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# DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1977

GOVERNMENT DOCUMENTS

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## HEARINGS

KANSAS STATE UNIVERSITY BEFORE A

### SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES

NINETY-FOURTH CONGRESS

SECOND SESSION

SUBCOMMITTEE ON THE DEPARTMENT OF DEFENSE

**GEORGE H. MAHON, Texas, *Chairman***

ROBERT L. F. SIKES, Florida  
DANIEL J. FLOOD, Pennsylvania  
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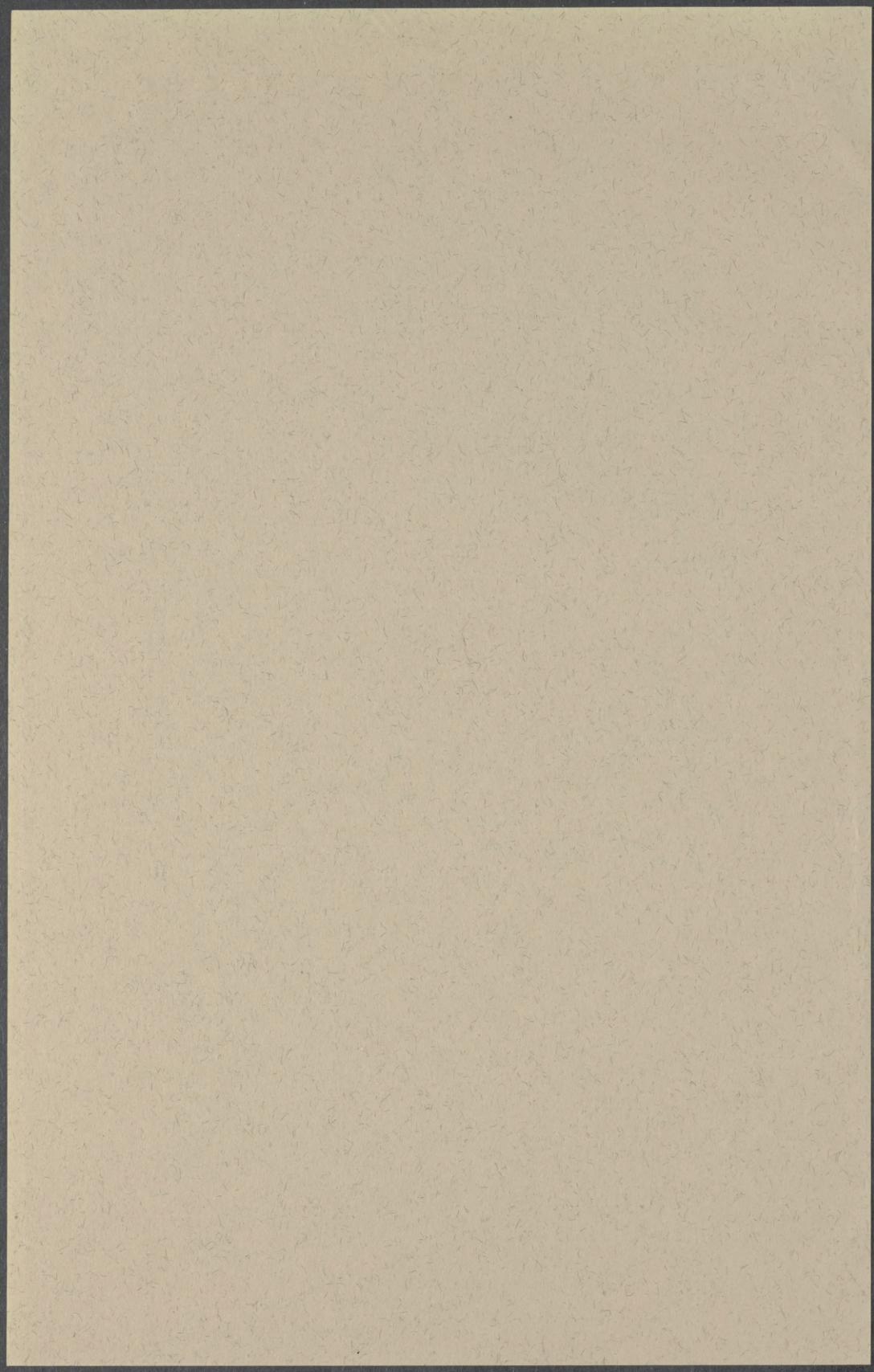
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### PART 8

- Fiscal year 1977 budget amendments
  - Minuteman missile program
  - Naval petroleum reserves
- Fiscal year 1976 Navy supplemental appropriations
  - U.S.S. *Belknap* conversion
  - Navy shipbuilding program
- REFORGER (mobility exercise)
- Claims
- Reprogramming actions

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# DEPARTMENT OF DEFENSE APPROPRIATIONS FOR 1977

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## HEARINGS BEFORE A SUBCOMMITTEE OF THE COMMITTEE ON APPROPRIATIONS HOUSE OF REPRESENTATIVES NINETY-FOURTH CONGRESS SECOND SESSION

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### SUBCOMMITTEE ON THE DEPARTMENT OF DEFENSE

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### PART 8

Fiscal year 1977 budget amendments  
    Minuteman missile program  
    Naval petroleum reserves  
Fiscal year 1976 Navy supplemental appropriations  
    U.S.S. *Belknap* conversion  
    Navy shipbuilding program  
REFORGER (mobility exercise)  
Claims  
Reprogramming actions

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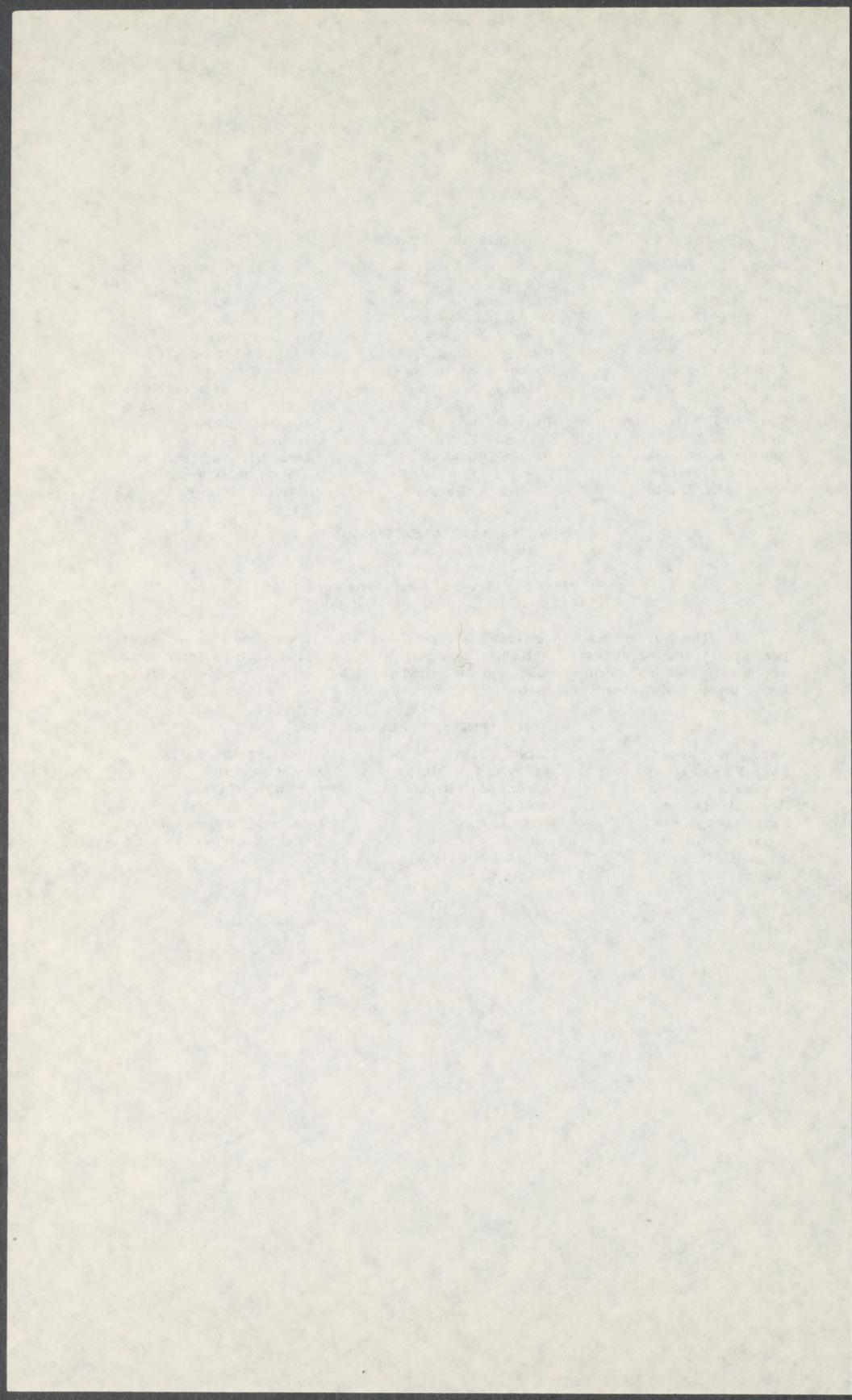
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DEPARTMENT OF DEFENSE APPROPRIATIONS FOR  
FISCAL YEAR 1977

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FRIDAY, APRIL 30, 1976.

DEPARTMENT OF THE AIR FORCE

BUDGET AMENDMENT FOR MINUTEMAN MISSILE  
PROGRAM

WITNESSES

LT. GEN. ALTON D. SLAY, DEPUTY CHIEF OF STAFF, RESEARCH  
AND DEVELOPMENT

MAJ. GEN. CHARLES C. BLANTON, DIRECTOR OF BUDGET, COMP-  
TROLLER OF THE AIR FORCE

Mr. MAHON. This afternoon we shall review the fiscal year 1977 Missile Procurement, Air Force, Budget Amendment in House Document 94-472 which proposes to add \$260.7 million for the procurement of 60 additional Minuteman III missiles and initial spares and \$56.3 million to initiate production of the MK-12A reentry vehicle and their initial spares.

We are pleased to welcome General Slay, Deputy Chief of Staff for Research and Development, and General Blanton, Air Force Budget Officer, and their supporting witnesses who appear with us today.

JUSTIFICATION DATA

At this time we will insert in the record the justification data which supports the budget amendment.

[The information follows:]

## MISSILE PROCUREMENT, AIR FORCE

For construction, procurement, and modification of missiles, rockets, and related equipment, including spare parts and accessories therefor, ground handling equipment, and training devices; expansion of public and private plants, Government-owned equipment and installation thereof in such plants; erection of structures, and acquisition of land without regard to section 9774 of title 10, United States Code, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to the approval of title as required by section 355, Revised Statutes, as amended; reserve plant and Government and contractor-owned equipment layaway; and \$1,916,400,000 to remain available for obligation until September 30, 1979. (5 U.S.C. 3109; 10 U.S.C. 2271-79; 2353, 2386, 2663, 2672, 8012, 8062, 9501-02, 9505, 9531-32, 9741-42; 31 U.S.C. 649c, 718; 50 U.S.C. 451-62; additional authorizing legislation to be proposed.)

AIR FORCE

MISSILE PROCUREMENT, AIR FORCE

APR 68

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-15-3020-0-1-951

OBLIGATIONS

PROCUREMENT ACTIONS PROGRAMMED)

BUDGET PLAN AMOUNTS TO BE

	FY 1977 PENDING	FY 1977 PENDING AMENDMENT	FY 1977 PENDING AMENDMENT	FY 1977 REVISED AMOUNT	FY 1977 REVISED AMOUNT
PROGRAM BY ACTIVITIES:					
DIRECT:					
1. BALLISTIC MISSILES	366,500	+311,400	677,900	398,575	+233,550
2. OTHER MISSILES	317,400	.....	317,400	267,347	.....
3. MODIFICATION OF INSERVICE MISSILES	62,800	+ 5,600	68,400	42,908	+ 4,200
4. MODIFICATION OF REPAIR PARTS	791,800	.....	791,800	792,303	.....
5. OTHER SUPPORT	1,599,600	+317,000	1,916,600	1,553,171	+237,750
TOTAL DIRECT	2,597,100	.....	3,010,100	2,593,822	.....
REIMBURSABLE (TOTAL)	1,634,400	+317,000	1,951,400	1,585,000	+237,750
10 TOTAL	4,231,500	.....	4,961,500	4,178,822	.....
FINANCING:					
RECEIPTS AND REIMBURSEMENTS FROM:					
11 FEDERAL FUNDS	- 200	.....	- 200	- 200	.....
12 OTHER FUNDS	- 34,750	.....	- 34,750	- 34,750	.....
13 NON-FEDERAL SOURCES	- 34,750	.....	- 34,750	- 34,750	.....
21 UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD	.....	.....	.....	.....	.....
FOR COMPLETION OF PRIOR YEAR BUDGET	.....	.....	.....	.....	.....
AVAILABLE TO FINANCE NEW BUDGET PLANS	.....	.....	.....	.....	.....
REPROGRAMMING FROM OR TO PRIOR YEAR	.....	.....	.....	.....	.....
22 UNOBLIGATED BALANCE TRANSFERRED FROM	.....	.....	.....	.....	.....
BUDGET PLANS	.....	.....	.....	.....	.....
OTHER ACCOUNTS	.....	.....	.....	.....	.....
23 UNOBLIGATED BALANCE TRANSFERRED TO OTHER	.....	.....	.....	.....	.....
ACCOUNTS	.....	.....	.....	.....	.....
24 UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD	.....	.....	.....	.....	.....
FOR COMPLETION OF PRIOR YEAR BUDGET	.....	.....	.....	.....	.....
PLANS	.....	.....	.....	.....	.....
25 UNOBLIGATED BALANCE LEAVING	.....	.....	.....	.....	.....
UNOBLIGATED BALANCE LEAVING, BUD PLAN	.....	.....	.....	.....	.....
40 BUDGET AUTHORITY (APPROPRIATION)	1,599,400	+317,000	1,916,400	1,599,400	+317,000
BUDGET AUTHORITY	.....	.....	.....	.....	.....
40 APPROPRIATION	1,599,400	+317,000	1,916,400	1,599,400	+317,000
41 APPROPRIATION REQUEST PENDING	.....	.....	.....	.....	.....
41 TRANSFERRED TO OTHER ACCOUNTS	.....	.....	.....	.....	.....
43 APPROPRIATION (ADJUSTED)	1,599,400	+317,000	1,916,400	1,599,400	+317,000
RELATION OF OBLIGATIONS TO OUTLAYS:					
71 OBLIGATIONS INCURRED, NET	1,550,000	.....	1,550,000	1,550,000	.....
72 OBLIGATED BALANCE, START OF PERIOD	1,148,412	.....	1,148,412	1,148,412	.....
74 OBLIGATIONS INCURRED AND OBLIGATED	-1,200,412	.....	-1,200,412	-1,200,412	.....
77 ADJUSTMENTS IN EMPLOYED ACCOUNTS	.....	.....	.....	.....	.....
OUTLAYS	1,498,000	+ 69,740	1,567,740	1,498,000	+ 69,740

AIR FORCE		MISSILE PROCUREMENT, AIR FORCE		RF 100
IDENTIFICATION CODE 07-15-1020-0-1-051		OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)		
		NY 1977	FY 1977	FY 1977
		REQUEST	PROPOSED	REVISED
		AMOUNT	AMOUNT	AMOUNT
				ATTACHMENT REQUEST
-----				
DIRECT OBLIGATIONS:				
22.0	TRANSPORTATION OF THINGS	4,974		4,974
31.0	EQUIPMENT	1,548,203	423,750	1,705,953
	TOTAL DIRECT OBLIGATIONS	1,553,177	423,750	1,790,927
-----				
REIMBURSABLE OBLIGATIONS:				
31.0	EQUIPMENT	31,823		31,823
99.0	TOTAL OBLIGATIONS	1,585,000	423,750	1,822,750

MISSILE PROCUREMENT, AIR FORCE  
(In Thousands of Dollars)

Budget Activity	January Justification Book	FY 1977 Request Pending	FY 1977 Proposed Amendment	FY 1977 Revised Request
Ballistic Missiles . . . . .	\$366,500	\$366,500	\$+311,400	\$677,900
(MINUTEMAN III Without Re-Entry System)			(+238,000)	

This portion of the amendment to the President's FY 1977 Budget provides for the continued production of the MINUTEMAN III Intercontinental Ballistic Missile (ICBM) exclusive of the re-entry system. Production would continue at a rate of five per month. MINUTEMAN III is the only United States ICBM in production; therefore, production beyond fiscal year 1976 provides major advantages and options to the United States, providing flexibility to the U.S. during the SAL negotiations. Missiles would be stored for later utilization. No SAL constraints would apply with respect to storage, while a production line would be kept active as a hedge against future contingencies.

(MK-12A Re-Entry System)

(+ 53,400)

This portion of the amendment to the President's FY 1977 Budget provides for the procurement of MINUTEMAN III re-entry systems with MK-12A re-entry vehicles (RV). This proposed procurement will provide re-entry systems sufficient either to arm 50 additional MINUTEMAN III weapons systems, should a deployment decision be made, or to retrofit the higher yield re-entry vehicle into presently deployed missiles.

Included in the total request is \$40.2 million for Advance Buy requirements for possible future production. In the event production is not continued beyond FY 1977, the \$40.2 million will be required to close down the production line (\$17.1 million) and to buy-out spares (\$23.1 million).

MISSILE PROCUREMENT, AIR FORCE  
(In Thousands of Dollars)

	January Justification Book	FY 1977 Request Funding	FY 1977 Proposed Amendment	FY 1977 Revised Request
Budget Activity				
Spares and Repair Parts . . . . .	\$ 60,900	\$ 60,900	\$+ 5,600	\$ 66,500
(MINUTEMAN III Without Re-Entry System)			(+ 2,700)	

This portion of the amendment to the President's FY 1977 Budget provides for the procurement of initial spares to support continuation of MINUTEMAN III production in the FY 1977 procurement program.

(MK-12A Re-Entry System)

(+ 2,900)

This portion of the amendment to the President's FY 1977 Budget provides for the procurement of initial spares to support initial procurement of the MINUTEMAN III re-entry system with the MK-12A re-entry vehicle.

MILITARY CONSTRUCTION, AIR FORCE

For acquisition, construction, installation, and equipment of temporary or permanent public works, military installations, and facilities for the Air Force currently authorized in military public works military construction Acts, and in Sections 2673 and 2675 of Title 10, United States Code, \$703,600,000

\$807,700,000, to remain available until expended.

AIR FORCE

MILITARY CONSTRUCTION, AIR FORCE

April 1976

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-25-3300-0-1-051

	BUDGET PLAN (AMOUNTS FOR CONSTRUCTION ACTIONS PROGRAMED)				OBLIGATIONS			
	FY 1977 Request	FY 1977 Proposed	FY 1977 Revised	FY 1977 Available	FY 1977 Request	FY 1977 Proposed	FY 1977 Revised	FY 1977 Available
PROGRAM BY ACTIVITIES:								
DIRECT:								
1. MAJOR CONSTRUCTION	743,550	5,400	748,950	567,100	3,780	570,880	3,780	570,880
2. MINOR CONSTRUCTION	24,000	.....	24,000	24,100	.....	24,100	.....	24,100
3. PLANNING	34,500	.....	34,500	34,000	.....	39,000	.....	39,000
4. SUPPORTING ACTIVITIES	250	.....	250	1,000	.....	1,000	.....	1,000
TOTAL DIRECT	802,300	5,400	807,700	631,200	3,780	634,980	3,780	634,980
REIMBURSABLE (TOTAL)	2,000	.....	2,000	2,800	.....	2,800	.....	2,800
TOTAL	804,300	5,400	809,700	634,000	3,780	637,780	3,780	637,780
FINANCING:								
RECEIPTS AND REIMBURSEMENTS FROM:								
FEDERAL FUNDS	-2,000	.....	-2,000	-2,000	.....	-2,000	.....	-2,000
UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD								
FOR COMPLETION OF PRIOR YEAR BUDGET PLANS				-173,665		-173,665		-173,665
AVAILABLE TO FINANCE NEW BUDGET PLANS				.....		.....		.....
REPROGRAMING FROM OR TO PRIOR YEAR BUDGET PLANS				.....		.....		.....
UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD				.....		.....		.....
FOR COMPLETION OF PRIOR YEAR BUDGET PLANS				.....		.....		.....
AVAILABLE TO FINANCE SUBSEQUENT YEAR BUDGET PLANS				343,965	1,620	345,585	1,620	345,585
BUDGET AUTHORITY (APPROPRIATION)				.....		.....		.....
RELATION TO BUDGET PLANS:								
71 OBLIGATED BALANCE, START OF PERIOD	802,300	5,400	807,700	882,300	5,400	807,700	5,400	807,700
72 OBLIGATED BALANCE, END OF PERIOD				632,000	3,780	635,780	3,780	635,780
74 OBLIGATED BALANCE, START OF PERIOD				582,606	.....	582,606	.....	582,606
75 OBLIGATED BALANCE, END OF PERIOD				-824,656	-3,565	-828,171	-3,565	-828,171
90 OUTLAYS				390,000	215	390,215	215	390,215

AIR FORCE		MILITARY CONSTRUCTION, AIR FORCE		OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)	
IDENTIFICATION CODE 07-25-3380-0-1-051				By 1977	By 1977
				Revised	Revised
				Pending	Request
				Amendment	
DEPARTMENT OF THE AIR FORCE					
DIRECT OBLIGATIONS:					
25.0	OTHER SERVICES	38,654	.....		38,654
32.0	LANDS AND STRUCTURES	41,808	.....		41,808
	TOTAL DIRECT OBLIGATIONS	80,462	.....		80,462
REIMBURSABLE OBLIGATIONS:					
32.0	LANDS AND STRUCTURES	2,800	.....		2,800
	TOTAL, DEPARTMENT OF THE AIR FORCE	83,262	.....		83,262
ALLOCATION ACCOUNTS					
25.0	OTHER SERVICES	35,108	250		36,318
32.0	LANDS AND STRUCTURES	53,324	3,530		56,854
	TOTAL, ALLOCATION ACCOUNTS	88,432	3,780		92,212
99.0	TOTAL OBLIGATIONS	171,694	3,780		175,474
OBLIGATIONS ARE DISTRIBUTED AS FOLLOWS:					
DEPARTMENT OF THE AIR FORCE:					
ARMY					
NAVY					
DEPARTMENT OF TRANSPORTATION					
		562,340	3,780		566,128
		26,044	.....		26,044
		44,608	.....		44,608
		1,000	.....		1,000





1. DATE	2. FISCAL YEAR 1977	3. PROJECT NUMBER	4. PROJECT TITLE BALLISTIC MISSILE PROCESSING SUPPORT FACILITY	5. DEPARTMENT AF	6. INSTALLATION HILL AIR FORCE BASE
MILITARY CONSTRUCTION PROJECT DATA (Continued)					
<p>year 1977, storage assets will be completely utilized. The standard Air Force Definitive Drawing for Minuteman Missile Motor Storage buildings has eight storage bays per building. Eight buildings will be required to satisfy the storage deficiency of 60 motor sets. There is no Definitive drawing for PSRE Storage as the design will vary with the type of storage container utilized. Procurement of metal shipping and storage canisters has been initiated. The proposed facility will be sized and designed based upon use of these canisters, and will also be based upon the currently approved explosive site plan for 26,000 pounds of class 2 explosives. The proposed PSRE storage building will handle 100 PSRE's.</p>					

I would suggest that you briefly summarize your statement at this point, General Slay.

STATEMENT OF AIR FORCE DEPUTY CHIEF OF STAFF, RESEARCH AND DEVELOPMENT

General SLAY. With your permission, we will insert the statement in the record.

[The statement follows:]

Mr. Chairman and members of the committee, I am here to present for your consideration an amendment to the fiscal year 1977 budget request for the missile procurement, Air Force appropriation.

The purpose of the amendment is to request funds for starting MK-12A reentry vehicle production in fiscal year 1977 and for the procurement of 60 Minuteman III missiles in the same year. Upon approval, this amendment would insure availability of the MK-12A and additional Minuteman III missiles for deployment if such action is deemed necessary.

When the fiscal year 1977 budget request was submitted to the Congress last January, the United States was exercising deliberate restraint in its strategic programs. We hoped for commensurate restraint on the part of the Soviet Union, and we also hoped for consummation of a SALT II agreement in 1976. Accordingly, the fiscal year 1977 budget request included termination of Minuteman III production after fiscal year 1976 and deferral of MK-12 production until fiscal year 1978. Regrettably, our earlier hopes have not become reality, and we are unable to foresee their fulfillment in the near term. We must, therefore, take positive action for two reasons—first, the Soviet Union is clearly proceeding to develop and deploy four advanced ICBM's and two new SLBM's; and second, because we have had more time to note the pace of SAL negotiations.

Consequently, an amendment to the fiscal year 1977 budget, requesting an additional \$317 million for Air Force missile procurement has been submitted to the Congress by the President. Of the \$317 million, \$260.7 million would continue production of Minuteman III, and \$56.3 million would be allocated to initial procurement of the MK-12A reentry vehicle. Should it be in the national interest to deploy additional Minuteman III's, 50 missiles now in storage could become operational by the end of this calendar year. Additional deployment could be accomplished in increments of 50 over the next 2½ years. Thus, we could achieve a Minuteman III force of 700 by mid-calendar year 1979.

The SALT II agreement which we now seek could possibly be reached in the near term, and might include provisions which render additional Minuteman III deployments unnecessary to meet national goals. If this agreement should transpire, we would then examine restructuring the Minuteman III production assets to provide hardware for modernization of the Minuteman II force. The Congress would be kept advised of program changes.

A companion amendment is also being submitted requesting \$5.4 million in the military construction appropriation for a ballistic missile processing support facility. This facility is needed to store the missiles exchanged for the additional Minuteman III ICBM's to be deployed. Alternatively, the facility would be used to store the Minuteman III for later utilization if immediate deployment is delayed. Construction will be at the Hill Air Force Base in Utah.

We believe that congressional and public desires are reflected in the requested budget amendment. However, we would ask you to note that the option for Minuteman III production in fiscal year 1977 is totally dependent upon Senate Armed Services Committee approval of the \$40 million fiscal year 1976 reprogramming request for Minuteman. That committee's favorable action on the reprogramming request would allow us to acquire long-lead Minuteman III production items now for possible use in fiscal year 1977 production. We are most appreciative of your support of that reprogramming request, and we solicit your approval of the proposed and related budget amendment.

General SLAY. Sir, the justification is very simple. Secretary Rumsfeld has stated in his initial submission of the 1977 budget that, although not requiring an additional buy of Minuteman missiles at

the time he did say that the options should be kept open in the event events in the SAL negotiations required us to take another look. He has been watching very closely, as has the Air Force, and the entire executive department, for that matter. The results of the SALT talks and the conclusion has been arrived upon that it is a prudent thing to do at this time to put in a request for these additional missiles.

Approval of this request would allow us to continue Minuteman production. However, this decision would be relooked at prior to September of this year, at which time it would be definitely decided as to whether we would continue production or if the SALT negotiations had progressed at that time to such a point that other action could be taken.

I should state very clearly, Mr. Chairman, that the budget amendment does hinge very definitely upon the reprogramming request approval for roughly \$40 million that we have requested that is currently under consideration by the Congress.

Mr. MAHON. I would say, General Slay, we have approved that reprogramming action in this committee, and I would state further that in our recommendation to the Budget Committee in March, we suggested that additional funds may be needed to keep the Minuteman III line open. Many of us were pleased when we received this budget amendment. It seems to me to be a step in the right direction.

Proceed with your statement.

General SLAY. I believe that is all the preliminary remarks I would like to make, sir.

#### MOTION AND VOTE TO CLOSE THE HEARING

Mr. MAHON. Mr. Flood has a motion.

Mr. FLOOD. Mr. Chairman, I move that the hearing be held this afternoon on budget amendments in executive session because of the classification of the material to be discussed.

Mr. MAHON. This requires a roll call and the clerk will call the roll. (The clerk proceeded to call the roll.)

Mr. MAHON. Mr. Reporter, let the record show that on this vote Mr. Mahon, Mr. Flood, Mr. Addabbo, Mr. Burlison, Mr. Edwards, Mr. Robinson, and Mr. Kemp voted aye.

A sufficient vote in the affirmative and the meeting is closed. If there are any unauthorized persons, they will please leave the room.

With further regard to our colloquy a moment ago, I think you are aware we discussed the question of continuing Minuteman III production earlier this year with Secretary Rumsfeld and with General Brown, as well as with Air Force officials.

## CONTINUATION OF MINUTEMAN PRODUCTION

There did not appear to be a groundswell of support for continued Minuteman III missile production at that time. What has happened in the last 2 months that caused a change of attitude toward continued Minuteman III production?

General SLAY. Sir, I think it is a realization that the SALT talks, or negotiations, have slowed down tremendously. We were expecting at the time that by summer 1976 we would have a SALT agreement that would obviate the necessity for deployment of additional missiles. That has not transpired. The talks give us no indication of coming to fruition at any time within the near future.

We feel it is now prudent to take the steps that Secretary Rumsfeld indicated might be necessary in his 1977 submission.

## OPTIONS AVAILABLE

Mr. MAHON. General Slay, your statement indicates that you will require new facilities to store older Minuteman III missiles being exchanged for those to be purchased in fiscal year 1977. Does this mean you will not deploy additional Minuteman III's beyond the 550 already deployed?

General SLAY. Sir, there are, of course, two options. To store and await further developments, or to go ahead and deploy. The \$5.4 million that is requested for storage would be to store the additional missiles that are procured in the event the decision was made not to deploy.

Of course, the option is there to deploy, and to replace older Minuteman II's in the silos.

As I am sure you know, the current SALT agreements prohibit building of new silos and they would have to replace Minuteman II's. The \$5.4 million is just for storage in the event the decision is made not to deploy.

Mr. MAHON. At what point in time would a decision be made that it would be in the national interest to deploy additional Minuteman III's?

General SLAY. Sir, I think we have breathing room until early September this year, with the approval of the \$40 million reprogramming under consideration in the Senate Armed Services Committee. If that is approved, we can keep the principal elements of the line open until September.

Prior to that time in late summer, it is the intention of the Secretary of Defense to review the entire atmosphere in conjunction with the

SALT talks and make a determination at that time as to whether the money will be spent for procurement of the missiles and, if spent for the procurement of the missiles, whether they should be deployed or stored.

Mr. MAHON. If a SALT II agreement should be reached in the near term, could that agreement include provisions which render additional Minuteman III deployments unnecessary to meet our national goals?

MINUTEMAN II MODERNIZATION OPTION

General SLAY. It could, sir. In such event, the money could be very logically spent on upgrade of our older Minuteman II force, still retaining the single reentry vehicle we have on the Minuteman II, but providing it with elements out of the Minuteman III line.

In other words, we would not be wasting this money. It would be the NS-20 guidance system, for example, which could go into Minuteman II to improve accuracy. We would dust harden the Minuteman II.

We are having some problem with the older motors in the Minuteman II. In other words, a general upgrade of the Minuteman II would be undertaken with these funds.

Mr. KEMP. What is the shelf life of the Minuteman?

General SLAY. We have revised the shelf life several times. Right now we are having a problem with the liner on some of our older missiles. It is becoming tacky. However, we have test fired these missiles and they fire OK, so we have not yet decided that we do have a problem. It is just that something has happened to the liner that we didn't expect. We are saying that eventually we are probably going to have to flush these cases out and put new propellant in or, alternatively, on the bottom two stages, which are the same as the Minuteman III, we could make use of Minuteman III assets we are producing, or would continue to produce, and just replace those older motors with the newer motors. There are two options there.

Mr. MURPHY. General Slay, could you provide for the record just what you would buy in order to modernize the Minuteman II missiles?

General SLAY. I would be very glad to.

[The information follows:]

We would buy Minuteman III guidance systems and repackage them in Minuteman II's. To provide maximum effectiveness, the Minuteman II MK-11C reentry vehicle would have to be modified for increased accuracy and hardness; a new vernier control system would be required for final RV velocity adjustment; and the missile would have to be dust hardened.

Mr. EDWARDS. I want to be sure I understand.

You are asking permission to buy 60 Minuteman III's?

General SLAY. That is right, sir.

Mr. EDWARDS. You are saying to us events could transpire in SALT II that would have the net effect of changing your proposal to buy Minuteman III's and in that case you might use the money for some other purpose?

General SLAY. With congressional approval, of course. We would have to come back and seek your approval to do this.

Mr. EDWARDS. I feel strongly if we give you the Minuteman III money, and if you don't need to buy them, that there ought to be a clear meeting of the minds back here as to what happens to that money.

General SLAY. No question, sir. Absolutely no question.

Mr. MURPHY. General, what would you do if you are in production on Minuteman III and we reach a SALT agreement? Do you stop production and, if so, what do you do with the assets that you have on hand?

General SLAY. Mr. Murphy, we have planned already for that eventuality and with congressional approval—and we would come back and give you full details on it. We have a contingency plan for using the assets out of the Minuteman production, such as the guidance system. We would need a new Vernier control system, would dust harden a new reentry vehicle for the single RV on the Minuteman II. There are several alternatives we could spend that money on for Minuteman II, in the event we decided to come to you for approval of an alternate use of those funds.

Again, the submission today is for what we anticipate will be the most likely contingency, the Minuteman continued production.

#### MINUTEMAN II REPLACEMENT OPTION

Mr. MAHON. By the end of fiscal year 1977, you will have ——— Minuteman III missiles in inventory. With 550 deployed, what will you do with the remaining ——— missiles besides firing ——— per year?

General SLAY. Sir, we have several options. If we wanted to deploy additional Minuteman III's, to get the maximum benefit out of early deployment, we would take these stored missiles and deploy them in the Minuteman II silos and catch up with production.

Mr. MAHON. Is that what you said earlier in the testimony?

General SLAY. That is correct, sir.

Mr. ADDABBO. Are not your silos all now loaded?

General SLAY. That is correct, sir. We could not build new silos so we would have to pull the old Minuteman II single RV missile out of the silos and replace those II's with the new III's.

Mr. ADDABBO. But still have a single reentry vehicle?

General SLAY. No, we would have up to three. We don't get to the 1,320 MIRV limit under current projections with the Trident boats until 1982. We have a lot of flexibility between now and 1982, to deploy additional MIRV vehicles.

#### MINUTEMAN III PRODUCTION LEADTIME

Mr. ADDABBO. If you start producing Minuteman III's now, when will they come into the inventory?

General SLAY. There's about a 24-month leadtime. I will give you that precisely.

[The information follows:]

The normal time from production start of a Minuteman III missile to its completion is 24 months. However, in our efforts to maintain a Minuteman III production capacity, we have reduced long lead items substantially. If the fiscal

year 1976 reprogramming request receives timely approval, we can then procure materials for the proposed fiscal year 1977 missile production. In turn, this would permit an October 1977 delivery of the first Minuteman III missile built with the funds requested in the budget amendment.

Mr. MAHON. Aren't we more or less maneuvering about in an effort to justify keeping the line open? I am not complaining about keeping the line open, but if you don't propose at this time to deploy the additional Minuteman III's in silos, you really don't accomplish a great deal, do you?

General SLAY. Sir, I hope I didn't leave that impression. The intent is, of course, that we will have that option and confirm that option this fall. At least this late summer. The option that we in the Air Force and OSD are thinking about, of course, is deployment of those Minuteman III's in the Minuteman II silos, and the least likely option in our opinion is that those would be bought and stored and we would agree with your comment.

#### COST OF REPLACING MINUTEMAN II MISSILES

Mr. MURPHY. Could you give us an idea of how much it would cost to upgrade and modify a Minuteman II silo to accept a Minuteman III?

General SLAY. Sir, you can put the III in the II silo. With our upgrade silo program that we currently have going, the silos are essentially equivalent, but we would, of course, have to change some of the electronic gear. We would have to put in command data buffer which is a retargeting capability that we do not now have in the II silo, but the silo itself is exactly the same size and would be able to fit the Minuteman III.

Mr. MURPHY. The fire control system centers are the same?

General SLAY. Yes. Of course, there are electronic changes, wiring changes that would have to be done.

Mr. MURPHY. Could you provide for the record about how much it would cost per silo?

General SLAY. Yes, sir. I would. It is about \$2.3 million per squadron.

Mr. MURPHY. That is for 50 missiles?

General SLAY. That is correct.

[The information follows:]

The specific cost of removing a Minuteman II missile from its silo and replacing it with a Minuteman III missile is \$46,000 per silo, not including the cost of the missile.

#### MINUTEMAN II INVENTORY

Mr. MAHON. How many Minuteman II missiles do you have in inventory beyond the 450 deployed in silos?

General SLAY. We have a total of \_\_\_\_\_ spares and \_\_\_\_\_ operational test vehicles for a total of \_\_\_\_\_.

Mr. MAHON. How many Minuteman II test firings do you conduct each year?

General SLAY. We plan for \_\_\_\_\_ per year, sir.

#### COST TO REOPEN MINUTEMAN III PRODUCTION LINE

Mr. MAHON. If you do not buy additional Minuteman III missiles in fiscal year 1977, when will the line close?

General SLAY. Sir, if we get the \$40 million reprogramming that we have asked for, we would be at the point of no return in September of this year.

Mr. MAHON. What would it cost to reopen the Minuteman III line and how long would it take to open it?

General SLAY. About \$300 million, sir, and it would take, as I recall, about 42 months. It would be \$300 million and 42 months.

This is one of the principal reasons, Mr. Chairman, we have felt so strongly about protecting the option to keep it open.

Mr. MAHON. With respect to your \$40 million reprogramming, you are waiting on the other body?

General SLAY. Yes, sir.

Mr. MURPHY. Do you have any new information on whether or not that will be approved?

General SLAY. I have nothing further in the last couple of weeks, Mr. Murphy, but our opinion is that they will approve it, sir.

Mr. EDWARDS. General, would you explain to me just briefly what in the world requires 42 months and \$300 million to open a line.

General SLAY. Yes, sir, there is a total of about 30,000 vendors in Minuteman production, sir, spread all over the country. Right now they are falling off due to the phasedown of the line. A lot of those are small bits and pieces of the missile that there is no other requirement for anywhere and these companies would, of course, stop production and would have to be requalified. And in the requalification, a lot of those vendors would not want to recompet. It would not be economically feasible for them to shut down and then start up again, so we would have to search for new vendors and search for new qualified sources.

Thirty thousand sounds like quite a few, but there are perhaps something like 100 very major vendors that would have to be requalified.

Mr. EDWARDS. You would literally have to start over just like you would start a new program if you had to reopen the production line?

General SLAY. Yes, sir; because bear in mind the Minuteman III, that technology has sort of passed some years ago and in order to regenerate the type of components that go into the guidance system, it is just not the type of components that are being built today. We would just have to requalify in that respect.

Mr. ROBINSON. Does this infer the technology is not the best?

General SLAY. No, sir; it does not. It infers, in a commercial sense, these vendors would be more interested, for instance, in making new large-scale integrated computer circuits rather than the relatively small-scale integrated circuits that we used in Minuteman III.

#### OPTIONS AVAILABLE

Mr. BURLISON. You have 450 Minuteman II's deployed.

General SLAY. That is right.

Mr. BURLISON. You have about \_\_\_\_\_ of the missiles.

General SLAY. That is correct, sir.

Mr. BURLISON. But you haven't made a decision yet as to whether you are going to replace those Minuteman II's with the III's.

General SLAY. That is a decision that we say is an option. This request is the first step and that decision could be ratified, so to speak, this summer, after we know more about what SALT is doing.

Mr. BURLISON. You are really not proposing now that those 450 be upgraded, you are retaining that as an option that may be done later.

General SLAY. That is correct, sir.

Mr. BURLISON. You have 550 Minuteman III's deployed?

General SLAY. Yes, sir.

Mr. BURLISON. You are not now proposing to deploy more Minuteman III's.

General SLAY. The obvious conclusion of this new request, Mr. Burlison, is for deployment of these extra missiles and the thought is fully in our minds, and it is our intent, if SALT talks go the way they are going now and continue to stay bogged down, quite logically we would want to deploy those missiles.

The only hesitation that we have is if SALT does come along and we do have a viable SALT agreement that says we do not want to deploy more MIRV'd vehicles we would have an option to use that money to upgrade our older Minuteman II's and we would come back to Congress in the fall, at least in the late summer, early fall, and say, "We now have a viable SALT agreement or an expectation of a viable SALT agreement, and the more logical thing to do is to spend this money some other way such as to upgrade our Minuteman II force."

At the present time it is the intent to buy these missiles and the logical conclusion of buying those missiles would be to deploy them in Minuteman II silos.

Mr. BURLISON. You are also requesting \$5.4 million for storage which you say you may decide to use.

General SLAY. That is correct, sir. In other words, there are three alternatives. To buy and deploy; to buy and store; or perhaps to use the money to upgrade Minuteman II.

This amount of money for the most expensive of those options which is buy and deploy, but we also have the money in there to build storage to store the missiles, if necessary.

Mr. BURLISON. The only thing you have really decided is that you want to keep the line open. You don't know what you are going to do with these missiles; you haven't made any decision on what you are going to do with them but all of this is all up in the air as possibilities and options to justify keeping the line open, isn't that about what it boils down to?

General SLAY. I can't fault your logic. We haven't come down hard on the decision to deploy, but the way things look to us right now, that is the obvious solution.

In the Air Force we feel that that is the way we are headed, is to deploy these missiles, but that decision has not firmly been made and under the current arrangement would not be made until this summer.

Mr. KEMP. Did I get out of that colloquy that you plan to upgrade Minuteman II regardless of what happens in SALT?

General SLAY. We haven't money to do that.

Mr. KEMP. Unless there is a SALT agreement that would allow you to—would that be considered reprogramming?

General SLAY. In the absence of a SALT agreement, we would want to fill those silos as well as we could with MIRV'd vehicles. If we have a SALT agreement, we would like to upgrade the single RV missiles. It is just that simple.

Mr. KEMP. So you do have a place to use this money?

General SLAY. That is correct, Mr. Kemp. We have a place to use the money, either way.

Mr. KEMP. It depends simply on whether the Vladivostok agreement is hammered out to the satisfaction of the United States—failing that, you will deploy further Minuteman III MIRV'd missiles?

General SLAY. That is correct, sir.

Mr. KEMP. I thought the record ought to be clear as to the fact that the Air Force does indeed want to continue the production line for a specific purpose rather than just some ambiguous purpose.

General SLAY. And the storage, by the way, to get back to Mr. Burlison's question, the storage would be, if we put Minuteman III in the holes where the Minuteman II's currently are, we would use that storage for storage of the Minuteman II's.

#### MINUTEMAN II REPLACEMENT OPTION

Mr. BURLISON. If you decide to deploy Minuteman III, how many—

General SLAY. We have several options. One is a single squadron and up to three squadrons of 150. Those are the options we have looked at. That would span a total of 3 years.

We would have 60 missiles bought in 1977, 60 in 1978, and 34 in 1979. That would provide us with an additional four missiles for spares that we would need.

Mr. BURLISON. The Minuteman III is MIRV'd?

General SLAY. Yes, MIRV'd with up to three MK-12's. We would want to upgrade with the MK-12A.

Mr. KEMP. What is the time frame that you estimate is necessary to be most cost effective as you move forward to the continuation of the production line of the Minuteman III?

General SLAY. Well, sir, we could actually—the earliest we could deploy the first squadron would be in December of this year to maybe March or April of next year, with old assets, the stored missiles, expecting to replace those assets from new production. Those are for the test objectives we have. But we could actually, if called upon, with a decision, say, this summer—in July, we will say—to go ahead and deploy—we could deploy a squadron in fairly short order and what we would like to do is to have this synchronized with our silo upgrade program at Wing I, at Malstrom Air Force Base. As we pull the Minuteman II's out of the holes to upgrade the silo under this already approved program, then, instead of putting the II back in, we would put the Minuteman III back in.

#### MINUTEMAN II MODERNIZATION OPTION

Mr. KEMP. What would it take from Congress to be able to proceed with that upgrading of the Minuteman II silo program?

General SLAY. It would be two things, sir. The approval of this

request to, you know, replace the missiles that we would be putting in there.

Mr. KEMP. I realize that, but what is the time frame?

General SLAY. In order to do that on the time scale that I talked about—December of this year until March of next year—we would need by July 1, 1976, the go-ahead with actual physical work starting in July.

Mr. KEMP. How much of the production line has already been shut down?

General SLAY. Sir, there are estimates of 20 to 25 percent of the vendors who are dropping off by the end of this month.

Mr. KEMP. At what rate are they dropping off? How will that be exacerbated by congressional delay?

General SLAY. Sir, if we get the reprogramming on May 1 in order to continue going it will cost us about \$1.56 million. That is a cost impact that we would not have had had we got the approval back a month ago.

Mr. KEMP. You didn't ask for it a month ago.

General SLAY. We asked for it in July of last year, sir. That is the reprogramming.

If we wait until June 1, for that approval, the cost impact will be \$5.68 million.

The problem is, these vendors are dropping off and we are estimating that by June 1 so many will have dropped off it will cost us in excess of \$5 million on the requalification alone of these vendors.

Mr. KEMP. Has this request made by the Air Force and DOD slowed down the loss of vendors from the program?

General SLAY. Quite naturally it has had some effect. Mr. Kemp. Had we not had the request in, I am sure we would have lost them much faster.

Mr. KEMP. You say by July 1 Congress must—

General SLAY. That is to make the schedule which I talked about which is the earliest we could deploy. I am getting you confused with two different things.

Mr. KEMP. I am with you right now.

General SLAY. The reprogramming is necessary. The July 1 had to do with the additional buy of missiles.

#### COST COMPARISON OF OPTIONS AVAILABLE

Mr. BURLISON. What is the comparative expense between upgrading Minuteman II and replacing II's with the Minuteman III?

General SLAY. We haven't costed out a total figure for replacing all of the II's with the III. We have costed out only up to 150, but the total Minuteman II upgrade would be about \$1.3 billion total in procurement and \$294 million for R.D.T. & E. To upgrade all 450. That spans out actually through fiscal year 1984 final expenditure.

Mr. BURLISON. What is the comparative expense between the deployment of additional III's and storing the additional III's?

General SLAY. Only \$2.3 million per 50. That is just the cost of the swاپout.

Mr. ADDABBO. If none of these funds were allowed and the reprogramming of the \$40 million was approved by the Senate Armed Services Committee and other respective committees, would that keep the line open?

General SLAY. It would keep it open into September, sir.

Mr. ADDABBO. What would be necessary to keep it open through January and February? In other words, for an additional 3 months?

General SLAY. Sir, it just won't work that way. We have to make a conscious decision to go ahead and build missiles. Otherwise it is economically infeasible to do that. I don't really feel we could keep the line going on an eyedropper feeding much longer than that. We can justify through August and into September simply because, you know, we see a use for the assets if we were to close the line down. For spares and—

#### COST TO RETAIN GUIDANCE SYSTEM PRODUCTION

Mr. ADDABBO. As I recall previous testimony before this committee, there would be some satisfaction in keeping guidance systems production line open, which is the main thing. Can you give us a cost estimate for that alone?

General SLAY. Quite obviously any of the items can be separated, Mr. Addabbo, and we can provide that for the record for the guidance systems. We have looked at that for an entirely different purpose, for keeping competition alive and we have that figure. I haven't it with me, but my personal belief is for this purpose it would be economically not a good thing to do.

[The information follows:]

The Minuteman III guidance system production line can be maintained throughout fiscal year 1977 for \$64 million. However, the utility of producing only additional guidance systems is very questionable. For example, their installation in Minuteman II missiles would provide only marginal improvements unless concurrent improvements were made in the reentry vehicle and other elements of the missile system.

Mr. ADDABBO. General, you say if Minuteman III deployment was not necessary then we should update Minuteman II.

Did the Department just find out about the tacky liner problem and need for updating Minuteman II? Did they not know this during the preparation of the budget for fiscal year 1977?

General SLAY. No, sir, and we are not saying that the tacky liner is something that is causing us immediate concern. It is not. Simply because we have proved to our satisfaction through tests that the tacky liner right now is not causing degradation in performance of the motor.

Also the Minuteman II, as it sits today, is a perfectly good missile. It has a perfectly good guidance system and a perfectly good ——— megaton warhead. What we are saying is if we are denied the MIRV'd system, then in order to get the most out of the SALT agreement, we would think it wise to upgrade what we have within the SALT limit and that would mean we would upgrade the Minuteman II to give it better accuracy and better survivability.

Mr. ADDABBO. If the SALT agreements fell apart, would it not be a better procedure to come to the Congress in January after decisions were made and be more specific as to how you are going to use the money?

Often when you have money you will find a use for it whether it is first, second, third, or fourth priority. You will find a use for it. When you have to justify new money, it becomes a little more difficult.

Here you are saying, if we don't need to deploy Minuteman III, then we could use this money, even though it is not absolutely necessary, to modernize the Minuteman II.

What would be the difficulty in going forward with your \$40 million reprogramming and, after decisions have been made, come back to the Congress with specifics and then we can decide on whether or not the money is really needed.

General SLAY. Principally, sir, because in late summer and early fall the line would have closed essentially permanently and we would have to expend a tremendous amount of money to get the vendors re-qualified and back up.

Mr. ADDABBO. How much are we talking about?

General SLAY. We are talking about \$300 million, sir, if it closes down completely, and the 42 months.

Mr. ADDABBO. You would need \$300 million to start it up?

General SLAY. That is correct, sir.

Mr. ADDABBO. In speaking of performance, all you are talking about is being able to deploy in 24 months the Minuteman III with the additional MIRV'd warhead, is that correct?

General SLAY. If the decision was made by the Congress to allow us to go ahead and procure additional missiles, we could take assets we have already bought for tests and deploy them very early. Say, by early next year, we could have a squadron deployed and we could have the total force deployed under a maximum effort by approximately midcalendar year 1978. A little after midyear in calendar year 1978.

That, of course, would be ———.

#### SURVIVABILITY OF MINUTEMAN FORCE

Mr. ADDABBO. A GAO report recently stated that the estimated number of Minuteman missile survivors, given a counterforce strike by the Soviet Union, has increased because, first, the estimated hardness of our silos has increased from ——— psi; and second decreased accuracy attributed to the Soviet ICBM's. Could you agree with this point?

General SLAY. Sir, I am not familiar with the report. The national intelligence estimates we are currently operating under show a contributing decline in silo survivability. However, it never gets to the point where the survivability, even into ———, take out all of the missiles.

Naturally, if you have extremely good guidance and an extremely large warhead and on a given silo that warhead and good guidance will be available to dig it out. But there are a lot of unknowns and the synergism of the Triad, of course, comes into play for a decision on the part of the Soviets to mount a first strike against our silos.

## UNOBLIGATED BALANCES

Mr. ADDABBO. General, at the end of fiscal year 1976 and the transitional period, how much will the Air Force have in unobligated funds?

General SLAY. I cannot answer that, sir. Perhaps General Blanton can.

General BLANTON. Let me supply that for the record if I may.  
[The information follows:]

## PROJECTED UNOBLIGATED FUNDS

[In millions of dollars]

	Estimate June 30, 1976	Estimate Sept. 30, 197
Minuteman procurement.....	268	240.0
Total Air Force.....	3,252	3,083.7

## SURVIVABILITY OF MINUTEMAN FORCE

Mr. CASEY. General Slay, has the Department of Defense actually decided how many warheads it must have given an attack on our forces? How many are needed? How much must survive to do the job that you have to do after an attack?

General SLAY. Yes, sir, we have.

That is a top secret figure. I could provide it for the record. I would prefer to provide it for the record.

[The information follows:]

Today the SIOP has allocated \_\_\_\_\_ ICBM reentry vehicles against targets. Factoring in prelaunch survivability and realizing that this value is an estimate based on several other variables, we project about \_\_\_\_\_ surviving reentry vehicles. In fulfilling national policy as specified in documents such as the nuclear weapons employment policy and the defense policy and planning guidance, we require \_\_\_\_\_ surviving ICBM reentry vehicles today to accomplish JCS guidelines.

With their current modernization programs, the Soviets are projected to achieve significant improvements in force survivability and offensive flexibility. In order to keep pace with the Soviet military initiatives and their expanding target base, the United States is planning to modernize each leg of the Triad with both current system improvements and future systems such as the B-1, M-X, and Trident I. We believe that in the mid-1980's, approximately \_\_\_\_\_ surviving ICBM reentry vehicles will be necessary to meet the growing Soviet threat.

Mr. KEMP. In answer to a question from my very dear friend and respected ally and colleague, Mr. Addabbo, in talking about survivability of our land-based intercontinental ballistic missile, discuss what the chances are, given the upgrading of the Russian SS-17, 18, and 19, and the MIRVing of the SS-18. Discuss the survivability of our land-based part of the Triad without the further deployment of Minuteman III and the hardening of our silos and the programs that you are currently engaged in.

General SLAY. Without the current upgrade program, our silos are \_\_\_\_\_ psi.

Mr. ADDABBO. You are talking about the upgrading of the silos now?

General SLAY. Yes.

Mr. KEMP. I am talking about the upgrading of the silo and continuing the production line of the Minuteman III as our response to the Soviet's continuing desire to upgrade their four production lines of intercontinental ballistic missiles.

General SLAY. I think it is a very good short- to midterm fix, Mr. Kemp. The ——— psi—what this says with the Soviet accuracy of today and the warheads they have, ——— psi silos will give us a large surviving force. We will still be in very good shape up until about the mideighties. Early in the mideighties the force starts to attrite faster due to increases in accuracy that are projected for the Soviet force. We will still have a significant number of RV's surviving, even into the mideighties, into the silos. However, the decline is still there.

Mr. KEMP. What is a significant number of RV's surviving a Soviet first strike? What do you consider to be a significant number of surviving RV's in numbers?

General SLAY. Even ——— would be significant to him to account for because he still has to think of the bombers and the submarines.

Mr. KEMP. I am not talking about bombers and submarines. I am talking about the land-based leg of the Triad.

General SLAY. If you are talking about 1980 and he chose with our current deployment to attack the force with all of his ICBM force and if he has the accuracy we are projecting him to have, we could get depressed down to something on the order of perhaps ——— RV's surviving.

Mr. KEMP. What is their counterforce ability? What type of deterrent would they provide?

General SLAY. Very significant. Each one of those RV's is capable of destroying one of his hardened sites. We have better accuracy right now than he is projected to have in the early to mideighties. We have good warheads and with the MK-12A going up to the higher yields—

Mr. KEMP. I was going on the assumption we were just going to stand pat.

General SLAY. To stand pat and do nothing, other than what we have programed?

Mr. KEMP. Right.

General SLAY. Well, sir, we would have a much less number of hard target killers than we would under the current arrangement. Every ICBM with two or three RV's that survives is two or three extra-hard targets which could be killed. The bomber, with its accuracy and the ICBM with its accuracy, are our hard-target killers. Of course, the majority of the warheads are provided by the sub-launched force. About ——— percent, as a matter of fact, ——— of the weapons.

Mr. KEMP. You are getting into the MK-12A program so I will defer to my colleagues.

#### LIMITATIONS OF VLADIVOSTOK UNDERSTANDINGS

Mr. BURLISON. You have no limitations problems. If you replaced all the Minuteman II's with the Minuteman III's, there are no SALT limitations that you conflict with?

General SLAY. Yes, sir, there is a SALT limit of 1,320 MIRV's. That is the upper limit of the Vladivostok understanding.

Mr. BURLISON. Under that present understanding then, how many of these II's could you replace?

General SLAY. Well, sir, what we are saying is, we could go up to 150, even with the current Trident deployment expectation and would not run into that limit until 1982.

#### MK-12A REENTRY VEHICLE

Mr. EDWARDS. The MK-12A reentry vehicles will be considered next.

How many MK-12A reentry vehicles do you propose to buy for \$53.4 million?

General SLAY. ———.

Mr. EDWARDS. How many Minuteman III missiles will that number arm?

General SLAY. Each takes up to three RV's, sir. It takes 100 to 150 RV's for the 50 Minuteman III's in each squadron, so if we deploy 1 squadron, that is 100 to 150 RV's that would be required. In multiples of 50. Each squadron is 100 to 150 RV's.

#### STATUS OF DEVELOPMENT PROGRAM

Mr. EDWARDS. The fiscal year 1977 R.D.T. & E. budget requests \$36.9 million for continued development of the MK-12A. An additional \$14.0 million will be required after fiscal year 1977 to complete development of the MK-12A. The scheduled development milestones provide for a critical design review this month, the first flight test in January 1977, and development completed in July 1978. Why are procurement funds requested if development, including the first test, has not been completed?

General SLAY. Sir, this is to get the MK-12A more in sync with our requirements for deployment of the new missiles. We would, with this current request, in fiscal year 1977, be able to deploy the MK-12A in ———. At the current time, it is ———. So we would gain a total of ——— months through this request, on the bigger RV.

Mr. EDWARDS. According to data previously provided to the staff, the development of the MK-12A program cannot be accelerated. Since no additional funds have been requested in this amendment for R. & D., presumably the fiscal year 1978 milestone for completion of R. & D. is still valid. Is this the case?

General SLAY. Sir, it cannot and probably should not be accelerated more than it is right now. We have a good program. And we have done the testing that is authorized under the limited test ban treaty. We are now, as you know, under the 150 kiloton restriction. So further testing will have to take that into account.

We are confident that we can get at least ——— out of the warhead currently, perhaps more with some additional changes that Los Alamos Scientific Laboratory has suggested. It is not a major change to the reentry vehicle. It has the same shape. Of course, it weighs slightly more. But we are just packing more equipment into the space in the reentry vehicle.

Mr. MURPHY. General, if, as we have been told, it would not be prudent to accelerate the research and development program, how can you justify accelerating production by \_\_\_\_\_ months?

General SLAY. Well, sir, the original program was to have warheads delivered in \_\_\_\_\_ with the development schedule as we have today. Of course, on the F-15, for instance, we still have development requirements. And we have deployed that long since. But it is just an extended development program in order to flight qualify these RV's. And to continue—just like any system, you deploy, but you don't chop off the R. & D. right at that point.

Mr. MURPHY. Well, you haven't had the first flight yet.

General SLAY. That is correct, we have not. But the point I should make is that from an aerodynamic viewpoint, the MK-12A is not too different than the MK-12. It is the same general shape, but it weighs slightly more. And it is the mass properties that we will have to be testing. But there are very few unknowns in that. The principal reason for testing the MK-12A is in the nuclear sense, and that has been accomplished to a large extent already with warhead tests.

#### WARHEAD YIELD

Mr. MURPHY. The current MK-12 warhead has, I think, a \_\_\_\_\_ yield.

General SLAY. That is right.

Mr. MURPHY. And I believe the MK-12A is supposed to achieve something like \_\_\_\_\_.

General SLAY. \_\_\_\_\_. But right now, with the latest test we are assured of something around \_\_\_\_\_. And with modifications Los Alamos Scientific Labs proposes to make, we think we can get back up to about the \_\_\_\_\_.

Mr. MURPHY. When?

General SLAY. We don't know. But the \_\_\_\_\_ is perfectly adequate for the task, Mr. Murphy. We have run sensitivity analyses to see where the cutoff is to the viability of a new MK-12A program. And the \_\_\_\_\_ kt is well within the positive range in that sensitivity analysis.

Mr. MURPHY. Why did you ask earlier to achieve \_\_\_\_\_ if \_\_\_\_\_ is all you need?

General SLAY. Because that is what we figured we could get, and ERDA originally said \_\_\_\_\_ is what could be gotten within the volume constraints that we gave them. And we still believe that is the case.

However, the assured \_\_\_\_\_ is perfectly adequate for us.

Mr. MURPHY. Well, would you be delivering MK-12A reentry vehicles with \_\_\_\_\_ yield, and later on begin buying them at \_\_\_\_\_ yield?

General SLAY. I cannot answer that, Mr. Murphy. We would hope that the missile, the RV that we would buy, starting in fiscal year 1977, would be closer to \_\_\_\_\_ than it is now. But right now we are assured that it will be at least \_\_\_\_\_.

Mr. MURPHY. Thank you.

Mr. EDWARDS. Are you saying that whatever it is over ——— you will go with that?

General SLAY. Absolutely.

Mr. EDWARDS. You are not going to come back with a so-called second generation to get it to ———.

General SLAY. No, sir.

#### STATUS OF PRODUCTION PROGRAM

Mr. EDWARDS. What is the status of the ERDA warhead development? Has production been initiated?

General SLAY. No, sir, it has not.

Mr. EDWARDS. When will production start?

General SLAY. Right now, the first warhead is scheduled to be delivered in ——— leading to an IOC in ———. And if this proposal that has been submitted is approved, that will be backed up to ———. First delivery in ——— leading to an IOC in ———.

Mr. EDWARDS. Can ERDA accelerate its program?

General SLAY. They can. They had originally proposed to give us the first warhead to meet an IOC in ———. ERDA has maintained the capability to meet an ——— IOC.

Mr. EDWARDS. The staff points out that ERDA does not have a budget amendment to speed up production. So we are wondering how ———.

General SLAY. Well, they did delay all fabrication effort planned for fiscal year 1977, Mr. Edwards. In other words, I am told—and General Blanton, you can correct me if I am wrong—that ERDA did not delay at the time early on in this budget cycle the warhead development but production was delayed. We had production money during the initial budget cycle, and it was taken out as a result of the expectation that the SALT negotiations would come to early fruition and I am told that ERDA did not slow their work down, R. & D. work, as we did not.

Mr. EDWARDS. So they don't need a budget amendment, if I understand you correctly, in order to keep up with the production schedule, or accelerate it?

General SLAY. Can I provide that for the record, Mr. Edwards, just to be sure? I can only answer from secondhand information. But I would like to ask ERDA that specific question, and get a specific answer.

Mr. EDWARDS. OK, I wish you would.

[The information follows:]

ERDA has advised their cognizant committees in Congress that the MK-12A acceleration to ——— is supportable by ERDA but will increase their fiscal year 1977 production and surveillance funding requirements by approximately \$6 million. Dependent upon final Congressional action on the ERDA fiscal year 1977 budget, they shall attempt to find these funds within available resources.

#### PRODUCTION DELIVERY SCHEDULE

Mr. EDWARDS. When will deliveries of the reentry vehicles begin, and when will deliveries of the ERDA warheads begin?

General SLAY. Simultaneously, in ———.

## COST EFFECTIVENESS OF A NEW REENTRY VEHICLE

Mr. EDWARDS. During hearings with Dr. Currie, we asked for a comparison of the effectiveness of a counterforce strike by the United States against Soviet ICBM's assuming all MINUTEMEN III missiles are fired with (1) the MK-12 RV and (2) the MK-12A RV. The answer, assumed use of current guidance, was that ——— Soviet silos would survive if the MK-12 RV were used. If the MK-2A is used, ——— survive.

Why do you need the MK-12A ———?

General SLAY. Well, sir, I think there is a synergism in the improved guidance that we are getting in the NS-20 upgrade, software upgrade. We currently have a program to improve the guidance from ——— nautical mile accuracy down to ——— nautical mile accuracy. Again, as I say, that is currently in the program. I have here some data, if I can look it up, that will provide a more direct answer to your question.

Mr. EDWARDS. Why don't you put it in the record?

General SLAY. I will put it in the record.

[The information provided is classified.]

General SLAY. It is significant, however, sir. On the order of ——— kill probability, single-shot kill probability, to ——— additive kill probability. In other words, going from the ——— to the ———. There is only about ——— of a point difference between the ——— and the ———. There is a knee of the curve in about that vicinity.

Mr. ADDABBO. Will the gentleman yield?

Mr. EDWARDS. Yes.

Mr. ADDABBO. General, with this great accuracy, how many Soviet silos would actually survive, comparing the MK-12 RV with the MK-12A RV?

General SLAY. Well, we grow from, as I recall the figures—with the current accuracy and the current RV—from about ———.

Mr. ADDABBO. That means nothing to me. I have numbers here—Dr. Currie says ——— with the 12, and possibly ——— with the 12-A. Now, when you come up with the ——— that doesn't mean anything to me. How many in actual figures do you estimate will survive between the 12 and the 12-A?

General SLAY. I'm not tap dancing around your question, Mr. Addabbo, but the way the SIOP is laid down, ———. I will provide that for the record. We do have that. But I just don't have it with me.

[The information follows:]

In the current SIOP-5 ———.

It is estimated that ——— reentry vehicle would achieve today a ——— percent probability of damage against a Soviet silo. The wide range is due in large part to the ongoing Soviet silo hardening program. We anticipate that the MK-12A reentry vehicle will become available following completion of the Minuteman accuracy improvement program. The combination of increased yield from the MK-12A, and improved accuracy will increase the probability of damage to Soviet silos to between ——— percent. Of course, by that time a greater portion of the Soviet silos will be upgraded, so the ——— percent value should dominate.

These percentages for probability of damage assume an arriving and detonating reentry vehicle. In operational practice, allowance must be made for the system reliability of the Minuteman weapon system.

Mr. ADDABBO. Thank you, Mr. Chairman.

## TOTAL PROGRAM COST

Mr. EDWARDS. How many MK-12A reentry vehicles do you propose to buy, and at what total cost?

General SLAY. Total cost, through fiscal year 1983, is \$367 million. And we are proposing to buy enough RV's to equip the total force of 550 Minutemen III's currently deployed, plus the additional missiles that are in the request that we have got before you.

Mr. EDWARDS. Does that cost figure include the ERDA warhead costs?

General SLAY. It does not.

That is exclusive of the nuclear material and the nuclear costs of ERDA.

Mr. EDWARDS. Do you know what their cost is to arm that many vehicles?

General SLAY. No, sir, I do not. But we could provide that.

[The information follows:]

ERDA states that the weapons production estimate for fabrication to support the first 550 is approximately \_\_\_\_\_, exclusive of special nuclear materials (SNM) and postproduction costs. The cost to support the additional 50 missiles is \_\_\_\_\_ to be incurred after fiscal year 1977, exclusive of SNM and postproduction costs.

Mr. MURPHY. I don't think we got the answer on what the total cost will be and how many you propose to buy to equip the full force. We were not speaking of just through 1983; we wanted the total.

General SLAY. A total of \_\_\_\_\_ for the backfit, plus \_\_\_\_\_ for the 50 that we are asking for—there seems to be a total of about \_\_\_\_\_.

Mr. MURPHY. At a total cost of \_\_\_\_\_

General SLAY. \$381.5 million, including AGE training, data, and site activations.

Mr. MURPHY. Then fiscal 1983 will complete the program—

General SLAY. That is correct.

Mr. MURPHY [continuing]. Of backfitting all 550 with the MK-12A warhead.

General SLAY. That is right, \$381.5 million is the bottom line.

That is correct, isn't it?

General BLANTON. Yes, sir, that is correct.

## COST EFFECTIVENESS OF A NEW REENTRY VEHICLE

Mr. EDWARDS. OK. Why do you believe that this expenditure of funds is worth the relatively small additional capability the MK-12A provides?

General SLAY. It really isn't a small additional capability. Certainly, if you look at it in finite terms of \_\_\_\_\_ improvement in single kill potential, that doesn't sound very flashy. But it really is, in a total force SIOP lay down.

Mr. EDWARDS. What is that word you are using?

General SLAY. The single integrated operations plan. I'm sorry, Mr. Edwards. The SAC talk for it—SIOP. That is the force laydown for missiles and for our bombers, as well as the submarines. Single

integrated operations plan. I will amplify previous answer for the record.

[The information follows:]

A significant fraction of the Soviet target base is resistant to nuclear attack. The Soviets have an active program to increase the number of targets and degree of resistance to nuclear attack. The land-based ICBM is the most effective weapon against those categories of targets. The present Minuteman III with its \_\_\_\_\_ warhead and \_\_\_\_\_ nautical mile CEP provides a modest capability against these targets. The increased yield of the MK-12A, coupled with programmed guidance improvement, will provide a capability increase of approximately a factor of \_\_\_\_\_ SIOP planning includes ICBM attacks against these targets resistant to nuclear attack. The projected increase of this category of targets requires an increased capability to allow the National Command Authorities to exercise flexible response options.

#### INITIAL SPARES REQUIREMENT

Mr. EDWARDS. What initial spares do you propose to buy for the MK-12A reentry vehicles at a cost of \$2.9 million?

General SLAY. Initial spares, if you are asking for a breakdown of what those spares are, I do not have that right off the top of my head. I can provide that for the record.

Mr. EDWARDS. You can put that in the record.

[The information follows:]

Although the initial provisioning review has not been completed for the MK-12A, we plan to buy items such as gyros, motors, switches, and warhead training assemblies.

Mr. EDWARDS. Any other questions on the MK-12A?

Mr. ADDABBO. No questions.

Mr. EDWARDS. Well, thank you very much, General.

General SLAY. You are quite welcome, sir.

Mr. EDWARDS. We appreciate your coming today.

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FRIDAY, APRIL 30, 1976.

### DEPARTMENT OF THE NAVY FY 1976 SUPPLEMENTAL REQUEST U.S.S. "BELKNAP" CONVERSION

#### WITNESSES

REAR ADM. R. E. MORRIS, U.S. NAVY, DIRECTOR, SURFACE WARFARE DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
REAR ADM. S. S. FINE, U.S. NAVY, DIRECTOR OF BUDGET AND REPORTS, OFFICE OF THE NAVY COMPTROLLER  
CAPT. J. A. BUCK, U.S. NAVY, OFFICE OF THE DEPUTY FOR SURFACE SHIPS, NAVAL SEA SYSTEMS COMMAND  
CAPT. J. B. OREM, JR., U.S. NAVY, AAW SHIP ACQUISITION PROJECT MANAGER, NAVAL SEA SYSTEMS COMMAND  
CAPT. R. G. MURPHY, U.S. NAVY, SCN APPROPRIATIONS MANAGER, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

Mr. MAHON. This afternoon we welcome Rear Adm. Robert E. Morris, Director, Surface Warfare Division, Office of the Chief of Naval Operations, Rear Adm. S. S. Fine, Director of Navy Budget and Reports, Captain Buck, from the Naval Sea Systems Command, and their supporting witnesses, who will justify the fiscal year 1976 supplemental appropriation request of \$221 million to design and convert CG-26, the U.S.S. *Belknap*, which was damaged in a collision with the CV-67 U.S.S. *J. F. Kennedy* on November 22, 1975.

Admiral Morris, since this is your first appearance before the committee in your present capacity, we shall place your biographic sketch in the record at this point.

[The biographical sketch follows:]

### BIOGRAPHIC SKETCH OF REAR ADM. ROBERT E. MORRIS, USN

#### REAR ADM. ROBERT E. MORRIS, U.S. NAVY

Rear Adm. Robert E. Morris, USN was born in Richmond Heights, Mo. He received a bachelor of arts degree from Princeton University in 1952 and was commissioned an ensign in October of the same year at Officer Candidate School, Newport, R.I.

His early sea tours included duty in U.S.S. *Rochester* (CA 124) as assistant communications officer, U.S.S. *Beatty* (DD 756) as operations officer and U.S.S. *Hooper* (DE 1026) and U.S.S. *Preble* (DLG 15) as executive officer. He commanded U.S.S. *Parsons* (DDG 33) from 1967 to 1969 and U.S.S. *Little Rock* (CLG 4) from 1972 to 1973. He has served in both the Korean and Vietnam wars.

Admiral Morris attended the Naval War College Command and Staff Course in 1963-64 and the National War College in 1969-70. He received a master's degree in international relations from George Washington University in 1964.

His shore tours have been principally in the politico-military and personnel fields. He has had two tours in the Office of the Assistant Secretary of Defense (International Security Affairs), first as Deputy Director, Arms Control Matters, and more recently as Assistant for Ocean Affairs. In this latter tour he was a member of the U.S. negotiating team which concluded the Incidents at Sea agreement with the Soviet Union. He has also served in the Office of the Chief of Naval Operations (OP-60), working in NATO and Middle East Affairs in the Current Plans Branch. His two tours in the Bureau of Naval Personnel were an early one in the Recruiting Division and, immediately prior to promotion to rear admiral, as Director, Surface Warfare Distribution Division. His first assignment as a flag officer is Director, Surface Warfare Division (OP-32) in the office of CNO.

His decorations include the Legion of Merit (two awards), Bronze Star, Joint Services Commendation Medal, and Navy Achievement Medal.

Rear Admiral and Mrs. Morris (the former Marjorie Greene of Newport, R.I. have a daughter, Carolyn.

### JUSTIFICATION DATA

Mr. MAHON. Before we hear your statement, we shall place in the record at this point the justification data that supports this fiscal year 1976 supplemental budget (submitted in H. Doc. 94-472 and 94-570) for Shipbuilding and Conversion, Navy, and Research, Development, Test and Evaluation, Navy.

SHIPBUILDING AND CONVERSION, NAVY

For an additional amount for "Shipbuilding and Conversion, Navy", \$213,000,000 to remain available for obligation until September 30, 1980.

NAVY SHIPBUILDING AND CONVERSION, NAVY

PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

BUDGET PLAN (AMOUNTS FOR PROCUREMENT ACTIONS PROGRAMED)

IDENTIFICATION CODE 07-15-1611-0-1-031

	FY 1976		FY 1976		FY 1976	
	Presently Available	Revised Estimate	Presently Available	Revised Estimate	Presently Available	Revised Estimate

PROGRAM BY ACTIVITIES:

DIRECT:

1. FLEET BALLISTIC MISSILE SHIPS	647,500	647,500	.....	.....	769,220	769,220
2. SUBMARINE SHIPS	5,111,000	754,000	213,000	.....	1,198,182	2,202,822
3. OMBUDSMAN SHIPS	.....	841,500	.....	.....	750,527	750,527
4. MINE WARFARE AND PATROL SHIPS	1,498,000	1,898,000	.....	.....	1,490,828	1,490,828
5. AUXILIARIES, CRAFT AND PRIOR YEAR PROGRAM COSTS	3,928,000	4,141,000	213,000	.....	5,000,397	5,213,397
TOTAL DIRECT	100,000	100,000	.....	.....	1,826,603	1,826,603
REIMBURSABLE (TOTAL)	4,102,000	4,241,000	213,000	.....	6,827,000	7,045,000
10 TOTAL						

FINANCING:

RECEIPTS AND REIMBURSEMENTS FROM:

11 FEDERAL FUNDS	-15,000	35,000	.....	.....	-15,000	35,000
12 TRUST FUNDS	-85,000	-85,000	.....	.....	-914,400	-914,400
13 NON-FEDERAL SOURCES	.....	.....	.....	.....	.....	.....
14 UNOBLIGATED BALANCE AVAILABLE, START OF PERIOD	.....	.....	.....	.....	.....	.....
21 FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	-75,000	-75,000	.....	.....	-75,000	-75,000
AVAILABLE TO FINANCE NEW BUDGET PLANS	.....	.....	.....	.....	4,868,900	4,868,900
REPROGRAMMING FOP TO PRIOR YEAR	.....	.....	.....	.....	.....	.....
22 UNOBLIGATED BALANCE TRANSFERRED FROM OTHER ACCOUNTS	-86,800	-86,800	.....	.....	-86,800	-86,800
23 UNOBLIGATED BALANCE TRANSFERRED TO OTHER ACCOUNTS	86,800	86,800	.....	.....	86,800	86,800
24 UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD FOR COMPLETION OF PRIOR YEAR BUDGET PLANS	.....	.....	.....	.....	.....	.....
AVAILABLE TO FINANCE SUBSEQUENT YEAR	.....	.....	.....	.....	2,904,300	2,904,300
25 UNOBLIGATED BALANCE LAPSING	.....	.....	.....	.....	.....	.....
UNOBLIGATED BALANCE LAPSING, BUO PLAN	3,853,000	3,853,000	.....	.....	3,853,000	3,853,000
BUDGET AUTHORITY	.....	.....	.....	.....	.....	.....
40 BUDGET AUTHORITY APPROPRIATION	3,853,000	4,066,000	213,000	.....	3,853,000	4,066,000

RELATION OF OBLIGATIONS TO OUTLAYS:

71 OBLIGATIONS INCURRED, NET	5,624,600	6,105,600	213,000	.....	6,105,600	6,105,600
72 OBLIGATIONS INCURRED, END OF PERIOD	7,314,668	7,522,668	.....	.....	7,314,668	7,522,668
74 OBLIGATED BALANCE, END OF PERIOD	2,721,600	2,729,000	.....	.....	2,721,600	2,729,000
90 OUTLAYS	.....	.....	.....	.....	.....	.....

NAVY SHIPBUILDING AND CONVERSION, NAVY  
 OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)  
 IDENTIFICATION CODE 07-15-1611-0-1-851

	FY 1976 Presently Available	FY 1976 Revised Estimate	FY 1976 Proposed Suppl.
DIRECT OBLIGATIONS:			
22.0 TRANSPORTATION OF THINGS	1,170	1,170	.....
25.0 OTHER SERVICES	142,300	1,649,000	206,600
29.0 SUPPLIES AND MATERIALS	3,956,527	3,396,700	6,400
31.0 EQUIPMENT	.....	.....	.....
TOTAL DIRECT OBLIGATIONS	5,080,397	5,213,397	213,000
REIMBURSABLE OBLIGATIONS:			
25.0 OTHER SERVICES	782,500	792,500	.....
29.0 SUPPLIES AND MATERIALS	.....	.....	.....
31.0 EQUIPMENT	931,603	931,603	.....
TOTAL REIMBURSABLE OBLIGATIONS	1,714,103	1,724,103	.....
TOTAL OBLIGATIONS	6,794,500	7,040,000	213,000

SHIPBUILDING AND CONVERSION, NAVY  
(In Thousands of Dollars)

FY 1976 Presently Available	FY 1976 Revised Request	FY 1976 Proposed Supplemental
\$541,000	\$754,000	\$213,000

Budget Activity 2: Other Warships

The supplemental request of \$213,000 million in Budget Activity 2 will provide for the restoration and modernization of the BELKNAP, which sustained extensive collision damage late last year. Modernization will result in BELKNAP becoming the lead ship for the CG-26/28 class for AAW modernization. BELKNAP will be equipped with the TERRIER missile system, Standard Missile (SM-2) and HARPOON. The modernization of BELKNAP is considered to be a more cost effective alternative than merely restoring the BELKNAP now and then modernizing later.

DEPARTMENT OF THE NAVY  
 FY 77 PROCUREMENT PROGRAM  
 SUMMARY  
 (\$ IN MILLIONS)

01 JAN 1976

\* REVISED APRIL 1976

ACTIVITY	FY 75	FY 76	TRANSITION	FY 77	FY 78
APPROPRIATION, SHIPBUILDING AND CONVERSION, NAVY					
1. FLEET BALLISTIC MISSILE SHIPS	1,362.5	647.5	254.3	794.4	1,678.4
2. OTHER WARSHIPS	1,128.9	754.0*	189.0	1,987.2	2,245.8
4. MINE WARFARE + PATROL SHIPS	278.3	841.5		1,179.5	1,171.6
5. AUXILIARIES, CRAFT + PY PROG COSTS	361.7	1,898.0	27.9	2,328.4	692.2*
TOTAL	3,111.4	4,141.0*	471.2	6,289.5	5,788.0*

\* ITEMS UNDER \$50,000



UNCLASSIFIED  
 DEPARTMENT OF THE NAVY  
 FY 1977 PROCUREMENT PROGRAM  
 EXHIBIT P-1  
 DATE: 31 JAN 1976 \*REVISED ADEL 1976

LINE NO	ITEM NOMENCLATURE	DOLLARS DOEAF MAY 1977	MILLIONS OF DOLLARS			
			FY 1975 COST	FY 1976 COST	TRANSITION QUANTITY	FY 1977 COST
	APPROPRIATIONS: 1631 N. SHIPBUILDING AND CONVERSION, NAVY					
		309,533,000				
	7 SSN-588 CLASS SUBMARINE (NUCLEAR) LESS: ADVANCE PROCUREMENT (FY 1975) (148.9)		667.5	294.3	794.4	1078.4
	OTHER WARSHIPS					
	7 SSN-588 CLASS SUBMARINE (NUCLEAR) LESS: ADVANCE PROCUREMENT (FY 1975) (148.9)	3 (778.9) (-78.0) 199.4	2 (491.8) (-52.8)		3 (925.6) (-177.7)	2 (640.4) (-177.7)
	8 SSN-588 CLASS SUBMARINE (NUCLEAR) ADVANCE PROCUREMENT (CY) (FY 1976 FOR FY 1977) (HEMO) (FY 1976 FOR FY 1977) (HEMO) (FY 1976 FOR FY 1978) (HEMO) (FY 1977 FOR FY 1978) (HEMO) (FY 1977 FOR FY 1978) (HEMO) (FY 1978 FOR FY 1979) (HEMO) (FY 1978 FOR FY 1979) (HEMO) (FY 1979 FOR FY 1980) (HEMO)	582.5	439.0		745.6	862.7
	9 CGM-10 CLASS GUIDED MISSILE CRUISER (MUC) LESS: ADVANCE PROCUREMENT (FY 1975) (-79.2)	1 (137.3) (-113.6) (-79.2)	102.0 (102.8)	189.0 (78.0) (111.0)	213.1	182.1
	10 CGM-10 CLASS GUIDED MISSILE CRUISER (MUC) ADVANCE PROCUREMENT (CY) (FY 1976 FOR FY 1976) (HEMO) (FY 1976 FOR FY 1976) (HEMO)	16.9 (16.9)				
	11 DD-981 CLASS DESTROYER LESS: ADVANCE PROCUREMENT (FY 1975) (-55.1)	7 (528.5) (-55.1) 577.1				
	*11A CG-26, BELKNAP (COM) ADVANCE PROCUREMENT (CY) (FY 1976 FOR FY 1979) (HEMO)		1 213.0			1 (1371.8)
	12 DDG-181 CLASS DESTROYER ADVANCE PROCUREMENT (CY) (FY 1976 FOR FY 1979) (HEMO)					800.0 (800.0)
	13 DDG-181 CLASS DESTROYER (MUC) ADVANCE PROCUREMENT (CY) (FY 1976 FOR FY 1979) (HEMO)					1 (1371.8)
	* ITEMS UNDER \$50,000					

UNCLASSIFIED

UNCLASSIFIED  
 DEPARTMENT OF THE NAVY  
 FY 1977 PROCUREMENT PROGRAM  
 APPROPRIATION: 1611 N SHIPBUILDING AND CONVERSION, NAVY  
 EXHIBIT P-1  
 DATE: 01 JAN 1976  
 \*REVISED APRIL 1976

LINE NO	ITEM NOMENCLATURE	IDEM FY 1977 UNIT COST QUANTITY	DOLLARS)		MILIONS OF DOLLARS		TRANSITION		FY 1977		FY 1978	
			ADVANCE PRODUCTION (PY)	LESS: ADVANCE PRODUCTION (PY)	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST	QUANTITY	COST
14	OSCM STEVE CRUISER (MMS) ADVANCE PRODUCTION (CY) (FY 1977 FOR FY 1978) (MEMO)		854,500,000									
15	DDG/A7 AEGIS DESTROYER			1128.9		754.0			1	856.5		
	TOTAL OTHER WARSHIPS						189.8			1987.2		2545.8
	BUDGET ACTIVITY 41 MINE WARFARE + PATROL SHIPS											1201.8
	MINE WARFARE + PATROL SHIPS											
16	P4M PATROL MINE/COTIL MISSILE LESS: ADVANCE PRODUCTION (PY) FUTURE COST GROWTH/FISCALATION	4	(243.41) (-34.33) 92.3			(39.0)						
17	R5G OUTDOOR MISSILE BRIGADE LESS: ADVANCE PRODUCTION FUTURE COST GROWTH/FISCALATION	3	(403.6) (-217.6) 185.6			(82.5)				811.7		8 (1504.8) (-32.4)
18	R5G SUBSEA MISSILE BRIGADE ADVANCE PRODUCTION (CY) (FY 1977 FOR FY 1978) (MEMO)											
	TOTAL MINE WARFARE + PATROL SHIPS											1171.6
	BUDGET ACTIVITY 41 AUXILIARIES, CRAFT + AV PROG COSTS											
	AUXILIARIES + CRAFT											
19	A0 DESTROYER TENDER FUTURE COST GROWTH/FISCALATION	1	(246.3) (-118.6) 127.7			(201.9)						1 (286.4)
20	A5 SUBMARINE TENDER											
	* ITEMS UNDER \$50,000											1 268.9
												289.1

UNCLASSIFIED

UNCLASSIFIED  
DEPARTMENT OF THE NAVY  
FY 1977 PROCUREMENT PROGRAM

EMERIT P-1

\*REVISED APRIL 1976

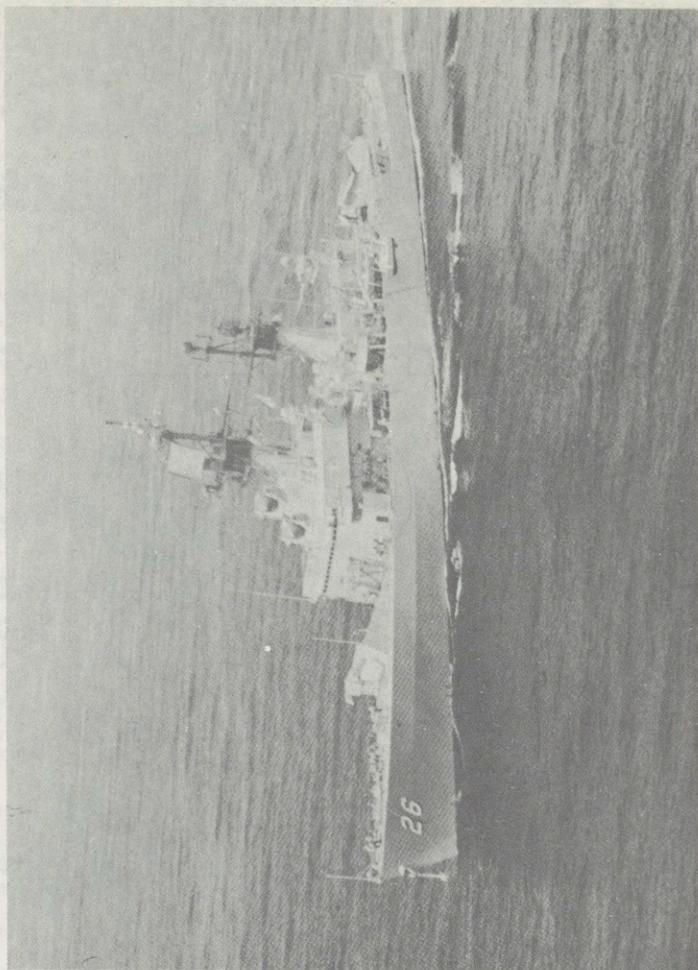
APPROPRIATION: 1611 N. SHIPBUILDING AND CONVERSION, NAVY

DATE: 01 JAN 1976

LIME NO	ITEM DESCRIPTION	IDEMT BY 1977 COST	MILLIONS OF DOLLARS							
			FY 1976 QUANTITY COST	TRANSITION QUANTITY COST	FY 1977 QUANTITY COST	FY 1978 QUANTITY COST				
		102,956,000	2	239.4		1	102.3		1	29.1
21	80 FLEET OILER	(15.5)								
22	T-ACGS SUPPRESS SHIP	(-3.7)	3	(41.4)						
23	T-ATF FLEET OCEAN TUG FUTURE COST GROWTH/ESCALATION	10.6		61.6					4	(64.3)
24	SHOR (SHIP WASTE OFF LOADING RARGE)	10.4		11.5						64.2
25	SERVICE CRAFT FUTURE COST GROWTH/ESCALATION	(30.2)		(11.4)						(26.4)
		22.0		1.4						26.6
26	LANDING CRAFT	21.9		32.5						8.0
27	OUTFITTING	27.8		17.2						7.5
28	POST DELIVERY									35.4
29	COST GROWTH	78.8		932.4						32.7
30	ESCALATION ON PRIOR YEAR PROGRAMS	71.0		450.3						532.7
TOTAL	AUXILIARIES, CRAFT & PY PROG COSTS	361.7		1898.8						1099.5
TOTAL	SHIPBUILDING AND CONVERSION, NAVY	3111.4		4,741.0						2328.4
										692.2
										5,783.0

\* ITEMS UNDER \$50,000

UNCLASSIFIED



FY 1976 PRESIDENT'S BUDGET SUPPLEMENTAL  
SHIP DATA SHEET

SERVICE: NAVY  
NOMENCLATURE: CRUISER (CG-26)  
P-1 LINE ITEM: 11A  
POPULAR NAME: BELKNAP (CG-26)

DESCRIPTION: The BELKNAP (CG-26) will be restored and become the lead ship of the CG 26/28 class for AAW modernization. The extended TERRIER missile system will be further enhanced by the STANDARD missile (SM-2) and HARPOON. Significant firepower is also provided by a 5"/54 Mod 10 gun. Other features include ASROC, torpedoes and a LAMPS helicopter. The twin screw steam turbine powered ship with a speed of 30 knots is 547 feet in overall length with a maximum width of 55 feet. Displacement is 8,500 tons and there are accommodations for 490 officers and men. MISSION: To operate offensively, independently or with strike, anti-submarine or amphibious forces against submarine, air and surface threats.

COST DATA:

(\$ IN MILLIONS)

PROCUREMENT QTY COST	(\$ IN MILLIONS)							CURRENT ESTIMATE TOTAL PROGRAM
	FY 76	FY 77	FY 78	FY 79	FY 80	FY 81		
LESS ADV PROC PY	213.0	0	0	0	0	0	0	1 213.0
NET	0.0	0	0	0	0	0	0	0
ADD ADV PROC CY	0.0	0	0	0	0	0	0	0
WEAPONS SYS COST	213.0	0	0	0	0	0	0	213.0
COST GROWTH/ESC.	0.0	0	0	0	0	0	0	0
OUTFITTING/POST DEL.	0.0	0	2.5	5.0	0	0	0	7.5
PROCUREMENT COST	213.0	0	2.5	5.0	0	0	0	220.5
PROCUREMENT UNIT COST	213.0	0	0	0	0	0	0	8.0
RDT&E	8.0	0	0	0	0	0	0	8.0
MILCON	0.0	0	0	0	0	0	0	0
PROGRAM ACQUISITION COST	221.0	0	2.5	5.0	0	0	0	228.5
PROGRAM UNIT COST	221.0	0	2.5	5.0	0	0	0	228.5

<u>CONTRACT DATA</u>	<u>CONTRACTOR</u>	<u>SHIP CONVERSION</u>	<u>PLANNED AWARD DATE</u>	<u>TYPE OF CONTRACT</u>
	Philadelphia Naval Shipyard	CG-26	to be determined	Project Order

BASIS FOR FY 1976 REQUEST

Damage sustained by the BELKNAP (CG-26) in her 22 November 1975 collision with the USS J. F. KENNEDY (CV-67) was extensive and essentially destroyed the ship's combat capability. Investigation of alternative new construction replacement ships with equal or better capabilities revealed that all would have higher acquisition costs and take longer to acquire than restoration and modernization of BELKNAP. With a sound hull and propulsion plant, the major cost to return this high value asset to the Fleet in the shortest period of time will be the cost of the new combat system suite.

The requirement to restore BELKNAP offers the opportunity for early modernization to meet the objective of the class modernization plan. CG-26 is presently scheduled for AAW modernization commencing in FY 80. Where significant components of existing systems have been destroyed, consideration has been given to replacing those systems with a modernized system, especially when the cost of modernizing now can be shown to be less than the cost to restore now and modernize later. The alternative of simply restoring BELKNAP to her pre-collision condition was found not to be cost effective because of the extensive and costly ripout and rebuilding required, and the additional loss of time associated with the subsequent modernization. Modernization will result in BELKNAP becoming the lead ship for the CG-26/28 class update similar to the CG-16 and DDG-37 AAW modernization programs.

BELKNAP will be equipped with the extended range TERRIER AAW weapon system; improved missile and gun fire control suites, advanced air and surface search radars; HARPOON, an advanced sonar, and an improved anti-ship missile defense system. This modernization will apply to the entire class when scheduled in the early 1980s.

The Navy rationale of modernizing BELKNAP now rather than restoring now and modernizing later at considerably higher cost justifies this budget item.

PRODUCTION DATA:		DELIVERIES										
FISCAL YEAR	QTY	FY 1975 & PRIOR	FY 1976	FY 1977	FY 1977	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	Revrnd	
QUARTER		1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4	1 2 3 4			FY 1981	
PROC YEAR												
FY 1974 and Prior												
FY 1975	1											
FY 1976												
FY 1977												
FY 1978												
FY 1979												
FY 1980												
FY 1981												
TOTAL												
INVENTORY												

CHARACTERISTICS:

	CLASSIFICATION	CG-26
Disp. Full Load	U	8,500 tons
Lgth. OA/Beam EXT.	U	547/55'
Draft, Max. NAVIG.	U	20
Speed	U	30 knots sustained
Shaft HP/No. Screws	U	85,000/2
Radars	U	AN/SPS-10, 48, 49 (space & wght.SPS-40 installed in interim)
Sonars	U	AN/SQS-53
Guns	U	(1) 5"/754 RF single mount (2) PHALANX (Space & wght)
Other Ordnance	U	(1) TERRIER/ASROC launcher (2) HARPOON Quad launchers (2) MK 32 triple torpedo tubes

Cost History Comparison:

	QTY	\$M
Development Estimate		
Procurement	1	220.5
RDT&E		8.0
MILCON		0.0
Total Program Costs		228.5
Current Estimate Total Program (FY 76 Budget Submission)		
Procurement	1	220.5
RDT&E		8.0
MILCON		0.0
Total Program Costs		228.5

TEST DATA

For purposes of reporting Test and Evaluation Data for the AAW Guided Missile Cruiser modernization, the data has been divided into two areas corresponding to the AAW modernization concept.

- I. Modernization (Combat System)
- II. Rehabilitation (Repair)

The AAW modernization is funded in the SCN and RDT&E appropriations.

- I. Modernization (Combat System)

Ship characteristics for CG-26 modernization were approved by the Chief of Naval Operations on 12 March 1976.

- A. The major sub-systems added are:

1. AN/SPS-48C Air Search Radar
  - a. Development Test and Evaluation - Not applicable during the modernization.
  - b. Operational Test and Evaluation - The AN/SPS-48C series radar is manufactured by ITT - GILFILLAN. Production commenced in 1963. Service approval on this version was granted in October 1974.
  - c. Sub-System Characteristics - The AN/SPS-48C air search radar is a three-dimensional digital, high-data-rate, computer-controlled pulsed radar that provides range, azimuth and elevation data.

2. AN/SPS-49 Air Search Radar

- a. Development, Test and Evaluation - Not applicable during the modernization.
- b. Operational Test and Evaluation - The AN/SPS-49 air search radar is manufactured by Raytheon. Commander Operational Test and Evaluation (COMOTEVFOR) completed a successful operational appraisal in December 1975. Service approval is expected by June 1976, with production commencing shortly thereafter.

c. Sub-System Characteristics - The AN/SFS-49 is a new long range two dimensional, air search radar which provides accurate initial range and bearing target detection information for translation into three dimensional radar weapons system designation or as a backup for designation directly to the weapons systems. The characteristics of this radar will enable it to perform in more stringent environments than older 2 dimensional radars.

3. CG/SM-2(ER) Combat System

The BELKNAP will receive the CG/SM-2(ER) combat system which is an upgraded current cruiser combat system to allow employment of the STANDARD Missile-2 (Extended Range). The CG/SM-2(ER) combat system is now in engineering development and is planned for installation in CG-26.

a. Development Test and Evaluation

Initial at sea testing of the CG/SM-2 combat system and the SM-2(ER) missile is scheduled to be conducted. Successful completion of these tests will lead to initial production approval. One of which will be installed in BELKNAP.

b. Operational Test and Evaluation

Operational testing of the combat system and missile will be conducted by COMOPREFOR. SM-2(ER) production rounds will be fired during the testing.

c. Missile Characteristics

Objective Demonstrated

Max Range  
Max Altitude  
Reliability

#### 4. HARPOON Weapons System

HARPOON is being developed under a separate DSARC review program.

##### a. Development Test and Evaluation

To date approximately 34 development prototype missiles have been fired, of which 30 were successful. These include 8 missiles fired during IOT&E. An additional 2 development prototype missiles are scheduled to be fired. Reliability and maintainability data collection and analysis has been developed.

##### b. Operational Test and Evaluation

During IOT&E in early 1974, 8 missiles were fired with 7 successes. OPEVAL of pilot production missiles is now planned to complete during summer 1976, in USS DOWNES (FF-1070) and a P3-C aircraft. Reliability and maintainability are being generated during a comprehensive captive-carry program.

##### c. Systems Characteristics

<u>Parameter</u>	<u>Objective</u>	<u>Demonstrated</u>
Max. Range	60 NM	TECHEVAL and
Probability of Mission Kill	TBS & *	OPEVAL
* depends on characteristics of the target and environment.		

##### 5. MK 116 Mod 1 Underwater Battery Fire Control System

The MK 116 Mod 1 UBPCS is an independent development by Naval Underseas Center (NUC), San Diego, which is a digital development for the USS VIRGINIA. It controls the MK 32 torpedoes tubes and OMLS MK 10.

##### a. Development Test and Evaluation

DT&E is now being conducted at NUC and later in the USS VIRGINIA (CGN-38). TECHEVAL will take place in 3rd Quarter 1977. Reliability and maintainability data collected during this period has confirmed this objective. Current plans are to use a simulator which has been developed by NUC for testing.

b. Operational Test and Evaluation

OPEVAL is planned for FY 1977 by COMOPTEVFOR, in USS VIRGINIA. The tests will include extensive operations against live submarine targets and simulated combat scenarios. The results of this evaluation will be used by the CNO as the basis for a decision for full Approval for service Use (ASU).

c. Systems Characteristics

<u>Parameters</u>	<u>Objectives</u>	<u>Demonstration</u>
Max. Simultaneous Tracks	[ ]	TECHEVAL and OPEVAL

6. Design to Price EW Suite #III

The system is currently in competition between two contractors. Contractor selection will be made in October 1976 after OPEVAL and other considerations.

a. Development Test and Evaluation

Parallel testing of competing contractors' systems is undergoing TECHEVAL now, in USS LEAHY (CG-16). Reliability and maintainability data will be collected and analyzed under Design and Price EW suite DT&E effort.

b. Operational Test and Evaluation

DT&E by COMOPTEVFOR of 2 competing low cost EW suites will be conducted simultaneously on the Pacific Missile Test Center (PMTCC) range in mid-1976. From DT&E, operational effectiveness and suitability of the 2 competing systems will be assessed. OPEVAL tests will include simulated threat scenarios of fully supported coordinated strikes against the test ship during 2 periods a day for 12 consecutive days. During this time the equipment will be manned and maintained by Navy operator and maintenance personnel.

c. Systems Characteristics

<u>Parameters</u>	<u>Objective</u>	<u>Demonstrated</u>
Number of signals tested	[	TECHEVAL and OPEVAL
Number of Target Deceptions - simultaneous		
Tracking accuracy		

II. Rehabilitation (Repair)

The rehabilitation of CG-26 consists of repair of existing retained hull, mechanical, electrical and electronic equipments to an as designed condition. Additionally, alterations and modifications developed as a result of service experience will be made to improve reliability, safety and maintainability of the equipments.

The five month test and checkout period following the industrial period is used to thoroughly test all repaired machinery and equipments insuring successful Final Contract Trials.

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY

For an additional amount for "Research, Development, Test and Evaluation, Navy", \$8,000,000 to remain available for obligation until September 30, 1977.

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, N&Y  
PROGRAM AND FINANCING (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-20-1313-9-1-051

		Budget Plan (Amounts for)				Obligations	
		FY 1976 PRESENTLY AVAILABLE	FY 1976 REVISSED ESTIMATE	FY 1976 PROPOSED SUPPL.	FY 1976 REVISSED ESTIMATE	FY 1976 PROPOSED SUPPL.	
PROGRAM BY ACTIVITIES:							
DIRECT:							
	1.	148,962	148,962	.....	149,133	.....	8,000
	2.	389,595	389,595	.....	389,595	.....	.....
	3.	1,231,185	1,231,185	.....	1,232,384	.....	.....
	4.	41,566	41,566	.....	41,584	.....	.....
	5.	595,375	603,375	8,000	615,798	.....	8,000
	6.	104,593	104,593	.....	104,806	.....	.....
	7.	884,895	884,895	.....	884,895	.....	.....
	8.	391,149	391,149	.....	392,189	.....	.....
	TOTAL DIRECT	3,317,220	3,321,772	8,000	3,340,000	.....	8,000
	REIMBURSABLE (TOTAL)	225,000	225,000	.....	225,000	.....	.....
	SUBTOTAL	3,442,220	3,450,220	8,000	3,462,000	.....	8,000
	INTERACTIVITY OBLIGATIONS	-58,000	-58,000	.....	-58,000	.....	.....
	TOTAL	3,384,220	3,392,220	8,000	3,404,000	.....	8,000
FINANCING AND REIMBURSEMENTS FROM:							
11	FEDERAL FUNDS	-66,450	-66,450	.....	-66,450	.....	.....
13	TRUST FUNDS	-57,030	-57,030	.....	-57,030	.....	.....
14	UNAPPORTIONED BALANCE AVAILABLE, START OF PERIOD	-550	-550	.....	-550	.....	.....
21	UNAPPORTIONED BALANCE AVAILABLE, END OF PERIOD	.....	.....	.....	.....	.....	.....
	FOR COMPLETION OF PRIOR YEAR BUDGET	.....	.....	.....	.....	.....	.....
	PLANS	.....	.....	.....	.....	.....	.....
	REPLACEMENT FLOW ON TO PRIOR YEAR	.....	.....	.....	-122,698	.....	.....
	BUDGET PLANS TO PRIOR YEAR	.....	.....	.....	.....	.....	.....
24	UNOBLIGATED BALANCE AVAILABLE, END OF PERIOD	.....	.....	.....	.....	.....	.....
	FOR COMPLETION OF PRIOR YEAR BUDGET	.....	.....	.....	102,918	.....	.....
25	UNOBLIGATED BALANCE LAPSING	.....	.....	.....	.....	.....	.....
	UNOBLIGATED BALANCE LAPSING, BUD PLAN	.....	.....	.....	.....	.....	.....
	BUDGET AUTHORITY	3,260,190	3,268,190	8,000	3,268,190	.....	8,000
BUDGET AUTHORITY							
40	APPROPRIATION (ADJUSTED)	3,268,190	3,268,190	8,000	3,268,190	.....	8,000
44.10	PROPOSED SUPPLEMENTAL FOR WAGE-BOARD PAY RAISES	3,238,190	3,246,190	8,000	3,246,190	.....	8,000
44.20	PROPOSED SUPPLEMENTAL FOR CIVILIAN PAY RAISES	4,300	4,300	.....	4,300	.....	.....
	RELATION OF OBLIGATIONS TO OUTLAYS:	17,500	17,500	.....	17,500	.....	.....
71	OBLIGATIONS INCURRED, NET	.....	.....	.....	.....	.....	.....
72	OBLIGATED BALANCE, START OF PERIOD	3,275,970	3,275,970	.....	3,275,970	.....	8,000
74	OBLIGATED BALANCE, END OF PERIOD	1,743,719	1,743,719	.....	1,743,719	.....	-6,000
90	OUTLAYS, EXCLUDING PAY RAISE SUPPLEMENTAL	3,133,600	3,133,600	.....	3,133,600	.....	8,000
91.10	OUTLAYS FROM WAGE BOARD PAY RAISE SUPPLEMENTAL	4,200	4,200	.....	4,200	.....	.....
91.20	OUTLAYS FROM CIVILIAN PAY RAISE SUPPLEMENTAL	17,500	17,500	.....	17,500	.....	.....

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, NAVY

OBJECT CLASSIFICATION (IN THOUSANDS OF DOLLARS)

IDENTIFICATION CODE 07-20-1319-0-1-051

FT 1976  
 PERM AND  
 SUPPL  
 ESTIMATE

90,526  
 813  
 3,128  
 94,157

PERSONNEL COMPENSATIONS  
 11.1 PERMANENT POSITIONS 90,526  
 11.3 POSITIONS OTHER THAN PERMANENT 813  
 11.5 OTHER PERSONNEL COMPENSATION 3,128  
 TOTAL PERSONNEL COMPENSATION 94,157

DEFECT OBLIGATIONS  
 PERSONNEL COMPENSATION 72,857  
 PERSONNEL BENEFITS: CIVILIAN 6,869  
 BENEFITS FOR FORMER PERSONNEL 40  
 13.0 TRAVEL AND TRANSPORTATION OF PERSONS 12,180  
 22.0 TRANSPORTATION OF THINGS 1,500  
 23.0 RENT, COMMUNICATIONS, AND UTILITIES 4,500  
 24.0 PRINTING AND REPRODUCTION 850  
 25.0 OTHER SERVICES 1,123,000  
 26.0 SUPPLIES AND MATERIALS 9,500  
 31.0 EQUIPMENT 300  
 32.0 LANDS AND STRUCTURES 300  
 41.0 GRANTS, SUBSIDIES, AND CONTRIBUTIONS 100  
 TOTAL DIRECT OBLIGATIONS 3,132,000 8,000

REIMBURSABLE OBLIGATIONS  
 PERSONNEL COMPENSATION 21,640  
 12.1 TRAVEL AND TRANSPORTATION OF PERSONS 1,370  
 21.0 TRAVEL AND TRANSPORTATION OF PERSONS 1,370  
 23.0 RENT, COMMUNICATIONS, AND UTILITIES 400  
 24.0 PRINTING AND REPRODUCTION 300  
 25.0 OTHER SERVICES 99,300  
 26.0 SUPPLIES AND MATERIALS 4,200  
 31.0 EQUIPMENT 700  
 TOTAL REIMBURSABLE OBLIGATIONS 130,000 130,000

95.0 INTERACTIVITY OBLIGATIONS  
 SUBTOTAL 3,462,000 8,000  
 -58,000

TOTAL 3,404,000 8,000

RESEARCH, DEVELOPMENT, TEST AND EVALUATION, NAVY  
(In Thousands of Dollars)

	FY 1976 Presently Available	FY 1976 Revised Estimate	FY 1976 Proposed Supplemental
Budget Activity 5: Ships, Small Craft, and Related Equipment	\$595,375 <sup>1/</sup>	603,375 <sup>1/</sup>	\$8,000

The supplemental request of \$8,000 million in Budget Activity 5 will provide for development of a complete contract design package for the BELKNAP. This package will include preliminary Combat System Design, initial preparation of GFE, GFI and Engineering Service requirements and development of detailed specifications and contract guidance plans. The funds required for this effort will provide the basis for development of the detail/working drawings to be utilized for restoration in the shipyard.

<sup>1/</sup> Includes \$3,127 million proposed supplemental request for wage board and civilian pay raises now pending before the Congress.

## EXHIBIT R-1

DEPARTMENT OF THE NAVY  
FY 1977 RDT & E PROGRAM

## APPROPRIATION: 135.9 M RESEARCH DEVELOPMENT TEST &amp; EVAL, NAVY

PROGRAM LINE ELEMENT NO	ITEM DESCRIPTION	ACT	TENS OF DOLLARS						DESCRIPTIVE SUMMARY E PAGE NO.
			FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	
1	61152N IN-HOUSE LAB INDEPENDENT RESEARCH	1	13,567	14,855	3,861	16,948	16,999	U	1
2	61153N DEFENSE RESEARCH SCIENCES	1	105,135	116,206	29,120	138,078	161,950	U	5
3	65151N STUDIES AND ANALYSIS SUPPORT (MO)	1	2,386	2,356	997	2,239	2,299	U	49
4	65152N STUDIES AND ANALYSIS SUPPORT (NAVY)	1	8,479	8,374	2,198	7,925	8,313	U	53
5	65153N MAR CORPS OPNS ANALYSIS GP, ONA	1	764	802	210	842	984	U	56
5	65154N CENTER FOR NAVAL ANALYSIS (NAVY): MILITARY SCIENCES	1	6,858 137,149	6,369 140,762	1,652 37,638	8,235 174,267	8,146 194,581	U	59
7	62541N AIRCRAFT TECHNOLOGY	2	21,028	22,237	5,601	24,149	27,780	U	87
8	63201N AIRBORNE ASM DETECTION SYS	2	2,065	2,981	696	4,171	3,749	U	99
9	63202N AVIONICS	2	1,042	3,666	2,135	7,500	11,711	U	105
10	63203N V/STOL DEVELOPMENTS	2	1,087	2,702	1,296	4,127	5,651	U	119
11	63205N KCX AERIAL TANKER	2						U	
12	63206N ABN ELECTRONIC WARFARE EQUIPMENT	2	17,196	31,392	8,944	12,051	11,695	U	129
13	63207N ENVIRONMENTAL APPLICATION	2	2,317	3,439	1,022	2,435	5,049	U	135
14	63208N MXM MEDIUM LIFT HELO	2					6,000	U	138
15	63210N AIRCRAFT PROPULSION (ADV)	2	11,233	9,576	2,299	13,706	14,909	U	143
16	63216N AIRBORNE LIFE SUPPORT SYSTEMS	2	1,478	1,722	331	2,978	2,299	U	153
17	63228N CV TACTICAL SUPPORT CENTER	2	1,163	2,916		4,544	4,058	U	156
18	63251N AIRCRAFT SYSTEMS (ADV)	2		1,911	391	3,254	7,459	U	159
19	63254N AIR ASM	2	21,081	31,097	2,365	3,549	2,556	U	163
20	63257N V/STOL AIRCRAFT DRY	2	12,680	22,845	5,912	44,034	59,611	U	166
21	63258N ADV PROPULSION FOR V/STOL	2	2,136	2,558	598	2,441	2,998	U	181
22	63259N ACOUSTIC SEARCH SENSORS (ADV)	2	8,884	9,407	2,712		2,000	U	184

DEPARTMENT OF THE NAVY  
FY 1977 R D T + E PROGRAM

EXHIBIT R-1

APPROPRIATION: 1319 N RESEARCH DEVELOPMENT TEST + EVAL, NAVY

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS							S FY 1978 C	DESCRIPTIVE PAGE NO.
			FY 1975	FY 1976	FY 1977						
23	63265N AIRBORNE TIME COUNTERMEASURES	2	2,624	3,052	1,050	7,423	8,617	U	188		
24	63261N TACTICAL AIRBORNE RECONNAISSANCE	2	2,314	6,918	1,519	8,100	8,311	U	197		
25	63262N ACFT SURVIVABILITY/VULNERABILITY	2		1,562	382		6,474	U	203		
26	63263N MODULAR FLIR	2	199					U			
27	63264N A WEATHER ATTACK	2				1,000	6,351	U	209		
28	63265N REMOTE PILOTTED VEHICLES	2		1,064	525		3,748	U	212		
29	64203N AVIONICS DEVELOPMENT/VAST	2	6,154	5,395	686		4,322	658	U	215	
30	64207N AIRBORNE NIGHT OBS SYS	2		9,657	150		1,107	U	221		
31	64209N TACT AIRBORNE SIG EXPLOIT	2	257				14,351	17,489	U	224	
32	64210N SEARCH AND RESCUE SYSTEM	2									
33	64211N AIMS/ATCRS/MARK XII	2	2,170	2,000	200		218	110	U	230	
34	64212N LAMPS MK III	2					83,200	111,899	U	234	
35	64213N VSTOL/HEAD DEV (ENG)	2	1,900	5,100	1,600		9,776	2,070	U	243	
36	64215N ACFT HANDLING/SERVICING EQ	2	1,472	2,224	449		1,300	2,500	U	246	
37	64218N ENVIRONMENTAL MODIFICATION SYSTEM	2	512	977	191						
38	64219N AIRBORNE ASN DEV	2	12,000	11,007	4,206		24,935	24,249	U	252	
39	64220N ACFT IR SIGNATURE SUPPRESSION	2	360	760	183		758	758	U	265	
40	64223N VISUAL TARGET ACQ/ZD/MPN CONTROL SYS	2	1,057	1,237							
41	64255N AIR ELECTRONIC WARFARE	2	5,591	6,315	1,447						
42	64258N AERIAL TARGET SYS DEV	2	12,977	14,594	2,353		14,477	14,145	U	275	
43	64259N VCX	2	636	5,606	1,440		982				
44	64260N CH-53E	2	46,683	10,510	1,000		14,043	1,290	U	288	
45	64261N ACOUSTIC SEARCH SENSORS (ENG)	2	12,259	17,738	3,782		29,219	32,151	U	295	

57  
88

## EXHIBIT R-1

DEPARTMENT OF THE NAVY  
FY 1977 R D T + E PROGRAM

## APPROPRIATION 1319 N RESEARCH DEVELOPMENT TEST + EVAL - NAVY

PROGRAM LINE NO	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS							DESCRIPTIVE PAGE NO.	
			FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981		
46	6A262N HSX ASH HELICOPTER (EN6)	2	106	919	304					U	313
47	6A263N NAVAL AIR COMBAT FTR	2	28,044	110,293	22,597	346,900	633,629	U			350
48	6A264W LIFE SUPPORT EQUIP	2				1,900	1,851	U			65
49	2A134N A-6 SQUADRONS	2	11,026	4,132		5,630		U			67
50	2A135N A-7 SQUADRONS	2	7,579	6,759	500	216		U			
51	2A152N EARLY WARNING ACFT SQUADRONS	2						U			
52	2A234N S-3 SQUADRONS	2	859					U			
53	25662N ACFT PROPULSION EVAL GENERAL	2	2,504	2,977	601	31,400	4,028	U			73
54	25663N ACFT FLIGHT TEST GENERAL	2	3,487	3,561	986	4,093	5,356	U			77
55	25666N F-401 ENGINE	2	4,600	2,000		1,000		U			80
56	25667N F-14A	2	13,886					U			
57	25674N EW WARFARE COUNTER RESPONSE AIRCRAFT + RELATED EQUIPMENT	2	5,117 281,775	5,007 389,505	1,008 81,861	4,957 728,218	5,451 1,063,414	U			85
58	62331N MISSILE PROPULSION TECHNOLOGY	3	7,886	7,955	2,094	8,720	10,247	U			369
59	6232N STRIKE WARFARE WEAPONRY TECHNOLOGY	3	36,743	36,625	9,438	42,400	44,727	U			379
60	63301N LONG RANGE SURFACE WPN SYS.	3	14,824	11,194	1,979			U			
61	63303N ADV ARH SYS TECH	3	2,971	3,525	208	3,444	3,328	U			401
62	63304N ADV SURF TO AIR WPN SYS	3		6,734		3,000	3,400	U			404
63	63305N ADV A/L AIR-TO-AIR MSL SYS (AGILE)	3		3,045	3,343	6,652	7,500	U			408
64	63306N ADV AIR LAUNCHED AIR-TO-SUR MSL SYS	3	6,544	7,951	1,900	4,527	8,236	U			413
65	63307N ADV FUZE DESIGN	3				667	1,740	U			417
66	63308N A/A MSL TECH DEMO	3		2,011	905	2,175	2,159	U			420
67	63309N SHIPBOARD INTER RANGE CHBT SYS (SIRCS)	3	3,253	4,592	6,737	16,100	20,000	U			423

DEPARTMENT OF THE NAVY  
FY 1977 R O T + E PROGRAM

EXHIBIT R-1

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS						DISCRETIONARY SUMMARY PAGE NO.		
			FY 1975	FY 1976	FY 1977	FY 1977	FY 1978	FY 1978			
66	63310N NATO AIR+SURF-TO-SURF MSL	3			500			98.0	U	427	
69	63312N A/L S/L ANTI-SHIP MSL (HARPOON)	3			1,049			3,664	U	430	
70	63318N ARMY/NAVY SM	3			2,700			5,500	U	432	
71	63353N AIR-TO-GROUND WPN TECH	3	2,001	826	202			848	U	437	
72	63356N WEAPONIZING (PROT)	3	4,551	2,981	576			4,588	U	440	
73	63361N SEA LAUNCH CRUISE MSL (SLCM)	3	37,343	93,734	37,232			17,551	U	443	
74	63363N HI-SPEED ANTI-RADIATION MSL (HARM)	3	14,284	27,746	3,086				U		
75	63364N ENCAPSULATED HARPOON	3	9,726	6,279					U		
76	63366N SURFACE MISSILE GUIDANCE	3	300	300	1,000			1,610	2,989	U	449
77	63367N SUB ASM STANDOFF WPN	3						1,450	5,488	U	453
78	63368N S/L M26B TECH	3			4,027				U		
79	63369N A/G STANDOFF WEAPONS	3							U		
80	64303N AEGIS	3	63,000	65,937	9,666			26,348	27,785	U	457
81	64304N CECS (COMBAT SYS ENG DEV SITE)	3		45,066	6,534			80,871	34,166	U	463
82	64352N SURFACE LAUNCHED WEAPONRY SYS TECH	3	14,832	9,118	1,960			15,803	18,951	U	468
83	64354N A/A MISSILE SYS ENGR	3		6,952	1,458			29,200	30,414	U	479
84	64355N CONDOUR DUEL MODE	3							U		
85	64358N CLOSE-IN WPN SYS (PHALANX)	3	14,974	15,041				19,877	9,234	U	489
86	64368N HI-SPEED ARMAMENT (HARM)	3						33,495	22,313	U	498
87	64361N NATO SEA SPARROW	3	4,109	7,486	2,299			11,502	6,949	U	509
88	64362N POINT DEFENSE IMPROVEMENT	3	7,146	2,572	133			3,842	1,367	U	513
89	64363N TRIDENT MISSILE SYS	3	639,767	725,942	165,743			522,551	348,108	U	517
90	64364N ANTI-SHIP WEAPONRY	3	59,331	11,871					U		

DEPARTMENT OF THE NAVY  
 FY 1977 R O T + E PROGRAM  
 APPROPRIATION 1319 N RESEARCH DEVELOPMENT TEST + EVAL, NAVY

EXHIBIT R-1

LINE ELEMENT NO	PROGRAM NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS					FY 1978 C	S
				FY 1975	FY 1976	FY 1977	FY 1978 E	FY 1978 U		
91	6A365N	SURFACE MISSILE WARHEAD DEV	3	445	1,022	207	364	2,962	U	595
92	6A366N	SURFACE MISSILE GUIDANCE	3	25,221	30,000	3,998	16,869	12,120	U	598
93	6A367N	SEA LAUNCH CRUISE MSL (SLOM) (ENG)	3				164,900	251,600	U	543
94	6A368N	VERTICAL LAUNCH STD	3				5,515	9,163	U	549
95	11221N	FLEET BALLISTIC MISSILE SYSTEM	3	38,660	53,001	16,804	111,846	131,169	U	353
96	11224N	SSBN SECURITY	3	18,775	20,152	5,346	29,788	33,788	U	341
97	11401N	ELF COMMUNICATIONS	3	0,205	14,577	3,782	29,000	19,300	U	344
98	11402N	GRYPHON	3	8,160	11,220	4,864	17,952	13,700	U	377
99	11403N	HYDRUS	3	0,013	6,257	1,721	1,958	1,782	U	363
100	12427N	SPASUR	3				216	2,300	U	366
101	25664N	SIDEWINDER MISSILE (AIM-9L)	3	11,661	3,038				U	
102	25668N	SPARRON (AIM-7F)	3	5,992					U	
103	25669N	CONDOR (AGM-53)	3	5,301					U	
		MISSILES + RELATED EQUIPMENT		1,074,038	1,251,405	295,705	1,240,860	1,107,358		
104	63401N	NAVIGATION SATELLITE	4	7,465	11,441	1,590	9,000	13,580	U	577
105	63451N	SPACE TECHNOLOGY	4	2,611	2,562	399	3,560	3,988	U	589
106	33190N	SATELLITE COMMUNICATIONS	4	43,301	26,866	4,039	10,579	13,385	U	553
107	35111N	WEATHER SERVICE	4	1,479	995	238	1,370	1,616	U	571
		MILITARY ASTRONAUTICS + RELATED EQUIP		54,856	41,566	6,266	24,509	32,489		
108	62542N	NUCLEAR PROPULSION TECHNOLOGY	5	24,412	27,595	6,896	32,229	31,852	U	659
109	62543N	SHIPS, SUBS + BOATS TECH	5	20,443	24,166	6,574	28,200	30,049	U	673
110	63501N	REACTOR PROPULSION PLANTS	5	6,276	5,816	1,520	6,625	7,156	U	693

DEPARTMENT OF THE NAVY  
 FY 1977 R O T E PROGRAM  
 EXHIBIT R-1  
 APPROPRIATION: 1319 N RESEARCH DEVELOPMENT TEST & EVAL, NAVY

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS					S FY 1978 C	E PAGE NO.
			FY 1975	FY 1976	FY 1977	FY 1978 C	FY 1978 C		
111	63502N ADVANCED MINE COUNTERMEASURES	5	3,995	4,592	1,419	8,345	18,415 U	701	
112	63504N ADV SUBMARINE SONAR DEVELOPMENT	5	3,026	8,019	3,679	15,906	24,793 U	703	
113	63506N ANTI-SHIP TORPEDO DEFENSE	5	2,028	2,160	847	5,312	7,523 U	729	
114	63508N SHIP PROPULSION SYSTEM	5	23,630	21,783	4,454	27,968	23,285 U	729	
115	63509N NEW SHIP DESIGN	5	1,603	1,582	424	1,688	1,742 U	745	
116	63511N AIR CONTROL	5	3,415	7,010	2,200	2,596	1,335 U	748	
117	63512N AIRCRAFT LAUNCHING AND RETRIEVING	5	200	1,900	1,900	6,476	11,243 U	753	
118	63513N SHIPBOARD SYS COMPONENT DEVELOPMENT	5	2,352	3,641	883	3,955	3,075 U	756	
119	63514N SHIPBOARD DAMAGE CONTROL	5	3,313	3,616	1,333	4,598	4,551 U	760	
120	63515N ADVANCED IDENTIFICATION TECHNIQUES	5	2,051	2,626	1,807	4,300	8,051 U	767	
121	63516N RADAR SURVEILLANCE EQUIP (ADV)	5	521	4,293	1,498	—	—	773	
122	63517N HI PERFORMANCE UNDERWATER VEH	5	—	—	—	3,000	8,000 U	781	
123	63518N ADVANCED NAVIGATION DEVELOPMENT	5	6,022	5,834	830	—	651 U	785	
124	63519N ADVANCED COMMAND DATA SYSTEMS	5	8,326	10,440	2,449	9,894	4,543 U	788	
125	63520N ADVANCED COMMUNICATIONS	5	1,655	2,199	596	2,431	4,574 U	795	
126	63521N SURF ELECTRONIC WARFARE (ADV)	5	3,371	5,140	1,999	3,474	2,453 U	799	
127	63522N ADV SUBMARINE SURVEILL EQ PROG	5	4,708	5,020	1,212	—	—	804	
128	63523N OCEAN INDUSTRY PROTECTION	5	—	—	—	—	—	808	
129	63524N SHIPS CHBT OPERATIONAL READY ENHANCE	5	—	—	—	538	1,074 U	810	
130	63531N HY-130 STEEL (NEW SSN MATERIAL)	5	3,455	2,997	620	2,629	1,551 U	813	
131	63534N SURFACE EFFECT SHIPS	5	45,781	36,156	17,057	48,000	68,008 U	817	
132	63553N SURFACE ASH	5	9,812	13,731	4,807	4,831	4,727 U	825	
133	63561N SUBMARINES (ADV)	5	704	3,700	1,723	7,049	15,606 U	831	

DEPARTMENT OF THE NAVY  
 FY 1977 RDT & E PROGRAM

## EXHIBIT R-1

## APPROPRIATION 1315 N RESEARCH DEVELOPMENT TEST &amp; EVAL, NAVY

LINE ELEMENT NO	PROGRAM NO	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS						DESCRIPTIVE SUMMARY PAGE NO.
				FY 1975	FY 1976	FY 1977	FY 1977 C	FY 1978 C		
134	63562N	SUB TACTICAL WARFARE SYS (ADV)	5	4,731	6,732	2,586	12,785	20,832	U	847
135	63564N	SHIP DEVELOPMENT (ADV)	5	14,223	20,629	7,343	19,297	26,346	U	897
136	63566N	AMPHIB ASSAULT CRAFT	5	20,761	20,233	2,377	9,200	7,449	U	867
137	63567N	HYDROFOIL CRAFT	5	5,995	4,217	1,482	4,728	5,356	U	875
138	63578N	A4W/AIG NUC PROP PLANT	5	7,188	6,815	1,050	8,055	9,203	U	879
139	63579N	D2M NUC PROP REACTOR	5	7,188	7,285	1,982	9,919	3,884	U	883
140	63580N	ADV DESIGN SUB NUCLEAR PROP	5	12,397	6,000	2,000	12,561	15,244	U	887
141	63582N	COMBAT SYSTEM INTEGRATION	5	2,721	1,168	502	3,516	11,293	U	891
142	63583N	JOINT SONAR DEVELOPMENT	5	2,317	2,398	711	2,228	699	U	899
143	63584N	OVER-THE-HORIZON TECHNOLOGY	5	490						
144	63585N	SHIPBOARD AUTOMATION DEV	5	1,331	871	83	542	5,686	U	902
145	63586N	NAVAL INSHORE WARFARE CRAFT	5	1,079	1,014		1,187	2,332	U	906
146	63587N	TEST BED DEV AND DEMONSTRATION	5	16,080	14,046	4,054	22,217	4,0275	U	909
147	63588N	IMPROVED SSBN	5				1,831	5,398	U	914
148	64502N	SUBMARINE COMMUNICATIONS	5	4,183	4,285	1,346	3,418	4,451	U	917
149	64503N	SUBMARINE SONAR DEVELOPMENT (ENG)	5	3,091	5,138	1,098	17,600	14,845	U	921
150	64506N	8W/CW COUNTERMEASURES	5	246	532	133	1,101	1,428	U	924
151	64508N	RADAR SURVEILLANCE EQUIPMENT (ENG)	5	8,010	4,433	517	9,001	3,651	U	927
152	64510N	COMMUNICATIONS SYSTEMS	5	2,339	1,718	2,281	1,698	2,243	U	930
153	64511N	INTELLIGENCE SYSTEMS	5				2,000	1,645	U	933
154	64514N	NAVIGATION SYSTEMS (ENG)	5				3,645	916	U	935
155	64515N	SUBMARINE SURVEILLANCE EQUIP PROGRAM	5	9,378	11,015	3,210			C	939
156	64517N	JT ADV TAC COMD/CTRL/COMM PROG	5	5,270	2,965	790	4,109	3,033	U	942

DEPARTMENT OF THE NAVY  
FY 1977 R, D, I + E PROGRAM

EXHIBIT R-1

\*REVISED APRIL 1976

THOUSANDS OF DOLLARS

PROGRAM LINE ELEMENT NO	ITEM NOMENCLATURE	ACT	FY 1975	FY 1976	FY 1977	FY 1978 C	SUMMARY	
							FY 1978 C	PAGE NO.
157	64518N COMBAT INFO CENTER CONVERSION	5	4,364	5,089	1,447	10,525	3,998 U	947
158	64525N NATIONAL MICROWAVE LANDING SYS	5						
159	64554N SURFACE ELECTRONIC WARFARE	5	8,430	7,570	2,496	8,435	9,078 U	955
160	64559N DEEP SUBMERGENCE TECH (NUC POWER)	5	516	2,513	885			967
161	64560N TRIDENT SUBMARINE SYS	5	107,592	84,224	12,606	75,200	57,103 U	970
162	64561N SUBMARINES (ENG)(ACOUSTIC COMI)	5				1,056	2,533 U	983
163	64562N SUB TACTICAL WARFARE SYSTEMS (ENG)	5	5,638	7,005	2,223	13,794	24,028 U	986
164	64564N NATO PMH (PATROL HYDROFOIL MSL)	5	17,626	11,334		1,199		1003
165	64565N SEA CONTROL SHIP (M)	5	25					
166	64566N ACOUSTIC COMMUNICATIONS	5	4,380	9,036	1,932	7,065	7,251 U	1011
167	*64567N SHIP DEVELOPMENT (ENG)	5	17,461	38,722*	9,666	22,902	19,713 U	1017
168	64568N DESIGNED TO COST ELEC WARFARE SYS	5	19,154	9,615	472	3,019	543 U	1021
169	64570N CSGN DEVELOPMENT	5				33,274	22,171 U	1026
170	64571N CVNX DEVELOPMENT	5				11,472	8,508 U	1029
171	24281N SUBMARINES	5	11,670	6,241	1,564	6,323		595
172	24573N COVER AND DECEPTION PROGRAM	5	3,726	3,238	524	2,618	3,008 U	604
173	25604N TACTICAL INFORMATION SYS	5				11,125	15,198 U	607
174	25623N SURF SHIP SONAR MODERNIZATION	5	5,101	5,443	1,131	13,745	9,249 U	614
175	25634N SUBMARINE SILENCING	5	8,831	9,164	3,705	13,761	13,205 U	623
176	25670N TAC INTELL PROCESSING	5	318	600	150	987	986 U	627
177	31011N CRYPTOLOGIC ACTIVITIES	5	10,867					
178	31015N TECHNICAL SENSOR COLLECTION	5	5,575	17,022	11,598			
179	31022N SCIENTIFIC AND TECH INTELLIGENCE	5	520	2,004	569	1,828	1,825 U	645

DEPARTMENT OF THE NAVY  
 FY 1977 R O T + E PROGRAM

EXHIBIT R-1

\* Revised APRIL 1976

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS						FY 1978 D	E	DESCRIPTIVE SUMMARY PAGE NO.
			FY 1975	FY 1976	FY 1977	FY 1977	FY 1977	FY 1978 C			
180	31025N INTELLIGENCE DATA HANDLING SYSTEM	5	536	544	144	447		418 U		649	
181	33401N COMSEC	5	4,481	4,134	1,177					651	
182	34111N SPECIAL ACTIVITIES	5	119,300	48,497	11,431	45,230		56,000 U		655	
183	35125N ADV SUPPORT COMMUNICATIONS	5				12,909		13,451 U		657	
	SHIPS SMALL CRAFT + RELATED EQUIP		668,242	603,375 *	185,932	750,809		824,330			
184	62633N UNDERSEA WARFARE WEAPONRY TECHNOLOGY	6	18,282	21,141	5,376	23,137		26,733 U		1054	
185	63601N MINE DEVELOPMENT	6	5,289	17,026	5,589	8,100		19,468 U		1065	
186	63605N ADVANCED CONVENTIONAL ORNANCE	6	1,245	3,634	930	3,700		4,231 U		1077	
187	63606M ADVANCED MARINE CORPS WEAPONS SYS	6	1,820	1,801	296	8,300		12,048 U		1081	
188	63609N SURFACE LAUNCHED MUNITIONS	6	12,382	7,926	1,102	1,618		3,775 U		1087	
189	63618N ADV ASM TORP	6	1,825	10,833	3,110	18,000		25,686 U		1090	
190	63653N GUN SYS	6	386								
191	63654N JT SERV EXPLOSIVE ORD DEV (ADV)	6	1,585	1,658	421	2,008		2,029 U		1095	
192	63655N ADV NAVAL GUN SYS	6	1,633	998	493						
193	63657N LTMT INTERM CAL GUN	6				1,800		2,700 U		1098	
194	64601N MINE DEVELOPMENT (ENG)	6				8,268		6,349 U		1101	
195	64602N 5-INCH GUIDED PROJECTILE	6				19,349		14,637 U		1105	
196	64603N UNGUIDED CONV'L AIR LAUNCHED WEAPONS	6	2,946	6,304	2,189	8,119		9,300 U		1119	
197	64604N CW WEAPONS	6				1,460				1125	
198	64606M ORD/COMBAT VEHICLES SYS	6	2,929	3,275	716	5,325		5,780 U		1128	
199	64652N FIRE CONTROL SYS (ENG)	6	12,674	14,184	1,569	9,330		7,509 U		1130	
200	64654N JT SERV EXPLOSIVE ORD DEV (ENG)	6	617	659	171	735		735 U		1131	

DEPARTMENT OF THE NAVY  
FY 1977 R O T + E PROGRAM

EXHIBIT R-1

APPROPRIATIONS 1319 N RESEARCH DEVELOPMENT TEST + EVAL - NAVY

PROGRAM LINE NO	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS								DESCRIPTIVE SUMMARY PAGE NO.	
			FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981	FY 1982		
201	64655N MAJOR CAL L/W GUN	6	6,229	5,691		1,163						1143
202	24384N MINES + MINE SUPPORT	6	13,144	1,505		501						1035
203	25630N TORPEDO SUPPORT EQUIP	6		460								
204	25631N LIGHTWEIGHT ASM TORPEDO	6										
205	25645N MODULAR GUIDED GLIDE WPM TWP	6	2,819	2,450		1,220						1040
206	25660N MK-48 TORPEDO (OP-SYS)	6	5,397	3,204								1045
207	25661N SUB ASM IMPROVEMENT	6		471		21						
208	26620N HC WEAPONRY	6	1,080	1,351		434						1092
	ORDNANCE COMBAT VEHICLES + RELATED EQUIP		91,302	184,533		25,227						157,833
209	62711N UNDERSEA TARGET SURVEILLANCE	7	23,707	25,086		6,825						1211
210	62712N SURF/AEROSPACE TARGET SURVEIL TECH	7	16,280	16,658		4,698						1221
211	62721N COMMAND + CONTROL TECHNOLOGY	7	15,975	17,932		4,925						1241
212	62734N COUNTERMEASURES TECHNOLOGY	7	13,160	15,162		4,116						1249
213	62757N TR-HUMAN ENGR TECH	7	7,307	6,747		1,765						1259
214	62758N BIOMEDICAL TECHNOLOGY	7	7,518	8,611		2,281						1267
215	62759N OCEAN/ATMOSPHERIC SUPPORT TECHNOLOGY	7	17,829	20,385		5,292						1279
216	62760N LOGISTICS TECHNOLOGY	7	18,415	11,415		2,994						1293
217	62761N MATERIALS TECHNOLOGY	7	13,486	13,546		3,171						1305
218	62762N ELECTRONIC DEVICE TECHNOLOGY	7	13,128	16,124		3,996						1321
219	62763N NAVAL PERSONNEL SUPPORT TECHNOLOGY	7	2,157	1,990		511						1339
220	62764N CHEMICAL/BIOLOGICAL DEFENSE TECH	7	150	151		50						1342
221	62765N ENERGY AND ENVIRONMENTAL PROTECTION	7	6,794	9,818		2,476						1345

## EXHIBIT R-1

DEPARTMENT OF THE NAVY  
FY 1977 R O T E PROGRAM

## APPROPRIATION: 1319 N RESEARCH DEVELOPMENT TEST &amp; EVAL. NAVY

LINE PROGRAM NO	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS						DISCREPITIVE PAGE NO.
			FY 1975	FY 1976	FY 1977	FY 1977 E	FY 1978 C	FY 1978 E	
222	62766N LAB INDEPENDENT EXPLORATORY DEV	7	13,279	6,333	1,610	6,925	6,008 U	1397	
223	63701N HUMAN FACTORS ENGR TECH	7	1,865	1,694	345	2,073	3,100 U	1361	
224	63702N OCEAN ENGINEERING SYS DEVELOPMENT	7	5,499	5,970	1,752	6,445	6,099 U	1365	
225	63704N OCEANOGRAPHIC INSTRUMENTATION DEV	7	925	676	221	923	823 U	1372	
226	63705N ADVANCED LOGISTICS	7	2,435	7,097	2,343	1,661	2,318 U	1375	
227	63706N MEDICAL DEVELOPMENT (ADV)	7	5,145	5,650	1,516	6,351	5,822 U	1380	
228	63707N MANPOWER CONTROL SYSTEMS DEVELOPMENT	7	1,694	1,631	273	2,500	4,966 U	1385	
229	63708N ANTI-SUB WARFARE SIGNAL PROCESSING	7	2,377	2,643	825	2,771	2,993 U	1393	
230	63709N ADVANCED MARINE BIOLOGICAL SYSTEM	7				3,736	3,734 U	1396	
231	63710N DIRECTED ENERGY PROGRAMS	7				2,637	2,637 U	1399	
232	63711N FLEET TAC D+E PROGRAM	7	1,090		435	973	2,790 U	1403	
233	63712N ADV ELEX COMPONENTS	7	10,535	11,159	3,571	14,145	15,067 U	1406	
234	63713N OCEAN ENGINEERING TECH DEVELOPMENTS	7	1,833	1,084	138				
235	63714N NUCLEAR VULNERABILITY/SURVIVABILITY	7							
236	63716N LASER, CH/COH	7	5,375	1,647	495	1,900	3,128 U	1422	
237	63717N INTEGRATED INFO SPT	7				7,659	5,739 U	1426	
238	63719N CONTAINER OFFLOAD + TRANSFER SYS	7				3,216	2,275 U	1431	
239	63720N EDUCATION + TRAINING	7	6,240	7,630	2,051	8,049	9,597 U	1434	
240	63721N ENVIRONMENTAL PROTECTION	7	8,924	8,893	2,273	8,055	5,913 U	1443	
241	63722N NAVAL SPECIAL WARFARE	7	1,860	2,183	842	2,976	3,051 U	1449	
242	63723N ASW FORCE COMMAND/CONTROL SYS	7	6,855						
243	63724N NAVY ENERGY PROGRAM (ADV)	7	1,439	1,179	316	3,693	5,049 U	1452	
244	63735N MHWCCS ARCHITECTURE	7	700	4,700	125	545	1,090 U	1457	

DEPARTMENT OF THE NAVY  
FY 1977 R O T E PROGRAM

EXHIBIT R-1

APPROPRIATION: 1319 N RESEARCH DEVELOPMENT TEST + EVAL - NAVY

LINE ELEMENT NO NUMBER	PROGRAM NO NUMBER	ITEM NOMENCLATURE	ACT	DOLLARS							S SUMMARY	DESCRIPTIVE PAGE NO.	
				FY 1975	FY 1976	FY 1977	FY 1978	FY 1979	FY 1980	FY 1981			
245	63742N	ADV ELECT DEVICES DEV	7					11,466				2,000 U	1460
246	63754N	HI ENERGY LASER	7	22,469	31,271	6,940		24,120				15,679 U	1463
247	63763N	AERO/OCEAN SURVEILLANCE	7	21,216	4,309	1,246							1468
248	63765H	OTHER MAR CORPS DEV (ADV)	7	5,425	4,700	398		1,276				1,251 U	1477
249	63766H	MAR CORPS DATA SYSTEMS (ADV)	7	2,639	2,435	461		616				1,751 U	1480
250	63788N	MORDED SURVEIL SYS (MSS)	7	12,000	12,666	4,289		14,250				14,735 U	1482
251	63795H	SURVEIL TONED ARRAY SENSOR (SURTAS)	7	7,688									
252	63798N	TACTICAL TONED ARRAY SONAR	7	11,900	6,945	2,860		14,262				10,616 U	1488
253	63791N	RELIABILITY/MAINTAINABILITY INIT	7	595									
254	63733N	ASM SENSORS (PROTO)	7	945	2,606	203		543					1493
255	63794N	ASM SURVEILLANCE	7	5,265	7,041	2,807		9,350				14,305 U	1496
256	63795N	LONG RANGE ACOUSTIC PROPAGATION	7	7,845	9,620	3,485		8,674				8,644 U	1509
257	63796N	ABN ELECTRO-MAGNETIC OPTICAL SYS	7	2,754	2,429	906		3,185				2,579 U	1519
258	63797N	SURF ELECTRO-MAGNETIC OPTICAL SYS	7	1,203	2,749	1,348		3,674				6,751 U	1525
259	63758N	SPECIAL PROCESSES	7	54,721	36,200	11,978		46,386				43,877 U	1533
260	63799N	R+D FUTURE OPTIONS (ADV)	7										
261	64742N	COUNTER-INTELLIGENCE SYS	7	472	300	100		466				465 U	1535
262	64783N	TRAINING DEVICES PROTOTYPE DEV	7	9,023	6,619	1,565		6,225				7,349 U	1538
263	64706N	REMOTE UNATTENDED SENSOR WARFARE	7	525		371							
264	64748N	NAVY ENERGY PROGRAM (ENG)	7	649	726	504		2,260				2,313 U	1541
265	64711N	FLEET COMMAND SUPPORT	7		18,216	1,954		8,065				6,411 U	1545
266	64712N	SEMI	7	1,469	3,507	994		2,688				3,213 U	1549
267	64761N	INTELLIGENCE (ENG)	7	1,609	1,209	416		1,786				1,859 U	1552

EXHIBIT R-1

DEPARTMENT OF THE NAVY  
FY 1977 R D T + E PROGRAM

APPROPRIATION: 1319 N RESEARCH DEVELOPMENT TEST + EVAL, NAVY

PROGRAM LINE ELEMENT NO NUMBER	ITEM NOMENCLATURE	ACT	THOUSANDS OF DOLLARS						E SUMMARY PAGE NO.
			FY 1975	FY 1976	FY 1977	FY 1978 C	FY 1978 U		
266	64765H OTHER MAR CORPS DEVELOPMENT (ENG)	7	6,855	5,300	2,881	6, 69	3,716 U	1596	
269	64766H MAR CORPS DATA SYSTEMS (ENG)	7	179	5,666	1,893	4,458	11,804 U	1565	
270	64771H MEDICAL DEV (ENG)	7	743	50	15			U	
271	64769H SURV TONED ARRAY SYS	7		28,444	4,999	16,444	5,089 U	1569	
272	64793H FOREIGN WEAPONS EVALUATION	7	2,890	1,001	264	2,031	1,151 U	1575	
273	24311H UNDERSEA SURVEILLANCE SYS	7	36,704	38,176	8,818	26,943	29,480 U	1153	
274	26313H MARCORPS TELECOMMUNICATIONS	7	1,301	1,185	102	777	655 U	1175	
275	26617H HC OPERATION LOGISTICS DEV	7	414	291	119	450	520 U	1178	
276	26619H HC OPERATION ELECTRONICS DEV	7	738	1,130	207	370	1,027 U	1181	
277	26622H HC DATA SYSTEMS (DP-SYS)	7	4,352	4,217	950	4,551	4,173 U	1183	
278	28010H JT TACTICAL COMM PROG (TRI-TAC)	7	934	7,130	1,161	3,674	5,982 U	1187	
279	28010H JT TACTICAL COMM PROG (TRI-TAC)	7	12,284	14,583	4,738	15,689	20,707 U	1191	
280	33126H LONG-HAUL COMMUNICATIONS (DCS)	7			50	1,316	2,446 U	1201	
281	33131H MINIMUM ESSENTIAL EMER COMM NETWORK	7	2,340	4,882	414	3,588	2,999 U	1204	
282	34113H SPECIAL SYSTEMS	7		4,471	917	2,900	2,148 U	1208	
283	35836H BASE OPERATIONS	7						U	
	OTHER EQUIPMENT		461,532	664,885	131,694	521,642	533,439		
284	65802N INTRA-TYPE TAC D+E SUPPORT	8				2,128	3,191 U	1579	
285	65803N ELECTRO-MAGNETIC COMPAT/EFFECTIVE	8	49					U	
286	65804N TECHNICAL INFORMATION SERVICES	8	1,068	988	248	773	880 U	1582	
287	65822N LANT UNDERSEA TEST/EVAL CTR (AUTEC)	8	3,490	15,374	4,826	16,638	16,836 U	1586	
288	65833N MANAGEMENT AND TECHNICAL SUPPORT	8	9,870	8,270	1,971	10,752	8,740 U	1589	
289	65854H DEVELOPMENT CENTER SUPPORT	8	3,174	2,411	602	2,049	2,111 U	1599	

DEPARTMENT OF THE NAVY  
 FY 1977 R O T + E PROGRAM  
 APPROPRIATION: 1119 N RESEARCH DEVELOPMENT TEST + EVAL, NAVY  
 EXHIBIT R-1  
 \*Revised April 1976  
 THOUSANDS OF DOLLARS

PROGRAM LINE NUMBER	ITEM NOMENCLATURE	ACT	FY 1975	FY 1976	FY 1977	FY 1977	FY 1978	DESCRIPTION SUMMARY
290	65855N NAVAL ARTIC RES LAB - PT BARRON	0	4,174	4,746	1,954	5,208	4,800 U	1602
291	65856N STRATEGIC TECHNICAL SUPPORT	0	1,696	1,791	469	2,064	2,680 U	1605
292	65457N INTERNATIONAL ROT+E	0	664	767	204	960	1,042 U	1609
293	65458N TACTICAL ELECTRO SUPPORT	0	2,604	3,554	1,207	5,367	5,228 U	1612
294	65859N ANTI-SHIP MSL DEFENSE TEST RANGE	0	7,892	2,846	3,547	5,914	5,866 U	1616
295	65860N USS WIP POCKET	0	995					
296	65861N ROT+E LAB + FAC MGMT SUPPORT	0	44,966	42,807	11,926	43,051	44,025 U	1623
297	65862N ROT+E INSTRUM + MTL SUPPORT	0	22,401	22,701	7,404	26,126	25,800 U	1631
298	65863N ROT+E SHIP + ACFT SUPPORT	0	36,391	43,144	12,412	55,939	57,108 U	1641
299	65864N TEST + EVAL SUPPORT	0	139,285	144,105	37,812	148,249	153,349 U	1647
300	65865N OPERATION-TEST + EVAL CAPABILITY	0	3,803	3,675	1,147	3,986	3,375 U	1661
301	65866N TELECOMM SYS ARCHITECTURE	0	2,812	3,556	1,130	4,316	4,400 U	1664
302	65868N R+O OPERATIONAL PLANNING SPT	0	366	94	240	2,330	3,200 U	1666
	PROGRAMMIDE MANAGEMENT + SUPPORT		284,720	301,149	65,493	335,940	343,431	
	TOTAL OPERATIONAL SYSTEMS DEVELOPMENT		459,127	336,187	91,454	449,814	452,868	
	TOTAL RESEARCH DEVELOPMENT TEST + EVAL, NAVY		3,051,614	3,325,220	826,122	3,925,203	4,325,193	

DEPARTMENT OF THE NAVY  
FY 1977 R D T + E PROGRAM

SUMMARY

\*REVISED APRIL 1974

THOUSANDS OF DOLLARS

	FY 1975	FY 1976	FY 1977	FY 1978
SUMMARY RECAP OF RESEARCH CATEGORIES				
EXPERIMENTAL DEVELOPMENT	118,702	131,061	32,981	178,959
ADVANCED DEVELOPMENT	287,789	309,124	80,749	349,756
ENGINEERING DEVELOPMENT	670,872	659,776	236,940	361,288
MANAGEMENT AND SUPPORT	1,268,957	1,319,850	390,556	1,962,239
RESEARCH AND DEVELOPMENT (FYDP PROGRAM 6)	2,601,487	2,989,033*	734,668	3,952,187
OPERATIONAL SYSTEMS DEVELOPMENT	459,127	336,187	91,454	449,114
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, NAVY	3,051,614	3,325,220*	826,122	4,325,705

	FY 1975	FY 1976	FY 1977	FY 1978
SUMMARY RECAP OF BUDGET ACTIVITIES				
MILITARY SCIENCES	137,149	146,982	37,638	174,267
MISSILES + RELATED EQUIPMENT	281,775	339,595	81,061	1,063,414
MILITARY ASTRONAUTICS + RELATED EQUIP	1,074,038	1,251,185	295,705	1,240,880
SHIPS SMALL CRAFT + RELATED EQUIP	654,856	814,566	165,532	1,017,358
ORONANCE COMBAT VEHICLES + RELATED EQUIP	691,532	104,553*	25,227	824,399
PROGRAMMABLE MANAGEMENT + SUPPORT	461,532	484,885	131,634	167,033
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, NAVY	3,051,614	3,325,220*	826,122	4,325,705

	FY 1975	FY 1976	FY 1977	FY 1978
SUMMARY RECAP OF FYDP PROGRAMS				
STRATEGIC FORCES	81,833	105,607	32,437	204,359
GENERAL PURPOSE FORCES	179,375	128,283*	23,440	138,121
RESEARCH AND DEVELOPMENT (FYDP PROGRAM 6)	188,319	110,297	30,577	116,737
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, NAVY	2,601,487	2,981,033	734,668	3,475,369
TOTAL RESEARCH DEVELOPMENT TEST + EVAL, NAVY	3,051,614	3,325,220*	826,122	4,325,705

FY 1977 RDT&E DESCRIPTIVE SUMMARY

Program Element: 64567N Title: Ship Development (Engineering)  
 Category: 4 - Engineering Development Budget Activity: 5 - Ships, Small Craft, and Related Equipment

RESOURCES (PROJECT LISTING): (\$ in Thousands)

Project Number	Title	FY 1975	FY 1976	FY 1977	FY 1978	Additional to Completion	Total Estimated Cost
		Actual	Estimate	Estimate	Estimate		
TOTAL FOR PROGRAM ELEMENT		17,481	38,722*	22,902	19,713	Continuing	
SSL67	Ship Contract Designs	17,481	38,722*	22,902	19,713	Continuing	

BRIEF DESCRIPTION OF ELEMENT: Carry out Contract Design Phase for non-strategic ships in Navy's Shipbuilding Program. Conduct Engineering Development phase of selected systems/subsystems for these ships. Note: Commencing in Fiscal Year 1977 Aircraft Carrier (CVNX) and AEGIS Strike Cruiser (GSCN) engineering development will be performed under Program Elements 64571N and 64570N respectively.

BASIS FOR FY 1977 RDT&E REQUEST: In response to requirements of the shipbuilding program, carry out portions of the contract design phase for the following ship types: AEGIS Destroyer (DDG 47), PHM Support Ship (AGHS), Submarine Tender (AS), Fleet Tug (T-ATF), Destroyer Tender (AD), Attack Submarine (SSN), Mine Counter-Measures Ship (MCM), Ocean Surveillance Ship (T-AGOS), and Fleet Oiler (AO). Commence system integration for Guided-missile Frigate (FGC) design update. Complete AEGIS Destroyer combat system design. Continue Amphibious Ship (LX) dry well development. Aircraft Carrier and AEGIS Strike Cruiser engineering development is transferred to separate program elements in FY 1977.

BASIS FOR INCREASE IN FY 1977 OVER FY 1976: Not Applicable.

PERSONNEL IMPACT - FY 1977 MAN YEARS

	RDT&E	Procurement	Total
(1) Federal Civilian Employees	9	-	9
(2) Contractor Employees	279	-	279
Total	288	-	288

Program Element: 64567N  
 Category: 4 - Engineering Development

Title: Ship Development (Engineering)  
 Budget Activity: 5 - Ships, Small Craft, and Related Equipment

**DETAILED BACKGROUND AND DESCRIPTION:** This program element includes efforts which occur during the Contract Design Phase of the Navy's Shipbuilding Program, with the exception of Fleet Ballistic Missile (FBM) ships. The output of the Ship Contract Design Phase is an engineering data package consisting of contract drawings, contract guidance drawings, and ship specifications. For an original ship design, the Contract Design Phase is normally preceded sequentially by the Feasibility and Preliminary Design Phases. The ship specifications describe the general design requirements and the essential features, functions, and arrangement of the ship. Taken together with the contract drawings, and contract guidance drawings, they define the ship as to dimensions, structure, arrangements, performance, power, machinery, weaponry, etc. The Contract Design Phase is therefore a prerequisite to the development of the working drawings from which a ship is constructed. In addition to the above this program element may include, on a case basis, the engineering development required in the design of a ship subsystem, such as, combat system design, integration of subsystems, computer program development, nuclear propulsion plant development, and support of test and evaluation. In response to Congressional direction to transfer the funding for contract design from the Shipbuilding and Conversion, Navy (SCN) to the RDT&E Appropriation, the effort was performed under existing Program Element 63564N during FY 74 and was performed under this program element commencing in FY 75. The Aircraft Carrier (CVNX) and AEGIS Strike Cruiser (SSGN) contract designs and subsystem engineering development require large expenditures of funds commencing in FY 1977. Separate program elements, 64571N and 64570N respectively, have been established for these two designs in FY 1977 to provide better program visibility.

**RELATED ACTIVITIES:** P. E. 63564N - Ship Development - Provides inputs to Ship Contract Design, P. E. 64500N - Computer-aided Ship Design - Develops processes for applying computer technology to all phases of ship design, P. E. 64304N - Combat System Engineering Development Site (CSSEDS) - Supports AEGIS ship combat systems, P. E. 64570N - SSGN, P. E. 64571N - CVNX. The following program elements support development of advanced marine vehicles: P. E. 63534N - Surface Effect Ships, P. E. 63566N - Amphibious Assault Landing Craft, and P. E. 63567N - Advanced Hydrofoil Craft.

**WORK PERFORMED BY:**

**In-house:** Naval Ship Engineering Center, Hyattsville, MD; Naval Electronic Systems Command, Arlington, VA; Naval Electronics Laboratory Center, San Diego, CA; Naval Air Development Center, Warminster, PA; Naval Underwater Systems Center, Newport RI; Naval Surface Weapons Center, White Oak, Silver Spring, MD.  
**Contract:** General Dynamics, New London, CT; RCA, Moorestown, NJ; J. J. Henry Co. Inc., New York, NY; John J. McMullen Assoc. Inc., New York, NY; M. Rosenblatt & Son, Inc., New York, NY; Wheeler Industries, Washington, DC; and others.

**PROGRAM ACCOMPLISHMENTS AND FUTURE PROGRAMS:**

1. FY 1975 and Prior Accomplishments:  
 Completed contract design phases for:  
 Fleet Tug (T-ATF) - A new design for Military Sealift Command (MSC) - manned tugs to replace overage seagoing tugs - first production (lead) ship in FY 1975 Shipbuilding Program.

Program Element: 64567N  
 Category: 4 - Engineering Development

Title: Ship Development (Engineering)  
 Budget Activity: 5 - Ships, Small Craft, and Related Equipment

Medium Repair Drydock (ARDM) - A new design which will provide drydocking facilities at an established base for deep draft submarines - lead drydock in FY 1976 Shipbuilding Program.  
 Commenced contract design phase for Submarine Tender (AS) - Updating of AS 39 Class design to provide ship capable of tending improved submarines - lead ship in FY 1977 Shipbuilding Program.  
 Provided design support for Combat System Engineering Development Site (CSEDS) which will effect systems integration for AEGIS ships.

2. FY 1976 Program:  
 Complete contract design phases for:  
 Destroyer Tender (AD) - Updating of AD 37 Class design to provide intermediate-level maintenance facilities and other logistics support for improved destroyer classes (including DD 963 Class) as well as replace coverage AD hulls - lead ship in FY 1975 Shipbuilding Program.  
 Fleet Oiler (AO) - A new design for replacement of World War II vintage AO 22 Class ships - lead ship in FY 1976 Shipbuilding Program.  
 Continue contract design phases for AS.  
 Commence contract design phases for:  
 PHM Support Ship (AGHS) - Conversion of an LST which will provide a mobile base and serve as maintenance facility for a Hydrofoil (PHM) squadron - anticipate Shipbuilding Program modification to meet PHM requirement.  
 AEGIS Destroyer (DDG 67) - will replace obsolete DDG's lead ship in FY 1977 Shipbuilding Program.  
 FY 1977 Fleet Tug (T-ATF) - modified-repeat design of FY 1975 lead ship to permit either MSC or USN crew.  
 FY 1978 AD - Update of FY 1975 lead ship design.  
 FY 1978 Attack Submarine (SSN) - Design improvement of SSN 688 Class currently under construction.  
 Commence design of Aircraft Carrier (CVNX) and AEGIS Strike Cruiser (GSGN) nuclear propulsion plants.  
 Commence DDG 47 combat system design and continue GSGN combat system design.  
 \*Commence development of a complete contract design package for CG-26 (BELKNAP).  
 3. FY 1979 Planned Program:  
 Continue contract design phases for AS, AGHS, DDG 47, FY 1977 T-ATF and FY 1978 AD and SSN.  
 Commence contract design phase for AEGIS Strike Cruiser (GSGN) - lead ship in FY 1978 Shipbuilding Program.  
 Continue DDG 47 and GSGN combat system designs.  
 Continue CSGN and Aircraft Carrier (CVNX) nuclear propulsion plant designs.  
 Commence Amphibious Ship (LX) dry well engineering development - LX is to replace coverage LSD's - lead ship in FY 1981 Shipbuilding Program.
4. FY 1977 Planned Program:  
 Complete contract design phases for DDG 47, AGHS, AS and FY 1977 T-ATF.  
 Continue contract design phases for FY 1978 AD and SSN.

Program Element: 64567N Title: Ship Development (Engineering)  
 Category: 4 - Engineering Development Budget Activity: 5 - Ships, Small Craft, and Related Equipment

- Commence contract design phases for:  
 Mine Counter-Measures Ship (MCM) - to be primary vehicle for new mine countermeasures equipment - lead ship in FY 1979 Shipbuilding Program.  
 Ocean Surveillance Ship (T-AGOS) - to be primary vehicle for Surveillance Towed Array Sensor (SURTASS) system - lead ship in FY 1978 Shipbuilding Program.  
 FY 1978 Fleet Oiler (AO) - modified-repeat design of FY 1976 lead ship.  
 Commence system integration for Guided-missile Frigate (FFG) design update - will incorporate specified military improvements commencing with FY 1979 Shipbuilding Program.  
 Complete AEGIS Destroyer (DDG 47) combat system design.  
 Continue Amphibious Ship (LX) dry well development.
5. FY 1978 Planned Program:  
 Complete contract design phases for T-AGOS, and FY 1978 Destroyer Tender (AD), Attack Submarine (SSN), and AO.  
 Continue MCM contract design phase.  
 Commence contract design phases for:  
 Ammunition/Combat Store Ship (AE/AFS) - will be capable of performing the functions of an ammunition and/or combat store ship - lead ship in FY 1980 Shipbuilding Program.  
 Air Cushion Landing Craft (LCAC) - will replace World War II design displacement - hull craft.  
 Complete LX dry well engineering development.  
 Continue FFG system integration.
6. Program to Completion: Continuing program.

Mr. MAHON. We will also insert in the record your prepared statement.

I suggest that you brief it at this time, and tell us what the meat of it is, as quickly as you reasonably can.

[The statement follows:]

#### STATEMENT OF DIRECTOR, SURFACE WARFARE DIVISION, CNO

Mr. Chairman and members of the committee, I am Read Adm. Robert E. Morris, USN, Director Surface Warfare Division, Office of the Chief of Naval Operations. I have with me Capt. John A. Buck, USN, Deputy to the Deputy Commander for Surface Ships at Naval Sea Systems Command Headquarters, Capt. John B. Orem, USN, project manager for the *Belknap* restoration and Capt. R. G. Murphy of my staff. I am pleased to be able to address the subject of restoration of U.S.S. *Belknap* with this committee. The *Belknap* collision with *John F. Kennedy* last year resulted in extensive damage to *Belknap*'s combat system suites and essentially destroyed the ship's capability.

With a sound hull and minimally damaged propulsion plant, *Belknap* combat system suite replacement was studied extensively within the Department of the Navy. A look at possible candidate new construction replacements, with the same or better warfighting capabilities, revealed that none was available at a cost comparable to that of restoring and modernizing *Belknap*. Further, the acquisition time for building a new ship, even one with less capability, would be much longer.

The alternative of simply restoring the ship to her precollision configuration is not feasible, since there would be major problems in acquiring certain equipments no longer in production. Since the *Belknap* has already been scheduled for modernization in fiscal year 1980, it will be cheaper to modernize now rather than simply restore now and modernize later.

Accomplishment of the restoration program will result in *Belknap* becoming the lead ship for the CG-26/28 class baseline III update.

Modernization is to include such major improvements as the extended range terrier missile system, upgraded Navy tactical data system, new air search radars, an upgraded sonar system with underwater battery fire control system, a digital gunfire control system, close in weapons system, and harpoon weapons system.

With the SM2 (ER) the *Belknap* will have the most advanced AAW capability in the fleet with range approximating that found today only in the Talos cruiser. In surface warfare, the harpoon missile will provide a significant new capability. The gun system modifications are consistent with those needed for introduction of the guided projectile in the early 1980's.

The ASW suite will provide increased reliability and maintainability and is the recommended long-range plan for the CG-26/28 class.

The combat direction system configuration which is recommended is precisely the same as that previously planned for her next overhaul. It is the same as the remainder of the CG-26/28 class. The benefits derived from maintaining class commonality are significant in the area of life cycle support, particularly NTDS computer programing.

In the case of active detection, the original configuration of *Belknap* included the AN/SPS-48 three-dimensional air search, the AN/SPS-43 two-dimensional air search, and the AN/SPS-10F surface search radars.

The modernization will include the updated AN/SPS-48C three-dimensional air search, and the AN/SPS-40 for long-range capability. When the newer AN/SPS-49 is available, we would expect to backfit it. The ship will retain the AN/SPS-10 surface search radar.

In antiair warfare, the CG-26 was originally built without digital fire control and weapons direction systems. Restoration to original configuration is neither possible nor desirable. The modernization will include the digital MK-76-MOD, 9 gun/missile fire control system with weapons direction system MK-14 which includes the SM-2 extended range surface-to-air missile capability. This installation will make *Belknap* the first ship to deploy with a fully operational SM-2 (ER) capability.

In antisubmarine warfare, the restoration program will replace the *Belknap* AN/SQS-26 sonar with the AN/SQS-53A sonar which is the digital update of the SQS-26. This is in consonance with the long-range plans for the class

modernization. In surface warfare, the *Belknap* restoration will upgrade the existing 5-inch/54-caliber MK-42 gun mount from MOD-7 to MOD-10 which brings significantly improved reliability. The gun fire fine control system MK-68 will be retained and the fire control radar will be improved to provide a significant increase in reliability.

In addition to the combat suite restoration, work is also planned in other areas. These include preservation and upkeep for the inactive period, restoration of superstructure, repair of existing components, such as propulsion, hull machinery, electrical, and electronics. Additional planning includes installation of the fiscal year 1977 fleet modernization program alteration package. Cost estimates for this work are included in the restoration program.

The Navy estimates the cost of repair and modernization of *Belknap* to be \$213 million in fiscal year 1976 SCN dollars and \$8 million in fiscal year 1976 R.D.T. & E. funds.

The current *Belknap* restoration schedule calls for completion of preliminary design work in spring 1977 with the commencement of repair work to start approximately October 1977. Completion is scheduled for October 1979.

Admiral MORRIS. Yes, sir, thank you, Mr. Chairman.

Following the collision with the *John F. Kennedy*, the Navy studied very carefully what we thought we should do with the ship which had a sound hull and only minimally damaged propulsion equipment. We studied first possible new construction replacements with the same or better war-fighting capabilities, and found none were available at a cost comparable to that of restoring and modernizing *Belknap*.

We did then decide that modernization in conjunction with the restoration was the course of action which made the most sense to us from a military standpoint as well as from a dollar standpoint.

The modernization will include the extended range Terrier missile system, an upgraded Navy tactical data system, new air search radars, an upgraded sonar system with underwater battery fire control system, a digital gunfire control system, close in weapons system, and the Harpoon weapons system.

We believe that we have combined new capability with reliability and maintainability, to give us the best possible capability in this ship, which will now be the lead ship for the update of the CG-26 and CG-28 class, and that update is to follow with the other ships of the class in a few years.

In addition to the combat restoration, we are going to be doing work in other areas, preservation and upkeep for the inactive period, restoration of the superstructure, repair of the existing propulsion, hull, machinery, electrical, electronics components, and so forth. Cost estimates for this work are also included in the restoration program.

The Navy estimates that the cost of repair and modernization of the *Belknap* will be \$213 million in fiscal year 1976, SCN dollars, and \$8 million in 1976, R.D.T. & E.N. funds. The schedule calls for completion of preliminary design in mid-1976 and commencement of repair work approximately October 1977, with completion scheduled for October 1979.

I believe that summarizes my written statement for the record, Mr. Chairman.

#### ORIGINAL DELIVERY AND SHIP COST

Mr. MAHON. All right.

Admiral, when was the *Belknap* delivered to the fleet, and what was the initial cost of this ship?

Admiral MORRIS. Mr. Chairman, she was built with funds appropriated in fiscal year 1961, and delivered, commissioned in November 1964. The fiscal year 1961 dollar cost was about \$78 million.

#### PREVIOUS OVERHAUL AND MODERNIZATION

Mr. MAHON. When was the last overhaul of the *Belknap*?  
Admiral MORRIS. 1972.

Mr. MAHON. How extensive was that?

Admiral MORRIS. She has had two overhauls, Mr. Chairman, 1969 and 1972, which included modernization. The modernization portions or other than routine work to keep her machinery in order, totals over her life about \$50 million worth.

Mr. MAHON. Was the *Belknap* ever subjected to conversion?

Admiral MORRIS. No, sir.

#### STATUS OF DESIGN

Mr. MAHON. You think the indicated design work will be completed in mid-1976. When did this design effort begin?

Admiral MORRIS. We have done some minimal amount already, Mr. Chairman, but we are awaiting the provision of funds in accordance with the supplemental until we can undertake the bulk of the design work.

Mr. MAHON. What further design work will be required? When will it begin, and when will it be completed?

Admiral MORRIS. We are attempting to find funds with which we can begin the work now. Preliminary design will be completed late this summer. It covers design of the ship for the modernization and the installation of the new equipment to replace those which have been destroyed in the collision.

Mr. MURPHY. What other design work will be required, Admiral?

Admiral MORRIS. Design of the superstructure itself, which will be somewhat altered from the previous configuration, and the modernization equipments.

Mr. MURPHY. Do you have any idea when that design effort will begin and when it will be completed, beyond the preliminary design effort?

Admiral MORRIS. May I ask Captain Buck to respond?

Captain BUCK. I'm Captain Buck.

As you know, the design phase normally for this type of conversion takes 10 to 12 months. So we anticipate completion of the preliminary and the beginning of contract design in that timeframe.

#### CONVERSION TO BE DONE AT PHILADELPHIA NAVAL SHIPYARD

Mr. MURPHY. The justification data indicates that the planned award date is "to be determined." Is it possible the contract for this modernization effort will not be awarded until fiscal year 1977?

Captain BUCK. Our current plan is to assign the ship to the Philadelphia Naval Shipyard, and in that case, we would not need to go through the contract award process. This can be done quickly.

## STATUS OF SUBSYSTEMS' DEVELOPMENT

Mr. MURPHY. Is it possible to install the Aegis system on the *Belknap*?

Admiral MORRIS. Perhaps I can answer that one, Mr. Murphy.

Mr. MURPHY. Certainly.

Admiral MORRIS. This possibility was considered. There are several reasons why we do not believe that it is advisable. First, the first of the Aegis systems is scheduled now to be delivered from the factory in April of 1980, and would require something on the order of 1 year to be installed in the first Aegis ship thereafter. We are planning on having *Belknap* back to sea at least 2 years before that could take place. Then further we are planning on the *Belknap* for the SM-2 extended range missile system, and the Aegis system is scheduled for installation on those ships which will have the medium range SM-2 installation. So that it would be incompatible as it currently exists, and while it would be possible to convert the Aegis to the extended range capability, it would be quite expensive, and it would create significant training and class commonality problems.

Mr. MURPHY. You propose to install in the USS *Belknap* the AN/SPS-49 air search radar, the extended range standard missile-2 combat system, the MK-116 Mod 1 underwater battery fire control system, and the design to price electronic warfare suite III. From a review of the justification data, it appears that none of these systems has completed their development and test programs. Is there any reason why currently used systems should not be installed in the *Belknap* instead of the aforementioned undeveloped and unproven systems?

Admiral MORRIS. The systems you have mentioned, Mr. Murphy, are scheduled for operational evaluation and approval for service use prior to the *Belknap's* return to the fleet. I cannot recall the complete list you mentioned, but there are perhaps two or three exceptions. Those are the SPS-49 radar, and if that system is not available, we will install an off-the-shelf SPS-40 radar, one which is currently approved in the fleet, and then plan to backfit the 49 radar into the ship at some later date at a routine overhaul. The CIWS close-in weapons system, we are asking for space and weight reservation, foundations and cabling only, so that it would be installed at a later date, when service-approved. In addition the design to price ECM suit hasn't been service approved as yet.

The others are scheduled at this time for service approval before the recommissioning date that the *Belknap* will be joining the fleet.

## MK-71 8-INCH 55-CALIBER VERSUS MK-42 5-INCH 54-CALIBER GUN

Mr. MURPHY. Why have you decided to use a 5-inch 54-caliber gun rather than the Navy's new 8-inch gun?

Admiral MORRIS. The 5-inch gun is currently in the *Belknap* and was completely undamaged by the collision. With relatively minimal expenses, we can upgrade that gun to make it capable of using the guided projectiles which we anticipate will be available in the 1980's. And that gun in addition has both a surface and antiair capability, which we felt more nearly comports with the principally AAW-ori-

ented mission of the class. We will be putting Harpoon on the ship as we are in essentially all of our combatants for the antisurface capability which we believe the ship requires.

Mr. MURPHY. Well, if you propose to have an SM-2 missile, which is an anti-air missile, on the U.S.S. *Belknap*, why do you concern yourself with requiring an anti-air gun?

Admiral MORRIS. I believe the point was that we have the SM-2 missile for the principal AAW weapon. We have the Harpoon for the principal surface weapon. The 5-inch gun provides a backup for each of those weapons, which the 8-inch gun could not. It would provide a backup, of course, on the surface side.

Mr. MURPHY. I wonder if you could provide for the record the range of the 5-inch/54 and the range of the 8-inch gun.

Admiral MORRIS. Yes, sir.

[The information follows:]

The 5-inch/54 MK 42 has a maximum range of \_\_\_\_\_ yards, the 8-inch/55 MK 71 has a range of \_\_\_\_\_ yards.

Mr. MURPHY. Is it possible to install the 8-inch gun on the *Belknap*?

Admiral MORRIS. I will provide a definitive answer for the record, if I may. I believe that it is possible. But I would like to amend that answer for the record.

[The information follows:]

While it could be done, the following facts militate against it. Installation would require a major rebuilding of the after part of the ship, including re-framing of the hull, at a prohibitive cost. Second, the additional weight of the 8-inch gun would mean giving up the helicopter capability and perhaps other essential capabilities as compensation. Finally, the 8-inch gun is not dual anti-air-warfare/surface warfare capable as is the 5-inch/54 gun.

#### VALIDITY OF COST ESTIMATE

Mr. MURPHY. Without the benefit of a completed design, how confident are you about the \$213 million estimate to modernize the *Belknap*?

Admiral MORRIS. We believe the estimate is a good one, and you are, of course, correct about not yet completing the design. We have done the most careful job which we can, and we have refined that estimate since the collision several times. We expect that it is within the limits of our possibility of knowledge right now—we think it is a good estimate.

Mr. MURPHY. Did you refine it downward or upward?

Admiral MORRIS. The last one I remember was slightly lower.

Mr. MURPHY. Did you have a higher estimate?

Admiral MORRIS. No, sir.

Mr. MURPHY. You estimate it will take 2 years to complete the modernization effort. How much do you have in the \$213 million for escalation and inflation?

Admiral MORRIS. May I ask Captain Buck to answer that question?

Captain BUCK. Approximately \$17 million, Mr. Murphy.

Mr. MURPHY. Over the 2 years?

Captain BUCK. Yes, sir.

## STATUS OF DESIGN

Mr. MURPHY. How will you spend the \$8 million in R.D.T. & E. funds?

Admiral MORRIS. Captain Buck has a breakout of those funds, I believe.

Captain BUCK. I would like to provide you the breakout and the major tasking that we intend to pursue. For preliminary combat systems design, we estimate a requirement for \$1.5 million. We estimate a requirement to prepare Government materiel ordering, Government-furnished equipment and engineering services, at half a million. We are estimating preliminary detailed specifications excluding the combat systems to be about \$2.5 million worth of design effort. And the contract design phase which includes systems engineering, configuration control, and other items, is estimated at \$3.5 million. This totals \$8 million.

Mr. MURPHY. And if you will put in the record, please, Captain, when the contract design will begin, and when it will be completed.

Captain BUCK. Yes, sir.

[The information follows:]

Contract design will begin in July 1976 and will be completed by May 1977.

Mr. MURPHY. How can you order material and equipment now without a completed design?

Admiral MORRIS. Well, we know, Mr. Murphy, that we are going to require certain basic systems, pieces of hardware and so forth, and that is fairly straightforward. We can order those. We also know that we are going to require and we can at least come very close on an estimate of such things as sheet aluminum, which has a long leadtime, 12 to 14 months, perhaps, to provide the right kinds and shapes of aluminum that we need.

Mr. MURPHY. How can you determine that? How do you know you need so many sheets of aluminum and what length and width and thickness they should be when you have not even completed design?

Admiral MORRIS. Well, we believe that we know what the superstructure of the ship is going to look like near enough so that a great deal of that can be estimated now. There will be some changes in the superstructure. There will also be parts which are restored in a manner similar to what was previously there.

Mr. MURPHY. Do you have a schedule on when you intend to order this material and equipment for the ship?

Captain BUCK. That would be a result of the completion of the initial preliminary design that I mentioned.

Mr. MURPHY. So that would be mid-1976.

Captain BUCK. Sir, we would complete enough of that effort to get on with most of the material for both electronics and hull material, by the end of this June.

Mr. MURPHY. Who will do the preliminary design, and who will do the contract design?

Captain BUCK. We will do the preliminary design through the Naval Ship Engineering Center.

Mr. MURPHY. And the contract design will be done by whom?

Captain OREM. Contract design will be also done at the Naval Ship Engineering Center. It is not determined at this time whether it will be done with the Navy engineers or under the supervision of the Navy engineers by a contractor.

CONVERSION AUTHORIZED BY HOUSE FOR FISCAL YEAR 1977

Mr. MURPHY. How are you going to initiate this preliminary design effort without an authorization? To be specific, the House Armed Services Committee has authorized this conversion in the fiscal year 1977 budget. Therefore it is not authorized for fiscal year 1976. And the Senate Armed Services Committee is marking up now. Do you have any assurance that the Senate committee is going to authorize this for fiscal year 1976?

Admiral MORRIS. The purpose of our appearance in support of the supplemental of course is to get the authorization and the appropriation in the 1976 budget. In all appearances by Navy witnesses, in which the subject of the *Belknap* has come up, both before Armed Services Committees and Appropriations Committees, we are not aware of any major opposition to the plan. The House Armed Services Committee has authorized it for 1977, as I know you are aware, and we are hopeful when we appear before them, if we do, they will authorize it in accordance with the supplemental.

Mr. MURPHY. Do you have any schedule for such an appearance?

Admiral MORRIS. No; we do not. We have testified to the Senate Appropriations Committee day before yesterday. This is our second appearance. I do not have any information with respect to Armed Services Committee.

Mr. MURPHY. What is the Senate Appropriations Committee going to do? Are they going to recommend appropriations in fiscal year 1977 or in fiscal year 1976?

Admiral MORRIS. We were testifying in support of the 1976 supplemental. The subject of 1977 appropriations did not come up in our testimony. And I do not know the action of the Senate Appropriations Committee.

Admiral FINE. Mr. Murphy, of course it is hard to tell what will come out, but the line of questioning which the chairman of the Senate Appropriations Committee seemed to be following was in the direction of saying that, subject to authorization they will appropriate. Now I cannot predict what they will finally do. But that seemed to be the direction that he was taking. For the R. & D. portion, I don't believe we need any additional authorization, because the authorization in the 1976 budget was significantly higher than what was actually appropriated. So for the R. & D. to get moving on that, we just need appropriation authority, as far as I can determine.

Mr. MURPHY. What is your prognosis for having this supplemental authorized by both the Senate and the House Armed Services Committees?

Admiral FINE. There are no hearings scheduled as yet. There has been some staff-to-staff discussion. But nothing beyond that.

The proposal by the President has been submitted to them as a 1976 supplemental, and there has been no indication that they were not going to accept it as that at this time.

Mr. MURPHY. What would be the impact of providing \$8 million in the fiscal year 1976 R.D.T. & E. budget, and including the \$213 million for conversion in the fiscal year 1977 budget?

Admiral MORRIS. We believe it would delay the beginning of the procurement of the long lead items which we need. For instance, the missile fire control radar—the SPG-55B, it is about a 19-month evolution to take one of those radars and send it to the factory for refurbishment and update and return to the ship.

The underwater battery fire control system has a long leadtime of about 16 months, so that the sooner we can undertake, get those sorts of items in hand, the quicker we can return the ship to the fleet.

If I might adjust one other comment to amplify what Admiral Fine replied to the last question, the House Armed Service Committee did hold a hearing on the *Belknap* in conjunction with their 1977 authorization for that, so that we are hopeful that having heard testimony on the subject of the *Belknap*, that they might be able to move promptly on the subject of the supplemental.

#### IMPACT ON FISCAL YEAR 1976 CONCURRENT BUDGET RESOLUTION

Mr. MURPHY. What impact does this \$213 million have on the fiscal year 1976 final concurrent budget resolution target?

Admiral FINE. I believe that that was considered as part of the book-keeping that OSD does on what they can squeeze in under the second concurrent resolution. I am not sure of that. But I believe it does fit in under that. I will clarify this for the record.

[The information follows:]

#### IMPACT OF BELKNAP SUPPLEMENTAL ON FINAL FISCAL YEAR 1976 CONCURRENT RESOLUTION

[In billions of dollars]

	Budget authority	Outlays
Final concurrent resolution.....	101.2	91.9
President's defense budget.....	100.7	92.8
Difference.....	-.3	+ .9
BELKNAP supplemental.....	.2	(1)

<sup>1</sup> \$7,000,000.

Mr. MAHON. Well, we are pleased to have you before us.

Admiral MORRIS. Thank you.

Mr. MAHON. We will give this matter consideration and will you please return the record of the hearings to us as soon as you can, so we will have this material available to us.

Admiral MORRIS. Yes, sir. Thank you very much, Mr. Chairman.

#### NAVAL PETROLEUM RESERVES

Mr. PRESTON. Before they leave—there is before you a budget amendment which transfers money from the Naval Petroleum Reserves to the Federal Energy Administration.

This is pursuant to a law which has been passed. I thought it might be useful at this time to have Admiral Fine very briefly speak to this for the committee.

The budget amendment will be inserted at this point in the record.

SUPPLEMENTAL APPROPRIATIONS AND BUDGET  
AMENDMENTS FOR ENERGY ACTIVITIES

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COMMUNICATION

FROM

THE PRESIDENT OF THE UNITED STATES

TRANSMITTING

PROPOSED SUPPLEMENTAL APPROPRIATIONS FOR FISCAL  
YEAR 1976 AND THE TRANSITION QUARTER, AND BUDGET  
AMENDMENTS FOR FISCAL YEAR 1977 FOR FUNDS APPRO-  
PRIATED TO THE PRESIDENT, THE DEPARTMENT OF DE-  
FENSE—MILITARY, AND THE FEDERAL ENERGY  
ADMINISTRATION



APRIL 27, 1976.—Referred to the Committee on Appropriations  
and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 1976

THE WHITE HOUSE,  
*Washington, April 26, 1976.*

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I ask the Congress to consider, for Funds Appropriated to the President, the Department of Defense-Military, and the Federal Energy Administration, fiscal year 1976 and transition quarter supplemental appropriations and amendments to 1977 appropriations requested in the 1977 budget. These requests total \$354,526,000 for fiscal year 1976, \$28,967,000 for the transition quarter, and \$849,510,000 for fiscal year 1977.

The details of these proposals are set forth in the enclosed letter from the Director of the Office of Management and Budget. I concur with his comments and observations.

Respectfully,

GERALD R. FORD.

(1)

[Estimate No. 51, 94th Cong., 2d sess.]

EXECUTIVE OFFICE OF THE PRESIDENT,  
OFFICE OF MANAGEMENT AND BUDGET,  
Washington, D.C., April 26, 1976.

The PRESIDENT,  
The White House.

SIR: I have the honor to submit for your consideration, for Funds Appropriated to the President, the Department of Defense-Military, and the Federal Energy Administration, proposed supplemental appropriations for fiscal year 1976 and the transition quarter and amendments to 1977 appropriations requested in the 1977 budget. These requests total \$354,526,000 for fiscal year 1976, \$28,967,000 for the transition quarter, and \$849,510,000 for fiscal year 1977. The details of these requests are contained in the enclosure to this letter.

I have carefully reviewed the proposals for appropriations contained in this document, and I am satisfied that these requests are necessary at this time. I recommend, therefore, that these proposals be transmitted to the Congress.

Respectfully,

JAMES T. LYNN,  
Director.

Enclosures.

(Proposed 1976 and transition quarter supplementals:)

FUNDS APPROPRIATED TO THE PRESIDENT

PETROLEUM RESERVES

*For expenses necessary to carry out section 201 of the Naval Petroleum Reserves Production Act of 1976, \$24,152,000, to remain available until expended.*

*For "Petroleum reserves" for the period July 1, 1976, through September 30, 1976, \$15,350,000, to remain available until expended.*

These funds will be used for reactivating and operating production facilities, and constructing pipeline tie-ins associated with opening up Naval Petroleum Reserves numbered 1 and 3 to maximum effective production.

OTHER INDEPENDENT AGENCIES

FEDERAL ENERGY ADMINISTRATION

SALARIES AND EXPENSES

For an additional amount for "Salaries and expenses", \$16,808,000.

For an additional amount for "Salaries and expenses" for the period July 1, 1976, through September 30, 1976, \$13,017,000: *Provided, That this appropriation shall be available only upon enactment into law of authorizing legislation.*

(3)

These funds will be used to carry out activities of the Federal Energy Administration authorized by the Energy Policy and Conservation Act. Primary activities include continuation of petroleum industry audits and investigations and initiation of a State grant program to promote energy conservation.

## STRATEGIC PETROLEUM RESERVE

*For expenses necessary to carry out sections 151 through 166 of the Energy Policy and Conservation Act of 1975, \$313,566,000, to remain available until expended.*

*For "Strategic petroleum reserve" for the period July 1, 1976, through September 30, 1976, \$600,000, to remain available until expended.*

These funds will be used to carry out activities of the Federal Energy Administration authorized by sections 151 through 166 of the Energy Policy and Conservation Act of 1975. Primary activities include completion of various studies and construction of facilities needed for the petroleum storage program.

(Proposed 1977 Budget Amendments:)

## FUNDS APPROPRIATED TO THE PRESIDENT

Budget appendix page	Heading	1977 request pending	1977 proposed amendment	1977 revised request
95	Petroleum reserves..... (Add the above heading and the following paragraph immediately after the material under the account "Middle East Special Requirements Fund":) <i>For expenses necessary to carry out section 201 of the Naval Petroleum Reserves Production Act of 1976, \$421,366,000, and such sums as are available, not to exceed \$557,684,000, which shall be derived from the Naval Petroleum Reserves Special Account, to remain available until expended.</i>		\$421,366,000	\$421,366,000

These funds will be used for production equipment and pipeline facilities for production from the Naval Petroleum Reserves and the continuing program for Oil Shale Reserves, and continued exploration and development of Naval Petroleum Reserve number 4 until it is transferred to the Department of the Interior and redesignated as the National Petroleum Reserve in Alaska. Funding to be derived from the Naval Petroleum Reserves Special Account, if available, will be used to offset appropriations requested from the General Fund for expenses necessary to carry out provisions of sections 151 through 166 of the Energy Policy and Conservation Act of 1975. Of the amount requested, \$367,700,000 was included in the 1977 budget totals as an item proposed for later transmittal.

## DEPARTMENT OF DEFENSE—MILITARY

Budget appendix page	Heading	1977 request pending	1977 proposed amendment	1977 revised request
247	Naval petroleum reserve..... (Delete the above heading and the paragraph thereunder.)	\$221,300,000	—\$221,300,000	-----

Funding for this activity, authorized by section 201 of the Naval Petroleum Reserves Production Act of 1976, is being requested under the heading "Petroleum Reserves", Funds Appropriated to the President.

## OTHER INDEPENDENT AGENCIES

## FEDERAL ENERGY ADMINISTRATION

Budget appendix page	Heading	1977 request pending	1977 proposed amendment	1977 revised request
726	Salaries and expenses .....	\$101,397,000	\$91,760,000	\$193,157,000

These funds will be used to continue petroleum industry audits and investigations, to initiate a State grant program to promote energy conservation, and to carry out other activities required by the Energy Policy and Conservation Act.

Budget appendix page	Heading	1977 request pending	1977 proposed amendment	1977 revised request
726	Strategic petroleum reserve..... (Add the above heading and the following paragraph immediately after the material appearing under the heading "Salaries and Expenses":) <i>For expenses necessary to carry out sections 151 through 166 of the Energy Policy and Conservation Act of 1975, \$557,684,000, to remain available until expended: Provided, That this appropriation shall be reduced to the extent that funds are made available for this purpose pursuant to section 201 of the Naval Petroleum Reserves Production Act of 1976.</i>		\$557,684,000	\$557,684,000

These funds will be used to purchase petroleum for the strategic petroleum storage program and for other activities required by the storage provisions of the Energy Policy and Conservation Act.

Admiral FINE. As I testified previously, the President's budget this year had a budget assumption in it that transferred the Naval Petroleum Reserves out of the DOD budget into the funds appropriated to the President portion of the President's budget. The Navy will continue to administer the Naval Petroleum Reserves in the continental United States; in Alaska, Interior will take over. While the Navy will be allocated these funds by the President in the future, and in fiscal 1977, the funds will no longer be part of the Defense budget. The amendment before you basically withdraw the \$221 million that was in the Navy fiscal year 1977 budget—withdraws those funds and requests a supplemental for \$421.4 million in the fund appropriated to the President.

Mr. EDWARDS. Does that mean that it will go through the Subcommittee on Treasury, Post Office and General Government in the future?

Admiral FINE. I have discussed on the Senate side with the members of the Defense subcommittee staff, and their indication is that it would not be in Mr. McClellan's defense subcommittee any longer; that is, that the subcommittee would not be hearing this appropriation.

I don't know what this House will do, of course.

Mr. EDWARDS. The funds that go to the President go through the Steed subcommittee—

Mr. MURPHY. In this case I would think it would go to our Interior subcommittee.

Mr. MAHON. I would think it would go through Interior.

Mr. EDWARDS. Thank you.

#### REPROGRAMING ACTIONS FY 76-24 AND FY 76-33 P/A

Mr. MURPHY. Admiral Fine, could you cause to be placed in the record at this point the statements on the pending reprograming actions that are before the committee, so that the committee will have the benefit of that information during the course of their markup session?

Admiral FINE. We have two, one in R. & D., and one in SCN. I will place these statements in the record.

[The information follows:]

Reprogramming Action: DOD Scr 76-24 P/A

Appropriation: Research, Development, Test and Evaluation, Navy (FY 76)

Subj: Test Bed Development and Demonstration

The purpose of this reprogramming is to realign \$5.6 million within the RDT&E,N appropriation for the Test Bed Development and Demonstration Program. The proposed adjustment is required as a result of a requirement to augment the Land Base Test Site at the contractor plant pending construction of planned test facilities at White Sands Missile Range.

Source of funds for this reprogramming action is (a) Airborne Electronic Warfare Equipment (-\$1.9 million) available as the result of a delay in the associated Tactical Airborne Signal Exploitation System; (b) Radar Surveillance Equipment (-\$1.648 million) available as the result of a decision to limit bistatic radar development and (c) Surface Electronic Warfare (-\$2.052 million) resulting from a decision to delay efforts on new electronic countermeasures techniques. This reprogramming must be approved by all four committees. Approval has been obtained for the full amount by the Senate Appropriations Committee on 31 March 1976, and by the House and Senate Armed Services Committees on 13 April 1976.

REPROGRAMMING ACTION									
APPROPRIATION ACCOUNT TITLE							PAGE SERIAL NUMBER		
Research, Development, Test and Evaluation, Navy FY 76/77							FY 76-24 P/A		
APPROPRIATION SERIAL NUMBER									
FY 76-2 P/A									
(Amounts in Thousands of Dollars)									
LINE ITEM	PROGRAM BASE REFLECTING CONGRESSIONAL ACTION		PROGRAM PREVIOUSLY APPROVED BY SEC DEF		REPROGRAMMING ACTION		REVISED PROGRAM		
	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	QUANTITY	AMOUNT	
a	b	c	d	e	f	g	h	i	
<u>PRIOR APPROVAL ACTION</u>									
This reprogramming action requests approval for the movement of \$5.6 million to the Test Bed Development and Demonstration Program									
(Deleted)									
in support of the High Energy Laser Program. This program is of higher priority than those programs from which the funds will come and is submitted for prior approval because it involves the reprogramming of funds to a program which had been specifically reduced by the Congress. This action meets all the administrative and fiscal requirements of the Congress.									
REPROGRAMMING INCREASE:									
<u>FY 1976 Program</u>									
Budget Activity 5: Ships, Small Craft and Related Equipment									
I. Test Bed Development and Demonstration									
		13,900		13,900		+5,600		19,500	
Explanation: This program supports tests to obtain technical engineering and system performance data with which to support development of a High Energy Laser engineering model. The increased funds are required									
Deleted									
In support of the High Energy Laser Program. The funding will be used for augmentation of the critical Land-Based Test Program pending construction of planned requisite test facilities at the White Sands Missile Range for which funds have been requested in the FY 1977 and FY 1978 Department of Defense Budgets to cover range facilities and equipment. This action is not reflected in the FY 1976/1977 columns of the FY 1977 Budget.									
TOTAL PROGRAM INCREASE									
						+5,600			
REPROGRAMMING DECREASES:									
<u>FY 1976 Program</u>									
Budget Activity 2: Aircraft and Related Equipment									
I. Airborne Electronic Warfare Equipment									
		31,700		31,700		-1,900		29,800	

REPROGRAMMING ACTION									
APPROPRIATION ACCOUNT TITLE Research, Development, Test and Evaluation, Navy FY 76/77							DDG SERIAL NUMBER FY 76-24 P/A		
APPROPRIATION SERIAL NUMBER FY 76-2 P/A		(Amounts in Thousands of Dollars)							
LINE ITEM	PROGRAM BASE REFLECTING CONGRESSIONAL ACTION		PROGRAM PREVIOUSLY APPROVED BY SEC DEF		REPROGRAMMING ACTION		REVISED PROGRAM		
	QUANTITY b	AMOUNT c	QUANTITY d	AMOUNT e	QUANTITY f	AMOUNT g	QUANTITY h	AMOUNT i	
<u>PRIOR APPROVAL ACTION</u>									
REPROGRAMMING DECREASES (Cont'd)									
<p>Explanation: This program is intended to support all Navy tactical air electronic warfare advanced development including self-protection warning equipment and jamming countermeasures systems in both the RF and IR areas. Because of late availability of the Tactical Airborne Signal Exploitation System (TASES) funds which have been deferred pending development of the Decision Coordinating Paper (DCP), the \$1.9 million has been made available for the High Energy Laser Test Program by application of RDT&amp;E incremental funding rules and will not be reinstated.</p> <p>Budget Activity 5: Ships, Small Craft and Related Equipment</p> <p>2. Radar Surveillance Equipment</p>									
		4,279		4,279		-1,648		2,631	
<p>Explanation: This program is intended to provide for upgrading the present fleet capability in a hostile electro-magnetic environment, improved radar operator training and utilization in an Electronic Countermeasures (ECM) environment, establishment of design standards to ensure that new radar developments include inherent Electronic Counter Countermeasures (ECCM) capability, and for HITCHHIKER bistatic radar development. The effect of making \$1,643 million available for a higher priority high energy laser test requirement will limit development of the HITCHHIKER prototype development efforts to feasibility testing and defer radar reliability technical development efforts seven months until FY 1977 funding becomes available on July 1976.</p> <p>3. Surface Electronic Warfare</p>									
		5,700		5,700		-2,052		3,648	
<p>Explanation: This program is intended to provide electronic countermeasures equipment and techniques to counter Soviet Anti-Ship Missiles. The effect of making \$2,052 million available for a higher priority high energy laser test development effort will delay development and demonstration efforts on new electronic countermeasures techniques that will counter advanced types of tracking not counterable by currently implemented techniques until FY 1977 funding becomes available on 1 July 1976.</p> <p>TOTAL REPROGRAMMING DECREASES</p>									
						-5,600			

DD FORM 1-75-1

Page 2 of

## STATEMENT FOR COMMITTEE

Reprogramming Action: FY 76-33 P/A

Appropriation: Shipbuilding and Conversion, Navy 1976/1980

Subj: Additional funding for Fy 1976 Cost Growth

This reprogramming action adds \$24.2M to FY 1976 Cost Growth line item for completion of various FY 1975 and prior year ship programs (identified below). During the FY 1977 Budget Review by DoD the Navy was permitted to reprogram \$24.2M FY 1977 PHM Advance procurement funds into a new line item in FY 1977 for Cost Growth, and the budget was submitted to the Congress including this proposed change as a forthcoming reprogramming action. Subsequently, legal counsel advised us that no new line item (subdivision) could be established in the FY 1977 budget without Congressional enactment into law. For this reason, the funding for the FY 1975 and prior year ships is now proposed to be reprogrammed into the FY 1976 Cost Growth line item.

Specifically, the \$24.2 million is planned to supplement the following ship programs in the amounts identified:

USS OLIVER HAZARD PERRY (FFG 7)	\$9.0
USS HENRY CLAY (SSBN 625)	6.3 *
CGN-41	8.9 -

TOTAL \$24.2M

\* The DD 1415 states that funds will be used for both the SSBN-622 and 625. The total \$6.3 is now required for the SSBN-625.

The funding for this action will be transferred from the FY 1977 appropriation. The line item being utilized is \$24.2M advance procurement funds for nine PHM's planned for Authorization in FY 1977. The procurement of these nine PHM's has been curtailed because of inflation and Cost Growth for both the prototype and production ships. Navy's current program is restricted to completion of the PHM's previously authorized through FY 1975, thus freeing the

advance procurement for higher priority programs. The Navy's current intention is to use the six currently authorized PHM's as a tactical squadron of small, high speed, high fire power patrol combatants to develop advance tactics and gain technical experience with this type ship.

This reprogramming action must be approved by the House and Senate Armed Services and Appropriations Committees.

The Senate Appropriations Committee held hearings on this reprogramming on 28 April 1976.

A funding profile is shown below:

Funding Plan for FY 73/75 FFG Programs

( \$ in millions)

<u>Available</u>	<u>FY 76</u>	<u>FY 7T</u>	<u>FY 77</u>
PHM (adv. proc.)		\$24.2	
1415 Action		-24.2	
Distribution of \$24.2 within FY 76 Cost Growth			
FY 75 (SSBN(C))	+6.3		
FY 75 DLGN	+8.9		
FY 73 FFG	<u>+9.0</u>		
	<u>24.2</u>		

REPROGRAMMING ACTION								
APPROPRIATION ACCOUNT TITLE Shipbuilding and Conversion, Navy 1976/1980							DOD SERIAL NUMBER FY 76-33 P/A	
APPROPRIATION SERIAL NUMBER FY 1976-3 P/A			(Amounts in Thousands of Dollars)					
LINE ITEM	PROGRAM BASE REFLECTING CONGRESSIONAL ACTION		PROGRAM PREVIOUSLY APPROVED BY SEC DEF		REPROGRAMMING ACTION		REVISED PROGRAM	
	QUANTITY b	AMOUNT c	QUANTITY d	AMOUNT e	QUANTITY f	AMOUNT g	QUANTITY h	AMOUNT i
<u>PRIOR APPROVAL ACTION</u>								
<p>This reprogramming action provides \$24.2 million for increased costs in certain FY 1975 and prior year ship programs. The funding will be made available to these programs by transferring \$24.2 million to the Cost Growth line item in the FY 1976 Shipbuilding Program. Since the source of funds for this action is contained in the FY 1977 SCN appropriation, the action will require the use of transfer authority contained in Section 733, P.L. 94-212. This action is submitted for prior approval because transfer authority is required and because the action provides for an increase in a subdivision within the SCN appropriation. The FY 1976 Cost Growth line item has not been denied by the Congress. All of the FY 1975 and prior year programs which will receive funds from this action are of a higher priority than the PHM program, which is the funding source in the FY 1977 SCN appropriation.</p>								
<u>REPROGRAMMING INCREASES</u>								
<u>FY 1976 Program</u>								
<u>Budget Activity 5: Auxiliaries and Craft</u>								
1. Cost Growth	-	932,400	-	932,400	-	+24,200	-	956,600
<p><u>Explanation:</u> This transfer provides for increased costs on ships in FY 1975 and prior years. Specifically, this increase will fund projected cost growth on The FFG 7, USS OLIVER HAZARD PERRY, the SSBN 622, USS JAMES MONROE, and SSBN 625, USS HENRY CLAY, conversions, and the CGN 41 (formerly the DLGN 41).</p>								
TOTAL PROGRAM INCREASE						+24,200		
<u>REPROGRAMMING DECREASES</u>								
<u>FY 1977 Program</u>								
<u>Budget Activity 4: Mine Warfare and Patrol Ships</u>								
1. PHM Patrol Hydrofoil Missile Advance Procurement (CY)	XX	24,200	XX	24,200	-	-24,200	-	-

UNCLASSIFIED  
CLASSIFICATION

REPROGRAMMING ACTION									
APPROPRIATION ACCOUNT TITLE Shipbuilding and Conversion, Navy 1976/1980						ODD SERIAL NUMBER FY 76-33 P/A			
APPROPRIATION SERIAL NUMBER FY 1976-3 P/A									
(Amounts in Thousands of Dollars)									
LINE ITEM	PROGRAM BASE REFLECTING CONGRESSIONAL ACTION			PROGRAM PREVIOUSLY APPROVED BY SEC DEF		REPROGRAMMING ACTION		REVISED PROGRAM	
	QUANTITY b	AMOUNT n	AMOUNT c	QUANTITY d	AMOUNT e	QUANTITY f	AMOUNT g	QUANTITY h	AMOUNT i
<u>PRIOR APPROVAL ACTION</u>									
<p>Explanation: The Congress appropriated \$24.2 million in FY 1977 for advance procurement for nine PHM's to be authorized in FY 1977. This program has now been curtailed because of inflation and cost growth for both the prototype and production PHM's. Navy's current program is restricted to completion of PHM's previously authorized, thus freeing resources for allocation to higher priority programs.</p>									
TOTAL PROGRAM DECREASE						-24,200			

REQUESTED BY (Signature and Date): *[Signature]* 9 MAR 1976  
 APPROVED BY (Signature and Date): *[Signature]* APR 18 1976  
 DD FORM 128 (Rev. 1-75) DEPUTY SECRETARY OF DEFENSE

UNCLASSIFIED  
CLASSIFICATION

Mr. MAHON. Is there anything further?  
Thank you very much, gentlemen.

TUESDAY, JULY 20, 1976.

## NAVY SHIPBUILDING PROGRAM

### WITNESSES

ADM. JAMES L. HOLLOWAY III, U.S. NAVY, CHIEF OF NAVAL OPERATIONS  
ADM. FREDERICK H. MICHAELIS, U.S. NAVY, CHIEF OF NAVAL MATERIAL  
VICE ADM. ROBERT C. GOODING, U.S. NAVY, COMMANDER, NAVAL SEA SYSTEMS COMMAND  
VICE ADM. JAMES H. DOYLE, JR., U.S. NAVY, DEPUTY CHIEF OF NAVAL OPERATIONS (SURFACE WARFARE), OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
REAR ADM. STANLEY S. FINE, U.S. NAVY, DIRECTOR, FISCAL MANAGEMENT DIVISION, OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
E. GRAY LEWIS, COUNSEL FOR THE NAVY  
CAPT. NELSON P. JACKSON, U.S. NAVY, HEAD, CONGRESSIONAL AND POLICY COORDINATION BRANCH, OFFICE OF THE CHIEF OF NAVAL OPERATIONS  
CDR. RICHARD J. GRUNAWALT, U.S. NAVY, SPECIAL COUNSEL TO THE CHIEF OF NAVAL OPERATIONS, OFFICE OF THE CHIEF OF NAVAL OPERATIONS

### INTRODUCTION

Mr. MAHON. The committee will come to order.

It will be necessary, in view of the classified nature of some of the matters to be discussed in the hearing, to close the hearing, but we won't have to close it at the moment because some of the beginning testimony is not classified.

Admiral Holloway, we welcome you and your colleagues before the committee this morning. We have scheduled the hearing today because of the committee's deep concern over the shipbuilding program of the Navy. I wish we could solve these problems and put these problems behind us. They seem to continue to recur. Somebody is to blame for the present situation, and I would think perhaps the Navy is somewhat to blame along with industry. I hope Congress is not to blame, but if we are to blame, we should know it.

Because of major differences between the shipbuilding program requested in the January budget and the program recommended in the Defense authorization bill by the House Armed Services Committee, we delayed a hearing with you on this subject until after some resolution of these differences could be made. You are, of course, aware of that. We need to have your best thinking in the military threat posed by the Soviet Union and the plans of the Navy to meet that threat both now and in the foreseeable future.

We are concerned over the dilemma posed by the controversy between the Navy and the shipbuilders over claims and cost evaluation in the shipbuilding areas generally.

There is a foulup of management somehow. I don't know all of the details, but there is something wrong. This problem has occurred and continues to recur.

We want to give you the opportunity of stating your position on the amended fiscal year 1977 shipbuilding program before the conference with the Senate on the appropriations bill.

Finally, we need to discuss the relationship between the new ship construction program and the major ship overhaul program in meeting the total needs of the Navy.

As you know, this committee has long been an advocate for a Navy second to none, and an advocate of a strong national defense generally. We have usually supported Navy shipbuilding budgets over the years. This year we continued this trend by recommending appropriations above the President's original fiscal year 1977 shipbuilding budget. Of course, the shipbuilding budget amendment of May 10, 1976, arrived too late to be considered by the committee, but it will be addressed by the other body and we will discuss it with you today. I believe the Senate Appropriations Committee is scheduled to report its bill out of committee tomorrow. We do not know the full extent of their recommendations with respect to the shipbuilding program at this time.

Admiral, with your concurrence, after you have presented your statement—and we know it is rather long but well done, we think—we shall open our interrogation with some questions on the future size and composition of our Navy, and our ability to meet that requirement in terms of dollars and otherwise. Then I think it might be profitable to discuss the sizes, missions, and shipbuilding trends of the United States and Soviet navies. And this will be followed by questions on shipbuilding claims and the problems associated therewith. Finally, we need to enlighten ourselves on the ship overhaul and modernization program, and what can be done to eliminate the large ship overhaul backlogs and various problems associated with that aspect of our Navy. If we do not finish today, we may have to meet again tomorrow afternoon.

So let's proceed with getting to the heart of these matters as rapidly as we can. And let's try to conserve our time as best we can because all of us are busy. We know the Navy has many problems, and you need to be working with them rather than sitting in this room for an excessive period of time.

I will recognize the distinguished gentleman from Alabama.

Mr. EDWARDS. Thank you, Mr. Chairman. First, I want to concur in the opening remarks of the chairman and submit just a few of my own comments for the record.

Probably the single most costly and controversial item in the defense budget this year is the Navy's shipbuilding program. Since the original request of \$6.3 billion for 16 new ships was submitted in January, a number of extensive changes have been proposed in the program—some have come from the administration and some have come from the Congress. The net result has been a great deal of confusion.

Because the House and Senate Armed Services Committees still had to reconcile major differences as between the shipbuilding programs proposed in their respective bills at the time of our markup and since the \$1.2 billion budget amendment relating to the shipbuilding pro-

gram was not referred to the committee until after our markup had started, we concluded that the most prudent course of action was to approve the President's original request with minor modifications. Thus, at the time we felt that this issue should more properly be taken up once the dust settled.

Now that the House and Senate Armed Services Committees have resolved their differences, we are ready to scrutinize the revised program and the claims problem in particular.

This is a major concern of this subcommittee, and I hope that we can take whatever time is necessary and not try to rush into completing this review too quickly and hear the Navy out so that all the pertinent questions can be answered.

I think all of us are greatly concerned about it, and I am concerned to the point that somewhere along the way, I will probably propose that we consider a Surveys and Investigations study of this situation. It is so complicated, I don't yet quite know how we should proceed at this point.

I think out of these hearings we ought to come to some conclusion as to just where we need to dig deeper and find out ways by which we can improve the situation. I don't think it is something that has happened in the last week or the last year, but something that has just been growing, and it is time we all try to find a way to put a stop to the problems that exist.

Thank you, Mr. Chairman.

Mr. MAHON. Are there any further observations?

Mr. FLOOD. I would just like to say this, Mr. Chairman. It is my opinion that in the opinion of the average man in the street insofar as the relationship between the United States and Soviets, there is only one thing in the front of their head: Who has the biggest and the best navy as of today?

Mr. MAHON. All right, Admiral Holloway, we have great respect for your capacity as a leader and member of the defense team, and we have confidence in your capacity to properly represent the Navy, and our defense interests.

We are pleased to have you before us again. Will you proceed?

Admiral HOLLOWAY. Thank you, Mr. Chairman. Let me say first that I am tremendously pleased to appear before this distinguished committee, and I am especially appreciative of having this opportunity to discuss Navy programs before this committee, which has always shown such a strong interest in the Navy, and has been such a strong supporter of Navy programs.

I have with me as backup today, Admiral Michaelis, the Chief of Navy Material; Vice Admiral Doyle, the Deputy Chief of Naval Operations for Surface Warfare, who has a main responsibility for the coordination of shipbuilding program requirements for the Chief of Naval Operations; Mr. Gray Lewis, who is the General Counsel for the Department of the Navy; Vice Admiral Gooding, the Commander of the Naval Sea Systems Command, who is responsible for procuring and maintaining our ships; and Adm. Stan Fine, the Director of the Fiscal Management Division, who works both for the Chief of Naval Operations and for the Secretary of the Navy.

I have a very full and comprehensive statement, Mr. Chairman, which I do not intend to read, but which I would like to submit for

the record, and I would also like to refer to it during the course of these hearings.

#### STATEMENT OF CHIEF OF NAVAL OPERATIONS

Mr. SIKES. Mr. Chairman, if I may interrupt, I am advised that this is a very comprehensive, very informative statement. While I realize that it is long, I do feel that if we are just going to have a brief summation of the statement, I hope it will be a longer than usual summation and that it will quote rather freely from the text of the complete statement, because I understand it contains a lot of information the committee should have.

Mr. MAHON. All right.

[Admiral Holloway's complete statement follows:]

#### STATEMENT OUTLINE

- I. Introduction.
- II. Navy mission force requirements :
  - A. Navy mission/functions.
  - B. U.S. needs a navy.
  - C. Determination of force structure :
    1. Strategy :
      - a. Forward strategy.
      - b. Requirements of a forward strategy.
      - c. Navy's responsibilities :
        - (1) Strategic forces.
        - (2) Deployed forces.
        - (3) SLOC protection.
      - d. Posture of naval forces.
      - e. Required capabilities of naval forces :
        - (1) Strategic.
        - (2) General purpose :
          - (a) Offensive.
          - (b) Defensive.
          - (c) Power projection.
          - (d) Logistics independence.
          - (e) Worldwide command and control.
  2. Threat—USSR :
    - a. Soviet strategy.
    - b. Current Soviet Navy force levels :
      - (1) Strategic.
      - (2) General purpose.
    - c. Current weapon system technology :
      - (1) Surface ships :
        - (a) Major combatants.
        - (b) Patrol combatants.
      - (2) Submarines :
        - (a) Strategic.
        - (b) Attack.
      - (3) Aircraft :
        - (a) Backfire bomber.
        - (b) Tactical attack.
      - (4) Carriers.
      - (5) Cruise missile.
    - d. Shipbuilding capacity.
    - e. Projected force levels.
    - f. Possible emergence of a naval projection strategy.
  3. Risk :
    - a. Defined.
    - b. Assessment :
      - (1) Current.
      - (2) Future.

## III. Naval force structure :

## A. Naval Warfare :

## 1. Sea Control :

## a. Prerequisite :

- (1) Strategic.
- (2) Tactical.

## 2. Power Projection :

- a. For purposes of sea control.
- b. Exploitation of sea control.

## B. Naval Warfare Tasks :

1. AAW.
2. ASW.
3. ASUW.
4. Strike.
5. Amphibious assault.
6. Mine warfare.
7. Supporting warfare tasks :
  - a. Intelligence.
  - b. Command and control.
  - c. Logistics.

## C. Naval force composition :

## 1. Sea control forces :

- a. AAW.
- b. ASW.
- c. ASUW.

## D. Types of Ships :

1. Carriers.
2. Surface combatants.
3. Submarines.
4. Amphibious.
5. Support.

## E. Warfare capabilities :

## F. Balanced fleet :

1. Among types.
2. Hi Lo Mix.

## IV. Naval program development :

## A. Projecting Force Structure Ten Years in Future :

1. U.S. Navy Force Structure.
2. Intelligence Analysis.

## B. Capability Analysis :

1. Net Assessment of Sea Control Capabilities : U.S.S.R. versus U.S.
  - a. U.S.S.R.
  - b. U.S.
2. Developing Requirements to Redress Deficiencies.

## C. CNO Program Guidance :

1. Improve AAW.
2. Continue ASW.
3. Nuclear Propulsion Policy.
4. Cruise Missile Development.
5. V/STOL Development : V/STOL plan.

## D. Program : 5-Wear Shipbuilding Program.

## V. Fiscal year 1977 SCN budget :

- A. CVN.
- B. CV Service Life Extension Program (SLEP).
- C. Strike Cruiser.
- D. DDG-47.
- E. Long Beach AEGIS.
- F. FFG-7.
- G. PHM.
- H. TRIDENT.
- I. SSN.
- J. Fleet Oiler.
- K. Submarine Tender.
- L. Destroyer Tender.
- M. Cost Growth.
- N. Claims.

## VI. Fiscal year 1977 O&amp;M budget :

## A. Operations :

1. Steaming Days.
2. Flying Hours.
3. Exercises.
4. Crises.

## B. Maintenance :

1. Routine Upkeep.
2. Overhauls.
3. Modernizations.

## VII. Conclusion.

*I. Introduction*

Mr. Chairman, as always, it is a distinct pleasure for me to appear before this distinguished subcommittee.

In my posture statement to the subcommittee in February, I described how the requirements for the U.S. Navy are determined. Very briefly, at the outset of this statement, I would like to restate those points.

Fleet force structure requirements are determined by three factors: the national military strategy which we as a nation intend to pursue; the potential threat to the successful prosecution of that strategy; and the degree of risk which we, the American people, are willing to accept in the assurance that we will be able to carry out the strategy against those who may seek to prevent its execution.

I have addressed each of these areas in considerable detail not only in my posture statement but also during recent appearances before this and other Congressional Committees. Today, I wish to elaborate on the Navy planning process and discuss how we relate naval requirements to national needs. I have said before that I believe there is little disagreement that the United States needs a Navy. The debate has been over its size and composition.

In bringing that debate into clearer focus I shall trace the development of force requirements to meet the responsibilities of the Navy's mission. While the mission requirements can stand alone, an integral part of force development is the magnitude of the threat. I shall update our analysis of the threat, and provide an assessment of future trends.

The ability of the fleet to meet today's threats at acceptable levels of risk is dependent on the existing force structure, or the fleet composition, as authorized and funded by the Congress from 3 to 30 years ago. Whether that fleet composition is adequate to the task reflects, in part, how well we were able to predict some years ago what the threats of today would be. Assuming our predictions were reasonably accurate and the proper forces were authorized and funded over the years, then our ability to meet today's threats with today's fleet depends on the readiness of each individual unit to perform as required. Fleet readiness is the top priority goal I have set for my tenure as the Chief of Naval Operations. Therefore, I also want to talk about the fiscal year 1977 budget in terms of the day-to-day operations and maintenance on which fleet readiness depends.

We have little control over the force structure of our fleet today, because the ships and aircraft in the active fleet now were authorized and funded by past Congresses. Our responsibility for future readiness lies in part in the procurement actions started now which will shape the character of the Navy in the years 1985-2000.

I shall speak to the current status of Congressional action on the President's amended fiscal year 1977 budget request as I more thoroughly relate naval warfare areas, naval warfare tasks, force composition and types of ships to the overall structuring of the naval force.

*II. Navy Mission Force Requirements*

Naval requirements are expressed in terms of military characteristics of individual ships, and in the force levels represented by those individual ships. The combination of military characteristics and force levels constitutes force structure. Force structure in combination with readiness represents the capability of the fleet.

First, to clearly establish a frame of reference, it must be reasserted that we are discussing future force levels, because today we are limited to what we have in the active fleet inventory and the ready reserve. There are not significant num-

bers of ships in mothballs which could be used to quickly increase our active fleet force levels. The only direction in which we can alter our current force structure, without new construction, is downward.

We must have enough ships and aircraft individually capable of coping with the advanced weapon technologies of our potential enemies, and we must have these ships and aircraft in a balanced force structure which will constitute a fleet that can effectively conduct combat operations at sea across the spectrum of conflict, from crisis management to general nuclear war.

#### A. NAVY MISSION/FUNCTIONS

In order to achieve the basic military objectives of the United States, the respective services are tasked with specific primary and collateral functions by Department of Defense Directive 5100.1. The Department of the Navy is tasked: "To organize, train; and equip Navy . . . forces for the conduct of prompt and sustained combat operations at sea, including operations of sea-based aircraft and land-based naval air components—specifically, forces to seek out and destroy enemy naval forces and to suppress enemy sea commerce, to gain and maintain general naval supremacy, to control vital sea areas and to protect vital sea lines of communication, to establish and maintain local superiority (including air) in an area of naval operations, to seize and defend advanced naval bases, and to conduct such land and air operations as may be essential to the prosecution of a naval campaign."

The Navy carries out its mission as expressed by the Congress in title X, United States Code, within the framework of the national strategy, in joint coordination with the other services and in combined planning with our allies. U.S. naval force requirements cannot be regarded in isolation from our foreign policy, domestic considerations and the force requirements and capabilities of the other services.

#### B. U.S. NEEDS A NAVY

To conduct the sustained combat operations at sea required by title X, the Nation needs a Navy with the capacity to exercise sustained control over the sea lines of communication in support of our national military strategy.

To carry out this mission the United States Navy needs, as I stated earlier, ships and aircraft—and people, competent and professional people, who can maintain and operate those ships and aircraft to the limit of their design capabilities. We must have enough of those ships, aircraft and people to constitute a fleet, which, in coordination with other services and in combination with our allies, can accomplish our mission in the face of the total maritime forces of our potential adversaries.

#### C. DETERMINATION OF FORCE STRUCTURE

Force structure is determined basically by the three factors which I briefly alluded to earlier:

**Strategy:** The national military strategy which that naval force structure will be called upon to support.

**Threat:** The military force and weapons technology which the naval force structure will encounter in carrying out its responsibilities within the national military strategy.

**Risk:** The degree of assurance that the Navy can successfully execute its responsibilities in support of the national military strategy.

#### 1. Strategy

##### a. Forward strategy

In discussing the first of the factors it is useful to note that the national military strategy of the United States is a forward strategy, driven by geopolitical considerations. The United States is characterized by its insular position on the North American continent. We have only two international borders neither of which is threatened by a hostile force, and we are insulated from the rest of the world on the east and west by two major oceans. However one of our states, all of the territories for which we are responsible and 41 of our 43 allies lie overseas. This situation dictates the use of a forward strategy which utilizes the

oceans as barriers for defense of the continental United States, as avenues for the extension of military and political influence abroad, and for international commerce which is essential to the sustained industrial output of the United States and its allies. It is an incontrovertible fact that the increasingly interdependent free-world economy depends upon the use of ocean shipping.

*b. Requirements of a forward strategy*

A forward military strategy requires allies, and overseas deployed U.S. forces. Because of the unique character of international waters, naval forces can operate in a considerably different fashion from ground and land based air forces. In any situation short of actual hostilities all nations of the world have access to international waters. The free passage afforded all vessels on the high seas provides for greater mobility of naval forces. Therefore naval forces can be positioned in international waters in the vicinity of a crisis, ready to respond, but without having to request overflight or landing rights or violate the sovereign rights of any nation. As a prelude to hostilities, naval forces of any nation may assume a posture which will facilitate the destruction of enemy sea commerce at the initiation of conflict or enhance the projection of military force from the sea to targets ashore.

*c. Navy's responsibilities*

The principal responsibilities of the U.S. Navy within the forward oriented national military strategy are to (1) provide for a strategic nuclear deterrence, (2) provide the naval components of our overseas deployed U.S. forces to support our allies and protect our own interests, and (3) insure the security of the sea lines of communication.

*d. Posture of naval forces*

A major portion of the U.S. Navy—a balanced force of aircraft carriers, submarines, surface combatants, maritime patrol aircraft, and underway replenishment ships—is forward deployed in a combat ready status to support these responsibilities. Two-thirds of the strategic submarine force are deployed.

About 30 percent of the active operating forces of the U.S. Navy in this forward deployed posture comprise the Sixth Fleet in the Mediterranean and the Seventh Fleet in the Western Pacific and Indian Ocean.

The balance of the combat ready elements of the fleet, about one-third of our force, is assigned to the Second Fleet, based on the East Coast of the United States and responsible for operations in the Caribbean and Atlantic Ocean, and the Third Fleet operating from West Coast bases and Hawaii. These forces are immediately available for overseas reinforcement in contingency situations, as well as for general war tasks and crisis responses in their own areas of responsibility.

The remaining third of our force is normally in depot maintenance or undergoing basic training.

This posture of the general purpose forces places fleet elements in locations where they can support our allies and where forward positioned U.S. ground and air units can attack our most probable adversaries, reinforce our forces rapidly, and protect the sea lines of communications between United States and our overseas forces. This enhances the protection of those sea lines of communication between the continental United States and those areas of the world vital to our national interests, such as the Middle East.

*e. Required capabilities of naval forces.*

These responsibilities of the U.S. Navy within our military strategy, the forward deployed posture and the unique characteristics of our forces operating in international waters, influence the military characteristics of our ships and our naval requirements in general. As a result, principal capabilities required by our naval forces are:

(1) A virtually invulnerable fleet ballistic missile submarine force with effective command and control, to constitute a credible nuclear strategic deterrent;

(2) General purpose forces to provide:

(a) An offensive capability enabling our fleets to defeat enemy forces routinely present in the theater of operations;

(b) A defensive strength to cope with large-scale attacks by enemy forces which can concentrate in a U.S. theater of operations on short notice;

(c) The ability to project power ashore by gunfire, missiles, carrier based aircraft, and amphibious landing. (This capability is required to achieve and maintain sea control and in order to support allied forces or our own land based forces ashore. Use of sea-based projection in defense, denial, or seizure of advance bases is an essential element in insuring continued use of vital sea areas, in preventing enemy transit to open ocean areas, and in destroying enemy base areas from which assaults against our forces at sea may be launched. Perhaps more importantly, our power projection capability lends substance to our political initiatives when the implied threat of the application of military power is used in an effort to convince other nations to act in consonance with our national interests.);

(d) A high degree of logistical independence from foreign bases, which may not be initially available, which may be temporarily denied through political decision, or which may be seized by an enemy. (This capability dictates that U.S. naval ships be able to carry large quantities of combat consumables such as fuel and ammunition; have good sea keeping qualities to ride out heavy weather for long periods of time; and be able to steam long distances without the requirement for refueling stops. It also requires an underway replenishment force which can resupply combatant ships in the combat zone. Finally, because we operate in remote locations, well beyond the range of friendly land based air, we must take a sea based aviation capacity with us, in carriers, and with helicopter and VSTOL capabilities.); and

(e) A command, control and communication system which will permit the reconnaissance and surveillance of hostile forces and the tactical and strategic direction of our own forces in the conduct of naval warfare on a global basis.

## 2. Threat—U.S.S.R.

### a. Soviet strategy

The second factor in determining U.S. naval requirements is the threat, presented by the Soviet maritime capability, principally the Soviet Navy. The threat of Soviet naval power can be analyzed conveniently by addressing Soviet military strategy, the weapon systems and technology available to their forces, and the strength of deployable forces now and in the future.

Soviet military strategy should be viewed in the historical context of a nation frequently invaded in the past and which was an outcast from the world community for most of the 20th century because of its political ideology. This heritage fosters strategies which will assure protection of the Soviet Government. In earlier years, when the national power base of the U.S.S.R. was more potential than real, they adopted a strategy of defense in depth. No other option was militarily open to them. Depth for the Army was provided by buffer states, and for the Navy by a huge submarine and mine warfare force backup by sizable coastal defense and border guards forces.

By the 1960's, however, the Soviet Union had reached superpower status. Their power base will continue to expand under almost all foreseeable situations short of a devastating nuclear war or prolonged conventional war. The Soviet Navy can be expected to share proportionately in the expansion of overall Soviet power in order to defend and contribute to the support of expanding Soviet national interests.

The strategic role of the Soviet maritime forces can be clearly deduced from the U.S.S.R. geopolitical situation. The Soviet Union dominates the Eurasian continent. The principal allies, the Warsaw-Pact nations, are contiguous to the western border. Two principal adversaries, the People's Republic of China on the southeast flank, and NATO Europe to the west, are on the same land mass. The Soviet Union can support her Warsaw-Pact allies, and attack Western Europe or China without leaving the continent. The Soviet Navy's main role must therefore be directed against the United States, including the interdiction of the essential sea lines of communication (SLOC) of the United States and our allies.

This view of the tasks and functions for which the Soviet Navy is organized, differing in their basic objectives from those of our own Navy, is supported by analyses of the ships and weapon systems they have been building, from the way they deploy and exercise these forces, and statements of their leaders that are now being seen more often in their open publications.

It appears that the Soviets intend to retain a militarily credible submarine-launched ballistic missile capability. They have been capitalizing on technological

developments to construct and deploy strategic weapon systems of improved ——— range. Progress has been steady and evolutionary in nature. From the numbers of units being constructed, it is apparent that the Soviets are placing increasing reliance on these naval systems to provide a greater percentage of their strategic strike capability.

The Soviets also dedicate a substantial ASW effort to oppose Western ballistic missile submarines on strategic mission patrols.

The traditional Soviet concept of defense in depth has not been abandoned, but with improved weapon systems, more flexible and offensively oriented options are available to Soviet leaders. Surface-to-surface missile equipped submarines, aircraft and surface ships, coupled with an elaborate ocean surveillance system and effective centralized command and control, provide the combined qualities of mobility, staying power, and rapid reaction.

Naval support of foreign policy objectives appears to be a new and evolving role for the Soviet Navy. The Soviets have recognized the impact of their Navy as a visible instrument of the economic and military might of their country, and as a means to influence political events favorably. The senior Soviet naval officer, Fleet Admiral Gorshkov, put it in these words: "Navies . . . are constantly being utilized as an instrument of state policy in peacetime . . . In this regard, navies have assumed particular significance under today's conditions. The mobility of the fleet and its flexibility in the event limited military conflicts are brewing permit it to have an influence on coastal countries, to employ and extend a military threat to any level, beginning with a show of military strength and ending with the disembarkation of a landing party."

#### *b. Current Soviet Navy force levels*

##### *(1) Strategic strike forces.*

Soviet capability to launch seabased strategic nuclear attacks is represented by ——— nuclear powered and ——— diesel powered ballistic missile submarines based in the Northern and Pacific Fleets.

##### *(2) General purpose forces.*

Current Soviet naval general purpose strength is estimated to be: 1 ASW carrier, 2 helicopter carriers, 21 missile cruisers, 11 cruisers, 34 missile destroyers, ——— destroyers, 107 frigates, ——— large patrol combatants, ——— small patrol combatants, ——— mine warfare, ——— amphibious, 80 general purpose nuclear submarines, 175 general purpose diesel submarines, ——— naval fixed wing aircraft, and ——— helicopters.

#### *c. Current weapon system technology*

##### *(1) Surface ships*

*(a) Major combatants.*—All major surface combatant classes introduced into the Soviet Navy since 1967 have been designated by the Soviets as ASW ships of one category or another. These units are large and heavily armed with increased endurance, modern electronic systems, and improved air defense systems. However, coordinated operations with land based air assets, shipborne helicopters, and integral long range weapons of the ASW ships are indicative of Soviet efforts ———. Even though the Soviets say all their new major surface ships are designed for ASW, these ships are capable of other significant roles such as force air defense and, in particular, as impressive instruments to support Soviet foreign policy objectives.

*(b) Patrol combatants.*—Within this category are ——— GRISHA class which displace over 1000 tons, but are categorized as patrol escorts. Also, it should be noted that although the NANUCHKA class displaces only 845 tons full load and is therefore classified as a minor combatant, its armament includes both surface-to-air (SA-N-4) and anti-ship surface-to-surface (SS-N-9) missile systems. The Soviet patrol combatants do not represent a major open ocean force capable of mounting a severe threat against main line U.S. Naval forces. These patrol combatants, however, are highly effective in restricted waters such as coastal areas and the approaches to their main fleet basing areas. As such they constitute a major threat to the naval forces of some of our allies, and they free the major combatants for the open ocean responsibilities.

##### *(2) Submarines*

*(a) Strategic.*—The strategic attack capability of the Soviet Navy was significantly enhanced by the introduction, in 1968, of the YANKEE class SSBN. The YANKEE class carries 16 underwater launched SS-N-6 missiles with a range of 1,300 to 1,600 nautical miles. The introduction in 1973 of the DELTA class SSBN with its 12 SS-N-8 missiles with a 4,200 nautical mile range gave the Soviets the capability to engage continental U.S. targets from Soviet waters. Enlarged DELTAS currently being built carry 16 SS-N-8 missiles.

(b) *Attack*.—Since the 1960s, the cruise missile submarines have been the most threatening anti-ship units in the Soviet Navy. Missile submarines are the most severe threat to first line naval surface forces and with torpedo attack submarines, would be used to interdict Western SLOCS in the Atlantic, and in a protracted conflict, the Pacific and Indian Ocean areas.

### (3) *Aircraft*

(a) *Backfire bomber*.—Along with the submarine, Soviet air-to-surface missile equipped aircraft present a significant threat to surface targets over wide areas of the open ocean. The BACKFIRE bomber will increasingly be of concern. The BACKFIRE is a continuation of the evolution in Soviet naval air anti-ship aircraft development from BADGER to BLINDER and now to BACKFIRE. It flies farther, faster and with a greater payload than the BADGER, and can cover vital sea lanes in the Atlantic, Mediterranean, Indian Ocean, and Pacific from bases in the Soviet Union. Overseas bases would give the BACKFIRE essentially worldwide coverage.

(b) *Tactical attack*.—After a 15 year hiatus the Soviet Navy is again being equipped with shorter-range land based fighter bomber aircraft. These fighter bombers would be useful for maritime missions in all confined areas such as the Baltic Sea. The V/STOL aircraft associated with KIEV could be used in air defense, reconnaissance, strike, or even an anti-ship role. In these latter roles, it could be reequipped with short range air-to-surface missiles currently under development.

### (4) *Carriers*

Admiral Gorshkov discusses fleet air defense and aviation at sea in the following terms:

Experience has shown the value of aircraft in air defense of ships and bases. SAMs alone are not enough;

Naval strike and ASW aircraft need to be protected against an air enemy "in the combat zone itself (i.e., at sea) and during their return to airfields;" and

"... modern surface ships with aviation weapons . . . capable of operating worldwide not only over the ocean but also to land areas on remote continents."

Gorshkov's language could be interpreted as announcing the arrival of carrier aviation in the fleet, and could also possibly be an exposition of future roles for carrier air in fleet air defense and in the projection of power abroad.

The Soviet Navy's first air associated ships, the two MOSKVA class helicopter carriers, appeared in 1967. The KIEV, which has just begun its first operational deployment, represents a significant advance beyond the MOSKVA class. The KIEV has an angled deck for operating fixed wing aircraft, although the lack of catapults and arresting gear limit the Soviets to the use of V/STOL aircraft. The KIEV is expected to carry a probable mixed load of 10-12 V/STOL aircraft and 20 HORMONE helicopters, as well as self defense weapon systems. Although, designated by the Soviets as an ASW ship, the KIEV can perform other missions such as fleet air defense, reconnaissance and targeting, and limited air strikes against naval and land targets.

### (5) *Cruise missile*

The foremost weapons threat to U.S. naval forces is the multitude of anti-ship missiles developed by the Soviets and carried by submarine, air, and surface platforms. These weapons have modified naval warfare by providing small, specialized ships with the capability of destroying surface shipping at extended ranges. The Soviet commitment to the development of this line of weaponry as primary armament has been a high priority item since the end of World War II. A minimum of 30 anti-ship missile development programs are known to have been initiated since 1947. To date, at least 19 programs have culminated in the operational introduction of the system under development. These cruise missile systems are the basis of the Soviet's — anti-ship strategy.

### d. *Shipbuilding capacity*

To support a Navy of the present size and scope, the Soviets have amassed the world's largest shipbuilding capacity. In spite of this apparent capacity, there is evidence that certain key facilities are being further expanded even though presently operating at less than maximum capacity.

During the past ten years, the Soviets have out-built the U.S. Navy in terms of major surface combatants and submarines. They have also constructed large

numbers of minor combatants and auxiliaries as well as about one half of the total merchant and fishing fleet ships procured during this period. Taken together, the expansion of building capacity and the construction of all types of naval and commercial shipping in quantity represents a maritime program unmatched in size, scope or momentum elsewhere in the world.

Submarine construction facilities have received particular attention and have been increased by some 50 percent since 1967. The Soviets now have the most modern submarine yards in the world at Severodvinsk, Gorkiy, and Komsomolsk.

#### *e. Projected force levels*

Current Soviet naval force levels are not expected to change significantly in the next five to ten years, as the Soviets concentrate on replacing older units with new, more capable ships and submarines. DELTA class SSBN construction is expected to continue ———. Overall SSBN force levels are subject to constraint by SALT obligations. Construction of some ——— attack submarines is expected in the next decade to replace older units now becoming obsolescent.

The major change in surface ship construction is in the area of air capable ships. In addition to the two MOSKVA class helicopter carriers, the Soviets now have in trials or are building a total of three KIEV class carriers. These carriers will provide added operational flexibility and capability for general purpose missions in the future. Additional units of the KIEV class or a follow-on carrier may be planned ———. These additions will balance reductions in older SVERDLOV cruisers and KOTLIN and SKORYY destroyers. Given the escalating costs of sophisticated new design, the total number of Soviet naval ships can be expected to continue to decline while overall capabilities increase.

The projected air threat will increase, ———.

By 1985, the Soviet naval order of battle is estimated to be:

(The information is classified and was submitted to the Committee.)

#### *f. Possible emergence of a naval projection strategy*

The projection of power on a global basis is a concept that is evolving in Soviet naval circles. The writings of Admiral Gorshkov describe the Soviet Navy's emerging point of view that the lack of capability to use the threat of force as a means of influencing events geographically distant from the USSR is a significant shortcoming for a nation seeking to become the world leader.

Admiral Gorshkov has recently set forth an expanded naval role "as our instrument of state policy in peacetime." The development of the KIEV class ship, in conjunction with vastly improved escort ships for distant operations such as the KARA and KASHIN classes, and better amphibious and logistic ships provide the Soviets with a nascent projection capability. Projection forces must be able to stay and fight in order to have military credibility, and for the Soviets to acquire such a capability on a global basis would mean increasing their commitment evident over the past few years.

### 3. Risk

#### *a. Defined*

Risk is the degree of assurance for the successful execution of the Navy's responsibilities in carrying out the national military strategy against the projected threat. Risks can be expressed as a degree of confidence in being able to win a war, as the rapidity with which success can be achieved, or the simultaneity with which a number of campaigns can be executed. Damage limiting considerations are important, since damage to homeland or combat forces might be avoided with more decisive force superiority, which also would give residual capability to defend against possible fresh opponents or reconstituted forces.

#### *b. Assessment*

(1) Current. Today our fleet has a slim margin of superiority over the Soviets in those scenarios involving our most vital national interests. In the event of conflict we could retain control of the North Atlantic sea lanes to Europe, but would suffer serious losses to both U.S. and allied shipping in the early stages. Our ability to operate in the Eastern Mediterranean would be uncertain at best. Our fleets in the Pacific could hold open the sea lanes to Hawaii and Alaska, but by reason of the shortages of sea control and mobile logistic support forces, we would have difficulty in projecting our sea lines of communication into the Western Pacific.

(2) Future. However, the foregoing conflict evaluation refers only to the present. At the current rate of improvement of their naval capability, the balance of maritime superiority will tip in favor of the Soviets within the next five to ten years if we simply maintain the status quo of current force structure. Because it takes an average of at least five years for a unit authorized for construction to become operational in the fleet, we must start this year to build the requisite number of ships if we are not to surrender the capability advantage necessary to accomplish our sea control function and retain our current marginal superiority at sea.

### III. Naval Force Structure

In assessing the requirements for the size and composition of the Navy to carry out its functions, there are virtually an infinite number of alternatives, each dependent to some degree upon the three basic factors of national strategy, the threat expressed as intelligency estimates of future Soviet maritime capabilities and judgments relative to the degree of risk we can accept for the success of our strategy.

The range of possible force structures starts with a force which has been compiled by the Joint Chiefs of Staff from the stated requirements of the Unified Commanders, and which provides a reasonable assurance of carrying out the strategy at a prudent risk. This fiscally unconstrained force numbers about \_\_\_\_\_ ships including \_\_\_\_\_ aircraft carriers, about \_\_\_\_\_ surface combatants of all categories and about \_\_\_\_\_ attack submarines. In my view, this would be the force level which we would build toward in a period of national mobilization in preparation for an inevitable war. Because construction of this force would require significant increases in our shipbuilding capacity, this force level could not be achieved until \_\_\_\_\_.

#### A. NAVAL WARFARE

Naval warfare can be best described as armed conflict between military forces in which the components of at least one adversary are sea based. It has generally been considered as being constituted of two basic functions: Sea Control and Power Projection.

##### 1. Sea control

Sea control is the fundamental function of the U.S. Navy, and connotes control of designated air, surface and subsurface areas. Sea control does not imply simultaneous control over all seventy percent of the earth covered by international waters, but is a relatively selective function, being exercised only where required and when needed.

##### a. Prerequisite

Sea control is a prerequisite for all naval operations. It is required to provide secure operating areas for the projection of power such as carrier strike or amphibious operations and to provide for the security of sea lines of communication against interdiction, to insure the buildup and resupply of allied forces in a theater of operations. Sea control facilitates ASW operations against the submarine threat and it enhances the survivability of the U.S. sea based strategic deterrent by impeding hostile ASW operations.

Sea control is accomplished by the destruction or neutralization of hostile air, surface, and submarine platforms which could constitute a threat to U.S. or friendly forces operating in those maritime areas we need to use. Sea control also can be effected by deterring the intrusion of hostile platforms into areas where they can threaten friendly forces. However deterrence is less effective than destruction in that it permits the enemy to retain a force in being and requires the continued presence of U.S. forces for protection.

##### (1) Strategic

In an operational sense, sea control consists of strategic operations to engage and destroy hostile forces at some distance from the location of the units to be protected. Such operations consist of the seizure of enemy forward bases or other key areas by amphibious operations, long-range missile or air strikes on enemy naval and air bases, barrier operations in choke points along the enemys access from his bases to the sea, and hunter-killer operations to destroy the enemy's naval combat forces.

*(2) Tactical*

Tactical operations are conducted by naval units for self protection or in defense of supported forces engaged in other operations. Examples include task force anti-ship, anti-air, and anti-submarine operations, close support of amphibious and underway replenishment forces, perimeter protection of the amphibious objective area, and convoy escort.

*2. Power projection*

The function of power projection covers a broad spectrum of offensive naval operations from strategic nuclear response by fleet ballistic missile forces to the tactical employment of carrier based aircraft.

The functions of sea control and power projection are closely interrelated. Some degree of sea control is necessary in the sea area from which power is to be projected, depending on the type force to be employed. Conversely, the capability to project power was developed in naval forces largely as an adjunct to strategic sea control.

*a. For purposes of sea control*

The use of carrier and amphibious forces in the projection of military force can be an absolute requirement in insuring our control, or continued safe use of areas of the high seas essential to our national needs. Long range air strikes contribute significantly to our ability to control the seas by destroying enemy warships at their home bases or enroute to those ocean areas which we desire to protect, before the enemy forces come within the range where their weapons can be employed against us. Marine amphibious forces, supported by carrier air and naval gunfire, can seize and hold land areas either to deny them to the enemy for their use in interdicting our sea lines of communication, or to permit our own forces to exploit these areas as advance bases to attack enemy forces which would interdict our own.

*b. Exploitation of sea control*

U.S. Marines embarked in Navy amphibious shipping constitute the nation's only major capability for injecting U.S. ground forces into a hostile environment in an opposed amphibious operation. Another form of power projection resides in the capability of our carrier-based aircraft to strike land targets more than 500 miles away from our task forces with a variety of weapons, conventional or nuclear. Perhaps the ultimate means of power projection is through the FBM force. This essentially invulnerable force is the backbone of our nation's strategic capability.

**B. NAVAL WARFARE TASKS**

Modern naval warfare involving aircraft, surface ships, submarines, and precision guided ordnance, all tied together with global command and control systems, includes the following functional tasks: anti-air warfare (AAW), anti-submarine warfare (ASW) and anti-surface warfare (ASUW); strike warfare, amphibious warfare and mine warfare. Supporting warfare tasks are: intelligence, command and control, and logistics.

*1. Antiair warfare (AAW)*

AAW is the destruction of enemy air platforms and airborne weapons, whether launched from air, surface, or land platforms.

*2. Antisubmarine warfare (ASW)*

ASW is the destruction or neutralization of enemy submarines.

*3. Antisurface ship warfare (ASUW)*

ASUW is the destruction of enemy surface ships.

*4. Strike*

Strike warfare is the destruction of enemy high value targets ashore through the use of conventional or nuclear weapons.

### 5. Amphibious assault

Amphibious assault is the seizure of hostile territory by seaborne troops. It includes weapon fire support of troops in contact with enemy forces through the use of close air support or shore bombardment.

### 6. Mine warfare

Mine warfare is the control of sea areas through the laying of minefields and countering enemy mine warfare through the destruction or neutralization of hostile minefields.

### 7. Supporting warfare tasks

#### a. Intelligence

Through the employment of reconnaissance and surveillance U.S. forces determine location, identification and capability of hostile forces.

#### b. Command and control

Command and control is concerned with battle management.

#### c. Logistics

Logistics replenishment is the resupply of combat consummables to combatant forces in the theater of operations.

## C. NAVAL FORCE COMPOSITION

### 1. Sea control forces

Sea Control forces must be capable of operating simultaneously against air, surface, and submarine threats, since the enemy has the initiative in selecting the mode of attack. For this reason each combatant group must have some capability to counter all three threats. This multi-threat capability is generally found in large general purpose units described as major surface combatants such as attack carriers and cruisers. In smaller vessels, a single warfare area capability is emphasized. The purpose of the task force concept is to provide for versatility through composition, so that the task force may be constituted of units which contribute a warfare capability optimized to meet the anticipated threat.

#### a. AAW

Soviet air can close the objective area rapidly. However, it is readily detectable and lacks persistence and staying power. It is a high priority threat because of the speed with which it develops and the mobility which permits massing quickly in force. Present Soviet aircraft can pose a threat to sea lanes over wide areas.

#### b. ASW

The Soviet submarine threat deploys to the objective area much more slowly. However, the submarine attempts to make the movement covertly and once on station may be difficult to detect and defend against. Submarines are a persistent threat due to their staying power and weapon reload capacity. Soviet submarines are a high priority threat because of their covert nature and persistence, and because of the large Soviet inventory. However, all present indications are that Soviet submarines must return to port to be reloaded and during this transit they are vulnerable to ASW barrier attrition in geographic choke points.

#### c. USUW

The Soviet surface ship threat develops slowly and can be detected and tracked throughout its deployment. When on station it has good staying time but limited reload capability for anti-ship missiles. The Soviet surface ship threat ranks behind the submarine and air threat because of its vulnerability to detection, tracking, and attack during closure.

## D. TYPES OF SHIPS

For the conduct of naval warfare, naval ships are broadly categorized into the following types.

### 1. Carriers

Aircraft carriers are capable of the operation of aircraft of the following mission types: fighter, attack, reconnaissance, surveillance, and ASW. Further-

more, carriers can operate any helicopter and V/STOL aircraft. Conventional takeoff and landing aircraft (CTOL) must be specially designed with arresting hooks, as well as special structural and aerodynamic considerations. Helicopter or V/STOL carriers cannot operate CTOL aircraft.

### 2. *Surface combatants*

These are ships designed for the use of guns and unmanned guided weapons such as torpedoes and missiles. A limited helicopter/V/STOL capability is being incorporated in current designs. Surface combatants include cruisers, destroyers, frigates, and mine warfare vessels.

### 3. *Submarines*

Ballistic missile submarines are equipped with sea-launched strategic ballistic missiles for their primary mission and are also armed with torpedoes for self defense.

Attack submarines have as their principal armament torpedoes, and torpedo tube launched missiles for employment against enemy ship and submarine targets. Our newer nuclear attack submarines will have the capability to employ nuclear and conventional sea-launched cruise missiles (SLCM) as well as the Harpoon missile.

### 4. *Amphibious*

Amphibious ships are equipped to carry troops and their assault vehicles, and are capable of landing this force via helicopters from the LPH, over the beach with assault landing craft from the LPD/LSD, and by both helicopters and landing craft from the LHA.

### 5. *Support*

Support ships are designed to replenish combat consumables in the theater of operations and to provide mobile maintenance and repair to deployed fleet units. These ships include oilers, ammunition ships, general supply ships, fleet tugs, and repair vessels.

## E. WARFARE CAPABILITIES

Naval warfare tasks are carried out by the types of naval ships which I have just described. The capabilities of these ships, in accomplishing naval warfare tasks, are indicated by the chart at figure 1.

The types of ships, excluding support ships, are displayed horizontally in the first four columns across the top of the chart, and the warfare tasks are listed vertically to the left. From an examination of this matrix it can be seen that each type of ship contributes to the overall naval warfare capability. It is clear that the carrier shown in the first column is the most capable of naval ships across the spectrum of warfare tasks. This is due to the very versatile nature of the aircraft mix it carries.

The dots display the current capability of those types of ships in the fleet today, with presently installed weapons.

In determining the character and the force structure of a future Navy, it is important that we examine the effect of new weapons systems on the units in the future. Cruise missiles, V/STOL, advanced hull designs, and new surveillance systems are some technologies which are likely to influence future naval forces. Only the cruise missile and V/STOL have operating prototypes today. To indicate the impact of these two technologies within the next 15 years, two additional columns are provided. The dots under those columns display an enhancement of the warfare skills. These may be applied in varying degrees to the ship categories to increase their capabilities within the warfare tasks.

## NAVAL WARFARE TASK CAPABILITIES

TASK	CARRIER	SURFACE COMBATANT	SUB	AMPHIB	CRUISE MISSILE	V/STOL
ANTI-AIR WARFARE						
AIR SUPERIORITY	•					•
AIR DEFENSE	•	•				•
ANTI-SUBMARINE WARFARE						
STRATEGIC	•		•			•
TACTICAL	•	•	•			•
ANTI-SHIP WARFARE						
STRATEGIC	•		•		•	•
TACTICAL	•	•	•		•	•
MINE WARFARE						
MINING	•		•			•
MINE COUNTERMEASURES	•			•		•
RECONNAISSANCE						
AEW	•					•
SEA	•	•	•			•
LAND	•					•
STRIKE						
NUCLEAR	•		•		•	•
CONVENTIONAL	•					•
AMPHIBIOUS ASSAULT						
VERTICAL ASSAULT	•			•		•
OVER THE BEACH				•		
CLOSE AIR SUPPORT	•			•		•
GUNFIRE SUPPORT		•				

FIGURE 1

## F. BALANCED FLEET

## 1. Among types

Our Navy must be able to fight against a broad spectrum of weapons and win. We cannot make the mistake of over emphasizing any single area of our naval capability. To do so would simply invite the enemy to exploit an area of neglect. We must also be prepared for conflict situations which involve aircraft, surface ships, and submarines simultaneously. Experience has shown that is the way that wars are most effectively fought. In order for the Navy to meet these requirements for a broad range of capabilities, there must be a balance among types: carriers, surface combatants, submarines, amphibious forces, and support ships.

## 2. Hi lo mix

Within a constrained budget, there must also be balance between very capable multipurpose ships such as carriers and cruisers, which are relatively expensive, and single-purpose vessels which, being less costly, can be procured in larger quantities, providing our fleet with the density of force it needs to be effective on a worldwide basis.

## IV. Naval Program Development

The determination of force structure requirements involves the application of the above considerations in an orderly analytical process which I shall describe.

## A. PROJECTING FORCE STRUCTURE 10 YEARS IN FUTURE

## 1. U.S. Navy force structure

The starting point for future fleets as previously stated, resides in today's assets. On the average, our fleet is about 15 years old. These ships have a nominal useful life expectancy of about 20-30 years, depending primarily on the type of ship. We are not so affluent that we can retire capable units with useful life remaining simply to replace them with more modern versions. Therefore, we start our planning with the current inventory.

We project this force structure 5 to 10 years into the future by dropping ships as they attain the limit of their useful life and adding those ships which have been authorized and funded by the Congress. We also add those ships included in the approved 5-year ship construction program.

Because it takes about 5 years after authorization for a ship to enter operational service in the fleet, and because we are already working with a 5-year ship-building program, it is sensible to examine a force structure 10 years from now.

## 2. Intelligence analysis

Just as we do with our own forces, and based upon agreed intelligence estimates, we project the main naval and maritime air forces of the Soviets to a force structure 10 years into the future. As we have seen in the discussion of the threat, the Soviets are currently placing greater emphasis on qualitative improvements in their forces, such as nuclear powered submarines, numbers and types of cruise missiles, and aircraft carriers. Thus, this threat projection must focus not just on numbers of force elements, but more importantly on Soviet qualitative capabilities in the context of reasonable threat scenarios.

## B. CAPABILITY ANALYSIS

## 1. Net assessment of sea control capabilities: U.S.S.R. versus U.S.

## a. U.S.S.R.

The number of Soviet ship and aircraft having sea denial capability has decreased, but the unit effectiveness has increased. Soviet attack submarines have declined from 330 to 255 from mid-1968 to mid-1976 but the fraction of nuclear ships has increased from 16 to 35 percent.

The Soviet Navy will have sea-based tactical air for the first time in the KIEV. Soviet surface combatants have increased only slightly in number, but they are larger and have better sea keeping capabilities. However, they have fewer anti-ship missiles.

Soviet naval aviation has been strengthened by a 12-percent increase in anti-ship missile launching aircraft and introduction of the Backfire bomber which has a once-refueled radius of over ——— and can reach the major convoy routes to NATO and Pacific allies.

The Soviets have developed ———.

## b. United States

Eight older antisubmarine carriers have been retired, but the capability has been replaced by employing the S-3 antisubmarine aircraft aboard all large carriers. Measured in terms of aggregate kill potential, carrier-based anti-submarine air capability has increased relative to the threat since 1968.

The most drastic change has been the reduction in the number of surface combatants and amphibious ships. Individual units have increased in capability, but the decrease in the numbers has been so drastic that the net capability has been reduced.

Land-based air antisubmarine forces have decreased from 30 to 24 active squadrons, but the individual units have improved and the reserves have inherited better aircraft, yielding a net increase in this capability.

Continued submarine production plus emphasis on quieting and better sensors give the 39 newer nuclear submarines more ——— kill width relative to the increased threat when compared to the diesel submarines they replaced.

The U.S. trend in air defense has been toward qualitative improvements with essentially constant force level. The F-14 is ———. These deficiencies provide the basis for the Navy's need for the Aegis air defense system.

In antiship warfare the United States continues to enjoy an advantage due to its carrier-based air. As the Harpoon antiship missile is added to surface ships and antisubmarine warfare aircraft, that advantage will be further enhanced.

U.S. undersea surveillance capability, ——— enhanced by sophisticated signal processing.

## *2. Developing requirements to redress deficiencies*

Given our projected future capabilities, we can use a form of war gaming to analyze our naval capabilities against the Soviet capabilities in various scenarios generated by our strategy. A number of iterations of these analyses are conducted to include the participation of allied forces at different levels, and to incorporate variables in possible enemy strategies as well.

From these analyses we determine the deficiencies in our projected force structure, and then develop programs to reduce or eliminate them.

These incremental changes will establish a range of force structures which provide varying levels of assurance that we can defeat the enemy, taking into consideration the significant uncertainties inherent in our ability to forecast future Soviet force levels and predict their strategies and actions. It is these uncertainties in battle outcome due to the unknowns in future Soviet intentions, as well as capabilities, which result in a range of future force requirements which we describe as risk. These uncertainties, likewise, prevent us from determining a precise number for our future force level which can be fully agreed upon by all responsible authorities. Working as we are, 10 years into the future, with the uncertainties of world politics, emerging weapons technologies, and difficult to define Soviet capabilities and intentions, these future requirements cannot be exact or inflexible, but must be continuously monitored and periodically updated as required.

In spite of the range of the analytical results, we can, through the application of sound judgment, determine force level goals for the future which will conform to national policy decisions on strategy and affordability as well as attainability at various levels of risk.

From this force structure goal 10 years hence, we develop a multiyear ship-building plan, with annual authorizations, for the new ships, which, when added to current forces minus the ships dropped due to old age, will provide us with the future force structure.

The foregoing approach provides a range of force structures which will be related to varying degrees of risk.

## CNO PROGRAM GUIDANCE

The objectives of this Navy planning process are to improve fleet and individual unit readiness and to maintain a balanced program. The CNO implements this planning through the issuance of program guidance from which the detailed programs are developed. The major elements of this guidance are set forth below.

### *1. Improve AAW*

Fleet air defense our antiair-warfare capability, is an important aspect of the Navy's sea control function. The lead element in executing this mission occurs prior to attack on our forces. ———.

The next tier of the multilayered defense in depth concept is area defense. The long-range destruction of the airborne threat using combat air patrol F-14/Phoenix weapons systems and airborne early warning aircraft is supported by long-range shipboard surface missile systems. ——— current shipboard missile systems (Talos, Terrier, and Tartar) are limited in their effectiveness. ———.

New sensors and improved missiles increase our capabilities in area defense. These developments are keyed to address detection, processing, and weapon engagement deficiencies; for example, the SPS-48C 3D radar is designed with an improved ECCM capability and automatic target detection and tracking. The SPS-52B now in the fleet in the LHA provides improved detection in an electronic countermeasures environment. An improved automatic target detection capability is being developed for this radar, which will be the primary sensor in the DDG modernization program. The target acquisition system (TAS) 2D radar is designed for a high probability of detection in a heavy ECM environment. It will have the capability to automatically detect, track, and assign targets to the NATO Sea Sparrow missile system on the DD-963's. The design-to-

price ESM sensor now undergoing technical evaluation should provide a significant increase in passive detection when it reaches the fleet ———. Reaction time improvements are also expected from the integrated automatic detection and track, digitized combat direction system.

Our capabilities will be enhanced significantly with the addition of the AEGIS weapon system designed for fast reaction, high track, and engagement capacity, radar ECM hardness, and improved missile guidance. The Terrier CG/SM-2 missile system, which should enter the fleet ——— has been designed to update Terrier cruisers for increased firepower, crossing target capability, and ECM capability.

Those penetrators that leak through area defense comprise the threat to the innermost, self-defense area. Existing gun systems and their associated fire control systems are woefully inadequate against the present threat: a head-on incoming missile. It was this realization in the late Sixties given the impetus of a man-of-war sunk by hostile missiles, that led to the introduction of the basic point defense missile system. This manual, low-power system with slow reaction time uses a surface-launched version of the aircraft AIM-7E Sparrow missile, ———. Again we have undertaken a program of improvements to enhance the individual ship's survivability. The NATO Sea Sparrow missile system is designed to increase firepower with automated fast reaction, using a surface variant of the AIM-7F missile. This AIM-7F variant has double the range and altitude capability of the present missile ———. The Phalanx Close-In-Weapon system, employing new closed loop spotting techniques, will provide automatic, autonomous, terminal defense for a wide range of ships starting in fiscal year 1978. New chaff and infrared decoys, along with the design-to-price ESM and SLQ-17 defensive electronic countermeasures equipment now in evaluation are designed to counter active and passive guided missiles ——— we should have significantly improved capability in both area and self-defense for executing the sea control function.

## 2. Continue ASW

In the field of ASW, we must continue our efforts to meet the expanding Soviet submarine threat. Although Soviet submarines will continue to show a slow decline in numbers, their increased capabilities will more than counteract this decline.

The great strengths of the U.S. Navy in ASW are the detection advantages of our SSN's over Soviet submarines, the surveillance ——— capabilities of our SOSUS system, the rapid response and high effectiveness of our VP aircraft against transiting submarines, and the greatly improved hull-mounted and towed array active and passive sensors of our primary ASW surface combatants.

Recent Soviet advances in submarine ——— are reducing these advantages. Additionally, we have inadequate numbers of primary ASW surface combatants ———. Therefore, we are continuing with a number of programs which will improve our capabilities in ASW. These include the near-term improvements in acquisition range for our MK-46 torpedoes, the deep ocean Captor mine for use in choke point barriers, further development of the S-3A and P-3C ASW aircraft, and the development of the improved Lamps helicopter in conjunction with the longer range passive tactical towed array sensors for our surface ASW combatants. We are also progressing with improvements to our SOSUS system, the development of an advanced lightweight torpedo for our surface ASW combatants and aircraft, and improved hull mounted passive sensors.

## 3. Nuclear propulsion policy

The Navy's policy for the new construction of nuclear-powered warships is straightforward and designed to support a limited but fundamental exploitation of the advantages of nuclear propulsion within the overall requirements of our naval strategy. This policy states that all submarines should be nuclear powered, because with nuclear power the submarine attains the ultimate capabilities of the true submersible. Among surface combatants, only carriers and cruisers should be nuclear powered, and only enough of these to constitute a strategically significant segment of the U.S. operating forces. This would amount to ——— all-nuclear powered task forces, each consisting of a carrier, ——— cruisers, and

— submarines. These all-nuclear powered task forces would have the ability to steam unlimited distances at high speeds without refueling, arriving at a crisis point ready to conduct combat operations until the crisis was resolved or conventional forces with logistic support could arrive. Three of these task forces in the Atlantic Fleet, for example, would permit one to be forward deployed at all times, one to be combat ready based on the U.S. east coast, and the third all-nuclear task force to be in maintenance status.

Our buildup toward this all-nuclear task force capability should continue in an orderly and balanced nuclear ship construction program.

#### *4. Cruise missile development*

U.S. Navy cruise missiles can make a significant contribution to the tasks of antiship warfare. They are needed to improve the capability of surface combatants, submarines and aircraft to engage enemy missile ships and air capable ships at long range. All current Navy capability for long-range attack is concentrated in our aircraft carriers. Extensive development of the 60-mile range Harpoon will provide much of the needed improvement. As a complement, and in some cases as a follow-on system, the conventional armed antiship Tomahawk offers additional capability—greater missile range and larger warhead. In addition to the obvious value of added range, the development of Tomahawk, especially on submarines, will make the Soviet problem of defense more difficult. The excellent survivability of attack submarines makes deployment of Tomahawk attractive as a supplement to planned central strategic forces.

#### *5. V/STOL development*

The unique versatility afforded by the ability to take off and land aircraft in restricted space has been demonstrated by helicopters of increasing capability since the late 1940's. Concurrently, efforts to overcome the inherent speed, range, and payload limitations of rotary-wing technology have produced a series of fixed wing V/STOL vehicles. The rapidly advancing state of the art now promises in the foreseeable future a family of V/STOL's roughly equivalent in capability to modern conventional aircraft, including heavy lift and supersonic models. The payoff anticipated is twofold: A marked improvement in flexibility of air operations and increased survivability of air assets.

Flexibility in the application of sea-based airpower is improved most markedly by no longer being tied to a small number of large aircraft carriers. We can extend the influence of U.S. airpower to widely separated moderate trouble spots without having to commit overwhelming and unnecessary assets; conversely, we can concentrate airpower incrementally against a maximum threat.

Air operations aboard ship become more flexible without the requirement for reserving large deck areas and blocks of time for catapulting and arrestment. Air operations from the dedicated air platforms are less sensitive to battle damage because of the ability of V/STOL aircraft to operate selectively from undamaged portions of the deck.

Survivability as well as flexibility is greatly enhanced by the ability to disperse air-capable forces. The use of greater numbers of smaller incremental airpower building blocks dilutes the enemy's offensive potential two ways: We can station effective forces over broader areas of influence where they are more difficult to find and to target, and even when force is concentrated we present multiple separate aim points, the loss of any one of which would not be decisive.

##### *a. V/STOL plan*

As conventional takeoff and landing (CTOL) aircraft reach the end of their normal service lives, the transition to V/STOL will occur. A subsonic multipurpose version will replace the S-3 and E-2 for the ASW/AEW missions and will perform COD/SAR missions as well. A supersonic multipurpose V/STOL will replace the F-18 and A-18. By technologically progressing from subsonic to supersonic, less risk is incurred.

As large deck carriers drop out of the inventory, they will each be replaced by two to three smaller V/STOL platforms, tentatively designated CVV. Since the V/STOL's can operate from both, we can achieve an increase in flexibility.

## D. PROGRAM

1. *Five-year shipbuilding program*

When the President submitted his budget in January, he indicated his concern over the adequacy of the naval shipbuilding programs. In view of the significant implications for both defense policy and the large potential fiscal impact, he initiated a special study of naval force requirements by the National Security Council. That study is now nearing completion. It has been an extensive review of the strategy, threat, and risk elements, and has led to a significant heightening of the insight into the problem by the members of the National Security Council. One clear conclusion has emerged, namely, that maintenance of our maritime superiority is essential to our long-term national security, particularly in view of the trends in the military balance of strategic and land forces. Given this general and clear consensus, the President decided to submit an amendment to the fiscal year 1977 Budget requesting an increase in the rate of naval construction, and indicated that further increases would be recommended in the outyears but that the details still needed to be worked out within the NSC. This revised 5-year program should be completed, approved by the President, and submitted to the Congress within the next few months.

As part of the NSC study, the Navy was requested to make several inputs. The input provided in February 1976, which reflected Navy views on forces required to carry out the strategy at an acceptable level of risk, has appeared in various press accounts, and was presented by the CNO as an illustrative force to the Seapower Subcommittee of the House Armed Services Committee on March 2, 1976. That force called for a shipbuilding program of 166 ships in a balanced mix judged to be capable of meeting wartime NATO commitments, maintaining present forward deployments, and providing clearly evident maritime superiority in the face of the qualitative and quantitative increases being achieved by the Soviets. Subsequent to that input, other elements within the Department of Defense reviewed the proposed program and developed alternatives reflecting other considerations. Among the major policy issues considered were the contribution that allies might make to the total maritime superiority, and the possible impact of new technology on future naval forces. As a result of this review, a broad consensus has emerged which focuses on the following major points.

The major element of superiority in the total naval posture today is the U.S. lead in sea-based aircraft deployment. These aircraft, based on the large-deck carriers, provide the Navy with the primary striking power vital to the attainment of sea control in the face of opposition by Soviet ships, submarines, and aircraft, and very useful in flexible application in day-to-day support of U.S. foreign policy, in cooperation with allies when possible, and unilaterally when necessary. It is important to recognize that carrier aircraft cannot do the job alone; no one maintains that they can.

A fleet balanced among types is essential to accomplish all of the necessary wartime tasks that add up to winning the naval campaign. Nonetheless, the carrier today is an indispensable element of U.S. naval power, and adequate naval power is clearly a key ingredient for our national security. Thus, in testimony before the Senate Armed Services Committee in May, the Secretary of Defense described tentative conclusions of the NSC study to the effect that a force of 12 active carrier task groups would be required through the end of this century, and that construction of a 4th *Nimitz* class carrier was necessary in order to maintain this level.

A second major finding of the NSC study effort to date is that the capability to defeat the cruise missile must be improved. No one system holds the key to defeating this threat. Navy doctrine calls for defense in depth, ranging from strikes against enemy bases from which the threat emanates, attacks on the enemy platforms as they transit from their bases to the sea lanes we need to control, to a system of tactical defenses composed of sea-based fighter aircraft, shipboard missile systems, and point defense systems. Technology has made possible a major increase in the performance of shipboard missile systems with the development of the AEGIS anti-air warfare system with its phased-array radar, computerized control system, and improved performance missiles. Rapid deployment of the AEGIS system in a balanced mix of nuclear and non-nuclear platforms will give our task forces a critically needed capability to

defeat a major threat. Accordingly, in May the Secretary of Defense stressed the need to build both the nuclear-powered AEGIS ship (CSGN) and the conventionally powered AEGIS destroyer (DDG-47).

A third major conclusion of the review is reaffirmation of the fact that new technology may make possible the achievement of the required capabilities to control the seas using systems that will alter the appearance of today's task groups. Principal among these new technologies are vertical/short takeoff or landing aircraft (V/STOL), advanced cruise missiles, and advanced naval vehicles such as the surface effects ship. The combined influence of these technologies seems to hold sufficient potential in the mid to long term that it is now prudent to plan future naval forces based on the development of V/STOL aircraft, cruise missiles, and new ship types to accommodate these weapons. In the light of these emerging conclusions, I recommended to the Secretary of the Navy a new shipbuilding program emphasizing these concepts as an input to the NSC study. This program was subsequently developed and submitted in late May as a fresh statement of Navy's 5-year program objectives.

In summary, during the past 6 months, the Navy has been involved with other responsible officials in searching review of naval force requirements. As an input to that process, the Navy has made two specific recommendations, the second and more recent evolving logically from the emerging conclusions of the inter-agency study. The final decision, although it may well differ in detail from the Navy recommendation, will not alter the general conclusion that we must rebuild our Navy with a balanced mix of capable ships if we are to maintain our maritime superiority and preserve our national security. The first and second recommendations are summarized in the following table, and compared with the tentative program presented by the President in January and subsequently amended in early May. Details are provided in Tabs A and B.

COMPARISON OF SHIPBUILDING PROGRAMS (TOTAL FISCAL YEAR 1977-81)

	President's budget (January)	Navy recom- mendation (February)	President's amended budget as projected <sup>1</sup> (May 4)	Navy recom- mendation (May 17)
Trident.....	7	9	—	—
SSN.....	11	16	—	—
CVN.....	2	2	—	—
VSS.....	1	3	—	—
CV SLEP <sup>2</sup> .....	—	1	—	—
CSGN.....	2	9	—	—
DDG-47.....	8	7	—	—
FFG-7.....	40	60	—	—
CG(C) <sup>3</sup> .....	—	2	—	—
LX.....	1	1	—	—
MCM.....	10	13	—	—
Support ships.....	29	43	—	—
Total.....	111	166	—	—
Cost (then year dollar billions).....	\$35	—	—	—

<sup>1</sup> Interim best estimate, final NSC study results will be incorporated into the 5-yr plan for fiscal year 1978.

<sup>2</sup> SLEP: Service life extension program.

<sup>3</sup> CG(C): Cruiser conversions.

#### V. Fiscal year 1977 SCN budget

The President's budget, as amended (Tab C) provides for 21 new ships in fiscal year 1977, as well as for long-lead materials for a fourth *Nimitz* class carrier and the first strike cruiser. Authorization for the latter two ships will be requested in fiscal year 1978.

In addition to these long-lead funds, the types and numbers of ships represented in the amended request are: 1 Trident submarine, 3 attack SSN's, 1 guided missile destroyer (DDG-47), 12 guided missile frigates (FFG), 2 fleet oilers, 1 destroyer tender, and 1 submarine tender.

## A. CVN

Carrier task forces are the essential building blocks of our general purpose naval forces. Naval combat operations in the past and intensive fleet exercises of today have conclusively demonstrated that sea control cannot be maintained without control of the air. Surface ships cannot survive in the face of a strong air threat without air superiority.

Sea based air capabilities provide the wide ranging air superiority under which other naval tasks such as amphibious warfare and antisubmarine warfare can be accomplished. This essential requirement to provide for an air umbrella over our surface operating forces will be even more necessary in the future as the Soviet Backfire bomber enters the Soviet Naval and Long Range Aviation inventory in large numbers over the next decade. The high performance and extreme radius of this aircraft with two antiship missiles aboard make it a severe threat to our shipping throughout the Northern Hemisphere. The possibility of Soviet aircraft operating from bases in Guinea, Angola, and Somalia expand that threat significantly.

The modern carrier air wing can quickly establish the requisite air superiority, conduct offensive long-range strike operations against naval surface forces, shore installations and land forces, and conduct antisubmarine warfare operations. Aircraft carriers are highly mobile air bases which can be moved into position at a rate of more than 600 miles a day. They incorporate substantial logistic self-sufficiency. They are versatile. The aircraft carrier can be employed across the full spectrum of conflict—from support of peace-keeping efforts in crisis situations, through limited wars to general nuclear war. The carrier—particularly the nuclear carrier—is ready on arrival when moved to a trouble spot and can maintain its readiness posture for extremely long periods.

The individual capabilities of our aircraft carriers and their embarked air wings have kept pace with technological advances. Our tactical naval aircraft are among the best in the world and the F-14 provides confidence that we can handle the projected threats. This has compensated partially for the decline in overall carrier force levels.

Construction of a new carrier is required for delivery in 1984 in order to maintain an operational force level of 12 deployable carriers into the future. It is essential that current carrier force levels be maintained.

When the U.S. Navy is compared to the Soviet Navy, it is the sea-based airpower of the U.S. carrier force which is the measure of difference between the two fleets and which provides the U.S. Navy with its maritime superiority.

A force level of 12 deployable carriers is the minimum necessary to support current forward deployment commitments, and then only at the continued expense of personnel retention, material and operational readiness. A force level of 12 deployable carriers is necessary to support four forward deployment commitments, but more importantly, we must maintain our carrier forces at a level which is recognized by the Soviets as a clear signal that we intend to maintain our maritime superiority. It is just as essential that we maintain the confidence of our allies by providing the requisite sea-based air power that must of necessity come from the world's greatest seapower.

It would be unwise to further reduce the capability of that one force within the U.S. Navy which currently provides us with our margin of superiority over the Soviet Navy without having in hand a replacement for that capability.

The new construction carrier for which long-lead funds have been authorized in fiscal year 1977 may possibly be the last big-deck—*Nimitz* class—carrier that we will require. This will depend on what means the Soviets as well as we ourselves employ in putting airpower to sea in the future.

The United States can maintain its margin of maritime superiority for at least the next 10 years by maintaining a force of 12 deployable large-deck carriers capable of operating the types of aircraft presently planned for procurement.

It will be necessary to extend the service life of the *Forrestal* and subsequent carriers past 30 years to maintain 12 deployable carriers. This will require that the ships be sequentially decommissioned beginning in 1980 for extensive overhauls lasting about 2 years, therefore, not available for deployment.

We must have this additional new carrier in order to have a sufficient inventory of carriers to extend the lives of the remaining ones while maintaining 12 deployable carriers.

For the more distant future, the Navy is confident that V/STOL aircraft with high combat capability are achievable and will make possible new alternatives for the types of ships which can be used to take aircraft to sea.

Exactly when these aircraft will be operationally available is questionable.

Therefore, we need to hedge against the risk of achieving sufficient operational capability with V/STOL aircraft by maintaining our current capability until the new technology is in hand and replacements are ready.

If the introduction of V/STOL technology is delayed, we will still have a reasonable force of large deck carriers and their CTOL aircraft through the 1990's.

If V/STOL technology comes to fruition on time or earlier, V/STOL aircraft can be operated effectively from ships currently in the fleet including large carriers and other surface combatants.

With its extensive compartmentation, protection, armor, and damage control facilities, the carrier is designed to take punishment and fight on. But much more important, the carrier, with its aircraft, reduces the vulnerability and improves the survivability of all surface ships of the task force.

It has been suggested that because of its large size, a carrier is an easy target for a guided missile. With today's guidance techniques that provide virtually no miss distance for guided missiles, no vessel on the high seas can escape the effect of such accuracy. But where a single warhead would sink or disable a smaller ship, the carrier can absorb these blows and fight on.

#### B. CV SERVICE LIFE EXTENSION PROGRAM (SLEP)

In order to maintain carrier force levels through the 1990's, we plan to extend the life of all of our modern post-World War II hulls, consisting of the *Forrestal* and later classes. This concept envisions an extended shipyard period of about 2 years for each carrier, during which extensive and indepth overhaul and refurbishment of basic hull, machinery, electrical, and electronic systems will be undertaken, with a goal of extending the service life of each ship from 10 to 15 years. The program will be phased so that only one carrier is undergoing service life extension at a time.

#### C. STRIKE CRUISER

As background, let me point out that the Navy plans to operate its nuclear powered ships in integrated task groups, each consisting of a carrier, cruisers, and submarines. These task groups will represent the most powerful naval tactical units afloat. These all-nuclear-powered task forces have a unique capability in that they can be immediately dispatched in time of tension, to proceed at high speed regardless of distance to the scene of a crisis without pausing to refuel, and arrive in the objective area ready for combat. The all-nuclear task force can remain in the objective area until the crisis has been resolved or the slower conventionally powered force with its logistic train can join up.

Nuclear-powered task forces are expected to face the most severe threats, both in terms of numbers of hostile platforms—aircraft, submarines, or surface ships—and in terms of the most advanced naval weapons technology—the cruise missile.

The all-nuclear-powered task forces must be equipped with the Aegis system because of their exposure to the highest level of threat. The introduction of the Aegis system into the fleet is imminent. It will permit naval forces to defeat large numbers of sophisticated air weapons systems including cruise missiles. To maintain the advantage of an all-nuclear task force the cruisers in which Aegis is installed must also be nuclear powered. The additional capabilities of the weapons suite in the strike cruiser adds flexibility to the carrier and its task force by complementing the carrier's weapons systems both offensively and defensively. Thus, there is a firm requirement for a nuclear-powered Aegis ship, which has become known as the strike cruiser.

Beyond our requirement for the strike cruiser as a component of an all-nuclear carrier task force, there is also a need for highly capable major surface combatants in our Navy to fulfill the requirements of maintaining maritime superiority against the Soviet Navy, which is growing in capability in all areas of naval warfare—surface, air, and submarine.

The major surface combatants, along with the carrier, are the only ships which can pose a credible and visible threat to Soviet forces, with their strong

capability in each of the warfare areas of antiair, antisurface, and antisubmarine. With carrier force levels diminishing to 12 deployable carriers, the major surface combatants must take over some of the sea control responsibilities previously handled by a larger force of carriers against a smaller and less capable Soviet naval threat. Therefore, strike cruisers will operate in areas of the world's oceans where U.S. naval presence is required to protect our interests and conduct naval warfare when carrier forces are required elsewhere. The strike cruiser is designed to do this.

The basis for our requirement for the strike cruiser is primarily in terms of the specific capabilities, which include the Aegis anti-air-warfare system with associated SM-2 surface-to-air missiles, the Harpoon and Tomahawk antiship missiles, the lightweight 8-inch gun with extended range guided projectiles, ASW weapons consisting of ASROC and deck-launched torpedoes, the passive-towed array sonar (TACTAS), the SQS-53 active sonar, helicopter/V/STOL aviation facilities, fragmentation protection in vital areas, a Tactical Flag Command Center and nuclear propulsion.

The strike cruiser's Aegis system, LAMPS MK-III/V/STOL air capability, and cruise missile complement the carrier air wing and enhance the flexibility inherent in our dual-mission carriers. Her Aegis system provides opportunity for increased fighter loadout options under certain threat levels. The SLCM, Harpoon and 8-inch gun diversify our total capability and allow for varied mixes of attack aircraft for employment against surface ship and shore targets.

The LAMPS MK III/V/STOL provides similar flexibility for sea-based air ASW assets and her SLCM will complicate air defense problems and reduce aircraft attrition through a mix of missiles and aircraft. Thus, the strike cruiser will disperse and diversify the fleet's ability to attack the enemy's surface combatants and to strike at his bases and facilities. This enhances our ability to control the seas, and presents a surface threat other than carriers to the Soviets, which compounds their surveillance/targeting problems, dilutes their density force, and offsets the increased accuracy of their weapon systems. The strike cruiser will also respond to contingency operations with a credible show of force while keeping open the option of escalating to a carrier task group, and still without commitment of troops ashore.

As the most modern and capable surface combatant, the strike cruiser is capable of engaging and destroying hostile threats to our continued free use of the seas—either as a major component of the most powerful naval tactical unit ever assembled, the all-nuclear-powered task force, or operating independently in the remote areas of the world's oceans.

The Nation needs the strike cruiser to fulfill its plans to maintain maritime superiority over the growing Soviet threat. She will be a multipurpose, offensively oriented, survivable, and essential component of our fleet of the future.

#### D. DDG-47

There is an urgent requirement to get the Aegis weapons system into the Fleet soon and in numbers to counteract the continued proliferation of Soviet antiship missiles.

The DDG-47 guided-missile destroyer program is the most achievable and opportune construction program designed to meet this need. There are several reasons why this is true. First, although the designs of both the DDG-47 and the CSGN are progressing simultaneously, the DDG-47 has a shorter design period due to its commonality with the DD-963. From the main deck down, except for the missile launchers and their magazines, the DDG-47 is almost a replica of the DD-963 class. Second, there are no components in the DDG-47 that require long lead funding. Finally, the building time of the DDG-47 is shorter than that of the CSGN.

The DDG-47 will be the most heavily armed and generally capable surface combatant ship in our Navy with the sole exception of the strike cruiser. Her Aegis combat system is the most advanced antiair warfare (AAW) system envisioned at this time. It is designed to provide area air defense in high-density, high-threat antiship missile environments. Such a capability is important to the implementation of the U.S. maritime strategy from both the sea control and power projection standpoints. We must be able to use the sea in forward areas to support our allies with supplies and to protect U.S. power ashore. Providing our forces with effective defense against determined, coordinated, high-density, antiship missile attacks will enhance our ability to operate and more effectively

carry out the U.S. forward strategy. The Aegis combat system was specifically designed for this purpose.

The DDG-47 combat system is similar in many respects to that of the strike cruiser. Besides their common Aegis systems, both ships will carry the same ASW systems and both will mount Harpoon missiles. The DDG-47 will not have tactical SLCM and will mount two 5-inch guns as compared to the CSGN's single 8-inch gun. She will be more lightly armored due to the use of the DD-963 hull design. Although the ship will not have nuclear power, it will have a range capability of \_\_\_\_\_ miles at 20 knots.

The missions of both ships are similar except that the DDG-47 with less endurance and light protection is less capable for independent offensive operations.

#### E. LONG BEACH AEGIS

In the light of overall fiscal limitations on the shipbuilding program and the necessity to get started on two new classes of Aegis ships—the strike cruiser (CSGN) and the DDG-47—the Navy has recommended that *Long Beach* be converted to an Aegis strike cruiser in two steps. First, a modest upgrade of her AAW capability would be accomplished concurrent with a regular overhaul to commence in October 1978. The second step would be the actual conversion to the Aegis strike cruiser which will commence in 1984. Upon completion of this conversion, *Long Beach* will have an Aegis capability comparable to the CSGN, and be capable of operation as a first-line fleet asset until about 2006.

The authorization bill provides for an earlier *Long Beach* conversion. If funds are appropriated in the manner that the authorization bill suggests, the *Long Beach* conversion to a strike cruiser configuration will begin in fiscal year 1979. I certainly support the *Long Beach* conversion, but not at the expense of our other two Aegis ships, the CSGN and DDG-47. It is extremely important that we introduce these two ships into the fleet as quickly as possible.

#### F. FFG-7

Recent crisis situations, fleet exercises and studies indicate that there are insufficient numbers of surface combatants to protect the sea lines of communication. Considering the need to reinforce and resupply U.S. deployed forces and overseas allies in the event of conflict and the expanding missile and torpedo threat to shipping from Soviet submarines, the FFG-7 guided missile frigate program was initiated to procure at least cost an effective open ocean surface combatant in sufficient numbers to replace retiring World War II destroyers and supplement existing FF-1052 class frigates. The FFG-7 class, designed to provide protection to military and mercantile convoys, underway replenishment groups and amphibious forces in areas of moderate threat meets this clear requirement. Equipped with long range passive sonar (TACTAS), two ASW helicopters (LAMPS), short range active sonar, torpedo tubes, Harpoon surface-to-surface missiles, an area anti-air warfare fire control and missile system (FF-1052 class has only short range self defense missiles) and a rapid-fire 76MM gun, this 3,600 ton, 28-knot gas turbine frigate will be capable, effective and seaworthy. The FFG-7 class frigate is affordable in the quantities required to offset both numerical and qualitative deficiencies in surface combatants and is a critically needed addition to the sea control forces of the Navy.

#### G. PHM

Reduction of the PHM program by \$193 million in previous year funding and \$41 million in fiscal year 1977 cost growth and escalation has been proposed. This action seriously jeopardizes the achievement of our objective for this promising new type of ship since the funds remaining are not adequate to build any more ships. The result of the subcommittee action would be to terminate the PHM program with the present single lead ship.

Although we have scaled down our original plans for the PHM building program primarily because of the generally higher shipbuilding costs which have affected all of our programs, we believe that we can achieve most of our near-term objectives with a single PHM squadron of six ships. This would include the five ships authorized and funded in the fiscal year 1975 and fiscal year 1976 SCN programs together with *Pegasus* (PHM-1), the lead ship which has just completed operational evaluation at sea.

The PHM program was conceived as the operational beneficiary of the accumulated hydrofoil technology we have developed over the past 15 years. Our aim at the inception of the program was to provide capable ships for the fleet. We think that progress to date justifies our original confidence that it would do this. In just over 3 years since the contract was signed, *Pegasus* has over 1,000 hours of underway time behind her. She has just demonstrated very successfully her ability to operate at high speeds in rough water while firing her Harpoon and 3-inch guns. She packs tremendous firepower for such a small ship. No other surface ship of comparable size can match her performance in rough water.

As you know, the PHM program is a joint program administered by the United States under the aegis of NATO with Germany and Italy as development partners. An unfortunate consequence of your proposed action is that it is all but certain that it would foreclose the introduction of this potent new weapon system into the NATO naval order-of-battle.

We believe that the PHM offers fine potential as a fleet unit, but it must be operated in squadron-sized numbers. The present program of building five more PHM's and operating these with the lead ship in a squadron of six ships is a sound and measured approach to capitalizing on new technology, gaining operational experience, and meeting fleet requirements.

I strongly urge that you reconsider your action and maintain present funding status for the five PHM's in the fiscal year 1975 and 1976 SCN programs.

#### H. TRIDENT

In the strategic area, it is of critical importance that we continue a vigorous Trident procurement program. Physical and technological aging of our current submarines and the potential future Soviet threat to these submarines require the deployment of the highly survivable, technologically current Trident system if we are to maintain a credible sea-based deterrent force. The Trident submarine, which employs the best that current technology offers, coupled with long range ballistic missiles which allow operations throughout the world's oceans makes any attempt by an enemy to destroy the force economically and technologically infeasible. Trident will also incorporate the growth room for further advances in missiles and ship systems required to combat any emerging threat or to carry out tasks which might be dictated by evolving national strategic goals.

#### I. SSN

The nuclear attack submarine is a key element in our naval forces. Its unique capability to operate covertly for prolonged periods in waters distant from friendly support, coupled with its sensors capable of detecting targets at great range, make the nuclear attack submarine the ideal ship for antisubmarine and antisurface ship operations where the enemy may control or contest the sea and/or air. The nuclear attack submarine is also proving highly effective in the direct support role with an integrated task force.

Recent fleet exercises have clearly demonstrated that the SSN provides a new dimension in task forces in antisubmarine warfare. With the carrier task groups, they furnish ASW support in detection and destruction of hostile submarines. In addition, they conduct area ASW operations, operating to detect, attack, and destroy enemy submarine and surface ships as they sortie from their bases or enter areas where they could constitute a threat to friendly forces.

The Soviets have the world's largest general-purpose submarine force. This force is the principal challenge to our control of the vital sea lines of communication. In addition to having a definite speed advantage over our current nuclear attack submarines, the Soviets have the capability of launching antiship cruise missiles, as well as torpedoes, from submerged nuclear submarines. No U.S. submarine currently has a cruise missile capability.

To counter the large numbers of currently operational Soviet high-speed and sophisticated submarines, we need in the fleet today a submarine that is technologically superior—one which will give us a qualitative edge. The SSN-688 class submarine gives us this qualitative edge. In addition to its higher submerged speed, major improvements in the SSN-688 over previous nuclear attack submarines include advanced sonar and fire control systems, a central computer complex to integrate navigational and fire control data processing, and improved noise reduction techniques.

The SSN-688 class submarine, an urgently needed weapon system, will provide a significant addition to the offensive power of the fleet.

#### J. FLEET OILER

This year we are requesting authority to procure two new fleet oilers of the AO-177 class. These two new ships represent a continuation of the program to modernize our fleet oiler force which was authorized by the Congress in fiscal year 1976. Each of these ships will be a replacement for one of the World War II era fleet oilers which remain in service today. Upon retirement in the 1980's, these veteran replenishment ships will all be well past their planned service life of 30 years.

These new AO-177 class fleet oilers which we are building have been designed specifically for their mission of supporting frontline combatant ships. In order to reduce manpower, they have been extensively automated and they are equipped with the necessary self defense, command and control, and damage control facilities to allow safe operations in a forward hostile area.

Our new AO's will be modern, effective, and capable replacement ships and become the nucleus of our fleet oiler force of the future.

#### K. SUBMARINE TENDER

The fiscal year 1977 AS is the fifth modern attack submarine tender programed to replace our aging World War II designed and built AS-11 class tenders. These five modern tenders are needed to support not only the increasing numbers and sophistication of nuclear attack submarines, both of which place additional demands on our intermediate maintenance activities (IMA's), but also to assume the extra workload to support the submarine extended operating cycle (SEOC). SEOC has been implemented to extend the overhaul interval of our newer SSN's. A key element recognized at the time of its conception was the timely replacement of our aging and obsolescent AS-11 class submarine tenders.

The four AS-11 class tenders delivered in the 1941 to 1944 period were built to support diesel powered submarines. Despite extensive conversion, these tenders possess at best a marginal support capability for modern SSN's and virtually no capability for SSN-688 and follow-on submarines since they have no remaining potential for further modernization due to their limited size and their age. These old ships now require an increasing amount of self maintenance which detracts from their capability to support assigned submarines.

At present, in addition to the four AS-11 class attack submarine tenders we have two modern tenders in commission. The tenders authorized in fiscal year 1972 and fiscal year 1973 were placed under contract in November 1974 and delivery is projected for July 1978 and March 1979 at the earliest. These ships will enter service approximately 3 years later than originally planned.

Delivery of the fiscal year 1977 tender is presently projected for May 1981 at the earliest. At that time, it would replace a 40-year-old AS-11 class tender. Procurement of this tender would avoid loss of maintenance capability at a time when the attack submarine force maintenance requirement is expanding and a significant part of our tender force has increasingly inadequate capability.

If we are to maintain our modern submarine force in peacetime and support our wartime strategy of forward basing attack submarines to reduce transit times, procurement of the fiscal year 1977 attack submarine tender, our fifth modern tender, must proceed as scheduled. Lack of adequate forward deployed tender support in wartime would require more SSN's to meet wartime commitments.

#### L. DESTROYER TENDER

The destroyer tender in the fiscal year 1977 budget request will be the third ship of a program which has been developed to replace our World War II tenders.

The first two ships of this program were authorized in fiscal year 1975 and fiscal year 1976 and are now under contract with delivery scheduled for 1979 and 1980.

Our current destroyer tender force is composed of two new AD's and seven older ships which were built during World War II. When the ship in this year's budget request is delivered to the fleet in 1981, it will replace a tender which will have completed over 40 years of service. Although these older ships have provided long and faithful service, they have now reached the point where replacement is necessary. Our new destroyer tenders have been designed and configured to provide their repair services required to support our newest and most advanced sur-

face combatant ships. They will be capable of providing the maintenance facilities required to insure that we maintain a high standard of fleet readiness.

#### M. COST GROWTH

Last year the budget request for SCN included \$2.3 billion to fully fund cost growth and escalation in the fiscal year 1975 and prior year shipbuilding programs. Subsequent actions by the Congress resulted in a deferral of approximately \$1 billion of the full funding requirements on the basis that these funds were not required to be obligated in fiscal year 1976.

This year our SCN request for cost growth and escalation restores the fiscal year 1975 and prior year shipbuilding programs to a fully funded status. The total request of \$1,623.2 million includes \$1,003.3 million of the funds deferred by the Congress and \$619.9 million to fully fund emergent requirements. The following table displays the present estimate for cost growth and escalation:

FISCAL YEAR 1977 COST GROWTH/ESCALATION REQUEST FOR FISCAL YEAR 1975 AND PRIOR YEAR PROGRAM  
[In millions of dollars]

	Deferred from fiscal year 1976 request	Emergent requirements	Total
<b>Cost growth:</b>			
Combination, economic, inflation, and other.....	27.7	59.2	86.9
Program changes.....	106.1	20.7	126.8
Claims.....	140.0	180.0	320.0
Subtotal cost growth.....	273.8	259.9	533.7
<b>Escalation:</b>			
.....	729.5	360.0	1,089.5
<b>Total.....</b>	<b>1,003.3</b>	<b>619.9</b>	<b>1,623.2</b>

The emergent requirements for escalation are the result of changes in the Bureau of Labor Statistics in shipbuilding which necessitate adjustments to full funding estimates for both the awarded and unawarded programs. The emergent requirements for cost growth are the result of increases in claims which necessitate additional coverage, as well as inflation-caused higher prices for government furnished material, and minor but necessary modifications to the guided missile frigate program stemming from an extensive test program.

#### N. CLAIMS

Over the past few years, the Navy Sea Systems Command has refined its procedures for settling claims by major shipbuilders. Since January 1, 1975, a total of 17 major claims have been settled. The following tabulation shows the claim/appeal activity over the past year and one-half (amounts in millions of dollars).

	Number	1975 amount	Number	1976 amount
Beginning of year.....	17	1,014.0	11	1,227.5
Received.....	9	607.5	2	313.4
Adjustments in prior claims.....		115.9		438.7
Settled.....	15	1,509.9	2	262.7
End of year.....	11	1,227.5	11	1,716.9

<sup>1</sup> Includes Lockheed claim of \$170.2; however, payment will not be made until approval of the Department of Justice is obtained. The settlement of \$61.6 was based on an ASBCA decision. Also includes claims withdrawn by contractor and claims rejected.

<sup>2</sup> Includes Litton claim of \$31.2; however, payment will not be made until approval of Justice is obtained. The settlement of \$17.0 was based on an ASBCA decision.

<sup>3</sup> Includes appeals pending before ASBCA totaling \$114.7 (end of year total for 1976 as of June 30).

Shipbuilding claims now totaling \$1.7 billion are onhand and being processed. The principal claimants are the Newport News Shipbuilding and Drylock Co. at Newport News, Va., a division of Tenneco, and Ingalls Shipbuilding Corp. at Pascagoula, Miss., a division of Litton Industries. Each of these contractors complain of large deficits in "cash flow" which constitutes a severe drain on company resources. They also predict contractual losses of a magnitude far beyond reasonable business risk consequences if substantial relief is not ob-

tained. Each is apprehensive because of the amount of time the Navy finds necessary to review each claim and reach a conclusion regarding entitlement and quantum. The liquidity problem continues to adversely impact corporate finances and the total loss remains in doubt. Recently these contractors have expressed serious reservations as to their ability to continue Navy ship construction in the current environment.

The Navy, however sympathetic it may be to the problems of the shipbuilder, must conform to existing law by establishing and adhering to a policy which is protective of its public responsibilities. Its claim settlement methods do precisely that. But it also has a duty to maintain the defense posture which surely includes retaining critical resources such as major shipyard facilities.

Deputy Secretary of Defense Clements formally notified the Congress of his planned use of Public Law 85-804 to reform selected shipbuilding contracts by substituting currently authorized escalation clauses for the old escalation clauses contained in the contracts which generated the claims. This was an equity action but not a giveaway program. It simply recognized that the old escalation clause provided less protection from economic risks, taking into consideration the state of the economy during the last several years and the lengthy period required to determine responsibility for delay. As a result of this action, Deputy Secretary of Defense Clements sought the contractor's withdrawal of any and all claims, except for certain claims on contracts where all ships had been delivered. The net effect of the Public Law 85-804 action would have been resolution of nearly all outstanding claims and the establishment of an improved business relationship between the Navy and four of its major shipbuilders (Litton, Newport News, National Steel, and Electric Boat).

Before the congressional will was known, Newport News and Ingalls each advised the Deputy Secretary of Defense that it would not relinquish the right to continue its existing claim actions since the proposed settlement did not represent sufficient consideration. As a consequence, the Deputy Secretary of Defense withdrew his proposed use of Public Law 85-804, but reserved the rights to reinstate another proposal under his extraordinary powers at a later date. In the interim, the Deputy Secretary of Defense instructed the Navy to institute accelerated claim settlement procedures. The accelerated claim settlement procedures include establishment of the Navy Claims Settlement Board, a special three-man board, headed by Rear Adm. Francis F. Manganaro, with an independent mandate. The Board actions are confined to Newport News claims.

The Navy was continuing to pursue settlement at Ingalls in accordance with the previously agreed to Ingalls/Navy plan of action dated December 23, 1975; however, recently Ingalls advised the Navy that they plan to stop all work on the LHA contract on August 1, 1976. Subsequent to the stop work notification Ingalls has filed suit against the Navy to void the LHA contract. The Navy plans to counter the Ingalls suit by requesting the Federal courts to issue an injunction to continue performance on the LHA contract.

## *VI. Fiscal Year 1977 O. & M. Budget*

### A. OPERATIONS

The purpose of this appropriation is to operate, maintain and support Naval Forces. These forces, consisting of men, ships and aircraft, represent combat power which is on the scene continually providing a range of options for implementation of national policy objectives.

Funding requested in fiscal year 1977 for the operation and maintenance, Navy account, supports forces at approximately the same level as in fiscal year 1976.

A major goal in developing the fiscal year 1977 O. & M. budget was improvement of Navy readiness. Therefore, additional funding was requested in both the ship operations and aircraft operations program areas.

#### *1. Steaming days*

Ship steaming time increases by 93,700 hours in fiscal year 1977. Fiscal year 1976 operating tempo was severely decremented during the second half of the fiscal year due to fiscal constraints. Reduced operating tempo has been a common factor in readiness deficiencies and has resulted in a less than optimum training readiness and operational flexibility. In fiscal year 1977 we have budgeted for an average operating tempo of 35.8 days per quarter which is below the optimum of 43.6 days per quarter.

## 2. *Flying hours*

The fiscal year 1977 flying hour program reflects a decrease in flying hours from fiscal year 1976 due primarily to the transfer to the Army of responsibility for undergraduate helicopter pilot training; and to the increasing use of simulators in the tactical air, the antisubmarine warfare, and the replacement air wing programs. Planned primary mission readiness levels for fiscal year 1977 achieved by a combination of flying hours and simulator hours are 89 percent for tactical air, 100 percent for the replacement air group and 86 percent for fleet support as compared to 74 percent, 96 percent and 83 percent respectively in fiscal year 1976.

## 3. *Exercises*

The fiscal year 1977 budget includes funding for expenses incurred as a result of Navy participation in the Joint Chiefs of Staff coordinated or directed exercises. The fiscal year 1977 budget includes funds for 10 exercises: Reforger, Solid Shield, Night Strike, Gen War, Wintex, Unitas, Aloud Echo, Aloud Fox-trot, Aloud Golf and Aloud Hotel.

## 4. *Crises*

The O. & M. budget does not include funds for contingency or crisis operations such as the evacuation of Lebanon or the recent typhoon damage on Guam. Funding of crises operations are handled in different ways based on the length, intensity, and timing of the contingency. Should the duration be shortlived, the intensity less than severe, and the timing early in the fiscal year, certain minimal program tradeoffs can be made; these include deferring maintenance, canceling planned exercises or drawing down on operating stocks. However, these actions directly affect readiness and their cost can only be postponed, not eliminated.

## B. MAINTENANCE

The maintenance portion of the O. & M. Navy budget also reflects an increase in fiscal year 1977 related to readiness improvement.

### 1. *Routine upkeep*

Increasing maintenance requirements and cost of industrial availabilities have required emphasis on intermediate and organizational level maintenance effort in recent years. Additionally, more intermediate maintenance support is required due to lengthened operating periods of Navy ships between overhauls.

Intermediate maintenance is performed by Navy personnel on destroyer and submarine tenders, repair ships, aircraft carriers, and at fleet support bases. Intermediate maintenance normally consists of calibration, repair or replacement of damaged or unserviceable parts and components, and emergency manufacture of unavailable parts.

In fiscal year 1977, the Navy has expanded the shipboard self-maintenance and readiness effort by increasing emphasis on corrective and preventive maintenance by the ship crews. This effort is expected to eventually increase individual ship readiness.

### 2. *Overhauls*

The Fiscal Year 1977 congressional budget for active fleet overhauls requested a total of \$2,130.5 million for 105 ship overhauls. However, OSD and Navy testimony before the Congress indicated that we would anticipate actually doing only 90 active fleet overhauls for the budgeted dollars, since we are not permitted by OMB regulations to budget for inflation. The overhaul schedule for Fiscal Year 1977 also assumes that we achieve a 5 percent productivity increase in our naval shipyards.

The difference of 15 overhauls is priced at \$790.3 million, that is, the additional amount needed to overhaul these 15 ships, or in effect the amount required to provide for anticipated wage increases and inflation.

### 3. *Modernizations*

In addition to the previously mentioned 90 ships scheduled for overhaul, 47 other ships will receive alternations which provide necessary improvements in required operational capabilities. Modernization efforts extend to all classes of ships. Of the approximate \$700 million budgeted for fleet modernization, over 40 percent will be utilized to upgrade mission related items. Approximately 25 percent is programed for engineering and propulsion improvements plus pollution abatement features to protect the environment.

## VII. Conclusion

The United States has a forward strategy and the Navy role in this strategy has never been more important than it is today. Events in the international political arena which have transpired even during the preparation of this statement are signal enough.

The U.S. Navy can accomplish its mission today. But as we continue to observe the increasing capability of the Soviet Navy, we must realize that the future is uncertain. If present trends are not reversed, then we may be faced with the possibility that the Navy cannot carry out its tasks.

We have a program for rebuilding the navy which provides, we think, acceptable risk in the face of the projected threat. It is a balanced program, the product of considered analysis. Examination of requirements is continuing by way of the NSC study whose overall conclusion will, I believe, support my judgment that the shipbuilding program must be accelerated. The proposals in the President's amended budget request as well as the program I have outlined herein are consistent with this belief.

Just as I believe that we, you and I, the Congress and the Navy, have a shared perception of the demands for our national security, we also share the responsibility for providing not only for the future requirements but the needs of our Navy today.

I have attempted to bring into clearer focus our awareness of the need to maintain a naval force that will provide the United States the requisite power at sea to continue to prosper as a maritime nation.

Thank you, Mr. Chairman.

[CLERK'S NOTE.—Tabs A and B are classified and were submitted to the committee.]

## PRESIDENT'S BUDGET: SHIPBUILDING AND CONVERSION, NAVY (SCN), FISCAL YEAR 1977

	Number	Net funding requirements (millions)
Trident (SSBN).....	1	\$791.5
Attack submarine (SSN).....	3	958.7
Aircraft carrier (CVN).....		350.0
Strike cruiser (CSGN).....		170.0
Guided missile destroyer (DDG 47).....	1	858.5
Guided missile frigate (FFG 7).....	12	1,700.5
Fleet oiler (AO).....	2	205.3
Destroyer tender (AD).....	1	260.4
Submarine tender (AS).....	1	260.9
Assault craft.....		7.5
Service craft.....		6.0
Outfitting/post delivery.....		71.0
Cost growth.....		533.7
Escalation.....		1,089.5
<b>Total.....</b>	<b>21</b>	<b>7,263.5</b>

## MOTION AND VOTE TO CLOSE HEARING

Mr. MAHON. The gentleman from Florida.

Mr. SIKES. I move the hearing scheduled for today and tomorrow, shipbuilding and conversion, Navy, be held in executive session because of the classification of the material to be discussed.

Mr. MAHON. A rollcall is required.

The Clerk will call the roll.

[The Clerk proceeded to call the roll.]

Mr. MAHON. Mr. Reporter, let the record show that on this vote Mr. Mahon, Mr. Sikes, Mr. Flood, Mr. McFall, Mr. Edwards, Mr. Robinson, and Mr. Cederberg voted aye.

A majority having voted in the affirmative, the hearings will be closed.

Will you proceed?

## SUMMARY STATEMENT OF CHIEF OF NAVAL OPERATIONS

Admiral HOLLOWAY. Thank you, Mr. Chairman. I do intend, Mr. Sikes, to give an overview of my statement. Having it available to the members of this committee, we can refer to it, important points need to be made. When appropriate, I would like to read those points into the hearings with the concurrence of the committee.

This statement attempts to relate Navy programs with national needs. I think you have heard me say before, Mr. Chairman, that it is not satisfactory to say "the Navy needs a strike cruiser." We should express that as "the country needs a strike cruiser."

We want to establish an audit trail between each line item in our budget to a national need. Therefore, for any statement on Navy programs, I would like to start at the beginning with how we determine naval requirements.

I think we all agree that this country needs a navy. The debate is what kind of a navy. What should be the individual characteristics of our ships, and how many of those ships should we have? In other words, what should be the force structure?

Individually, our ships and aircraft must be capable in a technical sense of meeting enemy weapons systems in combat and defeating them. Then we must have enough of those ships and aircraft to form a fleet which, in the aggregate, is going to be able to defeat the threat which we anticipate the nation will face in the maritime areas.

In addition to ships and aircraft, we have got to have people. And we have to have enough people, and people of the proper quality to not only operate those ships and aircraft to the peak of their design capability, but also maintain them to get every ounce of potential out of our equipment.

These ships and aircraft and people constitute the fleet, which is the Navy. That is what we mean when we talk about naval capability. The Shore Establishment exists solely to support the fleet.

In my view, there are three basic factors which determine the kind and the size of the navy we ought to have. The first factor starts with the fundamental strategy of the United States. What is our national strategy? I think that we only need to look at a globe of the world to realize that our national strategy is driven by geopolitical considerations.

This country is characterized by the fact that we are isolated on the North American Continent. We have only two borders, not an enemy behind either one. In contrast, one of our States, all of our territories, and 90 percent of our allies lie overseas. As a national power, we use the oceans as the medium through which to extend our influence, both commercial or military, abroad. We also use these oceans as barriers in defense of our country.

The Navy's responsibility within this forward strategy is twofold: First, we provide naval forces overseas. These forces support our allies or constitute a threat to our enemies. Examples of such forces are the 6th Fleet in the Mediterranean and the 7th Fleet in the Western Pacific, virtually the only flexible military forces we now have deployed overseas in abundant military strength.

The second responsibility of the Navy, which is equally as important and a cornerstone of our strategy, is to maintain the security of the

sea lines of communications between the United States and our overseas interests.

What are our overseas interests? First, there are our allies. Second, there are our own U.S. forces that are deployed overseas; and, third, there are the sources of raw material which are so essential to our economy. So we have got to insure that those sea lines of communication between the continental United States and our Japanese and NATO allies are uninterrupted. We have to insure that we are able to support our own U.S. military forces deployed in Korea and in Europe. And, third, we have to make sure that those essential sea lines from critical sources of raw materials, such as the Persian Gulf for example, to the United States, to Japan, and to Europe are not interrupted.

I am told that in any single moment there are an average of 350 large tankers at sea in that sea line of communication from the Persian Gulf, either tankers full of oil for distribution or empty tankers going back to replenish. That is the magnitude of the importance to western civilization of these sea lines of communications.

The second factor that determines what kind of a navy we should have, and how big that navy should be, is the threat. Against what kind of an enemy is the U.S. Navy going to have to fight in order to carry out this mission of supporting our allies, defeating our enemies, and defending the sea lines of communication? I think no one would disagree that the threat is the Soviet Union.

Furthermore, the Soviet Union's Navy is designed to fight the U.S. Navy, in my opinion, and to prevent it from doing its job.

Why do I say that? Again, consider a chart of the world. The Soviet Union dominates the Eurasian Continent. It has its allies, the Warsaw Pact nations, on its western border. It has a principal enemy, China with a common border on its southern flank. It has NATO Europe to the west. In other words, the Soviet Union can defend itself from an attack across its borders, it can support its Warsaw Pact allies, and it can invade China or Western Europe, and never cross a major body of water.

So why are they building an enormous navy? Because they, as the other superpower, recognize that without the support of the United States to Western Europe across the Atlantic, NATO cannot survive.

So the Soviets have built a navy, the primary objective of which is to defeat the U.S. Navy by preventing us from carrying out our two principal responsibilities: first, of supporting our allies by carrier task forces and marine amphibious forces in the Mediterranean, the Western Pacific, and in the Atlantic; second, of maintaining the sea lines of communication between the United States, Europe, the Persian Gulf, and Japan, and those other areas of the world that are so important to us.

The third factor that determines the size of our Navy is risk. The first is our mission within the strategy, second is the threat we face, and the third is the degree of risk which the American people will accept for the Navy's capability to carry out its mission.

To put it another way, how much assurance do we want that the U.S. Navy can defeat the Soviet maritime forces?

Now, to answer Mr. Flood's question, today it is my considered professional opinion—

Mr. FLOOD. That was no question; that was a statement.

Admiral HOLLOWAY. Yes, sir; I will respond to your statement, Mr. Flood.

Mr. FLOOD. All right.

Admiral HOLLOWAY. The U.S. Navy is capable of carrying out its responsibilities in the war plans against the Soviet Union, but only by a fairly slim margin of assurance.

Mr. FLOOD. Off the record.

[Discussion off the record.]

#### ROLE OF CARRIER IN SOVIET NAVAL PLANS

Mr. FLOOD. It is very clear that in your analysis of Soviet future naval operations, that carrier warfare is not a major item?

Admiral HOLLOWAY. I don't know what you mean. Do you mean carrier warfare on our part, or their part?

Mr. FLOOD. Their part.

Admiral HOLLOWAY. I believe that what we are seeing today is a transition——

Mr. FLOOD. What is the answer to my question? Just answer the question.

Admiral HOLLOWAY. All right, sir, I see a growing role of the carrier in the Soviet naval plans as they transition from an interdiction force to a navy that can project Soviet interests overseas. I have a picture of the *Kiev*, their newest carrier and the lead ship in a class of three such ships, —— and if the chairman would permit me, I might show that to you. —— The picture gives an indication of the size and capability of this new class of warship. I am convinced that the Soviets are going to continue to develop an ability to take tactical aviation to sea.

Mr. MAHON. What type of aircraft does this ship accommodate?

Admiral HOLLOWAY. It operates vertical or short take-off and landing type of aircraft, either helicopters or fixed wing V/STOL similar to the U.S. Navy and U.S. Marine Corps *Harrier*. —— it had on-board both antisubmarine warfare helicopters and a tactical V/STOL fighter, the YAK-36, which compares in performance to the AV-8A U.S. Marine Corps *Harrier* aircraft.

Mr. MAHON. It is not a carrier in the sense that our big carriers are carriers?

Admiral HOLLOWAY. No, sir; it does not have the catapults and arresting gear. The ability to land and take off from a carrier must be built into the aircraft it operates.

Mr. MURPHY. Admiral, could you put in the record the capability of that V/STOL aircraft, the range, payload, and so forth?

Admiral HOLLOWAY. Mr. Murphy, I would be pleased to. We will include that information in the record.

[The information follows:]

#### CAPABILITIES OF THE SOVIET NAVAL V/STOL AIRCRAFT

The following performance data is current Office of Naval Intelligence estimates:

Maximum gross weight (vertical take off/short take off) ——.

Maximum speed at Sea Level (KTS/MACH) ——.

Maximum speed at 35,000 (KTS/MACH) ——.

Combat ceiling ——.

Combat radius:

Vertical take off \_\_\_\_\_.

Short take off with external fuel \_\_\_\_\_.

Armaments: \_\_\_\_\_ guns, bombs, air-to-air missiles, tactical air-to-surface missiles \_\_\_\_\_.

Mr. MAHON. All right.

Mr. SIKES. Is this a relatively new aircraft in the Soviet inventory?

Admiral HOLLOWAY. Yes, sir; it is within the past \_\_\_\_\_.

Mr. SIKES. Do you have reliable information on the numbers of this type aircraft which the Soviets have?

Admiral HOLLOWAY. I will have to provide that for the record, Mr. Sikes.

[The information follows:]

Admiral HOLLOWAY. We presently estimate the Soviets to have about \_\_\_\_\_ operational YAK-36 VSTOL fighter aircraft and will have \_\_\_\_\_ operational by the end of this year. They will probably produce about \_\_\_\_\_ of these fighters a year until they have around \_\_\_\_\_ by 1980. \_\_\_\_\_.

Mr. FLOOD. Do you have any indication that the KIEV carrier, going through the Bosphorus Strait in the Mediterranean had a \_\_\_\_\_.

Admiral HOLLOWAY. No, sir, I would say we are virtually assured that it had no \_\_\_\_\_ with it going through the Bosphorus, itself. It is very possible, even probable, that the Soviets would operate \_\_\_\_\_ in conjunction with the KIEV.

Mr. MAHON. Proceed.

Admiral HOLLOWAY. I was discussing risk, Mr. Chairman, pointing out that today I think the U.S. Navy can do its job in the face of the Soviet military threat, but I tempered that by saying that we only have a relatively slim margin of assurance that we can do it, and also my assessment applies only to the present.

I am much more concerned about the future because, as I look at the trendline for the U.S. Navy up to this fiscal year, I have observed a level direction in terms of capability. I would rather not get into the question of numbers, because numbers are only part of capability. A naval capability resides in numbers of capable ships.

At the same time, I have witnessed over the past 10 to 15 years the growth of the Soviet Navy in capability and in numbers of ships. Now, as we project to the future, we do not foresee the Soviet Navy really getting any larger. In fact, in some categories of ships, the numbers will probably decline, but what we project for the future is a substantial upgrading in the quality of the ships they build and put to sea.

Mr. MAHON. That is what we have been trying to do ourselves?

Admiral HOLLOWAY. Yes, sir, we are headed in similar directions. We realize that numbers alone is not the answer. In our naval strategies, we must have adequate numbers of capable ships, but we must consider the trends. Soviet naval capability is increasing; should our own naval capability remain where it was during the first half of the decade of the seventies, it is my belief that those capability lines would cross; and at the point they cross, the Soviets would be able to prevent the U.S. Navy from accomplishing its mission.

So we have got to embark, in my view, on a strong program to build a navy for the future, a navy that will maintain the margin of superiority that we enjoy over the Soviet Navy today as a minimum objective. That, Mr. Chairman, is why I think the discussions that you propose concerning our procurement programs are especially important, because procurement programs relate to future capabilities.

The programs that will be decided upon in the fiscal 1977 budget will really not affect the Navy's capability until 5 to 10 years in the future. It takes, on the average, five years for a ship to become operational in the fleet after it has been authorized and funds appropriated by the Congress. Since we are presenting a 5-year naval shipbuilding program, which has been requested by the Congress for the first time this year, we will be requesting ships that will not be operational in the fleet until 10 years from now. Therefore, the decisions we make in fiscal 1977 will determine the character and the capability of the Navy 5 to 10 years hence.

I would also like to emphasize another point. As we look to the future to see what our needs will be in order to maintain this maritime superiority, we must not neglect the present. The CNO is responsible to the Congress and to the President for insuring that the U.S. Navy is ready now to carry out any function of its mission, from the evacuation of civilians from Lebanon, or, if necessary, to conduct general war with the Soviet Union. We have got to be always ready to handle any kind of contingency that we may be called upon to support between those two extremes, and this day-to-day readiness largely depends upon the adequacy of the operations and maintenance accounts.

We must have flying hours and steaming days for the fleet so the crews can operate the ships and aircraft they are expected to take into battle. They must be able not only to operate but also to maintain them. So we must have adequate maintenance funds so that the ships and aircraft in the fleet are maintained in fighting trim. An acceptable tempo of operations, adequate maintenance of equipment, and proper manning will enable us to maintain our current readiness as we build toward the future.

Finally, Mr. Chairman, I, too, am vitally concerned about the matter of claims. This affects the future because we can't continue to have a modern, capable Navy unless we continue to build ships. We are working very hard to solve these problems, not only those that we have inherited, but also we consider it is absolutely necessary to establish an approach to contracting that will not permit a repeat of these conditions which have led to the current claims problem. We want to establish a general approach in our relationships with the contractors which will allow us to work in a congenial and cooperative environment.

Mr. FLOOD. Permit what not to happen again?

Admiral HOLLOWAY. The situation that exists today, Mr. Flood, between the Navy and the shipbuilding industry, which I would have to describe as being generally acrimonious in the case of the Navy and its principal contractors, Newport News and Litton.

That concludes the overview of my statement, Mr. Chairman.

#### RELATIONSHIP BETWEEN NAVY AND CONTRACTORS

Mr. MAHON. Perhaps your last statement was an understatement. I understand that some of the shipbuilders are thoroughly and completely disenchanted with the Navy and hold the Navy procedures in some degree of contempt. I understand that the Navy takes a similar position toward the contractors.

This cannot be anything other than bad for the United States, and bad for the Navy. I am really tired of it, and I would like to see

something done to bring about a better working relationship. I just can't believe that the contractors, the shipbuilders, are all bad and always wrong on every subject and that the Navy is always right.

There is something here that doesn't meet the eye; there is something that needs to be done about the situation. Nobody should know that better than you.

You speak very eloquently about the needs of the Navy and keeping the sealines open, and modernizing the fleet and having it in a state of readiness. The American people are growing weary of big Government spending and big deficits. The national debt will probably go up \$90 billion this year, and the Navy is not the only arm of the military services.

It is a bit appalling, in a way, to think of the huge additional funds which we are going to have to raise in order to maintain our military strength and even so, there is no way to have a completely perfect and ironclad defense program that will accomplish all of our objectives all of the time. It is a rather serious proposition that is confronting us.

I wonder if the people in the Pentagon fully realize this fact?

Admiral HOLLOWAY. Mr. Chairman, I believe very sincerely that they do. Speaking for myself, when I am asked what kind of a Navy does the CNO want, I have to answer with another question: What do you want the United States Navy to do?

If the American people want a two-ocean Navy which can maintain the security of the sealines of communication between us and our allies in Western Europe, and between the United States and Japan, then that drives one set of requirements. If we are going to have a one-ocean navy in which we are simply going to move almost the entire fleet into the Atlantic in the case of a Warsaw Pact-NATO conflict, or U.S.-Soviet conflict, then we need to have a second kind of navy.

If we say we are going to avoid foreign entanglements, not maintain any security relationships with Japan and Europe, then there is a third kind of navy, which requires not a great many ships and operates in the close vicinity of the Continental United States, Alaska, and Hawaii.

I believe that the programs which the CNO has recommended to the Secretary of Defense as being supportive of our military strategy provide a reasonable degree of assurance that if we have to fight in the next 5 to 15 years, we are going to be able to win those battles required to support our national objectives.

Mr. MAHON. Well, of course I think all loyal Americans, and most Americans, of course, are completely loyal, realize we have to pay a heavy price for relative security, and that there is no way to acquire complete security, that we need to maintain in Congress and in the executive branch a maximum degree of credibility with the people if we are to get the support of the people in connection with the defense programs. I am sure you agree with that?

Admiral HOLLOWAY. Yes, sir, and, Mr. Chairman, I know that the Pentagon has been accused of indulging in exotic weapons systems, but I would like to point out that in the 5-year building program which I recommended to the Defense Department, the percentage of so-called exotic units was relatively small.

Over this 5-year period, I would propose the construction of only one nuclear-powered aircraft carrier and three nuclear-powered cruisers. The bulk of what I would propose to build would be relatively straightforward, conventional combatants. That is, 60 FFG-7 class guided missile frigates. These figures should make it clear that we in the Navy, in stating our requirements, should not be accused of an undue preoccupation with exotic or untried systems.

SIZE AND COMPOSITION OF U.S. FLEET

Mr. MAHON. Your fiscal year 1977 shipbuilding budget envisioned the construction of 111 ships over a 5-year period ending in fiscal year 1981 at a total cost of \$35 billion—about \$7 billion per year. Testimony this year indicated that the current program would provide for a fleet of—ships by 1985 as against about 480 ships today. Reportedly, you submitted a recommendation to the Secretary of Defense in February of this year for the construction of about 160 ships over a 5-year period ending in fiscal year 1981 at a total cost of—billion—about—billion per year. Reportedly, the new program would provide for a fleet of some 600 ships by the late 1980's.

Admiral, will you provide a side-by-side table for the record showing the class and quantities of each ship in both programs for comparison purposes?

Admiral HOLLOWAY. Mr. Chairman, that appears on page 57 of my statement. The first column shows the President's budget as he submitted it in January for a total of 111 ships. Column 2 is the recommendation which the Navy made in February to the Secretary of Defense, at his request, when it appeared that it was in the best national interest to look at expanding Navy programs. That same recommendation, column 2, was the basis of my testimony before the Seapower Subcommittee of the House Armed Services Committee on the 2d of March.

I characterized that building program as one that was essentially not fiscally constrained. I did that in response to the request of the House Armed Services Committee for a program which was feasible, was not unduly fiscally constrained, and which represented the CNO's judgment as to what would be needed for a Navy of the future. I labeled that program an illustrative force, one which the U.S. industrial capacity could support, and which the American Navy could maintain.

Mr. MAHON. Is the program reported in the press approximately what you had recommended to the Secretary of Defense in February 1976 as to numbers of ships and their cost?

Admiral HOLLOWAY. Yes sir; the program shown in column two of page 57 of my statement is the same program that was reported in the press.

Mr. MURPHY. Admiral, could you, for the record, provide the total fleet each of these programs would furnish the Navy?

Admiral HOLLOWAY. Mr. Murphy, tab B to my statement, fourth column, shows the force levels in the outyears.

Also, I would like to amplify my last response to the Chairman. The Navy recommendation, column 2, which I made in February, has subsequently been altered, and my present position as to the size and composition of the Navy that I would recommend to this committee ap-

pears in column 4. There are some significant changes. Those changes are the result of a continuing analysis and a careful review of the deliberations that have occurred so far in the National Security Council study on naval requirements.

So column 4, on page 57, represents the Navy recommended 5-year program. Tab B to my statement shows the active fleet force levels of ships out into the future.

Mr. MURPHY. So for the record you will add the total ships that the Navy would have had if it had followed the programs in column 1, 2, or 3?

Admiral HOLLOWAY. Yes, sir; I will provide that for the record.

[The information is classified and was submitted to the committee.]

#### PRESIDENT'S AMENDED BUDGET AND NAVY RECOMMENDATION

Mr. SIKES. Would you explain the difference between the President's amended budget and the Navy recommendation? Does the Navy recommend taking into consideration the President's recommendation to the Congress?

Admiral HOLLOWAY. Mr. Sikes, it is misleading in that the President's amended budget as projected is dated May 4. What that column represents is the President's amended budget which, as we know, was only for fiscal year 1977. The Navy has projected it on the basis of our best knowledge of the outyear impact of the President's May amendment. In other words, for the purposes of my statement, it represents my best estimate of the 5-year program we can expect from the NSC study, based upon its current status.

The recommendation of May 17, column 4, was submitted to the Secretary of Defense for his use in preparing alternative programs for the NSC study. Column 4, the CNO's recommended 5-year building program, was submitted to the Secretary of Defense for his use in preparing the 5-year building program that will eventually be produced by the NSC study, as an extension of the fiscal year 1977 program which was dated May 4.

Mr. FLOOD. We are talking about fleet. When you use the word "ships," you do not include submarines?

Admiral HOLLOWAY. Yes, I do.

Mr. SIKES. There is no conflict, then, between the President's amended budget and the Navy recommendation?

Admiral HOLLOWAY. Yes, sir, there is, in that I am asking for a few more ships and a slightly different mix. I would say that essentially there is no conflict between the two programs in the main issues. I believe that the way I would propose to phase the acquisition of the ships might be different from the sequence that the NSC study will do it. I am asking for more support ships in the 5-year period, for example.

Mr. SIKES. They are a department head and bound by the President's budget. How is it that the Navy can make a different recommendation? Not that I quarrel with your recommendation, but I am asking for your opinion.

Admiral HOLLOWAY. My recommendation was not to the Congress. I am informing you of it now for the first time. My recommendation was to the Secretary of Defense. Column 4 is the CNO's recommendation to the Secretary of Defense. It is possible that column 3 could be

identical to my recommendation, should the NSC study come out that way. I am trying to be responsive to this committee and give you my best estimate of the position of the NSC study as I see it at this moment.

Again, I would reiterate that I believe that columns 3 and 4 are not too far apart except that I believe you would have to accept the fact that the Chief of Naval Operations is probably going to push a little harder for more ships sooner. However, in generating my recommended program, I don't consider all of the factors that would be seen by the President and the National Security Council.

Mr. SIKES. You have departed from your statement to answer questions a number of times. Have you completed your statement to the committee?

Admiral HOLLOWAY. Yes, sir, I have, Mr. Sikes. I think what I would like to do is reference parts of my statement in amplification of my answers to your questions.

#### NAVAL FORCE PLANNING

Mr. MAHON. In your professional judgment, what size Navy should we have, what mix and numbers of ships would be required to build in order to attain a Navy that size, and what would be the cost over a 5-year period?

Admiral HOLLOWAY. In naval force planning we deal with the total force—active fleet, the auxiliaries operated by the Military Sealift Command, the Naval Reserve Force, our mothball fleet, support from the other services, and, when appropriate, naval units of our allies. In providing an answer to the above question only the active fleet is considered.

By capitalizing on the large inventory of ships built during World War II, the Congress was able to maintain an active fleet of 800 to 900 ships (peaking at 976 in 1968), through the 1960's. During the past 10 years, an average of 19 new ships has been authorized for construction each year—procurement sufficient to maintain an active fleet of about 510 ships, under steady state conditions and nominal ship life assumptions. Today, most of our World War II ships have been retired and we have, in fact, less than a 500-ship active fleet. Hopefully, that downward trend has been halted.

There is no unique and universally accepted estimate on the size and mix of the fleet this country needs to support our national interests; however, the Secretary of Defense does provide explicit force sizing guidance to the Navy and the other Services. Those guidelines pertinent to determining Navy force levels are based on the worldwide strategic environment and the national strategy and security objectives of the U.S. Currently, the guidance calls for the Navy to plan for a fleet, active and Reserve, capable of executing concurrently a NATO-Warsaw Pact war and a unilateral military action involving neither the Soviet Union nor the Peoples Republic of China. The guidance provides planning standards for strategic warning, mobilization, and duration of conflict as a means of establishing fiscally constrained inventory objectives, active-Reserve balance and intensity of operations.

Force level recommendations enunciated by the Secretary of the Navy and the CNO are derived from close scrutiny of functions the Navy is assigned and careful appraisal of the fleet's ability to perform its mission in support of national policy.

I recognize the impracticality of rebuilding the active fleet to the 800-ship level in the next decade. Inflation has hit the capital-intensive Navy harder than any other Service. In an addendum to the Navy's program submission for fiscal year 1978, I recommended to the Secretary of Defense a fiscally constrained return to what I regard as minimum acceptable force levels, a program which would involve the expenditures of about \_\_\_\_\_ new ships and convert three older ones. The mix of this building program would be as follows:

	<i>New Construction</i>	<i>Conversion</i>
Carriers .....	_____	_____
VSS .....	_____	_____
SSBN's .....	_____	_____
SSN's .....	_____	_____
Surface combatants.....	_____	_____
Amphibious .....	_____	_____
Support .....	_____	_____
Total .....	_____	_____

The objective of this rebuilding is not merely numbers but maintenance of a balanced force structure. This program will build toward an active fleet in 1985 of \_\_\_\_\_ ships. The composition of that fleet will be as follows:

Carriers .....	_____
VSS .....	_____
SSBNs .....	_____
SSNs .....	_____
Surface combatants.....	_____
Amphibious .....	_____
Support .....	_____
Total Active Fleet.....	_____

The implementation of this program will result in rebuilding the Navy to a force level which will sustain forward naval force deployments and which moves toward sufficiency for naval warfare operations on a worldwide basis against an increasingly more capable Soviet fleet.

Mr. MAHON. Are the costs of each program, namely the \$35 billion program and the one you just addressed, in then-year escalated dollars or in fiscal year 1977 dollars?

Admiral HOLLOWAY. The costs of all the programs addressed are in then-year dollars.

Mr. MAHON. Do you believe the Federal budget, and more specifically the Defense budget, will be able to accommodate a shipbuilding program of about \$10 billion per year, when one considers very costly programs, such as the Trident, B-1, Main Battle Tank, and so forth, that will be entering production during that time frame and competing for funds?

We have to look not only at the Navy but at the whole defense budget.

Admiral HOLLOWAY. Yes, sir, I believe that it can be afforded. The SCN this year is about \$6 to \$7 billion. We are talking about an

increase to about \$9 billion to \$10 billion, or about a \$3 billion annual increase in SCN. When we compare that increment to the gross national product, to the Federal budget, even to the Defense budget, it doesn't represent a large increase in terms of percent.

There are two ways to absorb this increase. One is to increase the total size of the Federal budget by that amount. The second is to offset the increase in Defense in some other area of the budget. I don't believe that it is proper for the Chief of Naval Operations to try to indicate which way we should go. I believe that should be the function of the Congress, and I would like to limit my presentation to the Congress to my views on what a balanced navy should be, and what kind of a shipbuilding program we should embark upon to get there within reasonable fiscal ranges. I think that the less than 1 percent that would be added to the Federal budget, or the three percent in the case of a Defense budget, appear to be within reasonable fiscal boundaries.

#### CAPACITY OF SHIPBUILDING INDUSTRY TO MEET NAVY'S CONSTRUCTION DEMANDS

Mr. MAHON. I think this is a question of very considerable importance.

Recent history has shown not only an unwillingness but a lack of capacity on the part of the shipbuilding industry to meet the Navy's current new construction demands. For example, only one shipyard in this country presently has the capacity and expertise to build large nuclear-powered carriers, frigates, and cruisers—Newport News. That shipbuilder is currently involved in a massive claims dispute with the Navy and has announced his unwillingness to build the CVN-70 carrier, the CGN-41 cruiser, and five SSN-688 class submarines. Litton and the Navy are caught up in a similar claims dispute and that shipyard is running behind in schedule on the construction of LHA's and DD-963 destroyers. Litton recently announced intentions to stop work on the remaining four LHA ships. Electric Boat has experienced schedule slippages in each of the last 3 years on SSN-688 class submarines, and the same shipyard apparently will receive all 10 Trident submarines. This looks like a very disturbing picture. This past record does not engender a great deal of confidence that you will be able to build even 111 ships in the next 5 years, a program that includes 2 nuclear-powered aircraft carriers, 7 Trident submarines, 11 nuclear-powered submarines, 2 nuclear-powered strike cruisers, 8 Aegis destroyers, 40 frigates, 10 mine countermeasures ships, 12 Surtass ships, a large V/STOL aircraft support ship, and 18 other ships.

I know your shoulders are broad, but how do you proposed to build these ships over the next 5 years?

Admiral HOLLOWAY. Mr. Chairman, in terms of physical capability, the American shipbuilding industry has the manpower and the capacity to build the ships I have suggested we need over this period.

Mr. MAHON. Does everybody agree with that?

Admiral HOLLOWAY. I think that is agreed to in industry and in the Navy. If we carried out our 166-ship program, the total shipyard work force would decline slightly from the level of 120,000 shipyard employees that were in the force, I believe, in 1970. As a matter of fact, with the 166-ship program, the total employment in the ship-

building industry of shipyard workers would not increase above where it is now, until 1979, and then would peak out at 128,000 employees.

In sum there is today physical capacity in terms of people and in shipyard space to build the 166-ship program.

Now then, the next question could be, is there a willingness on the part of the industry to do this? I think that it is necessary for the Navy and the shipbuilders to get together and resolve the claim issues problems which, in most instances, are a holdover from contracts prior to the early 1970's. We must first get those out of the way and then go forward with better contracts that will attract the shipbuilders to the construction of naval ships.

Mr. SIKES. Admiral, is there anything to indicate this is a possibility? The situation seems to get worse instead of better.

Admiral HOLLOWAY. I believe that it is getting better, Mr. Sikes, and I would like to call on the Chief of Naval Material to cite several things that have happened just in the last several weeks that indicate to me that we are beginning to make progress.

Mr. MAHON. All right.

#### ADMINISTRATION OF CLAIMS SETTLEMENTS

Admiral MICHAELIS. Mr. Chairman. In early April, the Deputy Secretary of Defense announced that he was going to exercise Public Law 85-804 in an effort to reform certain basic shipbuilding contracts to include the new escalation provision now used in shipbuilding contracts. This provision would make adjustment for the traumatic swings in economic conditions that occurred in 1973 and 1974. It was to be used in contracts where we had existing or pending claims on ships not yet delivered.

This action was an attempt to provide equity. It was expected, of course, that if these changes involving the new escalation clauses were made, that the contractors as a matter of equity would then withdraw their claims. Only two of the four companies involved agreed to this type of reformation. The other two, Ingalls Division of Litton, and Newport News Division of Tenneco, were not satisfied with the expected outcome of this approach and elected to continue processing of their claims.

Since use of Public Law 85-804 was in essence an adjustment for escalation, and two of the four contractors elected not to accept the 85-804 offer, it was withdrawn by the Deputy Secretary of Defense.

At that particular time, in early June, the Deputy Secretary of Defense stated that we would now go back to an effort to settle claims and do so on an accelerated basis to the very best of our ability.

Over the past several years, the Navy has established a method of claim settlement which has withstood the test of audits, the scrutiny of various regulatory agencies, and in general is executed in less time than a claim presented to the Armed Services Board of Contract Appeals. We are continuing to refine our established claim settlement process and acting to make headway in reducing the amount of time it takes to settle these claims.

Additionally, an independent Navy Board of Claims Settlement Board has been established under Rear Admiral Manganaro, who previously commanded the Puget Sound Naval Shipyard. This Board

will have full authority to analyze and negotiate assigned claims. The objective of the Board is to settle as many Newport News claims in as short a time as is consistent with good practice and protection of Government interests.

Mr. SIKES. Is the new system presently operational?

Admiral MICHAELIS. Admiral Manganaro took his position last week, Mr. Sikes, and he has since that time visited Newport News. The Board is now planning how to attack this job, and I am bullish about the direction in which we are moving and have great hopes for shipbuilders and Navy cooperation in this effort.

We have taken steps to make sure that this Board is independent in its action and is not influenced extraneously. The Board has the authority to make the quantum determination to effect the settlement, and if they believe that a settlement cannot be made, to make a contracting officers decision and pass it right up to the Armed Services Board of Contract Appeals. We have high hopes for this approach.

Mr. SIKES. How much cooperation are you getting from the shipbuilders in the new system that you are describing?

Admiral MICHAELIS. So far, we have only begun to apply it on Newport News Claims, so our experience is limited.

Newport News has accepted this approach with the statement that they are willing to try it. They are, of course, skeptical because they would like to see all the claims settled quickly.

We are trying to do the best that we can to speed up this process and still protect the Government's interests.

We are also looking at other things to improve our administration. One is in the changes area. Changes and the manner in which they are administered contribute to contractor claims. We are working very hard with Newport News to improve our change administration so as to settle such things as labor laws and material cost and accept settlement of delay and disruption at a specified later date. With several different types of ships being built at once, the shipbuilder finds it difficult to determine ahead of time how much delay and disruption a Navy-caused change may engender.

As part of this partial settlement system we are asking the shipbuilder to complete and close out his change in a given period of time. That is under discussion right now as a second step in trying to improve our method of operation with the shipbuilder.

We are moving simultaneously on many fronts to improve our relations. Mr. Chairman, and to settle claims more rapidly.

Mr. MAHON. When you settle a claim, in any case, I guess it would be fair to assume a broad side of criticism will be leveled against either the shipbuilders or the Navy, or both. That is typical of such things.

Admiral MICHAELIS. That is a very fair statement, sir. As you know, claims settlement is the process of technical and legal analysis, assessment of litigative risk, and negotiation. We negotiate under rather strict rules established by the ASPR and by our own Navy procurement directions. We feel that we can stay within these limits and still find ways to speed up the process—

Admiral HOLLOWAY. I was just going to interject to emphasize the point the chairman made. I have responded to the question on claims

by saying it is not our only objective to settle claims in a hurry. It is our objective to settle claims fairly as well as expeditiously. I think that we all understand that if we were simply to accede to the claims requests, we could certainly get these claims out of the way, but we in the Navy would not be fulfilling our obligation for the proper stewardship of Government funds.

So our objective is a fair settlement of claims in the shortest period possible.

#### CHANGE ORDERS IN SHIPBUILDING CONTRACTS

Mr. MAHON. Are you fulfilling your stewardship in this, that you unwisely plan and therefore call for an unreasonable number of changes which complicate the whole process?

Admiral HOLLOWAY. We are aware of the fact that this is a complicating factor, Mr. Chairman, and we have taken steps to minimize the number of changes we request. On the other hand, we would be improperly exercising our military responsibilities to the taxpayer, for example, if we decreed that there would be no changes in the case of a ship that takes 5 years to build. In the 5 years between the time we started to build the ship and the time the ship was delivered there may be changes in the threat or in our own technology, which may make it in our best interests to make some modifications in the design of that ship. In other words, we should take cognizance of the fact that the enemy may have developed a new weapon that we have to protect against or that our own science has developed a new weapon that we must have on that ship when it goes to sea.

It is my responsibility, and that of my staff, to judge very carefully every proposal for a change. We balance the improved effectiveness against the increase in cost of that ship. So only those changes are made that are absolutely essential.

An example of one kind of a change arose during the building of the *Nimitz*. When the ship was first designed, sewage was to be disposed of by pumping it overboard. Between the time we went to contract and the ship was partially constructed, legislation was enacted which required us, for environmental purposes, to store sewage onboard. So it required redesign in the ship for onboard holding tanks. That is an example of a change which may be required by law.

Mr. MAHON. Since any contractor knows that you are going to have a lot of change orders, at least some change orders, is there a disposition to enter into contracts that are not very valid from the standpoint of the shipbuilder, but the shipbuilders feel that as a result of change orders they will be able to recoup anything that they might tend to lose otherwise in building on the ship?

Admiral HOLLOWAY. It is my impression, speaking not as a shipbuilder but as a naval officer, that in the past this perhaps was a tendency and a view that was held by the shipbuilders.

I would like to ask either Admiral Michaelis or the commander of the Naval Sea Systems Command to explain what we have done to try and eliminate that aspect of shipbuilding and contracting.

Admiral GOODING. Mr. Chairman, if I may, I would like to put the question of changes in what I consider a proper perspective. The customary face value of the changes in a shipbuilding contract amounts

to about 5 percent of the face value of the contract itself which in turn amounts to about half the cost of the total ship including Government-furnished equipment and information.

We are talking of a number of 2½ percent to 3 percent of the total cost of the ship as the dollar amount of changes. It may well be so that in the past the shipbuilders plan to get well on the changes, but it is pretty hard to get well on 2½ percent or even 5 percent.

I do not wish to mislead the committee, and the CNO has already said so, but some changes are inevitable. Most of them are comparatively minor, a few man-days or 50 man-days. Occasionally if a new threat pops up over the horizon, it will be necessary to put in a major change and we do it. I do not see that process stopping.

Mr. MURPHY. Admiral Gooding, we recall that the Navy Material Acquisition Review Committee report last year was somewhat critical of the Navy shipbuilding contracting practices in awarding ship construction contracts with limited ship design data. This resulted in inadequate estimates for the cost of ships and the necessity for making changes as the ship was under construction.

What actions have been taken in light of the criticism in this report to insure that the ship design is thorough before awarding a shipbuilding contract?

Admiral GOODING. Well, I kind of take umbrage at the statement that our design information was inadequate. We do endeavor, and as far as I am concerned in general we succeed in supplying to the shipbuilders and to my own cost estimators, more than enough information for them to make an estimate, both of them, and more than enough information for them adequately to build a ship.

This is a never-ceasing effort. I think in the recent past we are probably providing even more information than we did say 5 years ago.

Mr. MURPHY. Well, I recall a number of situations where we found in each succeeding year that the cost estimate we were provided the previous year was inadequate. It would seem that the cause is probably a poor cost estimate by the Navy based for some reason on either a poor design or some other reason.

Admiral GOODING. Your observation is correct but if you will check into the record, I think you will find in almost every case the Navy has not forecasted the escalated cost of the ship. The basic cost of the ship in man-hours and pounds of material has changed very, very little.

Mr. MURPHY. Admiral Holloway, in answer to an earlier question by the chairman, I believe you indicated that in your opinion the shipbuilding industry had the capacity to accept the shipbuilding program you proposed. This would presume that they have the necessary facilities and skilled manpower to build the program that you propose.

We note that virtually every ship in the Newport News yard is behind schedule. The same is true for the Litton yard, and to some extent the SSN-688 class submarines in the Electric Boat yard. If the shipbuilding industry does have the facilities and the manpower to accommodate your proposed shipbuilding program, why have we experienced the schedule slippages that we have in the construction of previous Navy ships?

Admiral HOLLOWAY. Mr. Murphy, I think that is the principal question involved in the claims. I would like to ask Admiral Gooding to answer it and also to give a projection of the capacity of those two yards in particular as to what will happen to their workload in the case of the 111 ship program and in the case of the 166 ship program.

Admiral GOODING. Mr. Murphy, I have with me the 110 ship program which I will provide the recorder. It does not break our specific yards. It is total industry. It says as the CNO mentioned, that there will be a decline in fiscal 1977 and fiscal 1978 in total manpower in the industry followed by a slight buildup starting in 1980 to some 8,000 men per day more than they have onboard today.

I will provide for the record a similar chart showing the 166 ship program. You will see when you get it that that is also feasible.

[The information is classified and was provided to the committee.]

Mr. MURPHY. Admiral Gooding, is it fair to look at the shipbuilding industry as a whole? It would seem that you are limited in the number of yards that can build certain ships. For example, it appears that Electric Boat will eventually get all 10 or 11, or whatever the number will be, of the Trident submarines. So it seems to me that you cannot add up numbers of employees in shipyards all over the United States to determine capacity because only the Electric Boat shipyard for example, will build your Trident submarine as well as some SSN-688 class submarines.

The same is true for Newport News. At the present time it is our understanding that that is the only shipyard that has the capacity and the expertise to build nuclear carriers and nuclear cruisers.

So looking at manpower across the board in the shipbuilding industry doesn't appear to help you in that respect. The same is true with the DD-963's that you have under contract. There is very little that you can do about those ships unless you pull them out of the Litton yard and give them to some other yard. How do you explain this?

Admiral GOODING. You are quite correct, sir, that looking at the total industry can be misleading. Behind this particular graph there is a graph for every major shipyard in the country with a possible, not necessarily probable, but a possible workload of that shipyard.

So this is the summation of individual shipyard studies. You are quite right that today Newport News is the only shipyard that can build nuclear aircraft carriers, although Puget Sound Naval Shipyard has the capability if we develop it. Today Newport News is the only one that can build nuclear strike cruisers, although Quincy has done it in the past and there is no reason Ingalls can't do it in the future. Electric Boat is solely a builder of nuclear submarines. That is their workload and will continue to be in the foreseeable future.

We have done our homework on this and have looked at it yard by yard.

Mr. MURPHY. All right, we will be looking forward to seeing that data for the record then, Admiral.

Mr. MAHON. Off the record.

[Discussion off the record.]

Mr. MAHON. Mr. Edwards?

Mr. EDWARDS. Admiral, in fiscal year 1973 the U.S. shipbuilding industry enjoyed a \$6 billion ship construction backlog, the largest in peacetime history. In fiscal year 1974 the backlog of work increased to

\$6.7 billion and in fiscal year 1975 it increased to \$8 billion. How can the shipbuilding industry absorb a \$10 or \$11 billion annual shipbuilding program from the Navy on top of its currently rising backlog?

Admiral HOLLOWAY. Mr. Edwards, the \$10 billion annual shipbuilding program I associate with the proposed 166-ship, 5-year plan. If that were to be executed, there would still be a lower number of workers required in the shipbuilding industry than the 120,000 nominal figure, until about 1979 or 1980 when it would build back up to 120,000 and then would peak out at about 128,000 workers in the industry.

Those figures do not appear to be unreasonable to me. I think it is a characteristic of a free economy that the capacity of the shipbuilding industry will be directly responsive to the orders that we place in the industry. If we were to build a very small number of ships and have a very small SCN account, then the U.S. military shipbuilding industry would shrink accordingly.

We are not like the Soviets where they can maintain a capacity to produce more than 20 nuclear-powered submarines a year, whether that capacity is used or not. Ours is a free enterprise system. If we reduce the number of ships that we are buying, the industry is going to contract. If we want to keep the shipbuilding industry healthy, we have to establish a stable SCN program with a predictable workload. That, of course, is what we hope to do with a 5-year program.

Specifically answering your question, we believe that the 166-ship program with an annual expenditure of \$10 billion a year is executable, and the industry will build up to a 128,000 man-year work force by the early eighties.

Mr. EDWARDS. Admiral, you have talked about the mission and the threat and risk, all of which comes down to the size fleet that you would propose or that you feel is necessary for the country.

We all agree that whatever that fleet should consist of, it needs to be built, it needs to be maintained and it needs to be kept on a ready status. You have talked about the claims that we are trying to settle and have been trying to settle for some time. We still don't seem to be boring in on what I think is a basic problem, and I guess what we all think is a basic problem. We need the ships, but how do we smooth out and uncomplicate the procurement of those ships?

Put the claims aside for a moment. You don't have any claims. You want to start out right now and proceed to procure ships to meet the needs of this country as defined by the mission and the risk and the threat.

How do you go about procuring those ships in an uncomplicated fashion that will get us out of this situation we find ourselves in?

Admiral HOLLOWAY. Mr. Edwards, I would like to give you my views in the broadest sense, and then turn the question over to the experts.

I think the first thing we need is a predictable shipbuilding program. The 5-year shipbuilding program which the Congress has very wisely requested the Defense Department to furnish on an annual basis is the first step in that direction, because it helps the Congress understand our military requirements. Further, it helps industry anticipate the future workload to allow them to plan their capacity and program in years ahead for both facilities and manpower.

In order to make that 5-year shipbuilding program useful, its credibility has to be established. The 5-year plan must be something more than just a best guess at what will occur in the future.

The second step that needs to be taken is that the Navy must write reasonable contracts for the procurement and acquisition of these ships.

Having suggested the first two requirements, a credible, predictable demand and writing reasonable contracts, I would like to ask the Chief of Naval Material and the Commander of the Naval Sea Systems Command to amplify this response.

Admiral MICHAELIS. With regard to writing appropriate and reasonable contracts, one needs to select a contract form that fits the risk. We think we are doing better in this area.

In recent contracts for construction of a series of ships, the first ship of the series is built under a cost contract. The lead ship is high risk and its construction must provide a good data package for the follow-on ships which will in turn reduce the number of changes that flow down that line of ships if a good data package is not properly established at the beginning.

I will cite the FFG program. The lead ship was awarded as a cost type contract with a 2-year gap between the first ship and the follow ships. The idea is since the lead ship is well along, we learn the problems and can correct them before the follow-on ships are too far along in construction. Then we build the follow ships under a less costly fixed price incentive contract.

We also are trying to ease the shipbuilders cash flow. One of the biggest problems for shipbuilding contractors today is cash flow. How much money at high interest rates does he have to put into the day-to-day business. We have shortened the intervals between payments. In the FFG program we are making progress payments every week. This gives the contractor an opportunity to receive payments as he does the work and reduce his costs.

We use escalation clauses which follow the basic principle that escalation is paid based on the rates at which time the work is done.

Mr. SIKES. Admiral, we are borrowing the money we pay him. Who is losing the most, the taxpayer or the shipbuilder?

Admiral GOODING. The shipbuilder is losing more. Mr. Sikes, the Government can borrow money at a more advantageous rate than the shipbuilders can, particularly the medium-size and smaller ones. So to answer the question, the shipbuilder would be losing more than the Government.

Mr. EDWARDS. Is that material? Admiral Holloway spoke about his stewardship, and he referred to it in terms of the taxpayer's money and that sort of thing. I think that is a commendable concern on the part of a CNO. But isn't the CNO's stewardship really to have the Navy ready to fight in any situation that we feel is something of concern to this country? If that is true, then isn't the CNO's job to see that these ships are built in a timely fashion and that these contractors are dealt with in a way that produces the maximum cooperation and effort under a contract?

I am not so much concerned about whether or not it is all the taxpayer's money one way or the other in the final analysis. I am not so much concerned about who can borrow the money the cheapest during the duration of a contract, but how do you keep that private enterprise which is building for the Government in a situation where the cash flow is sufficient to have it operate properly?

That stewardship carries a military responsibility, a subject about which you also spoke. These are the kinds of things that bother me. It seems like a contracting war with the contractor or between the contractor and the Navy, I should say. I concern myself with this because it appears that the Navy, in coming before the Congress, finds itself in the middle. The charge is frequently made that the military, and I won't limit this just to the Navy, comes in with figures for construction or procurement that are underestimated, partly because the military is fainthearted to the point they don't want to say exactly what it will cost, and I would not want to debate this now, but if it occurs, it is obvious this is where the whole process starts that causes the claims problems and the cost problems and all the rest that occurs in dealing with the contractor.

It means the military has to come back here and ask for more money. So it would appear to me that appropriate estimations should be made from the beginning.

#### GENERAL PURPOSE AMPHIBIOUS ASSAULT SHIP (LHA) PROGRAM

Mr. EDWARDS. I would like to look at the LHA program as an example of what I see as a major concern in this area, to try to get at the heart of it.

Because of its importance to our amphibious lift capabilities over the long run and thus to the maintenance of our foreign policy commitments abroad, I am deeply concerned over the status of the LHA program.

Originally, the Navy planned to buy nine LHA's at a cost of about \$1.4 billion. The proposed buy was subsequently reduced to five ships costing an estimated \$1.2 billion. The Congress has fully funded the program. Of the approximately \$1.2 billion appropriated to date, all but \$25.6 million had been obligated as of the end of March.

It has been rumored that the Navy is anticipating a serious funding shortage in the LHA program and that the Navy is now drifting toward a decision to buy only three or four LHA's. We are aware of a \$75 million increase associated with updating some of the ships' equipment and prior claims, et cetera, and know that the Navy may soon be facing a claim of up to \$701.7 million by Litton for "contract changes, delays, and disruption."

Please discuss the funding picture in the LHA program and any tentative plans as regards changes in the LHA buy.

I think this is fairly typical of what we are faced with. You determine the mission. You determine the threat. You determine the risk. You conclude that you need nine LHA's in this particular instance and now you are down flirting with three or four if my informa-

tion is right, which is obviously shortchanging yourself in terms of what the country needs to defend itself.

Yet you appear to be in that posture because of a lack of funds or because of underestimating or because of inflation and probably a combination of all of those. So you are falling short of your mission.

This is the kind of thing I spoke about a moment ago, and I said we have to find out some way to smooth out and uncomplicate this whole process.

I wonder if you might address yourself to that.

Admiral HOLLOWAY. Yes, sir.

As I mentioned previously, the bulk of the claims we are processing today stem from contracts which were written before 1970.

During the sixties it was Defense Department policy to approach contracting on the basis of total package procurement. Contracts were very tightly written. The escalation provisions were very strict. Those are some of the contracts that we are in trouble with now.

About the end of the sixties and early seventies the shipbuilding industry expanded. When an industry expands, two things happen: One, the experienced people move from the shipyard into the office and people are brought into the shipyard work force from apprentice school or from the streets. Then there is a drop in productivity during expansion. With reduced productivity, it takes longer to build a ship. However, the escalation provisions of the contract only protect the shipbuilder from the effects of inflation up to the contract delivery date. This problem of delay in ship delivery due to reduced productivity was compounded for the shipbuilder, in a fiscal sense, by the double-digit inflation of the early seventies. Because of the strict escalation provisions of the contracts, the shipbuilder was not being protected from the effects of inflation on his late deliveries. Heavy financial losses have been incurred. The shipbuilders consider that the inequities associated with unforeseen inflation should be corrected. The Navy is limited in the action that can be taken because the firm contractual agreements are legally binding.

You are absolutely right that the CNO has a responsibility to insure that new ships are delivered to the fleet to replace overage units and maintain the capability of the Navy to carry out its mission. But balance must be maintained. There has to be a compromise between those two responsibilities to the taxpayer: first, to insure that there are enough ships in the fleet; and second, to insure that we do not pay an exorbitant price for those ships. This is where the most critical judgment is required.

I have never yet been in a position where I could certify to the Secretary of the Navy, the Secretary of Defense or to the Congress that if we didn't have one more cruiser or three more destroyers by 1977 that we would slip to second place or that we would lose a war. It is a question of much broader judgments than that.

I do think that we have to solve the claims problem, and I think the Navy may have to appeal to the Congress for some extraordinary help in that solution. At the present time I am not prepared to state exactly what kind of help we may have to ask from the Congress.

Can we, in the case of Litton, settle those claims without coming in for additional funds, or in the next year or two are we going to have to request additional money to complete the LHA program?

I have made it clear that the programs of the 30 DD963's and 5 LHA's are Navy requirements and I don't intend to change them.

Now the question has to be turned over to the Chief of Navy Material and the Commander of the Sea Systems Command to find out how we resolve the issue in the most equitable fashion, equitable to both the taxpayer and the contractors. If that requires that the CNO come back before the Congress in the immediate future, next year or the year following, to ask for additional funds to do it, there is no question in my mind but that I would propose to do that.

Having given a preamble in covering the requirements and the degree to which I think the Navy has the responsibility to move in a vigorous and positive way to solve these problems, I will now ask the technical people to describe how we are going to do it.

Admiral MICHAELIS. We started as of last January with a major claim on the LHA for \$504 million. It was moved from litigation before the ASBCA and put into claim negotiation. To do this with some degree of confidence both for the shipbuilder and the Navy, we laid out a plan of action. This was a time-phased plan for providing information necessary for analysis and negotiation of the claim by the Navy. It provided for periodic provisional payments, based on entitlement, as we moved toward a position where we would be able to negotiate a final settlement.

In April our plan called for the first provisional payment and a provisional payment of \$20 million was made. We are continuing that plan of action but, of course, it has been interrupted by the litigative position that has been taken by the shipbuilder at the present time. Ingalls Division of Litton is now in a position where cash flow is going negative. The DD-963 positive cash flow is balanced by the LHA negative cash flow.

For the LHA, the deferred cash flow is almost \$100 million at the present time. It is on the LHA contract that Litton has brought suit against the Navy for breach in two respects: Navy interference with the design; and antideficiency. In the latter case, Litton alleges the Navy does not have enough money in the program to pay the full cost of the contract.

Now we will be going into court to make certain that Litton continues work on the LHA.

Actually, there were two steps. The first was an announcement that Litton was going to stop work on the LHA, and the second was to take us into court. We are planning this week to move into the courts ourselves in response to this.

Our first step is to make sure, with the temporary restraining order, that they continue to work on those ships. Speed is important because they are no longer hiring and we are beginning to lose people rapidly out of the yard because of attrition.

Mr. EDWARDS. But I figure that contractor has to be either a great American or a fool to bid on a contract where he knows he is going to end up in this sort of situation. He has either got to be so patriotic that he wants to build Navy ships no matter what the problem is or how much he is going to lose, or he has to be a fool who can't figure how easy it is to go broke.

It is the procedure that bothers me. It is not so much Litton, or it is not so much the CNO, but it is the procedure that allows a contractor

to find himself in this situation, or the Navy to find itself in this situation.

I still don't feel like I have heard an answer that says the Navy has a handle on the procedure to head off this situation.

Now we kind of had, for lack of a better term, the McNamara approach to contracts and then the Laird approach to contracts. Presumably the Laird approach worked better than the McNamara approach, but I have to assume that that is not 100 percent the best thing to do.

What is the present approach? What are you doing now that you feel is better than those other two approaches?

Admiral HOLLOWAY. Let me start by saying your view is shared by the leadership of the Defense Department. Deputy Secretary of Defense Clements, less than 1 month ago, instructed me to get our people to work in trying to design a contract which would largely eliminate the problems that we have had in the past. His objective was the ideal contract, one which would insure equity to both parties. The Naval Material Command and the Sea Systems Command are working on this.

Admiral Michaelis, perhaps you can tell us how we are moving in that direction?

Admiral MICHAELIS. I think we are well along the way. I had started to point out some of the steps, Mr. Edwards, that we are taking now to make an equitable risk between the Navy and the contractor. As I had previously pointed out, the use of cost type contracts for lead ships and fixed price incentive contracts for follow ships substantially reduces risk. Other improvements in our ships contracts would include: progress payments, which would reduce contractor financing of the work; new escalation coverage which pays escalation against actual labor and material expenditures rather than in accordance with predetermined labor and actual expenditure curves; escalation payments to actual delivery rather than being cut off at the contract delivery date; and realistic targets and spreads between target and ceiling in fixed price incentive type contracts.

In the latter case, the theory is that the contractor should have a 50-50 chance of completing the contract at or above target. However, they seldom come in below target. Our efforts are to use appropriate contract structure along with appropriate escalation and payment provisions, and we try to put them together properly.

We think the contracts that we are writing today are better than many written in the past so far as risk is concerned.

There are no contracts in the Department of Defense that cover a longer period of time in execution than contracts for complicated warships. It is difficult, as Admiral Gooding has said, to estimate exactly what kind of conditions we are going to encounter. Therefore, we have tried to reduce the risk from various sources of change—particularly economic changes.

Another consideration is that the contract can only be changed under specific circumstances. I was about to get around to that when I spoke of the Litton problem. In order to protect the Government's rights and comply with the law, we cannot change the provisions of the contract without proper consideration; that is, some benefit to the Government.

Even if we should have an empathetic feeling for the contractor, recognizing that things agreed to long ago look different today, we cannot open the contract without appropriate consideration for the Government. Instead, we receive contractor claims, analyze them, and settle them. In some cases this increases considerably the time that the contractor has to wait for payment.

Now in the *Litton* case I cannot say, since we have not gone into court, sir, just what course we will end up with.

Mr. CEDERBERG. Will you yield?

What happens if you win the court suit? That doesn't build your ships. You can win the court suit but if the company is broke and doesn't have the money to complete the ships, what do you do with them?

Admiral MICHEALIS. Well, I cannot predict the outcome of the court action, and I probably should ask the General Counsel. We have one litigation at Newport News, the CGN-41. In this case, the court made a provision for payment during the period of time permitted for negotiation.

Mr. CEDERBERG. Who would make a payment?

Admiral MICHEALIS. The Navy might be required to pay the cost to continue the operation. This is the case with the CGN-41. On the other hand, the contractor and the Navy might share costs on some basis during some specified period. I would not want to try and second-guess the court in the case of *Litton*.

Mr. EDWARDS. Where are you going to find a Federal judge who can come even close to the expertise to make a judgment like that when the Navy itself along with the contractor can't reach any kind of a conclusion of that type? I am not saying you should not go to court to get the ship built, but I think you are imposing an almost impossible burden on a Federal judge to make that kind of a decision. It cannot be based on a whole lot of expert knowledge.

You have to get the ships built, but the thing that seems to fuzz up my brain just a little on all of this is that we sit here talking about the great free enterprise system that builds our ships and that is true, *Litton*, *Electric Boat*, and *Newport News* are free enterprise companies, but they quite likely would have very little existence were it not for the Federal Government building either military ships or subsidized merchant ships.

So I think we have to look on those companies as something of an extension of the Government and that may run some of my conservative friends up the wall. But you have to look on them that way. If they go broke or if they stay perpetually unhappy with the Navy or if they just say "A pox on all of you," free enterprise or not, we don't have any shipyards. I think somehow we have to find the magic formula that nobody seems to be able to find.

But I just wonder if part of the problem results from the fact that we bring an admiral, for example, into a position of leadership in this regard, and he serves his 2 or 3 years or whatever in that job, and then he moves on to something else, and you bring somebody else in, and over a period of years of changing of hands, and I know this has to be nec-

essary in the military, if you just don't ever really develop the expertise necessary to follow through on these things.

That may be way wrong, but that it just something that sticks in my mind. I would like to hear you comment on that if anybody has a comment.

Admiral HOLLOWAY. Mr. Edwards, I think your concern is shared by a number of people and certainly by the Secretary, the Deputy Secretary of Defense, and myself.

I would like to ask Vice Admiral Gooding, who is a shipbuilder by profession and trade as well as a naval officer, to respond to that.

Admiral GOODING. Mr. Edwards, there are several things I would like to say if I may. I would like to start out first with your remarks on the subject of estimated costs. I have been in the front office in the Naval Sea Systems Command for 7 years. The last 4 I have been in command. In those 7 years, to my knowledge and my knowledge is complete, the Navy has never submitted an estimate knowing it would be low.

I must concede that we have submitted estimates and the Congress has authorized and appropriated these numbers which turned out to be low. I make no apology for that. Our ability to forecast the future is no better than that of the Council of Economic Advisers and they are not very good either.

But the estimates we have submitted have invariably been honest estimates. We thought that was the price required for that ship. I might also say that if you are looking for a man responsible for making estimates which turned out to be low, I am here because once the estimate for a ship leaves my desk, no one in the Government, not OP NAV, not the Department of Defense, not OMB, not the President, not the Congress, ever changes that number.

So if it turns out to be wrong, I bear the responsibility for it.

I will say again, each one of those estimates have been an honest estimate, right or wrong. I wish some of them had been higher but I don't pad the budget. I put in what I honestly think it will cost.

As to tenure, I think I have spoken to that. I have been in the office now for almost 7 years. I think I am fairly proficient in my job. At least I have not been fired. It is unquestionable that we would be in a better position today had we been able to or had we been able to talk ourselves into padding the budgets in the past.

We did not choose to do that. We put in what we thought the ship would actually cost. In some cases it turned out to be low, in most cases.

Again, in response to Mr. Murphy's question, if you will check the record I believe you will find out that where we missed the ball badly was in our estimate of future escalation under the contract. The shipbuilding costs, judging by the BLS indexes between 1970 and 1975 went up, I believe, some 52 percent. Wheat went up three times. Petroleum went up 2½ times. We did not foresee increases of that magnitude and again I don't apologize for that because my crystal ball is as cloudy as anybody else's. I would like to add that I plan to hire an outside contractor, one independent and unbiased by the Navy's procedure or situation. We will have him make an independent appraisal

of our cost estimating procedures and results. We will certainly review the report of that study with great care and take actions as necessary.

Mr. EDWARDS. First, I was not referring to personalities when I stated the question.

Admiral GOODING. I understand.

Mr. EDWARDS. Secondly, using a personal reference, my father-in-law is an architect. That man makes the most sincere estimates that I have ever seen a man make. Yet I have never seen a project come in at or lower than that estimate. That is typical, I think, of architects. It is typical of those who estimate.

I don't find fault except I keep saying to him, "You know it is going to be low. Why don't you level with the people." He says, "I am leveling as best I know how to level."

I attribute this to you. You are giving us the best figure and giving the CNO the best figure you can come up with. Yet they always turn out low, I won't say always, but many times they turn out low. That makes one wonder what you do about that.

We will be the first to jump on you if we think you come over here with a padded figure. You know that, and we know that.

Admiral GOODING. Yes, sir.

Mr. EDWARDS. But maybe we have not jumped enough when we have found estimates that turn out to be low, and later we have to come up with more money. But again, it seems to me that this kind of filters all the way through. We hear that contractors try to bid in at a low figure, knowing, as you said, that they are going to get well on 2½ or 5 percent.

I agree with you that is not much margin to get well on. But we hear these things. So we wonder and I wonder if this is not all part of a process that we have just become used to, and we all do the best we can, but we all seem to know deep in our heart that the figures are not going to be sufficient, so we find ourselves in the middle of these claims type problems.

Admiral GOODING. Mr. Edwards, it has not always been that way. If you remember back to the early 1960's, we were using basically the same estimating process we are using today and we consistently guessed high. About 1964, the Navy had in its checking account (my phrase) well over \$1 billion in underruns by estimating high on escalations. The escalation did not turn out to as high as we had forecast and we made money. We used up that money for various good reasons like the submarine safety program and the Terrier, Tartar and Talos system.

Until 1966 or 1967 we drew that checking account down to zero and the claims hit us. So we can guess high, we have done it. In the recent past we have guessed low.

Mr. MURPHY. Admiral, you took umbrage with a statement I mentioned earlier and you again referred to it a moment ago. I don't think I ever accused the Navy of submitting dishonest estimates but I have accused the Navy of submitting poor estimates. I can cite programs where the Navy has requested funds to initiate shipbuilding programs based on class F or class D estimates. They are very poor estimates and they are not based on a firm ship design and the Navy has admitted that. This is the sort of estimates I am alluding to.

In the FFG-7 patrol frigate program, 6 months after we funded that program it experienced a \$500 million cost increase. I don't believe that program was based on a firm design of that ship at the time it was originally submitted to Congress for funding.

Admiral GOODING. Yes, sir, it was a class C estimate originally submitted. We had to make several changes on the ship for various reasons and we had to reestimate escalation on what we knew. The only budget year estimates the Congress ever received on FFG-7 were class C estimates. In the last 4 years I can think of there were only two estimates which were not at least class C. One was a class F, I think on some waste barges and another was a class D—I am sorry because I can't remember on what.

Mr. MURPHY. Please have somebody search it because I remember over the years discussing estimates for a number of new programs on which the Navy was requesting initial funding and they were not class C estimates. I think they were either class D or F estimates. I think a review of the records in the last 6 years or so will show that there have been more than two.

Admiral GOODING. I will be glad to supply it for the record.  
[The information follows:]

The following ships were class D or lower estimates when submitted to Congress:

Fiscal year:	Ship	Classification of estimate
1972	CGN-40	D
	DDG (DLG) (Conv)	D
	AS	F
1973	ATS	D
	PHM	D
1974	FFG	D
	Trident	D
	SWOB <sup>1</sup>	D
1975	( <sup>2</sup> )	
1976	( <sup>2</sup> )	
1977	DDG-47 (Aegis)	D

<sup>1</sup> Ship waste offloading barge.

<sup>2</sup> None.

#### LACK OF PROGRESS IN CONSTRUCTION OF LHA-4 AND LHA-5

Mr. EDWARDS. Although Litton appears to be making steady progress in the construction of LHA-1, LHA-2, and LHA-3, there appears to be very little progress in the construction of LHA-4 and LHA-5. Fabrication work on LHA-4 was started on May 23, 1973, that is more than 3 years ago, yet as of July 1, 1976, the ship was only 13 percent complete. In the case of LHA-5, it was started more than 2 years ago, but as of July 1 it was only 2 percent complete (in terms of manhours). Please explain the apparent lack of real progress on LHA-4 and LHA-5.

Admiral DOYLE. The progress figures given for ships 4 and 5 are accurate. This lack of progress is the result of Ingalls stated inability to man all of their shipbuilding programs to the manpower levels they had originally planned. Consequently, in May 1974, Ingalls first advised the Navy that the company was established priorities within their various programs which would place the LHA last in the allocation of resources within the shipyard. Since that time, the lack of

progress on LHA's 4 and 5 is attributable directly to the rescheduling of their production activity to reflect their partial manning of the LHA program. Although the present company policy is to afford equality between the LHA and other surface ship programs at Ingalls, the schedule slippages of up to 2½ years on ship 5 incurred during this manpower hiatus are considered unrecoverable.

Mr. EDWARDS. Based on progress on all five ships, the Navy has paid the contractor a total of \$827.4 million. Litton, by comparison, has incurred expenditures on the LHA's of \$920.6 million, or \$93.2 million in excess of Navy payments. Ingalls (Litton) has stated it will incur no further liability on this contract and intends to stop work on August 1. Since these claims could not be settled and appealed until 1970-80, the Navy is faced with a real dilemma. If we are ever to have the amphibious lift capability we need, these five ships must somehow be built. How does the Navy intend to resolve this problem?

Admiral HOLLOWAY. The Navy intends to take all necessary steps to assure that Ingalls continues to perform on the LHA contract. The Navy plans to continue the negotiations to settle the claim with Ingalls which began in January 1976 but, if necessary, is prepared to seek injunctive action by the courts.

#### DEFICIENCIES RECORDED ON *TARAWA* (LHA-1)

Mr. EDWARDS. At the time of the Navy's Board of Inspection and Survey of LHA-1, 2,750 deficiencies were cited by the Board. When the Navy took delivery of the ship, how many of these deficiencies had not yet been corrected? Please describe some of the major deficiencies. Have all deficiencies been corrected? If not, how many are still outstanding? For the record, please provide a detailed list of all outstanding deficiencies on LHA-1.

Admiral DOYLE. As you have noted, the Board recorded some 2,750 items on *Tarawa* ranging from contract deficiencies to recommended improvements to the as-built design. Of this total 440 were highlighted as "starred" items, signifying that the Board recommended correction of the items before delivery.

*Tarawa* was delivered on May 14 with 371 of the 440 starred items corrected. Of the 69 deficiencies outstanding at delivery 28 were either waived or completed. The remaining 41 items have been deferred. As a precursor to this action, none of the 69 items was determined to be either a mandatory safety item or a mission-essential item for continued ship operations.

In addition to the 371 "starred" items corrected before delivery, 1,682 less critical items—Part I—were also corrected satisfactorily. The remaining 628 items, split between the Navy and the contractor as to responsibility, have been deferred until the postshakedown availability (PSA) now scheduled for Long Beach Naval Shipyard beginning in July of 1977. The primary reason for deferral of those less critical items is to provide additional operational experience with the ship with a view to either affirming or rejecting the proposed changes on the basis of performance. All deficiencies affirmed by the performance criterion will be addressed and corrected by the end of the PSA period.

The following are examples of some of the major deficiencies:

The tactical air control and navigation (TACAN) control unit on the LHA is located in the combat information center (CIC) next to

the air intercept controller where it is normally located. However, there may be a need for the TACAN control/monitor to be moved into the helicopter direction center. This will be evaluated under operational conditions and changed if necessary at the postshakedown availability period about 1 year from now.

The LHA contract predates the requirement to install fire retardant plywood in the troop ammunition cargo holds. As the plywood deteriorates in LHA-1 it will be replaced with fire retardant materials.

We may have to modify the monorail system in order to enhance the car driver's visibility to avoid collisions with the safety switches in the system. The shipbuilder has operated the cars for several hundred hours with no apparent problems; however, we must evaluate the system at sea.

A complete listing of the 41 outstanding major "starred" item deficiencies follows:

020AX	Stern closure locks.
002BR	Boiler flexibility test.
003BR	Main feed water system discrepancies.
004BR	Boiler water/condensate test and treatment system.
006BR	Automatic firing of boilers below 70,000#/hr.
013BR	Main feed booster pumps.
016BR	Boiler control console air flow.
028BR	No. 1 and No. 2 uptake forced draft blower ducting.
002CS	ITAWDS/GFCS integration.
003CS	GFCS/gun mount position.
006CS	Message reproduction/distribution.
007CS	Combat information center (CIC) evaluator.
008CS	Test parameters.
009CS	Test of communications equipment/computer-controlled.
010CS	Operational readiness test (ORT).
013CS	Multiprogramming capability, integrated tactical amphibious warfare data system (ITAWDS).
016CS	ITAWDS operations.
017CS	ITAWDS/control console data.
018CS	ITAWDS/target designation system.
019CS	Gun fire control system (GFCS) MK-86/ITAWDS.
020CS	Documentation for trouble shooting combat system.
035CS	Plywood sheathing.
054CS	Target designation transmitter operator position.
064CS	Ships weapons coordinator (SWC) cease fire.
067CS	Intermittent signals at SWC.
090CS	Ultra high frequency homer in helo direction center (HDC).
091CS	SPS-10 (surface search radar) safety rails.
092CS	Location helo approach/departure consoles and carrier control approach.
099CS	Remote tactical navigation unit in HDC.
102CS	Electro-magnetic interference in remote optical sight cameras.
128CS	Aircraft power disconnect switches/communications center.
014DC	Fire/smoke detectors.
020DK	Assault subsystem.
024DK	Monorail driver visibility.
036DK	Amphibious recovery winch.
003EL	Value position indicator-fuel oil, lube oil valves in bilges.
001MP	Automatic propulsion system.
003MP	Lube oil pumps.
001MP	No. 2 low-pressure turbine forward steam seal.
011MP	Sink in laboratory.
031SP	COSAL-government.

*Insurv item number*

AV019-1	Functional test with MOGAS not conducted.
AV055-1	De Elev. door rollers do not track.
AV056-3	Door rollers do not rotate.
AV112-1	No maintenance training for pallet transporter.
AV112-3	Inadequate pubs for P/T.
AX020-1	Stern closure locks don't hold.
AX028-1	Improper operation of No. 1 reefer unit.
AX030-1	Engineering/department does not have ultrasonic cleaner.
AX062-1	Port boat davit feeder gear is worn.
AX064-1	Oil leak in monorail hoist.
AX081-4	Inadequate clearance on machine shop hoist.
AX086-5	No pressure gage for windlass brake booster.
AX095-1	Ladder for side port crane not installed.
AX109-1	Vibration quals not completed.
AX110-1	Shock quals not completed.
AX123-5	No. 2 s/s air comp. short cycling.
AX150-1	Test kits not available for DG.
AX168-1	PAD Gyes for cylinder heads not installed.
AX186-4	AFT A/C elevator packing leaks.
AX209-1	Emerg. Strg demo not completed satisfactorily.
AX222-1	B/A crane rubber boots wearing excessively.
AX233-3	Cargo elevator controllers and gages difficult to reach.
BR002-1	Boiler flex test not sat.
BR003-3	Feed pump turbine press was low.
BR004-1	Boiler water treatment system deficient.
BR006-1	Ability to control ops below 7000 #/HR unsatisfactory.
BR016-1	FDB operation unsat.
BR028-1	Excessive stack noise.
BR059-1	Stack soot seal ineffective.
BR061-1	Boiler water test and treat system not demonstrated.
BR064-1	L.O. relief valve settings not correct.
BR065-1	MR-HI temp surfaces existed.
BR071-1	Discrepancies during boiler overload.
BR087-1	Sample cooler deficiencies.
BR104-1	Boiler casing clearance not provided.
BR126-1	CO <sup>2</sup> bottles wrong color.
CS006-1	MSG repro facilities inadequate.
CS013-1	Computer core limitation limits MIS jobs.
CS014-1	ITAWDS interruptions occur.
CS016-1	Mis jobs could not continue after interrupt.
CS017-1	Air MGT tracks are cleared.
CS018-1	TDS update not avail w/o trial procedure.
CS020-1	Combat Syst. level test DOCM not avail.
CS064-1	Cease fire action is unsat.
CS067-1	SWC signal RCVD spuriously.
CS091-1	Gun MT display incorrect.
CS092-1	SPS-10 35 degree blind zone.
CS097-1	Radar displays in HAC incorrectly located.
CS102-1	SPS40B interferes with ROS.
CS118-1	No net around SPA-72 antenna platform.
CS201-1	Cooling system not provided in magazines.
CS212-1	No comm. at Mag Spring local stations.
CS242-1	Burn spots on TDS console cathode ray tube.
6.CS249-7	Voice comm. missing.
CS250-8	OP instructions not posted.
CS251-2	No book case in EW module.
CS260-1	Status boards are marred or missing.
CS261-1	Lighting inadequate in CIC spaces.
CS289-1	IFF—Mode 4 caution light in on continually.
CS300-1	Turners will not hold air pressure.
CS326-1	Simplex OPS requires 2 TSEC/KWT7s.
CS343-1	UHF-1KW No. 2 not wired for link 4.
CS367-1	No fault generated during test.
CS408-1	Deficiencies in ITAWDS modes of OPS.
CS412-1	Link 11 Model III design not fully doc.

- CS413-1 DRO displays only 4 digits.  
 CS415-1 No means of cancelling MIS printer writers job.  
 CS419-1 TDS capability limited—No alt. limitations.  
 AV26-3 No inclinometers installed.  
 AV30-1 Camera F stops on fit deck and hangar dk can't be remotely adjusted.  
 AV47-13 Inadequate air conditioning.  
 AV101-3 Insufficient fire extinguishers—Avionics Shop.  
 AV117-2 Hangar deck fire lanes not painted.  
 AV119-1 Flight deck markings.  
 AV120-1 Capacity brake—sheer not wide enough.  
 AV121-1 Mat'l control & Aviation Supplies Activities not provided.  
 AV130-1 No guard on light switch.  
 AV132-1 Harbor Pollution signs not posted.  
 AV137-1 JP5 Supply Risers pressure gauge.  
 AV142-4 No emergency battle lantern—sq work center.  
 AV148-3 Avn. Maint. Office—No emergency battle lantern.  
 AV155-1 Hydraulic contamination test bench required.  
 AV159-1 OMA spaces—not sufficient administration spaces.  
 AV160-1 No aviation oil analysis lab.  
 AX35-1 Ships Reefer System—Installation of solenoid valve.  
 AX104-1 Fan Room Access—Installation of Watertight door.  
 AX170-1 Photo Lab Print Room—timer required.  
 AX237-1 Mechanical Seals not installed in fire pumps.  
 AX240-1 Fwd pump room—inadequate access.  
 AX241-1 Reefer compressors inadequate.  
 BR108-1 Forced draft blowers unsuitable for maint/repair.  
 BR116-1 No. 1 and 2 boiler handhole plates.  
 BR137-1 No data logger provided in after ER.  
 BR138-1 FDB throttle valves—inadequate indicator.  
 CS140-1 AN/SPS-10F radar has no IFF system.  
 CS145-1 Gun Fire Control Room 07-65-1-C requires one computer operation.  
 CS148-1 Modulator MD-176/B SPS10F—Safety cover for fuse panel not installed.  
 CS149-1 IFF—Improper security straps on cryptomounts.  
 CS152-1 Secure voice—TA-790 red remote not installed.  
 CS153-1 Communication Center—R-1051 in OC console—not modified.  
 CS156-1 No VHF—FM bridge to bridge radio installed.  
 CS157-1 Main Com.—off lines not installed and demonstrated.  
 CS160-1 Computer Room and Gunfire Control—no interface design spec between ITAWDS TDS in AN/UYSK-7 and GFCS MK86 mod 4 Prog.  
 CS165-1 Equip not installed for interface between ASMD and ITAWDS TDS.  
 CS168-1 Joint Intelligence Center—No automated plotting equip interfaced with ITAWDS.  
 CS231-1 AM/SPS-52B Radar requires lobe mod to AN/SIPA-72 antenna.  
 AV26-6 Room for rapid exit from machine.  
 AV49-2 Damage control charts missing.  
 AV95-1 Portable equipment missing.  
 AV98-17 Turret punch not installed.  
 AV108-11 No rubber matting on deck.  
 AV112-4 Depot activity not identified.  
 AV114-1 No aviation test equipment calibration.  
 AV154-1 No hydraulic jack load tester.  
 AV156-1 No tubing bender.  
 AV158-1 No magnaglo/magnaflux equipment.  
 AX78-2 Flexible hoses not tagged—bow thruster.  
 AX104-1 Improved fan room access.  
 AX155-3 Flexible hoses not tagged No. 2 emergency diesel.  
 AX157-2 Flexible hoses not tagged No. 1.  
 AX236-1 Flexible hoses not tagged—anchor windlass.  
 BR136-1 No stack gas thermometers.

- CS102-1 Two ROS's experienced interference.  
 CS139-1 No Omega data converter installed.  
 CS141-1 GFCS MK86 gun data call up inoperable.  
 CS143-1 Program alignment info not visible.  
 CS144-1 No capability to perform PMS MRC G-121M2.  
 CS147-1 Test procedures update required.  
 CS150-1 CCTV not secure.  
 CS151-1 Secure voice capability missing A1CTDS.  
 CS156-1 VFM bridge to bridge radio installed.  
 CS162-1 CDPS program emergency and flash equal.  
 CS169-1 No CAI capability.  
 CS183-4 Topside ordnance lockers sunshields unpainted.  
 CS189-1 No stowage for dummy powder cases projectiles.  
 CS203-1 Air reducing banks—no inst'ns or diagrams.  
 CS234-1 AN/SPN-35A Radome—No catch and lock.  
 CS235-1 AN/SPN-35A Radome—Insufficient power outlets.  
 CS237-1 No UPA-59(V) video decoder unit provided.  
 CS238-1 HDC—certain communications not possible.  
 CS249-6 Voice radio tape recorders inadequate.  
 CS251-8 Voice radio tape storage required.  
 CS263-1 SSES has no paper shredder.  
 CS264-1 Com CTR has no paper shredder.  
 CS288-1 AN/UPX-23 installed but not incorporated.  
 AV059-9 Excessive gaps between inboard end of nets and the elevator.  
 AV081-1 JP-5 filter elements overdue for replacement.  
 AV083-1 No Mo gas stripping capability.  
 AV102-2 No ultrasonic filter cleaner ventilation exhaust.  
 AV103-3 No installed exhaust hoods.  
 AV107-8 No protective cover for voltage regulators.  
 AV108-7 No battery charging adapters provided in shop.  
 AV110-4 No exhaust hood installed over degreaser.  
 AV118-1 Insufficient illumination on portion of flight deck.  
 AV128-1 Flight deck scuppers missing.  
 AV149-1 Main deck spaces lack red lighting.  
 AX065-1 Open L/P and M/P air compressors for inspection.  
 AX132-1 Escape trunk door from machinery room unsat.  
 AX158-5 No spray shield installed over fuel oil filters.  
 AX172-3 Developing sink badly scratched.  
 AX191-6 No gages or thermometer on the pumps.  
 BR063-1 Lube oil sumps' handholes in conflict with MIL-P-22302.  
 BR72-2 Agitator not provided on automatic tanks.  
 CS008-1 Test does not list correct test parameters.  
 CS009-1 Test did not reflect true equipment status.  
 CS010-1 Ort is not a valid "go" test.  
 CS115-1 Equipment improperly installed.  
 CS128-1 No AC power disconnect switches.  
 CS215-1 Rockbestos tubing fastened incorrectly.  
 CS251-14 No stowage provided in radar room.  
 CS298-1 All audio dependent on one power supply plug.  
 CS309-1 No status board.  
 CS337-1 No keyboard/TD selection at JMC.  
 CS340-1 Configuration on papa circuits retard operator efficiency.  
 CS401-1 High insertion loss of all UHF couplers.  
 CS451-1 RF cable not protected from kick damage.  
 CS476-1 Selector switch and head set net provided for GFCS.  
 CS479-1 Cannot sight through MK104 telescope safely.  
 CS488-1 No isolation/tie switch on 2JP gun mount phone CKT.  
 CS525-1 LP purge line requires excessive pressure.  
 CS546-1 AN/SPS-40B causes interference to AN/SMQ-1.  
 CS549-1 AN/SPS-40B causes interference to AN/URD-4A.  
 CS553-2 Latest modifications to magazine sprinkler system not installed.  
 CS555-1 Loader drums not readily accessible for repair.  
 DC018-2 Clean out "T" not installed.  
 CS235-2 AN/SPS-35A Radar electronics maint bench.  
 9.CS249-10 CIC-EWS Console Intercomm interphone comm. capability required  
 Ops Officer, air traffic over comm with HDO, HDI—etc wearing  
 head sets.

- CS276-1 Rifle racks—inadequate security.  
 CS316-1 Secure voice—TACC unauthorized remote jack box.  
 CS317-1 CDPS/MPS—No save/get function for edit provide.  
 CS421-1 Program Probs in TDS data extraction.  
 CS422-1 TDS HT info has scaling factor which is not useful.  
 CS423-1 TDS Track HDR info not useful in present form.  
 CS426-1 MIS History tape readout problems.  
 CS427-1 MIS restarts checkpoint before previous rest. compl.  
 CS428-1 MIS queued start MSG is output—confused.  
 CS430-1 Possible security probs at UYA-5 MSG terms.  
 CS434-1 Previously ident SW Probs not resolved.  
 CS437-1 When LS printer in Op, no other output data avail.  
 CS440-1 TDS/MIS constraints not clear.  
 CS443-1 CPU usage for BVP not realistic.  
 CS444-1 ITAWDS can't be loaded by mag tape if IOCO Cas.  
 CS448-1 ITAWDS dynamic resource alloc. locks-up.  
 CS449-1 ITAWDS design does not agree with codes.  
 CS452-1 UYA-5 MSG term do not have release phrase.  
 CS457-1 Alum. wrap will deteriorate.  
 CS465-1 SWC cannot send rqrd commands.  
 CS471-1 GFCS special tools not provided.  
 CS473-1 Info books have errors.  
 CS480-1 SPG 60 slip rings not access. for maintenance.  
 CS483-1 Test equipment for MK86 not aboard.  
 CS493-1 DRP2840B Dir. coupler not installed.  
 CS496-2 Radar Rm.—Test cable not provided.  
 CS506-1 TDS intercept control was not conducted.  
 CS5 10-1 A/C 10,000 ft test not conducted.  
 CS5 12-1 50,000 ft ht demo not sat.  
 CS513-1 Link 11/Link 14 demo not demod.  
 CS516-1 ECM demo not completed.  
 CS526-1 Deterioration of ESM waveguides.  
 AV112-1 Maintenance training req'd on pallet transporter.  
 AV153-1 Provide heat treatment oven.  
 AV157-1 Air frames rivet refrigerator required.  
 CS 142-1 Gun Fire Control Rm.—Target height reading adj.  
 CS146-1 Servo amp failures—gun fire control room.  
 CS154-1 CDPS/MPS needs 400 address guard list entry.  
 CS155-1 "N" & "P" Sys. need D.C. lines.  
 CS159-1 JIC needs secure R/I circuits for ship-to-shore.  
 CS161-1 Data Processing Cen.—Storage capacity of RD-281 disk file is limited.  
 CS163-1 Data Processing Cen.—Operation of Control Console is awkward.  
 CS221-1 Fwd & Aft BPDSMS—DI operator platforms not adjustable.  
 CS243-1 Distribution switch needed in Computer Center.  
 2.CS249-3 JIC needs secure intra-ship COMMS.  
 CS282-1 Need manual buss transfer pool for ITAWDS power.  
 CS324-1 CDPS/MPS design doesn't allow operator to retrieve and process msg of no concern.  
 CS327-1 Need mnemonic entry at MPS console.  
 CS331-1 No capability of terminating msg traffic at designated terminal.  
 CS332-1 Need test equipment within RS&RR.  
 CS333-1 Model 35 TTY Sig. event logger too high.  
 CS429-1 ITAWDS MIS update capabilities too limited.  
 CS466-1 Gunfire Control Rm.—COC rdoro data not updated.  
 CS565-1 CDPS/CMCS—No listing of useable freqs.  
 CS568-1 Need capability to store freqs—CDPS/CMCS  
 CS630-1 HDC—Status Boards in back of consoles inaccessible.  
 CS695-1 Debark Cont. Cen.—External light affects ITAWDS screen.  
 CS707-1 CDPS/MPS—operator can't direct sys. to process msgs rec'd by other means.  
 CS708-1 CDPS/MPS—Req. means to flag possible matches.  
 DC88-1 Provide salt water fire stn—Aft machinery room.  
 DK163-1 Designate inflatable lifeboat stowage for high shock loads.  
 EL79-1 Gyro compass failure alarms are missing.

EL132-1	CCTV Cameras can't cover entire flight deck.
HB58-2	Need access to weapons office and canvas shop.
MD38-1	Battle lanterns too low in OR Rm 1.
MD43-1	Funnels for autoclave sterilizers are inadequate.
MD54-6	Dent. X-Ray Dark Rm needs on/off switch for processor.
MD68-1	Blood Gas Analyzer req'd for grade "A" shock.
MD69-1	X-Ray Arm/Head SS WHITTE—inadequate space.
MD76-1	Cleaning sink too small in sterilizing room.
MD80-1	Insufficient electrical outlets.
MD110-1	Film Processor Med X-Ray needs modification.
MD111-1	X-Ray table requires modification.
MD112-1	Unqualified type of dental sterilizer.
MD113-1	Dental X-Ray control needs modification.
MD114-1	Dental Surgical unit requires modification of instl.
MD115-1	Blood bank needs modification of instl.
MD121-1	Med. Sterilizer needs modification of instl.
MD122-1	300MA generator needs modification of instl.
MD123-1	Barrav Processing tank (dental) needs mod. of instl.
MD124-1	Patient monitor needs modification of instl.
MD125-1	AMSCO Gen Purpose needs modification of instl.
CS313-1	COM CTR—visible index file required.
CS328-1	CDPS—misuse of channel sequence no.
CS330-1	CDPS—Maintenance software problem.
CS339-1	COM CTR—Missing take up reels.
GS441-1	Nonconformance to security features.
CS447-1	No diagnosis of ITAWDS equip maint.
CS467-1	Test modules & cables not provided (GFCS MK 86).
CS482-1	GFCS MK86—Certain test procedures nonexistent.
CS484-1	GFCS MK86—Interface data inadequate.
CS486-1	Excessive noise level—gunfire control room.
CS489-1	Alarms sound alike—gunfire control room.
CS542-1	SRG to fire control radar not blanked.
CS544-1	Certain blanking pulses cannot be produced.
CS552-1	Latest mods missing—magazine sprinkling sys.
GS553-1	Latest mods missing—magazine sprinkling sys.
GS554-1	Latest mods missing—magazine sprinkling sys.
CS557-1	Lack of standard system configuration—IFF.
CS561-1	Field changes not installed—IFF.
CS562-1	Incompatible IFF systems.
CS604-1	Armory door does not meet requirements.
GS605-1	Armory door does not meet requirements.
GS646-1	Weapons equip—missing ordalt plates.
DC84-1	Dangerous fire plugs.
DC202-1	OBA's no eight second continuous ring timer.
DC203-1	Some fire lanes not painted.
DC216-1	Unsafe voltage indicator.
DC256-1	Stowage locker for OGA cannisters not provided.
DK42-1	Problems with inflatable lifeboats.
DK51-10	Port boat davit—heavy weather pendants needed.
DK167-4	Boat room P/S—grease fitting needed.
EL51-1	Dark room lights not grounded.
EL90-1	IVCS needs module card extenders.
EL97-1	Direct shore telephones needed.
EP40-1	Sewage plants—need capability to divert troop soil into FWD plants.
HB38-1	Emergency exit labeling required.
HB39-1	Access label plates required.
MD14-5	Minor or #1—false overhead needed.
MD15-5	Minor or #2—false overhead needed.
MD39-1	Diet pantry—drawer latches not provided.
MD46-1	Primary ward bunk ladders not provided.
MD90-1	Booster heaters required in galley.
MP085-1	Pipe plugs need replacing.
MP113-1	Instrumentation needed in FWD EOS for AFT plant.
NV033-2	Bow light required STBD life boat.

- NV034-2 Bow light required 36 PK PA 7013.  
 NV035-3 36 PL 7015 compass light & bracket not installed.  
 MP86-2 EOS meters don't have normal operating range indicated.  
 NV32-1 Bridge Wing Indicator—RPM graduate inadequate.  
 SP45-1 Hydraulic Valve reach rods unprotected in storerooms.  
 CS318-1 CDPS Program.  
 CS319-1 CDPS—MPS doesn't flag outgoing classified.  
 MGS if downgrading code missing.  
 CS321-1 CDPS/MPS—No automatic backrouting of outgoing messages.  
 CS414-1 CIC: 06-65-3C—ITAWDS TDS has no LTRAN capability.  
 CS418-1 CIC: 06-63-3C—Target tracking capability.  
 CS424-1 Computer Room 4-73-1C—Install connections.  
 CS439-1 Data Processing Center 04-73-1C—Reduction of data.  
 CS462-1 Data Processing Center 04-73-1C—Difficult operation.  
 CS504-1 AN/SPS-40B Radar—REA 83—Tubes too small for cable connectors.  
 CS554-2 Magazine Sprinkling Sys.—Label plate for drain lines missing.  
 CS559-1 IFF—Transponder test set not installed.  
 CS560-1 IDD—Pulse generator SG-1066 not installed.  
 CS564-1 KW7 Installation—Send, receive and remote function of all KW7s not hooked up.  
 CS566-1 CDPS/CMCS—Inadequate capability of copying sixteen channel full period termination.  
 CS567-1 CDPS/CMCS—No capability for copying sixteen channel fleet multichannel broadcast.  
 CS571-1 Sup. Rad. AN/UGR-9 LTP-2—Copy light not modified.  
 CS587-1 Ammunition Safety Placards on topside lockers are incorrect.  
 CS669-1 Radar Rm. 2—Dial Terminal not in reaching distance of work bench.  
 DC41-1 AFFF Stations—Replace foam tanks.  
 DC77-1 Conflag Station No. 1D—No escape route.  
 DC139-1 Fire House Stations—Some fire plugs in machinery room have wrong size hose.  
 DC219-1 Manual Butterfly Vent Valves for ballast tanks.  
 DC241-1 Incomplete compartment check off lists.  
 DC242-1 No mounting for CCOL's in some compartments.  
 DC385-1 Relocate CO<sub>2</sub> Extinguisher.  
 DK52-4 LCPL Stowage and Handling—No markers to aid in positioning boat on cradle.  
 DK171-2 Sail and Canvas shop—Sewing machine covers not provided.  
 DK182-1 Fire fighting equip Stations—No labeled at sufficient height.  
 EL56-5 Electric Test Panels—Inadequate labeling.  
 EL65-1 Gyro Repeater—No auxiliary on or near ships control console.  
 EL133-1 CCTV Sys.—Flt deck surveillance cameras do not meet gen spec reference.  
 EL165-1 Shore Phones—No cables or cable racks provided.  
 EP41-1 Fwd Pump Room and Aux Machinery Rm.—Sewage plant piping cannot be secured for maintenance.  
 HB18-1 Second Access Required in numerous spaces.  
 HB38-1 Emergency Exits Labeling—Well marked routes required.  
 HB39-1 Access Label Plates—No plates in hanger deck to 02 level.  
 DC044-1 Replace swing check valve.  
 DC082-1 Control piping does not contain deflection bends.  
 DC262-1 NBC washdown has no isolation or root valves.  
 DC290-1 Improper location of FO tank sounding tubes.  
 DK036-4 Wire does not spool properly onto winch drum.  
 DK044-1 No capability to moor to a buoy.  
 DK045-1 Howser reels not large enough.  
 DK047-1 Anchor handling space not provided with warping capstan.  
 DK048-1 Handling anchor too difficult without powered assist.  
 DK051-12 Night lights inadequate.  
 DK052-11 Inadequate night lights in LCPL handling & stowage.  
 DK053-15 Inadequate lighting in boat davits (STBD).  
 DK054-6 Red illumination not installed.  
 DK156-7 Riser to pressure gage line unprotected.

- DK161-1      Weathertight boxes for stowage of survival gear not provided.  
 DK164-5      Hawser incorrect length and not double braided.  
 DK175-1      Fire hose reel too far from fire main valve.  
 EL34-1        No red night lights on 02 level catwalks.  
 EL039-1      Servicing electrical devices in overhead of hangar bay.  
 EL048-1      No means of removing water from bilges.  
 EL050-1      Line voltage regulators improperly installed.  
 EL056-6      After IC shop test panel meter calibration overdue.  
 HB026-1      Compartment airborne noise surveys incomplete.  
 HB027-1      Airborne noise level specs exceeded.  
 HB124-3      Inadequate stowage for hanging uniforms.  
 MD050-1      No exhaust vent in specified spaces.  
 MD056-1      Airborne noise level specs exceeded.  
 MP045-1      No access for moving line shaft bearings.  
 NV028-1      Chronometer case pull out drawer unsat.  
 PM008-1      PMS coverage discrepancies.  
 PM009-1      Items not covered by PMS.  
 SP034-2      Numerous inaccessible areas for cleaning.  
 SP036-6      No record of hydrostatic testing.  
 SP037-2      No coaming provided around dry storage.  
 SP45-7        No side or back braces or sea bars on "J" & "K" racks.  
 SP67-5        Offices—No office designated for Supply Officer.  
 SP71-1        Tailor & Dry Cleaning Ship-capacity/reliability of machines is  
                   doubtful.  
 SP73-1        Ship's Store Storeroom—Incorrectly labeled.  
 SP74-1        Ship Store Breakout—No deck grating or battens provided.  
 SP77-1        Crew & Troop Mess-Racks/shelves, shields not installed as re-  
                   quired.  
 SP78-2        Crew & Troop Galley—Toasters Cannot be easily adjusted.  
 SP91-1        Store Rooms—Most do not have telephones installed.  
 SP91-2        Store rooms—IMC CKT speaker not provided in numerous spaces.  
 SP101-1      Food Ser Equip—gear dispenser unsanitary.  
 SP102-1      Crew Mess—Menu Boards not installed.  
 DC138-1      Fire hose blocked by TV on mess Dr.  
 DC143-1      No hose on fire plugs.  
 DC204-1      Varnished damage control plugs.  
 DC210-4      Rep 5 inadequate tools STA 10 badly located.  
 DC211-1      All Repair STA need equip list review.  
 DC246-1      Deck drain closures not installed.  
 DC264-1      Tanks 7-65-1—W bad paint/Debris.  
 DC302-1      Secondary drain valve inaccessible.  
 DC305-1      FWD Pump RM—Location of educator in question.  
 DC371-1      Trip OVFLW CAS Ward—Access Trunk inadequate.  
 DK001-1      No sat mooring plan.  
 DK019-1      Sub assault SYS—Tech Documentation not undated.  
 DK020-1      Automatic operation of assault subsys not demonstrated.  
 DK024-1      Monorail cars—inadequate driver visibility.  
 DK043-1      Mooring STA—Bits not installed properly.  
 DK047-8      Phone cable is led across anchor-chain.  
 DK052-2      Small clearance for LCPL stowage & handling.  
 DK053-4      STBD boat davits falls are kinked.  
 DK054-1      No boom angle indicator—B&A crane.  
 DK062-1      Monorail cars—No anti-slack device on hoist.  
 DK098-1      Damage to rollers on long, conveyor when relay fails.  
 DK111-1      Cargo conveyor rinse out secured.  
 DK120-1      Final tech manuals not provided.  
 DK126-3      HYD hose fittings rusted on vehicle 5 lb. sideport door.  
 DK130-1      Vehicle sideports—ramp edges damage vehicle tires.  
 DK134-6      No wire rope ADJ on transverse water barriers.  
 DK135-1      Well deck—inadequate drain FWD section.  
 DK148-2      Equip exposed to damage from vehicular traffic.  
 DK153-1      Cargo hold upper #4—inadequate clearance.  
 DK156-8      FAS DAL STA FO, hose chafe & is kinked.  
 DK157-1      FWD FAS STA horn cleats & pad eyes not provided.  
 DK158-2      AFT FAS STA washers on probe receivers rusted.

DK164-3	Towing rig to pad—line has wrong type thimble.
DK171-5	Sail & canvas shop—racks not labeled.
DK173-1	Stowage racks not labeled.
EL003-3	Valve Position Indicator deficient FM569 Sea Suction #3. FM569 Microswitch flooded. FM569 Microswitch corroded.
EL025-1	High failure rate of Valve Motors reflect actual usage.
EL035-8	Darken ship-light traps leak.
EL036-1	S/S Turbo Generators-no auto. trip feature.
EL052-1	Flood Lt. Control pnl not watertight.
EL056-1	Gen. Purpose & IC test pnls not fully outfitted.
EL068-1	NR1 and 2 Gland Exhaust Motors & Fans not accessible.
EL071-1	SCC internal wiring doesn't conform to plt hs blueprints.
EL101-1	IVCS-Ship's force can't change numbers.
EL108-2	Cargo Elevs. wiring changes not in tech manual drawing.
EL154-1	Std nomenclature for circuit designation not used.
EL171-1	IC Swbd not labeled correctly.
EL187-1	IVCS Phone Terminal cmpt requires ext phone.
EL209-1	CCTV Sys-Recorders need dust covers.
EL210-1	CCTV Ant. Couplers require removal of paint.
EP022-1	Insuf. space for Sew. Plt Test Supplies.
EP-039-1	Instl. provision to isolate leakage sew. hose connections.
HB028-1	Excessive Stack Noise Level.
HB032-3	Inadequate clearance above berths.
HB033-1	Unsatisfactory drains.
HB047-2	#1 WR lounge-excessive vent. noise.
HB054-6	Inadequate sound proofing in staterooms.
HB068-1	Excessive noise level-3 cmpts.
HB093-4	Overhead vents sweat-troop living compt.
HB114-3	Insuf. clearance-Trp berthing compt.
HB146-2	Supply Dept. Off. tile installed over rusty deck.
MD031-2	Carbon Monoxide detection sys. not adequate.
HB57-1	Access Hangar-Number of spaces need separate means of egress.
HB58-1	Access (general)—Routes and locations not marked.
HB61-1	Some compartments have electric outlets installed in manner which creates a safety hazard.
HB73-2	Rec. Room—Need second access.
HB75-1	Crew and Troop library—Need second access.
HB88-5	Washroom—Second access needed.
HB96-1	Crew and Troop Gullery—PKP-1 foam bottles at 2 hatches are un- accessible.
HB125-2	Wardroom Mess—Fwd access does not permit forming a line for cafeteria type services.
HB149-1	Flag Admin. Off.—Seven coat hooks only one desk.
HB161-1	Radar Room #2—CO <sub>2</sub> location not adequate.
NV036-2	36 PL 7017 needs compass light & bracket.
SP013-1	Fire Ext inaccessible in storage area EPO/NCO galley.
SP031-1	GF OSI shortage includes critical items.
SP042-3	Provide detergent injectors for hoods.
SP046-1	Inadequate storage for flammable material.
SP058-4	No soap & towel dispenser—officers' barber shop.
SP059-3	No soap & towel dispenser—Crew's Barber Shop.
SP060-1	No soap & towel dispenser—Troop Barber Shop.
PM012-1	No PMS coverage for DCPO inspection.
MD032-2	Diesel exhaust in Monorail Sys. not adequate.
MD043-4	Broken switch on sterilizer.
MD052-4	No compt check off list on medical strms.
MD055-1	Airborne noise—space exceeds specs.
MD073-2	Vent. Sys. inadequate in Battery shop.
MD097-1	Limiting heat stress conditions aft mn. mach. space.
MD099-1	Limiting heat stress conditions fwd mn. mach. space.
MD103-1	Excessive vibration of dk in Avn. Strm.
MD108-1	Excessive noise #1 Inport draft blower.
MP001-1	Auto. Propulsion Sys. is unreliable.
MP003-1	Lube Oil Pumps don't operate properly.

- MP011-1 #2LP Turbine has leak on fwd steam seal.  
 MP024-1 Review heat balance on steaming arrangement.  
 MP026-1 Improper Instl. of Main Condensate Pump.  
 MP031-1 Main Lube Oil Strm.—need equip. for clean/test of filter element.  
 MP032-1 Inadequate stern tube seals.  
 MP038-1 Main turbines need over speed protection.  
 MP044-1 Nrs. 1 & 2 H.P. Turbine leak oil in 2 areas.  
 MP049-1 #2 Main Engine has two oil leaks.  
 MP091-1 Numerous valves leak.  
 MP102-1 EOS Consoles suspected not shock qualified.  
 MP103-1 No shaft RPM indicator for manual control.  
 NV007-1 Range light illuminates flight deck.  
 NV027-1 Mag. compass deviations not adj. and recorded.  
 NV044-1 No status board for call signs & formation info.  
 NV059-1 Inadequate dk drain on signal bridge.  
 PM025-1 Discrepancies in PMS weekly schedules.  
 SP036-3 No pressure gages installed in steam line.  
 1.SP37-1 PKP Fire Ext. is inaccessible.  
 SP045-2 Excessive vibration of bins in Storerooms.  
 SP046-1 Inadequate storage for flammable material.  
 SP053-15 Flat work ironer not properly mounted.  
 SP084-1 WR Galley—griddle top warped.  
 MD81-1 X-Ray Rm #1 No volume Control on IMC Speakers.  
 MD91-1 Crew and Trp Galley—Cleaning gear locker not properly ventilated.  
 MD130-1 Dental units top damaged.  
 MD162-1 Cleaning gear unit not properly ventilated.  
 MD163-5 Physical Therapy, Cast Room requires plaster sink.  
 MP115-1 Rubber expansion joints do not have alignment measurement ref. marks.  
 NV13-2 Signal shelter—emerg. illumination for safe combination required.  
 NV14-2 Benchmark labels at all repeaters not available.  
 NV17-2 Chart House—Rubber insulated deck covering not provided.  
 NV23-1 Visual Equip—Relocate Stbd EOT Rpm ship speed indicator console.  
 NV27-2 Pilot House—Magnetic Compass deviation not adjusted and recorded.  
 NV33-5 Stbd lifeboat—Instrument panel light white vice red.  
 NV34-6 Boat 36-P.L. 7013—Inst. light white vice red.  
 NV35-5 36 P.L. 7015 Boat—Inst. light white vice red.  
 NV36-4 Boat 36 P.L. 7017—Inst lights white vice red.  
 NV37-1 Gratings not provided bridge wings of pilot house & flag bridge.  
 NV38-1 Port Bridge Wing—Move marine location markers.  
 NV42-1 Flag Plot—DRT not provided.  
 NV45-1 Signal Shelter—Chart table doesn't meet space—deck required.  
 NV51-1 Flag Bridge—Voice tubes & call buzzers not provided between chart tables and pilot house.  
 NV53-1 Flag Bridge—Fwd windows Stbd side lacking.  
 NV54-1 Signal bridge—Break in handrails.  
 NV68-1 Window washing sys not provided pilot house, flag bridge or PRI fly.  
 PM13-1 PMS coverage for vent screens & filters should be moved.  
 PM42-1 No PMS Work Center for ER-09.  
 SP32-1 ADP Current planned arrangement to use NDTs for SUADPS unsat.  
 SP33-1 Key Punch Room—Equipment not installed/demonstrated.  
 SP34-1 Food Service Compartments—Relocate serving line window bulkhead.  
 SP35-5 Food Serv. Equip.—Hotfood wells not provided with drain.  
 SP42-3 Gaylord Hoods—Provide detergent injectors.  
 SP45-11 Storerooms—Compt. check-off list missing on numerous spaces.  
 SP48-2 S.D. Strm—Bulk area not adjacent to entrance.  
 SP49-2 Acid Strm—No storage for protective clothing.  
 SP52-3 Ships Stores—No elec. receptacles in each section of shelving.  
 SP64-1 Ships Stores—Bulk area at rear vice near entrance.

Mr. EDWARDS. Because some of the major pieces of equipment and components procured for the LHA fleet are now out of date, the Navy is planning to spend an additional \$40 million for equipment undating on the 5 LHA's. Please discuss the planned equipment update program, and for the record provide a detailed list of each item in the program.

ADMIRAL. DOYLE. With regard to our specification update program which stems from the initial sea trials of LHA-1, we have discovered, during the comprehensive tests and trials leading up to ship delivery that many procedures and acquisition standards which were acceptable in 1969 no longer reflect current fleet practices or standards of safety and operation. Since these items are necessarily Government-responsible, it will be necessary for the Navy to implement corrective action to achieve current fleet standards. The actual composition of the update program has not been defined. Tarawa (LHA-1) will undergo a comprehensive operational evaluation including a full scale amphibious assault in February 1977. The results of this evaluation will be used to define those modifications which must be incorporated in the LHA's to make them fully effective fleet units.

Mr. EDWARDS. I will yield.

#### COMPARISON OF UNITED STATES NAVY VERSUS SOVIET NAVY

Mr. BURLISON [presiding]. I have a couple of questions I would like to ask about the strategy of the Russian vis-a-vis our own Navy and I am referring to a comparison of United States versus Soviet Navy.

Admiral, why do you suppose the Soviets continue to build diesel submarines?

ADMIRAL. HOLLOWAY. I think that there are several reasons, Mr. Burlison. One is that the submarine is a very important weapon system to the Soviets because of their strategy. A major aspect of their maritime strategy is one of interdiction. In other words, their strategy is to interrupt the supply routes of the United States and the Western Powers.

I believe that they have embarked on a nuclear-powered submarine building program which, although it exceeds ours in numbers, probably doesn't live up to their full expectations in capabilities. We know that they have produced a number of different designs in both their attack and ballistic missile nuclear-powered submarines and ———.

So reason one, I would suggest, is that they are continuing to build diesel fleet type submarines because submarines are important to them and they don't feel that they can fully rely on their nuclear-powered building program.

The second reason is that the Soviets, in assessing the threat against them, are sensitive to the considerations of the other nations on the same land mass, the Chinese, and Western Europe. In view of their own restricted outlets to the sea, they realize that they are going to have to conduct some naval campaigns very close to their own fleet bases.

In these coastal areas close to their own bases, diesel submarines can be very useful. We don't envision the primary use of U.S. submarines off the east and west coasts of our country because our potential adversaries be overseas, rather than on our borders.

The third reason, in my opinion, is that the Soviets are maintaining the capability to produce good diesel fleet submarines for foreign military sales and loan purposes.

In that order, those are the three reasons I would ascribe to the continuing Soviet interest in diesel submarines.

Mr. BURLISON. When did the Soviets begin to build nuclear-powered submarines?

Admiral HOLLOWAY. The first delivery occurred in 1958.

Mr. BURLISON. Why is it that the Soviets have not begun to build nuclear-powered surface ships?

Admiral HOLLOWAY. I think, again, there are several reasons. One is that their military requirements are different from ours in their present strategy.

Mr. BURLISON. Do you think your answer to the initial question would be essentially the same?

Admiral HOLLOWAY. Yes, sir, I think essentially so. We use the oceans as barriers for our defense and avenues to extend our influence abroad. We operate our ships on the other side of the world and we need independent logistics. The Soviets, in my view, are only beginning to develop a naval strategy which would give them a force which can operate fairly far from home bases. That is, I think, the first reason for their carrier construction program. They have learned they must take tactical air power with them if they propose to achieve maritime superiority beyond the range of their land based air.

The second reason that I ascribe to their not building nuclear-powered surface ships is that I don't believe, and I think the body of intelligence supports this, that they are yet as proficient as we are in the U.S. Navy in the building and maintaining and operation of nuclear propulsion plants. We have evidence that several or at least one of the plants that they have built for surface ships, an icebreaker, did encounter trouble some years in the past.

#### SATELLITE PROGRAM

Mr. BURLISON. What is the Navy doing in the area of satellite coverage to enhance our capability to identify Soviet warships as they move to interdict our lines of communications and attack our carrier task forces?

Admiral HOLLOWAY. We have a fairly comprehensive satellite program which, as a program, covers the various capabilities that satellites can offer to maritime operations.

One program, which is ———.

Now there is a drawback to this kind of a system in that it only identifies and detects part of the threat. The priorities of the Soviet maritime threat are first submarine, second air, and third the surface warship threat.

Therefore, ———.

Mr. BURLISON. Off the record.

[Discussion off the record.]

Mr. BURLISON. Back on the record.

Thank you very much, gentlemen. We will recess until 2.

## AFTERNOON SESSION

Mr. MAHON. The committee will come to order.

Mr. ROBINSON, you had some questions at this time.

Mr. ROBINSON. Thank you, Mr. Chairman.

## CONTRACT DESIGN AND CLAIMS

Admiral Holloway, I would like to get back into the question of claims, contract design, and the processes leading thereto for a moment.

How well equipped do you consider the Navy to be, personnel-wise, with respect to designing contracts and servicing claims. Do you feel that there is, to a degree at least, an extent to which these processes are buried in bureaucracy as we find they are in many other Federal departments today?

Admiral HOLLOWAY. I believe that the Navy is well equipped to handle claims. After all, the technical aspect of claims evaluation deals with our basic business, ships, and ship design. I think it is always possible for any organization to be impeded by bureaucracy unless we give top management attention to the process.

Having said that, I would like to ask the Chief of Naval Material to give his views and then the Commander of the Naval Sea Systems Command.

Admiral MICHAELIS. Although our total resources are getting thinner, I believe we have considerable capability in claims, contract structuring, et cetera. In claims processing, our past has not been uniform, Mr. Robinson. I'm informed that there was a time when our claim process was less rigorous than it is today, and it was difficult from one claim to another to say what comprised the standard process.

With the checks and balances of the Government we moved into a much more regularized process. It has been developed and refined to some degree over the last 2 or 3 years. Although the process is not without fault, it is one in which we have a high degree of confidence that we are properly representing the Government's interests.

Our aim now is to take the procedural benefits that we have achieved and start reducing the administrative time it takes us to do that job, and that calls for resources.

Resources are slim from the following point of view: It takes several different types of disciplines to effectively accomplish claims review. It takes technical people, legal expertise, and people with some audit experience to do a good job in claim review.

Our technical people are also the experts who are involved in ship construction. If they are working on claims, it is very hard for them to be working on shipbuilding, and therein is the rub. You can't just hire these people.

As the Chief of Naval Operations has just said, shipbuilding is our business, and it takes good shipbuilders or people who know the technical side of shipbuilding to be good in claims analysis.

Our problem lies more in being able to do both things, build ships and process claims. When we get a long number of claims, we can't do both well. Our worry is that we are not doing well enough with shipbuilding when we spend too much time on claims.

Of the other two disciplines, audit and legal, we find when the job in claims peaks, we need more help there, too.

Mr. ROBINSON. Admiral, I wonder when these people who represent Litton and Newport News come before us to give their side of the picture, if we are going to find an acknowledgment on their part that this process has improved significantly, or if they are not going to give us the same story we have been getting all along.

Do you feel you have gotten through to them in this respect?

Admiral MICHAELIS. Well, not totally, because I think if I were in their position I might like to obtain instantaneous claim negotiation and adjudication, so I don't believe we will ever get total approbation from the shipbuilders.

I think, however, they would say that the Navy does a very thorough claims job, and they would probably also say it is a hard job; that we represent the Government in a very effective manner.

The record shows that we have shortened the time for adjudicating claims, but it isn't where we would like to be. I would like to find ways to cut administrative redtape so that all that is left is hard-rock analysis and negotiation.

Mr. ROBINSON. Perhaps what I am trying to do is ask you whether or not they will attempt to lay the blame for slippage, at the feet of the Navy because of the inordinate amount of difficulty that they have in negotiating and the foot dragging that goes on in the process of adjudicating claims.

Admiral MICHAELIS. Yes, sir, there are two different sources of delay. One source is the delay that the shipbuilders and the Navy speak of that causes claims, but I believe you are speaking to the delay in getting the claims negotiated.

Mr. ROBINSON. I am.

Admiral MICHAELIS. As I have noted, claim analysis requires time. In some cases we work out plans for setting claims that are completely satisfactory to them.

Let me explain that quickly. In one case we set up a plan that was signed both by the Navy and the shipbuilder. Both the shipbuilder and the Government have put necessary resources on this plan to meet finite time requirements for each part of it.

Presently, our independent claims board, may find it desirable to work out a similar kind of arrangement. If you get the shipbuilder and the Navy to agree on a plan and there is a means for systematic review of progress under the plan, then there should be a higher degree of satisfaction. We have not tried this system until last January.

Mr. LEWIS. Could I take a shot?

Mr. ROBINSON. I am appreciative that you will, because I was going to get you in it, anyway.

Mr. LEWIS. Maybe I am going to take a different view here, but as far as the Navy, in its handling of the claims, my own opinion is that we are really not in that bad a situation. We have settled, in the past couple of years, almost \$1.3 billion worth of claims for approximately \$600 million, and since I have been General Counsel for the past 3 years, when I first came in until the present time, most all the big claims that we had then have been settled. With your permission, I will provide more detailed information for the record.

[The information follows:]

The Navy has had 35 appeals of \$1 million or more during this period. The Of those 665 appeals, 122 were denied by the Armed Services Board of Contract Appeals (ASBCA)—won by the Government—76 were sustained by the ASBCA—won by the contractor—110 were dismissed on motion as being late or otherwise

defective or not ripe for decision by the ASBCA, and 214—or over 32 percent of the total—were settled by mutual agreement.

The Navy has had 35 appeals of \$1 million or more during this period. The only significant appeal still pending is Litton's LHA appeal.

The status of all appeals involving \$3 million or more is as follows:

Contractor and ASBCA Number	Amount claimed (millions)	Current status
Lockheed Shipbuilding—18460.....	\$160.0	Decided by ASBCA in 1975 after partial trial. ASBCA awarded \$62,000,000 to appellant.
Litton Project X—17579.....	105.0	Tried 1975, final contractor brief to be filed August 1976. ASBCA decision estimated in late 1976 or early 1977.
Westinghouse—17850.....	72.0	Settled in 1974 for \$20,000,000.
Litton SSN 680—17717.....	30.0	ASBCA trial in 1974. ASBCA decision April 16, 1976; \$16,500,000 awarded to Litton.
LTV & Advance Technology.....	42.0	Tried in 1974. Decided for appellant April 1976. Motion for reconsideration filed by Government. Final ASBCA decision expected in 1976.
Litton AE—17718.....	31.0	Tried in 1974. Settled for \$18,000,000 in September 1974.
General Dynamics (submarines)—13885.....	23.0	ASBCA 1973 decision for Government Contractor appealed to court of claims. Decision by court expected in late 1976 or early 1977.
Edo.....	16.7	ASBCA trial and partial decision, settled for \$5,000,000 in 1974.
Defoe—17095, 409, 851, 361.....	12.4	Partial ASBCA trial in 1973, then settled for \$7,600,000 in 1974.
N.Y. Shipbuilding—16164.....	5.1	ASBCA trial in February 1974, briefing in August 1974. ASBCA decision on June 30, 1976 awarded \$4,100,000 to contractor.
Whittaker Corp.—18422.....	4.5	In discovery.
Northrop—18126.....	3.5	Settled for \$1,900,000 in 1974 after discovery.
Todd Shipyard.....	3.5	Appeal suspended March 1976 for NAVSEA negotiations.
Wright Industries.....	3.5	May be set for trial in 1977 after extensive discovery in 1976.
Otis Elevator Co.....	3.3	Being settled for \$0.91,000.
Litton—18213.....	505.0	Interest on progress payments portion of claim (of approx. \$20,000,000) is being tried before ASBCA. Balance of appeal was suspended in January 1976 for negotiations. Exchange of information during negotiations was recently stopped by Litton and declaratory judgment action was filed by Litton in California.

Mr. LEWIS. Almost every one of the major cases that we had before the Armed Services Board of Contract Appeals has been tried. The only large case we have before the Armed Services Board is the LHA, and that, as was disclosed to you, was held in abeyance, and we are involved in a plan of action in an attempt to settle it. Again, with your permission, I will provide the details for the record.

[The information follows:]

[In millions of dollars]

	Amount of claim	Amount of settlement	Date of settlement
<b>1st quarter 1974:</b>			
General Dynamics (E. B. Division).....	2.7	1.4	January 1974.
Dixie Manufacturing Co.....	.9	.4	February 1974.
Dillingham Shipyard (claim withdrawn).....	16.0		March 1974.
<b>Total.....</b>	<b>19.6</b>	<b>1.8</b>	
<b>2d quarter 1974:</b>			
Alabama Drydock.....	14.2	4.9	April 1974.
Newport News Shipbuilding & Dry Dock Co.: CVA (67 and LCC 20) (LKA-113-117).....	73.3	43.5	Do.
Bethlehem Steel.....	28.6	14.4	June 1974.
Defoe Shipbuilding.....	50.0	17.0	May 1974.
General Electric.....	6.7	1.1	June 1974.
Merritt Chapman.....	3.9	2.2	Do.
Defoe Shipbuilding (3 appeals).....	6.9		April 1974.
	11.8	4.5	June 1974.
<b>Total.....</b>	<b>195.4</b>	<b>87.6</b>	

[In millions of dollars]

	Amount of claim	Amount of settlement	Date of settlement
<b>3d quarter 1974:</b>			
Ingalls Shipbuilding	2.6	1.4	July 1974.
General Dynamics (Quincy Division)	14.0	6.6	September 1974.
EDO Corp	16.7	5.0	August 1974.
Ingalls Shipbuilding	29.7	18.0	September 1974.
Westinghouse	45.6	20.5	Do.
<b>Total</b>	<b>108.6</b>	<b>51.5</b>	
<b>4th quarter 1974:</b>			
Bethlehem Steel	2.6	1.5	October 1974.
General Dynamics (Quincy Division) as 36-37	67.5	32.5	Do.
N.W. Marine Iron Works	1.0	.3	Do.
Frequency Engineering Laboratory	3.4	1.1	Do.
General Dynamics (Electronics Division)	2.1	.6	December 1974.
General Dynamics (Quincy Division) AOR 1-6	78.4	30.0	Do.
Gulf Stream Industries	.9	.1	Do.
Todd Shipbuilding (C.O. Decision)	3.0	1.1	Do.
<b>Total</b>	<b>158.9</b>	<b>66.2</b>	
<b>Total calendar year 1974, settled/withdrawn/C.O. Decision</b>	<b>482.5</b>	<b>207.1</b>	
<b>1st quarter 1975: Ingalls Shipbuilding (LPH-12)</b>	<b>1.8</b>	<b>.4</b>	<b>March 1975.</b>
<b>2d quarter 1975:</b>			
General Dynamics, Quincy Division (LSD 37-40)	76.0	21.0	May 1975.
Avondale Shipyards (DE 1052-1078)	169.1	80.0	June 1975.
<b>3d quarter 1975: Marquardt (launchers)</b>	<b>2.4</b>	<b>1.8</b>	<b>September 1975.</b>
<b>4th quarter 1975: Newport News Shipbuilding (SSBN 617)</b>	<b>19.9</b>		
<b>Total calendar year 1975</b>	<b>259.2</b>	<b>103.2</b>	
<b>SIGNIFICANT CLAIMS SETTLEMENTS, 1976</b>			
General Dynamics, E. B. Division	231.5	97.1	April 1976.
General Dynamics, Pomona	58.9	12.0	July 1976.

<sup>1</sup> Withdrawn by contractor.

But if one looks at the facts of the LHA, out of \$500 million, approximately \$420 million of that involved delay and disruption. That is a nebulous area, and you have to zero in on the facts, but the problem there is, and I am sure Litton will agree, they have not supplied us yet the packages to analyze that.

We have a team in force down in Pascagoula. I thought we were making rather good progress. I know Admiral Michaelis gets daily reports from his team leader, and the lawyers and contracting types and technicians were moving along, but we have to wait for the packages. A claim of \$500 million does us no good until we see what it is based upon, and they have to tell you, and Litton is unable to supply us the delay package until December of this year. They will supply some of the delay package this month, hopefully, although I have been told that will slip, but it is not until December that the complete package comes in. So we have to sit there.

But we are all prepared to handle the case. As the admiral indicated, in the past 2 or 3 years we have become rather sophisticated in our approach, in our analysis. We use what is known as the multidisciplinary team composed of lawyers and the contracting types and auditors and the technicians.

The only other claims we have that are really any big claims are Newport News. In fact, just yesterday we settled a \$58 million claim brought by General Dynamics for \$12 million. The only claims outstanding that we have are Newport News, big claims.

Let's just take a look at those, if I could, please, Mr. Congressman. You have the Newport News SSN-686/687 for \$92 million. That was only submitted in March of this year.

You have the Newport News CVAN-68/69, the carrier claim, for \$221 million. That was only submitted in February of this year. You have the Newport News CGN-38 to CGN-40 claims for \$159 million. That was only submitted in, I believe, August of 1975.

And you have the Newport News SSN-688/689/691/693 and 695. While that was submitted in July of last year, it was revised and has now come in at \$270 million, and that was just submitted in March of this year.

And you have the CGN 36/37. That involves two elements. One, the 10 formal change orders in which they want \$68 million from the Navy. That was submitted some time ago, and yet in that particular matter we have given them a counter offer, if I am correct.

Admiral MICHAELIS. That is correct.

Mr. LEWIS. And we are waiting to hear from them. The second part of that case is for \$82 million, and that was only submitted in February of 1976.

So while the claims are a huge picture, I must say I think the Navy has made rather good progress. All the big cases we had with Litton have been tried before the Board. There is one case, the 680 case, in which they have received \$17 million, if I am correct, out of a \$31 million claim. We have nothing to do with that any more. The Department of Justice has put a hold on it. We are willing to pay the money as soon as they release that hold. The *Lockheed* case is through.

Really, we are in fairly decent shape, and I would anticipate that with this new board, this three-member board that Admiral Michaelis was talking about earlier, that Admiral Manganaro is chairman of, I feel rather confident that they are all ready to dig in, and I have worked with people in Admiral Gooding's shop, and my lawyers and the auditors, and we are anxious to get down there and wrap that thing up.

Mr. ROBINSON. Speaking again of Newport News, I would gather that you do not feel a time frame of in excess of 6 months is excessive in terms of getting something accomplished with regard to a claim. Is that correct?

Mr. LEWIS. Yes, but one of the problems I see is a lot of posturing before the parties really get down to the nuts and bolts. These things come in, and you have to appreciate how they come in. Some are as high as 10 to 15 huge, big looseleaf 3-ring folders like that. That is one claim. We have to set up a team to analyze a claim, and it takes about 6 weeks just to read all the material. It takes shipbuilders approximately a year or 2 years to prepare a claim.

So we have to put reading into it, and then we start our so-called TAR's, which are technical analysis reports.

Mr. ROBINSON. Isn't there any way that process can in some way or other be shortened in terms of redesign of the contract and the process of legally dealing with the people?

Mr. LEWIS. We are working on that, and I know Admiral Michaelis and Admiral Gooding and myself all have people attempting to see

if there is any way we can streamline the process, but at the same time still make sure that the Government is settling fairly and equitably and yet protecting the taxpayer's money.

Admiral MICHAELIS. I think you have put your finger on it, Mr. Robinson. Sometimes claims are really a symptom of a need for better ways of writing contracts and administering them. Some of the things that I discussed this morning about contracting today versus the sixties and early seventies, we hope, will help to reduce the level of claims.

Mr. ROBINSON. I find myself very concerned about a comment that Admiral Gooding made this morning in which he said once he arrives at an estimate as to what a ship should cost, it is never changed, all the way down the line. Now I think that is too inflexible. I don't think that gives you the possibility of meeting the responsibilities that you have as times change.

Admiral HOLLOWAY. My interpretation of what he said is that nobody could change it except him, and that is a budget figure to reflect the estimate as opposed to what it is paid on.

Admiral GOODING. This is the estimate to build a new ship.

Mr. ROBINSON. Yes.

Admiral GOODING. It does not include a contingency for claims because it is supposed to be the right estimate, and it is a fact nobody does change it, not that nobody could, but nobody does.

Mr. ROBINSON. I think perhaps somebody should have, or there should be built into the process some kind of flexibility so there could be some kind of adjustment made when you can tell that you have gone too far off in the wrong direction on the original estimate.

Admiral GOODING. Yes, sir; I see what you are saying, but we can't tell that we were off for some years. The estimates in the 1977 budget were as accurate as we knew how when we put them in. Three years from now, we might find they are high or low. In that case the Navy's recourse is to come back to the Congress and give back money, which we are reluctant to do, or to ask for more.

Mr. ROBINSON. That is what we are trying to avoid here.

Admiral GOODING. Or a claim results.

Mr. ROBINSON. That is what we are trying to avoid here.

Admiral HOLLOWAY. Mr. Congressman, I think what we were talking about is the cost of a ship presented in the SCN account to the Congress for authorization and appropriation. That will change if the design is modified. Long before the ship goes to contract in many cases, the cost is changed and Congress is asked for more money. I think that has been the case in several of our auxiliaries. We have changed the cost of the submarine tenders AS-39 and AS-40, if I am not wrong, several times, and they had not yet gone to contract.

So I believe that Admiral Gooding has given a wrong impression if he has indicated to you that once we decide that this is how much a ship should cost, the price is inflexible from there on. We can alter the cost of that ship if the requirements and design are modified. If we find that the economic situation has changed, the cost can be modified, and this can be done before the ship is placed on contract.

Mr. ROBINSON. But not without looking badly if the price goes up?

Admiral Holloway. No, sir; I really don't think that is a correct

statement, I have given you the example of ships on which we have changed the price. Those are the submarine tenders, and we had corrected those prices as we attempted to get them on contract. As Admiral Gooding pointed out, we are, of course, professionally embarrassed if we make a poor estimate based upon the design features of the ship which we ourselves had prescribed. But I don't think any of us are embarrassed when we have to change the ultimate cost of a ship as a result of inflation which no one in the country had for seen.

As you know, for years the Navy was not permitted to budget for the inflation we actually anticipated but were directed by higher authorities to only budget a certain percent which was well below our best estimate.

Mr. ROBINSON. Well, Admiral Michaelis indicated that he felt a high degree of confidence in the competence of the Navy Department people in the technical aspect of estimating how much a ship should cost and in putting together the facts and figures with regard to the technical aspect of claims.

But it seems to me that a more serious deficiency exists in terms of the claims process and in the contracting process which exists at the present time, and which you are obviously trying to improve.

Now, as I see it, the Navy is not really in the business—I mean you gentlemen sitting over there in uniform are not really in the business of redrafting, redesigning contracts, and adjusting claims except to provide the technical aspects of it, not the legal aspect. I am wondering whether or not you feel that Mr. Lewis and the other people you have on staff, some of which are in uniform, give you everything that you need in that regard. Do you have sufficient staff in that respect?

Admiral HOLLOWAY. I understand the point you are making, sir, and I do think that we have the requisite technical competence on the part of the men in uniform.

I would first like to ask Admiral Gooding if he considers whether or not he has or has had uniformed officers who are contract specialists that he considers leaders in the field of contract adjudication?

Admiral GOODING. In general, yes. I am able to whistle up more naval officers in this field than I am civilians.

To respond to your question, no, I do not think we are adequately staffed. We have the expertise. We do not have the depth that is needed. Within the past 2 weeks I signed a letter to Admiral Michaelis requesting over 100 more people in the claims business, and this very committee last month agreed to add 75 civilian personnel to the claims settlement teams which we now have in existence. So there is no question we have admitted to the Congress and asked Congress to assist, that we don't have enough bodies to do this in an expeditious manner, and I don't want to leave a false impression with the committee whatever. I am hurting, and I am hurting particularly if we are to do it any faster than business as usual.

Mr. ROBINSON. Mr. Lewis, would you like to react to that general line of comment?

Mr. LEWIS. I wanted to make two comments. One is that in every one of our settlements of claims some Senator or Congressman asks the GAO to review it, and they come down and they do review it, so

that we always have to be mindful of that in the settlement of these claims.

The only other point I wanted to make was that the new escalation clause which the Navy is now putting into their contracts, I think should take care of some of the problems that you were referring to as far as Admiral Gooding's estimating, because I believe, as he indicated, where they fell down was on inflation and escalation, and I think that clause should help a great deal to alleviate that problem.

Mr. ROBINSON. We hear a great deal today about the batteries of lawyers that the big contractors have and their ability to mount these terrific efforts with respect to dealing with the Government and others as well.

Do you feel that in your shop you have the competence and the numbers to do the job that you are responsible for?

Mr. LEWIS. I am sure I could probably use some more attorneys, yes. I just feel that I could use some more attorneys. Competencewise I think we have the knowledge and the competence to do it. These are time-consuming tasks. You have to analyze the facts and apply the law to those facts.

Mr. ROBINSON. We hear criticism, of course, that the zeal and determination of lawyers that work for the Government is not of as high an order as it is in the ones that they run into when they get into courts or when they begin to negotiate for the people representing business. Do you think there is any validity to that?

Mr. LEWIS. I haven't seen any. Before I came to this job, I was the Deputy Assistant Attorney General in the Civil Division, which is probably the largest division in the Department of Justice and represents all the agencies. I didn't see any there, and the Navy is the same way. I find a lot of people who are very proud of the work they are doing and very conscientious and have a great deal of integrity.

No; I don't find that. I know that when called upon, the lawyers, as well as the contracting types and auditors, have gone out of town and worked tremendously long hours. Certainly they don't get paid as much as the private lawyer, nor are they able to live in the circumstances that a member of the private bar does when he travels, but I don't see that as a great morale factor.

Mr. ROBINSON. Obviously what I am trying to do is to dig into this problem and see if there is some sort of underlying difficulty with which we can deal in which we might be of help to you in resolving this conflict. It is something we are going to have to resolve, and there is no question about that.

I am groping to find out whether or not we can identify the spot where the difficulty exists.

We are now going to have a series of floor votes, and we will have to recess shortly because we will be voting every 5 minutes.

Mr. MURPHY. Mr. Lewis indicated that his records show the dates certain claims were submitted by Newport News. I have a claims status report of the Navy dated December 31, 1975, which indicates that Newport News submitted a claim on the CGN-36 and 37 as far back as June 11, 1973.

Mr. LEWIS. That is what I said. I said that is the only one that goes far back. I specifically said that, and then I said that was for \$68 mil-

lion and that we have given them an offer on that case, and we are waiting to hear from them.

Then the other part of that 36/37—it is two parts—they have come in recently with an \$82 million claim under the 36/37, and that was filed in February of 1976

Mr. MURPHY. Then on the CGN-38/39 and 40 this form indicates that the claim was revised on August 8, 1975, which indicates it was originally submitted somewhat earlier than that.

Mr. LEWIS. It could very well have been. The revision is what we are working under, and that was in 1975.

Mr. MURPHY. Thank you, Mr. Robinson.

Mr. LEWIS. Sometimes they have submitted to us a letter saying they are going to file a claim, but then it takes many months for that to occur. We have been notified, for example, that Electric Boat might very well file a claim, but at the present time we have none, and the outstanding claim we had with Electric Boat we settled a couple of months ago for \$97 million.

Admiral MICHAELIS. We have two claims that have fallen behind. They are the CGN-36/37 and the SSN-688. We have recently made an offer on the initial 36/37 claim. During the 3-month period we were working on 85-804, we lost critical time for getting something done on the 688 claim. Our resources were tied up in working the 85-804 action.

Mr. ROBINSON. Admiral Gooding, I would like to return for a moment to the colloquy we had regarding the firmness of your estimates. Isn't it true that in OSD there is a review process of your estimates in terms of the cost of given ships?

Admiral GOODING. Yes, sir.

Mr. ROBINSON. But I would suggest you can be highly flattered if they have never chosen to change an estimate. I believe that is true, is it not?

Admiral GOODING. In my tenure it is true, yes, sir. I am not sure I am flattered, but it is a fact.

Mr. ROBINSON. But there is a review process at the OSD level that could change it if they wanted to.

Admiral GOODING. Yes, sir.

Mr. ROBINSON. Well, I think that is significant.

Mr. MURPHY. Is that a CAIG group?

Admiral GOODING. Yes, exactly.

Mr. ROBINSON. Gentlemen, we will try to be back at 3 o'clock. We have five separate votes at 5-minute intervals.

[Brief recess.]

#### NATIONAL SECURITY COUNCIL STUDY ON SIZE AND COMPOSITION OF THE U.S. NAVY

Mr. ADDABBO. Admiral, the National Security Council has been conducting a study to determine the size and composition of the U.S. Navy for the 1980's and the 1990's. Have you been able to obtain any preliminary data with respect to that study effort?

If so, can you provide the committee with what details you have of that study that you have been able to determine?

Admiral HOLLOWAY. Mr. Addabbo, the answer is yes. I have been associated with that study effort as a member of one of the working

committees. I have had an opportunity to review the draft inputs and make my comments on those inputs at each phase of the study.

In my statement which has been distributed to the committee, on page 57, the third column which is labeled "The President's Amended Budget as Projected," represents my best estimate of the 5-year shipbuilding program which would come out of the NSC study based upon its present status.

Mr. ADDABBO. Column 3 shows the projection as of May 4. Then you have a Navy recommendation as of May 17 of a total of \_\_\_\_\_ ships. Why is there the discrepancy, a period of 3 weeks, when this is your projection in column 3 of \_\_\_\_\_ ships?

Admiral HOLLOWAY. The discrepancy is really in the way my statement labels the third column. It is the President's amended budget for fiscal year 1977 as submitted on May 4 and modified into a 5-year projected program. Subsequent to that date, the Navy submitted to the NSC study group the program represented by column 4. Since that time the Navy's input has been incorporated by the study group, with some modification. That is why column 3 is somewhat less than column 4.

I apologize that the May 4 date is misleading. That should be the date of the President's submission of his amended budget for fiscal year 1977. It represents a preliminary estimate of what the 5-year program may look like after the NSC study is completed.

Mr. ADDABBO. So would you say your Navy recommendation now is \_\_\_\_\_ rather than \_\_\_\_\_?

Admiral HOLLOWAY. No, sir. I come before this committee not giving the NSC recommendations but giving my recommendations as the Chief of Naval Operations. I am not at all certain that column 3 will end up being the NSC figures. It is simply my judgment that that is the way the NSC study will come out, approximately. That is my best estimate of the NSC's 5-year program based upon the deliberations as they now stand.

I might add, Mr. Addabbo, that we are very close in our basic breakdown of forces in these two estimates. The principal difference is in numbers of support ships. I have a few more than what I think the NSC study will have; there may also be somewhat different phasing in the cruisers and the V/STOL support ships.

Mr. ADDABBO. Does the National Security Council have a realistic insight or an appreciation of the serious problems the Navy has been experiencing in obtaining ship deliveries on schedule and within cost, as well as the amount of claims outstanding, so that these factors might be considered in any recommendation the Council might make?

Admiral HOLLOWAY. The NSC is indeed aware of the ongoing consultations and negotiations being conducted among the Defense Department, the Navy Department and the private shipbuilders concerning the ship deliveries and contractual claims. The mechanics of achieving a satisfactory settlement with the major shipbuilders on an equitable and prompt basis is the immediate problem; be assured that both the Navy Department and the SECDEF are working intensively on this problem. I am confident that new initiatives will appear in this dispute, and I am hopeful that before the summer is out there will be an equitable solution worked out. The NSC study is being conducted

with a view toward shipyard capacities and responsiveness. Which-ever alternative is decided upon, shipbuilding requirements will not exceed reasonable shipyard capacities; a healthy industrial climate will be the result.

Mr. ADDABBO. How much dialog has there been between the Navy and the National Security Council since the study began in about January of this year?

Admiral HOLLOWAY. Navy recommendations have been considered since the inception of the study. The Navy has been afforded the opportunity to comment on the study at each stage, and the Chief of Naval Operations has met with the Secretary of Defense prior to each decision. The Navy considers that adequate dialog has occurred.

#### AIRCRAFT CARRIER MISSION

Mr. ADDABBO. World War II brought about the demise of the battleship and the emergence of the aircraft carrier as the capital ship of the U.S. Navy. For over 30 years, the aircraft carrier has not been seriously challenged in war by an enemy. Nevertheless, carriers have required large sums of money for their construction as well as for development and production of the aircraft that populate them. Billions of dollars have been required for the operation and maintenance of these capital ships and their embarked aircraft, as well as for the construction, operation, and maintenance of escort ships that accompany them in carrier task forces. These large carriers and their escorts become major targets for surprise missile attack and for submarine torpedo attack.

Admiral, do you believe the aircraft carrier is as viable a weapons system today as it was during World War II, or is it fast becoming the "battleship" of today's Navy?

Admiral HOLLOWAY. Mr. Addabbo, I think that to refer to the carrier as the battleship of today is too imprecise a way to put it. I would like to back off from that expression and say that aviation at sea is as important today as it was during World War II. Whether that aviation comes from carriers which today we define as ships almost exclusively dedicated for the operation of aircraft, or whether these aircraft in the future come from every ship in the Navy, is a question of transition.

I refer you to page 38 of my statement. This table is a matrix showing across the top the four principal types of combatant ships in the Navy, and on the left margin the principal tasks that are involved in fighting a war at sea. The black dot indicates the capability of these individual ships in carrying out warfare tasks.

From this display you can see that the carrier—and this is by virtue of the aircraft it operates—is the most versatile ship in the Navy, and it is the system that can cover the most warfare tasks. That is the reason why the carrier is today the principal ship through which we carry out our warfare missions.

There has been a recent tendency to concentrate on the antisurface ship warfare function of the U.S. Navy, largely because of the recent emergence of the Soviet surface fleet. But the threats that we face to our continued superiority at sea are, in my opinion, in order of

priority: First, the submarine threat; second, the air threat; and third, is the Soviet surface warship threat.

So we need weapons systems that can fight across the spectrum of these warfare areas, in the air, surface and subsurface environment.

Your last point, which had to do with the fact that the carrier has required a number of surface combatants to protect it, is almost the reverse of the true case.

Mr. MAHON. We have a 5-minute vote. We had better suspend.

[A brief recess was taken.]

Mr. ADDABBO. You may proceed, admiral.

Admiral HOLLOWAY. Thank you.

I pointed out that the chart on page 38 showed why we need carriers and the fact that their very flexibility makes them useful in fighting against an enemy who can utilize air, surface, and subsurface forces against us, supporting a strategy which also requires that we be able to use marine amphibious operations in support of our mission of controlling vital sea areas. The carrier—more precisely, the aircraft she operates—has this widespread of capabilities.

On the question of whether surface ships are procured for the purpose of protecting carriers, I would answer that the surface combatants and the submarines and the carriers today operate together in integrated task forces. The mission of those task forces is to search out and destroy hostile naval forces and eliminate the threat to our control of the sea.

They destroy these hostile forces through mutually-supporting offensive operations. To show you why we can conclude that surface combatants are not procured for the protection of carriers, let me give you this example:

If we reduce the number of carriers in the Navy, one would then expect the number of surface combatants to be similarly reduced if their only function was to protect the carriers. In other words, if the carriers went to zero and surface combatants were produced only to protect them, then the number of surface ships would go to zero.

I think we all know that in any naval program in which the numbers of carriers are reduced, we find it necessary to increase the number of surface ships. So I think that it is clear that the mission of surface combatants is to operate in conjunction with the carriers for the purpose of fighting and winning at sea.

As to the amount of the budget that carriers have consumed over the past 15 years, it ranges between 7 and 10 percent in the procurement and research and development accounts. On the other hand, I think we would all agree that the carriers with their aircraft contributed 10 percent or more to the Navy's ability to carry out its mission.

Mr. ROBINSON. Would you yield?

Mr. ADDABBO. Yes.

Mr. ROBINSON. On pages 55 and 56 you draw three major conclusions, the third of which is that technology of the future may make possible the achieving of required capabilities using systems that will alter appearances of today's task groups.

## V/STOL

Then you go on to discuss the V/STOL. You have indicated that the carrier's mission applies to each of the tasks that you have there under the column for carrier, and the same missions apply to the V/STOL. I wonder if you could at this point give us your feeling as to how far down the road this technology is and how it will alter the appearance to today's tasks groups?

Admiral HOLLOWAY. Yes, sir.

V/STOL aircraft can accomplish these missions that I have indicated in the right-hand column at such time in the future that these V/STOL aircraft have the same military capabilities as the conventional aircraft they will be facing.

In other words, when we reach a point where aviation technology can give us a V/STOL attack aircraft that has the same ability to penetrate hostile defenses and deliver the weapons with the same degree of accuracy as its conventional counterpart, then we will be able to achieve that capability with V/STOL aircraft.

Our estimate is that the subsonic V/STOL will gain this level of military capability by about \_\_\_\_\_ at the earliest if we apply extensive R. & D. resources in this approach. Fighter aircraft present a more difficult problem because of the design requirements to produce a V/STOL supersonic aircraft are more demanding than those required for subsonic types.

It is our estimate that with the proper application of R. & D. resources we could have at the earliest a V/STOL fighter by about \_\_\_\_\_ that would be competitive with conventional fighters it might encounter.

The Navy has developed a V/STOL transition concept which applies R. & D. funds to the development of V/STOL aircraft to achieve the operational capability in the time frames I have discussed. These V/STOL would replace those aircraft that are in the inventory now but which we would normally be dropping from the inventory at about the time the V/STOL models become operational. This would permit us to have high performance V/STOL aircraft operating from a number of our ships by the last decade of this century.

Today the big carrier remains that ship which can, from a point of view of cost effectiveness, can best operate both V/STOL aircraft and conventional takeoff and landing aircraft. However, V/STOL technology provides the opportunity for us to build ships from 20,000 tons up to 80,000 tons with a tactical aviation capability.

I see those V/STOL ships phasing into the Navy in the last 15 years of this century. We must realize that this technology is not with us today. We must also realize that if we are going to get that technology in \_\_\_\_\_, we have to start now. That is why the President's amended budget requested additional funds to emphasize the research and development for these aircraft. If we delay the start, it will be a year-for-year delay in the introduction these capable V/STOL in the inventory.

In view of this delay in operational capability because of required research and development, we must maintain our current fixed wing

aviation at sea capabilities until we can bring this V/STOL concept to fruition.

If the Soviet Navy and the U.S. Navy are compared in individual ship capabilities, the real margin of superiority we have over the Soviets is in our sea-based aircraft system, the carriers. Therefore, I believe it would be irresponsible to give up that one segment in which we have unquestioned superiority over the Soviets until we have something else in hand to replace it. We are moving toward that "something else" with V/STOL—again, sea based tactical aircraft.

So, I think all ships built in the future will have more of a tactical aviation capability than they do today. Our ships today have a great deal more aviation capability than those of a decade ago. All of our frigates and cruisers are capable of operating LAMPS-2 helicopters. In addition, our new Spruance class destroyers are also LAMPS-capable ships, and most of our amphibious ships today have an air capability.

Mr. ROBINSON. Thank you.

#### HARRIER AIRCRAFT

Mr. EDWARDS. What will the Harrier do today, and what improvements need to be made before you can have the kind of plane you are talking about?

Admiral HOLLOWAY. The Harrier is a fighter bomber. Its performance is about that of a Korean era F-86 in terms of its range, load-carrying capability and fighter characteristics. It is very useful as a light attack aircraft for the Marines.

The naval fighter aircraft of the future must be a supersonic vehicle with performance characteristics exceeding the F-18. I believe that the technology that offers us that opportunity is the thrust-augmented wing. The Navy has an R. & D. project at the present time to develop that capability.

Mr. EDWARDS. Would that necessarily mean a Harrier or some other plane?

Admiral HOLLOWAY. I think that the Harrier aircraft today represents a very useful aircraft that can operate off of very small decks at sea but could not be used as an air superiority fighter against first-line enemy aircraft. It does not have an all-weather fighting capability.

Mr. ADDABBO. Admiral, you talked about our sea-based air superiority over Russia and we should maintain this. Isn't it a fact that Russia doesn't need that kind of superiority because hopefully the war, if there be a war, would not be fought on our soil but it would be fought over in Europe or the Far East, and Russia has easy access to land-based aircraft and landing fields which we do not have. So, therefore, they do not need that type of superiority, isn't that correct?

Admiral HOLLOWAY. Yes, sir, Russia, on the continent of Asia, shares a common border with the Chinese, a current adversary. Their Warsaw Pact allies are contiguous to their western border. NATO-Europe lies on the same continent. One can draw the conclusion that the Soviets do not need to cross a major body of water in order to defend themselves from invasion, attack China or NATO, or to defend the Warsaw Pact nations.

Nevertheless they are embarked on a shipbuilding program which has seen them exceed the U.S. Navy in total numbers and which we predict in the next decade will maintain those numbers in improved quality. Therefore, I must draw the conclusion that since the Soviets can defend themselves and their allies without going to sea, and because they are building a powerful Navy, the United States Navy is their target.

That is why I feel we have to have a strong Navy to oppose the Soviet maritime capability.

Mr. ADDABBO. We have further questions and we will go into that in further depth.

On our sea-based aircraft and air superiority, what good is our air superiority in the North Pacific and North Atlantic in bad weather? They have submarines that can see at any point. We have aircraft and aircraft carriers and attack force sitting out there which cannot maneuver at any great speed because it must maneuver at the speed that meets the slowest ship and not the fastest ship.

What good is that in the bad weather of the North Atlantic or the North Pacific?

Admiral HOLLOWAY. Well, sir, the question of speed to evade hostile submarines is not as important in the age of submarine-launched cruise missiles as it was with torpedo firing submarines. Very frankly, the torpedo does not pose in any sense as large a threat to our major combatants as do the missiles.

As a matter of fact, sea-based antisubmarine warfare under rough weather conditions is still effective against the submarine. The reason is that even in very rough weather the carrier's helicopters can put their dipping sonar in the water and detect enemy submarines. Sonobuoys can also be used and these are more effective than surface ship sonars under those extreme conditions.

I think we must realize that we are not necessarily going to be able to pick the place that we are going to fight the enemy. If we have to route our convoys across the Atlantic, the enemy is going to move toward where those convoys are, and we are going to have to move our fighting forces to where the enemy may be.

#### MILITARY PRESSURE AND CAPABILITY IN THE MEDITERRANEAN

Mr. ADDABBO. Whenever there has been any type of tension in the Middle East or areas surrounding the Mediterranean we suddenly find a massing of the Soviet Navy in and around our task forces there this means to me that these forces would be the prime targets.

In my estimation there is the possibility of a sitting duck aircraft carrier. What would be our defense in such a case?

Admiral HOLLOWAY. That certainly, Mr. Addabbo, is the most difficult situation that we face. It is not just the aircraft carrier but any surface ship which is vulnerable when intermingled with potentially hostile ships.

Our method for protecting ourselves under those circumstances is a defense in depth and it is very scenario oriented. I would have to say that if any of our surface ships are intermingled with Soviet naval ships, and those Soviet naval ships executed a surprise attack, our ships are going to receive damage.

Up until this time our technique with the 6th Fleet has been, as tensions mount, to maneuver our ships at high speed staying away from the concentrations of the Soviets.

Mr. MURPHY. Well, Admiral, if in fact during periods of tension the Soviets tend to concentrate their forces near our aircraft carrier task forces, why station such high value ships in the Mediterranean at all? Why not keep them out in the Atlantic and move them in later?

Admiral HOLLOWAY. I think you have made a very good point, Mr. Murphy. The only place where this situation occurs, that of the Soviet surface combatants intermingling with our task force, is in the Mediterranean.

The reason we have our carriers and their task forces in the Mediterranean is because that is where they are needed to provide a certain military presence and capability which cannot be provided by the Army, the Air Force, or any of our allies.

Mr. MURPHY. Can't you do it with ships other than a carrier?

Admiral HOLLOWAY. Not entirely, because part of that mission is to provide tactical air. However, without a carrier present, the vulnerability of the other surface ships would increase fourfold over their vulnerability with the carrier present due to the hostile air threat.

Mr. MURPHY. But they would not be as high value a target as the carrier?

Admiral HOLLOWAY. I don't look at it that way, Mr. Murphy. I look at it from the point of view of winning. I recognize the fact that anytime you go to war, the objective is to win. You will, in so doing, have to take some losses. We don't want to take losses and lose. I don't want to go into the Mediterranean with a force that cannot win and simply sacrifice them. I want to go in with a capable force of carriers, surface ships, and submarines which, operating in a coordinated effort, will defeat the Soviet Mediterranean squadron and do whatever else is required, even though some ships may be lost.

Mr. MURPHY. I am not attempting to conduct a naval warfare scenario with you, but there has been criticism that we are taking a big chance by placing a carrier task force in the Mediterranean; that a better course of action might be, for the safety of our carrier task forces, to keep them out in the Atlantic and attempt to attrite the Soviet forces by use of submarines and then move our carrier task forces into the Mediterranean when it is safer.

Do you take issue with that?

Admiral HOLLOWAY. No, sir.

First, let me say we have to talk scenarios if we are going to get ourselves involved in this kind of discussion. Having commanded carriers and carrier task forces in the Mediterranean during periods of tension, I am familiar with what our thinking and planning is. Up to a certain point we can leave the 6th Fleet forces in the Mediterranean and they can survive and win. That certainly is the case in anything less than a general war with the Russians.

If we postulate a situation where we were facing general war with the possibility of a surprise preemptive attack against our forces in the Mediterranean, one of the options open to the national command authority or the Commander-in-Chief-Europe would be to take the surface forces of the 6th Fleet out of the Mediterranean. He would

have to realize that in so doing we would be giving up much of the capability that we have in the Mediterranean area. If the carriers are withdrawn for survivability, the surface combatants and amphibious ships would have to be withdrawn as well.

I don't think that the way to then clean up the Mediterranean is with submarines as has been suggested by Admiral Steele. I think it must be done by a combination of aircraft and submarines, as submarines are ineffective against an air threat. There may be certain circumstances under which we would just seal off the Mediterranean and operate in the Atlantic until we have the war under control and could reenter the Mediterranean.

There are so many variables to that particular area that I don't think we can cover them all. Certainly withdrawing forces from the Mediterranean is an option open if you can afford or are forced to give up control of the area.

Mr. MURPHY. You point out on page 26 of your statement that our Navy's ability to operate in the Eastern Mediterranean would be uncertain at best in the event of conflict in that area.

Admiral HOLLOWAY. In the event of general war with the Soviet Union in that area, yes, sir.

Mr. MURPHY. Thank you.

#### AIRCRAFT CARRIER AND ESCORT SHIPS

Mr. ADDABBO. Admiral, in talking before about the vulnerability of the aircraft carrier and who came first, the chicken or the egg, the task force protecting the aircraft carrier or the aircraft carrier protecting the task force or the ships around it, I think there is an oversimplification by you because if I remember the testimony that I heard relative to when we are going to fund an aircraft carrier, it was then also the escort ships that were necessary and that the escort ships that are used lose a certain amount of offensive capability because they are there mainly for the purpose of warding off an attack on the aircraft carrier and unless and until we do develop a Harpoon missile that is their main purpose.

I would agree we would not expect that you would reduce the number of ships if you take away a carrier, but I would presume that you would change the nature of that ship or the type of a ship that you would want in place of the carrier; that you would have a new offensive weapon to give you greater sea superiority than having a ship there which 90 percent of its responsibility is to protect the carrier which it is escorting.

In most cases an escort vessel is not a ship with a great deal of offensive capability.

Did I misunderstand the testimony?

Admiral HOLLOWAY. It is not testimony I have ever given.

Mr. ADDABBO. It is not you. You are a carrier man. If we bring in here a cruiser man or if we bring in here a different segment of your office, will he say that we need this other ship rather than the carrier, that we need this greater capability?

Admiral HOLLOWAY. I can ask Admiral Doyle who is the Deputy Chief of Naval Operations for Surface Warfare to comment on that.

Mr. ADDABBO. Before you comment, let me give you a specific.

If we say we are not going to give you this carrier, do you still want

these escort vessels or would you request a different type of vessel and what would be the capability of this new vessel?

Admiral HOLLOWAY. I would request the exact same kind of ship if this carrier were not to be approved.

Mr. ADDABBO. Admiral?

Admiral DOYLE. I was before you on the shipbuilding hearings back in February or March. I testified at that time that the carrier is a key element of U.S. forces and that it is absolutely essential that we have that capability to carry out our mission and furthermore that the surface combatants should not be thought of as merely escorts because they were there to operate with the carrier in carrying out the mission in a multithreat environment in the areas where they have to operate where there will be saturation-type air attacks either by missiles from aircraft or submarines and also the submarine threat and perhaps the surface threat also and all those forces are necessary and compliment each other.

Mr. ADDABBO. It is primarily a defensive weapon system?

Admiral DOYLE. As an offensive weapon against enemy submarines, as an offensive weapon to move in and get our amphibious forces ashore in the face of the threat, to defeat the Soviet forces either at sea or at bases ashore.

All those things have to be done in order to perform the mission.

Mr. ADDABBO. I fully agree with you but again, if it did not have as its main purpose defending the carrier, would you not seek a different type of combatant vessel rather than the vessel that you are seeking as an escort to the carrier, one that would have greater offensive capability rather than defensive capability.

Admiral HOLLOWAY. I think the difference is, Mr. Addabbo, you are thinking only of offensive capability against hostile surface ships. There are three threats we face in the Navy. When I say "threat," I don't mean simply defending against it, but also eliminating the threat by destroying enemy weapons systems.

The three threats are the submarine threat, the air threat, and the surface ship threat.

The submarine threat I consider No. 1 because although submarines can only move at \_\_\_\_\_ knots, when they arrive on station they are persistent.

The air threat deploys very rapidly and it is the speed at which it develops which makes it dangerous. In the Indian Ocean, for example, Soviet Backfires flying out of the Crimean bases can change the balance of power in that area in a short period of time. But the air threat is not persistent because it has limited time on station in contact before the aircraft must retire to refuel and rearm.

The surface threat in the Soviet Navy is third in priority of danger to us because it is slow to develop; that is, it moves at about 25 knots and it cannot develop covertly. We are able to track surface ships as they deploy. The Soviet surface Navy constitutes the greatest danger in the Mediterranean where it is intermingled with our ships. We don't see it as a force that can compete with the U.S. Navy in open ocean areas in the Atlantic and the Pacific.

So when we talk about an offensive capability, we are not talking about simply putting Harpoons on surface ships and engaging other ships. The only offensive capability against enemy aircraft, for example, are our own aircraft that can go out 500 miles and shoot down the

Backfire before it gets to the antiship missile launching point. That is an offensive capability.

Mr. MURPHY. Admiral Holloway, it appears to me that the CGN-36 class and the CGN-38 class nuclear cruisers were designed primarily to escort aircraft carriers. I say that because anytime we talk about nuclear carriers we are told that we must have nuclear escorts to accompany those carriers.

I am reminded of the weapons aboard the CGN-36 and CGN-38. I believe my recollection is correct that they have 5-inch guns which do not give them much of an offensive capability to seek out and destroy enemy surface ships. They have an anti-air suite on them, but I know the purpose of the CGN-36 and 38 is not to plow the oceans looking for airplanes. They are primarily to defend the aircraft carrier. They also have an ASW capability with sonar and Lamps and torpedoes. I am speaking of your nuclear cruisers of today.

They don't have Harpoon missiles. They don't have Aegis, and they don't have SM-2 missiles on them. When the CGN-36 was designed I don't think it was designed to accommodate the Harpoon missile. When those ships were designed it appears to us that they were designed and built primarily to escort and protect a carrier and not to go out and seek enemy surface ships and airplanes. Is there something wrong with what I am saying?

Admiral HOLLOWAY. No, sir. That is absolutely right.

Mr. MURPHY. I thought you were trying to tell us that the primary purpose of the nuclear cruisers was not to defend the carrier but they are offensive ships.

Admiral HOLLOWAY. I think the word "defend" is wrong. Our concept of operations is that submarines, the cruisers, and the carrier operate together in an integrated task force for the purpose of destroying the enemy. The amount of defense that the cruiser, the CGN-36, provides to a carrier is about the same amount of defense that the carrier through its aircraft provides to the cruiser.

So it is a mutual defense. We don't call them escorts because they are major combatants and they operate in many cases without the carriers. We have periodic visits to the Indian Ocean of surface combat task groups. But in those areas where we face the most severe threat from submarines, surface ships, and aircraft of high performance, we plan to operate insofar as possible with integrated task groups because they represent the highest degree of naval war fighting capability.

Nevertheless, everything that you have said is correct. The CGN-36 design goes back to the late fifties before the Soviets emerged as the maritime power they are today. As we look to the future, projecting the Soviet Navy and its capability out 10 to 15 years, we can determine our requirements for ships of individual capabilities and in numbers that will give us the ability to do our job.

The answer lies in the table on page 38 of my statement. Naval warfare is three dimensional, and we cannot preoccupy ourselves with only one warfare area. We must look at the full spectrum of missions and the warfare tasks required to accomplish them.

One area that seems to be neglected when we discuss sea control is amphibious warfare. Amphibious warfare is often considered to be applicable only to support a land campaign. Yet the island-hopping campaigns in the Pacific during World War II which put the Marines

ashore to seize Japanese bases was not for the purpose of gaining real estate. It was a campaign to gain control of the sea approaches to recover the Philippines and invade Japan.

A key situation in a war with the Soviet Union would be the loss of——. It is vulnerable. The Soviets could try to take it in the early days of a conflict. We would then have a choice of going very far south to avoid the air forces that would operate out of——or we could take a bolder approach: to gain control of the sea approaches to——and take it back in an amphibious operation.

I think that amphibious seizure of key base areas and strait areas is going to be essential in the future. We will need amphibious forces as an integral part of our balanced Navy to be able to effect the necessary sea control for our national survival.

Mr. MURPHY. I feel that if today's nuclear cruiser for some reason had to leave the carrier task group and go back to port for repairs or ammunition or some other reason, it would be very vulnerable to attack by a Soviet surface ship. Don't you feel that that is true?

Admiral HOLLOWAY. Yes, sir, I think that there are conditions when it would be. There are circumstances, such as when we are intermingled with the Soviet Navy, that it would be in a tough spot. As I have said, those ships that were designed in the fifties when there was no other surface navy besides the U.S. Navy have to have their weapons suites improved, especially the offensive weapons. We are putting Harpoon on both the CGN-36 and 38 class. When Harpoon is aboard those ships, I think they will then be better than a match for any other Soviet surface ship they would encounter.

Do you agree?

Mr. MURPHY. Yes, I do.

#### U.S. SUBMARINE FORCE LEVEL

Mr. ADDABBO. Turning from the aircraft carrier, in your 600-ship Navy how many attack submarines do you propose?

Admiral HOLLOWAY. Mr. Addabbo, could we refer to Tab B of my statement, which is a force level projection of the Navy that I have proposed. The active totals, if you look at the bottom, show we don't get to 600 ships under my plan. We have ——, and we would have —— SSN's in the force at that time.

Mr. ADDABBO. Do you believe the total submarine force you propose would be adequate to meet the Soviet threat at that time?

Admiral HOLLOWAY. I think it would be adequate. I would like to have more.

Mr. ADDABBO. There was a recent article that stated:

Today, and for many years to come, the really battle-worthy capital ship is the nuclear-powered submarine. It has the unique ability to get close enough to destroy the enemy surface ship, using missiles or torpedoes, without great risk, regardless of how much air power is ranged against it. The only adversary that it really need fear is another and better submarine, down in the sea with it, using the same advantages of mobility and stealth.

Admiral, do you disagree with these remarks with respect to the stated advantages of the nuclear-powered attack submarine over aircraft carriers and other surface ships?

Admiral HOLLOWAY. Yes, sir, I do, and I go back to my table on page 38. If we had a Navy of only nuclear-powered submarines, we would have to do away with the Marine Corps, the amphibious force,

and convoys because the nuclear-powered submarine cannot provide air superiority nor protect convoys against air attack.

Mr. ADDABBO. How would an aircraft carrier group defend itself against a concentrated attack by several Soviet submarines?

Admiral HOLLOWAY. These are our principals—I will use the word “defense” since you asked it that way. The first effort would be to fly long-range strike aircraft to the ——— to sink them before they get to sea.

The second step would be to ———. The third step would be to use long range P-3 aircraft and the S-3's from the carrier to put sonobuoys in the ——— must traverse in order to get to the carrier's operating area. Then we would use the ——— being employed by surface combatants to detect those submarines at ranges out to almost ———. The surface combatants, with their ASW helicopters, would be vectored to the detected submarines while they are still several ——— from the carrier and attack them with modern ASW weapons. Finally, if a submarine did reach a point where it could launch a guided missile attack against the carrier, we would have a chance to destroy that guided missile in flight, either by aircraft launched missiles, or the Aegis-equipped surface combatants and their weapons system.

Mr. ADDABBO. How would an aircraft carrier group defend itself against a concentrated attack by several Soviet submarines? Would our active sonars serve to better identify and locate U.S. ships to Soviet submarines, and thereby provide the enemy submarines with targeting data from which they may stand off at long range and attack our ships with torpedoes or missiles?

Admiral HOLLOWAY. Yes, sir. It is very possible that any surface combatant using active sonar ranging on a submarine target does run the risk of identifying the bearing on which that radiating ship is located. Within every task force the person responsible for antisubmarine warfare exercises very close control over those ships which would actively radiate their sonars. The only circumstances under which the surface ships would actively range would be when the tactical situation indicated that it was to our advantage to do so.

There certainly are many conditions in the tactical prosecution of submarine attacks where the surface combatant would want to actively range on a submarine.

Mr. SIKES [presiding]. Admiral, tomorrow I want to discuss with you the possibility of greater dependence on Navy yards. I know that policy may dictate otherwise, but from the standpoint of the Navy's preference, I think it would be well for us to have an exchange of views on this, and I would like for you to give some thought to it before we come back tomorrow.

Mr. EDWARDS. May I piggyback on that with reference to the ability to make use of employees, hours they can work, different kinds of problems that you have as between civil service employees and private shipyard employees?

Mr. SIKES. That would be very useful, and you can, if you wish, be prepared to tell us something about the actual operation of the Soviet shipyards and policies that they follow.

Admiral HOLLOWAY. Yes, sir.

Mr. SIKES. If there are no further questions at this time, we will reconvene at 2 o'clock tomorrow.

WEDNESDAY, JULY 21, 1976.

Mr. MAHON. The committee will resume the hearing.

Mr. Sikes has some questions at this time.

Mr. SIKES. Thank you very much, Mr. Chairman.

## UTILIZATION OF PUBLIC SHIPYARDS

Admiral Holloway, yesterday we indicated that there would be a discussion of the greater utilization of Navy-operated shipyards. There was, of course, a time when the Navy made much greater use of Navy-operated yards than it does at the present time.

I am interested in learning what, in your professional opinion, the advantages or disadvantages of greater use of Navy-operated shipyards would be, particularly in view of the difficulties that we now are having with some of the civilian yards.

Would you give us some background information on this and open up the subject so that we can explore different aspects of it?

Again, I realize what the policy now is toward utilizing civilian shipyards to a considerable extent, but I am thinking now primarily of the Navy's own attitude, what the Navy would like to do and why.

Admiral HOLLOWAY. Mr. Sikes, as we all know, the Vinson-Trammell Act of 1934 did provide for the construction of naval ships in public yards. I don't believe we have exercised that provision since the 1966 authorization. The Navy has been asked by the Deputy Secretary of Defense, Mr. Clements, to develop a plan to initiate new construction in public yards and we have done some preliminary planning. We feel that it certainly has some advantages.

Two of the principal advantages are: First, it provides a capability in these public yards which could be not only supplemental but perhaps essential in an emergency, either an emergency due to an unwillingness or inability of private yards to produce needed ships, or in time of industrial mobilization when we would need the additional ship construction capacity.

Secondly, we believe that the construction of new ships in our naval shipyards would enhance the professional qualifications of our own engineering duty officers whose responsibilities are largely to supervise the new ship construction programs in private yards.

We also recognize that there are some disadvantages. The first would be a higher initial cost. This is not restricted to naval shipyards. Any shipyard, private or public, as it starts building new kinds of ships is going to incur extra start-up costs in establishing the special facilities necessary to build ships. This is especially true in the case of complex warships.

Also, we do experience higher cost rates in naval shipyards than in private yards. The reasons for this are rather complex. If we want to discuss it in detail, I would ask Admiral Gooding for an explanation.

But essentially it is the civil service provision of benefits which, when added to the overhead, cause higher hourly wage rates.

A third consideration that we have to keep in mind is the fact that given a fixed capacity in naval shipyards, and if we were to commit a significant fraction of that capacity to new construction, we reduce our flexibility in responding to emergent repair requirements.

Our experience has been gained principally during World War II when we used our naval shipyards to repair battle damage and during the Vietnam war, to repair ships on an emergency basis in order to get them back to sea promptly.

Then, finally, I think we must be aware of the impact it might have on the public sector in depriving the commercial industry of the shipbuilding work by moving new construction to public yards.

Mr. SIKES. If the Navy had a choice, would you expand the Navy's shipyards at this time?

Admiral HOLLOWAY. Yes, sir. My recommendation is that we should.

Mr. SIKES. By what extent?

Admiral HOLLOWAY. I would like to ask one of my colleagues to answer in terms of personnel.

Admiral GOODING. About 4,000 men per year for the next few years, Mr. Sikes.

Mr. SIKES. Per year for the next few years?

Admiral GOODING. Yes, sir. That is an average roughly of 500 men per naval shipyard per year.

Mr. SIKES. Would you open additional shipyards?

Admiral GOODING. I do not see the necessity to do that, sir.

Mr. SIKES. You could expand existing shipyards satisfactorily?

Admiral GOODING. Yes, sir.

Mr. SIKES. Now, would you expand for the record the advantages of and the disadvantages of an increase of this sort. For how many years?

Admiral GOODING. I am not sure, but I think it is less than five.

Mr. SIKES. Would you give more details for the record on that?

Admiral GOODING. Yes, sir, I will do that.

[The information follows:]

Admiral GOODING. Naval shipyard capacity is constrained by the productive capacity limits of the industrial facilities and drydocks and also by the size of the work force employed to operate the facilities. The eight naval shipyards have an industrial plant which can efficiently employ on a single shift basis 70-80,000 workers under peacetime working conditions. Shipyard employment is substantially below this level, hence shipyard manning, not shipyard facilities, is the operative constraint at present. The approximate maximum peacetime, one-shift employment of the eight naval shipyards for conversion, alteration, and repair (CAR) work, utilizing existing facilities, is 76,700.

The maximum naval shipyard capacity achievable in a 5-year period depends upon the rate at which naval shipyard employment can be increased from current levels to 76,700. It has been previously estimated that an optimum, sustained buildup of employment of 4,000 men per year could be achieved in naval shipyards. However, in fiscal year 1974 employment increases of approximately 6,000 were achieved in the eight naval shipyards after the closure of Boston and Hunters Point. Thus, an achievable estimate of maximum sustained employment increase is 5,500 per year in naval shipyards.

Employment buildup more rapid than the optimum 4,000 per year could result in higher unit cost due to increased training costs, more rapid dilution of existing workforce and increased turbulence caused by more rapid turnover of personnel.

The current naval shipyard buildup plan required to achieve the projected 5-year ship maintenance and modernization program is within the optimum hiring ability of 4,000 per year. The plan requires achieving a fiscal year 1982 end strength of approximately 72,600. The EO fiscal year 1976 end strength is 63,728.

When the current inactive new construction capability of the naval shipyard complex is utilized in conjunction with conversion, alteration, and repair workload the approximate maximum peacetime, one-shift employment utilizing existing facilities increases from 76,700 to 82,500.

## SOVIET AND UNITED STATES NAVAL SHIP PROCUREMENT SYSTEMS

Mr. SIKES. The Russian policy gives an entirely different situation than ours. They are not concerned with the private sector. All of their capacity is state-controlled. That is true, is it not? Does that give them a decided advantage over you?

Admiral HOLLOWAY. In my opinion, Mr. Sikes, it does, because all of the shipbuilding industry, as you have indicated, is state-controlled, although it is annually allocated among the various bureaus such as fisheries, merchant marine, and navy. As policy changes occur they are able to reallocate capacity. They have a sizable production base which gives them great flexibility which makes our forecasting of Soviet naval strength in the future very difficult.

Mr. SIKES. Would you spell out in more detail for the record what the results of the Russian system are vis-a-vis ours?

Admiral HOLLOWAY. I will, sir.  
[The information follows:]

## THE SOVIET AND UNITED STATES NAVAL SHIP PROCUREMENT SYSTEMS

*Soviet shipbuilding system*

1. Almost all shipbuilding activity, both naval and commercial, in the Soviet Union comes under the Ministry of Shipbuilding which is one of the nine ministries subordinated to the Military Industrial Commission, the chairman of which is a member of the Council of Ministers. The Council of Ministers is the highest executive government body in the U.S.S.R. subject only to the rulings of the party apparatus, the Politburo.

Most repair yards and some minor construction yards are under the jurisdiction of the organization which they primarily serve, that is, navy, Ministry of Maritime Fleet, Ministry of River Fleet or a directorate of the fishing fleet. Soviet shipyards may be categorized by their function—shipbuilding or ship repairing—and by whom they serve—navy, merchant fleet, river fleet, or fishing fleet. Some yards have dual functions and a number serve both the naval and commercial fleets.

2. The Ministry of Shipbuilding is responsible for research, development, design, and construction of ships, facilities and other equipment for the navy; and produces all large seagoing commercial ships and fishing ships for the civilian economy. Overall task includes planning for the shipbuilding industry, direction of production, solution of matters of technical policy, providing material and technical support, and controlling financing, labor, and wages.

3. Naval construction is coordinated with the \_\_\_\_\_.

4. Over the last 2, 5-year plans (1965-75) the Soviets have accomplished considerable expansion in their shipbuilding industrial base, building several new yards and expanding and modernizing a number of others. As the whole industry is totally managed by the government, shipyards can be ordered into naval production from commercial production or vice versa with relative ease and the required industrial support directed toward the priority projects as necessary.

5. All submarine fabrication and assembly and \_\_\_\_\_ the major and minor combatant construction is carried out under cover in large usually heated halls. The primary reason is environmental protection due to extreme climatic conditions at the yards. Also the Soviets have \_\_\_\_\_

6. The Soviets currently have 5 shipyards building submarines, 5 yards constructing major combatants and 11 shipyards producing most of the minor combatants now entering the naval inventory.

*U.S. shipbuilding system*

7. Naval shipbuilding activity in the United States comes under the Chief of Naval Material whose subordinate, the commander, Naval Sea Systems Com-

mand, is assigned the additional duty of coordinator of shipbuilding, conversion and repair for the Department of Defense and the Department of Commerce.

8. The Chief of Naval Material through his subordinate systems commands and project managers is also responsible for research, development, design, and construction of naval and naval associated ships, facilities and other equipment for the Navy.

9. Currently, 100 percent of U.S. Navy new-ship construction is being accomplished by private shipyards. The commander, Naval Sea Systems Command lets, administers, and monitors shipbuilding contracts with the private sector of the shipbuilding industry. Naval shipyards are now utilized solely for overhaul, repair, and conversion, however, one-third of this type work is also being contracted to private yards.

10. The U.S. Navy currently has under contract for new construction the following number of private shipbuilders: two for nuclear submarines, seven for major combatants and auxiliaries, and one for minor combatants.

Mr. SIKES. I would like to ask Mr. Preston to ask any questions he may have on this subject.

Mr. Preston?

Mr. PRESTON. Thank you, Mr. Sikes.

#### PERSONNEL AND FACILITIES FOR NEW CONSTRUCTION

Admiral Gooding, is the 4,000-men-per-year figure you used a figure that would cover new construction in Navy shipyards or just to clean up the backlog in overhauls?

Admiral GOODING. It would not cover new construction, sir.

Mr. PRESTON. What would be required for new construction in naval shipyards? Could we accommodate new construction of naval vessels in present shipyards if those shipyards were modified?

In order to do that would we have to open new yards? What would be the personnel requirements?

Admiral GOODING. You would not need to open a new yard. We would require relief in the shipyards. Depending on what kinds of ships were to be built and what kind and in what years, I would expect a one-time delta of perhaps 5,000 people and perhaps if the program got very large, 10,000 people scattered among 3 years.

Mr. SIKES. How quickly should that be accomplished in order to get maximum results?

Admiral GOODING. In order to accomplish a build-up like that in the new construction area only, I would estimate about 2 years.

#### NEW SHIP CONSTRUCTION IN GOVERNMENT VERSUS PRIVATELY OWNED SHIPYARDS

Mr. PRESTON. In a number of areas of defense procurement we have a mix of Government facilities and privately owned facilities. It used to be said of new construction in naval shipyards that maintaining some capability within the Government provided a balance of a kind by which industry performance could be judged and that this offered some competition.

We have gotten away from that. We used to construct naval ships in both private and public yards. It may be entirely unrelated but since then we have gotten into difficulties in ship construction, in cost and in deliveries.

Would it be possible that if we started new construction of ships, new ships, in Navy shipyards, that we could have that kind of salutary

effect that might offer some competition to the private shipbuilding industry, which is relatively limited in the area of building large ships, and that this competition might give us a better performance all around and might have a positive overall impact even though there would be higher initial costs?

Admiral GOODING. I think it is entirely possible, sir, particularly if you wanted to look at the man-hours and the cost of material to build a given ship both public and private. As the Chief of Naval Operations has said, the wage rates are different in the public sector and one would expect the total dollar cost to be higher, but total manpower requirements to do the job are total manpower requirements.

I think it would be a very useful gage if nothing else, at the negotiating table.

Mr. PRESTON. You mentioned a study ongoing now. I recall when we stopped new construction of naval vessels in publicly owned yards. It was said at that time that there was a large cost differential and it was far more expensive to build in the Navy shipyards.

Is that true today, still, with the wage and benefit increases in the private sector?

Admiral HOLLOWAY. Yes, sir. Our estimates, which are tentative until we are able to specify the yards and the ships, indicate that it would cost about 20 percent more to construct in naval shipyards than in a comparable private shipyard. This is plus or minus 5 percent, and it does not include the startup costs. However, it could be affected as we developed our competence and capability in a continuing program.

Mr. PRESTON. Does your analysis that indicates a 20-percent additional cost include the experiences we have had in claims or are you talking about original contracts or what?

Admiral HOLLOWAY. The 20 percent is based upon the full cost of the ship and does not involve claims. It is based upon the cost of Government-furnished material, and the cost of the man-hours required to produce the ship.

I would ask Admiral Gooding to follow up on this point. I believe that the 20-percent differential is based upon approximately the same number of man-hours being required for the public yard as for the private yard.

The main difference is in the cost per man-hour, with a higher overhead in the public yard.

Admiral GOODING. There is a difference in the items charged as overhead between the public and private yards, the most significant being supervisors, which is an overhead charge in public but a direct labor charge in most private yards. There are a number of other such functions, as planning and material control, which are charged as overhead in public yards as opposed to direct in most private yards. Other costs, such as maintenance, utilities, and transportation also costs more in public yards than in most private yards due to the difference in the larger physical plants in the naval shipyards and the difference in mission. In addition to the bigger overhead the wage scales are higher and therefore the overall costs of a man-day of work with its associated overhead compounds the cost problem.

Mr. BURLISON. Will the gentleman yield on that point?

## OVERHEAD EXPENSE IN PUBLIC YARDS

Why is the overhead so much more in the public yard?

Admiral GOODING. There are several reasons. For example, I suspect the public yards are more stringent in their application of the OSHA provisions and the EPA provisions. Six of the public yards are nuclear shipyards and that carries with it a requirement for additional overhead in radiological control and contamination.

In addition to that, with the overhead itself being bigger, the wage scales are higher and therefore the cost of the overhead is somewhat compounded.

Mr. MURPHY. And you don't have the hiring and firing flexibility that you would have in the private yard?

Admiral GOODING. That is true. The work force in the naval shipyards is relatively very stable compared to the private sector.

## EMPLOYMENT AND RETENTION PROBLEMS ENCOUNTERED IN PUBLIC VERSUS PRIVATE YARDS

Mr. SIKES. I would like for you to go into some details on the employment problems, retention problems, et cetera, that you would encounter in a public versus a private yard and what solution, if any, could be offered.

You mentioned the problem of comparatively stable employment. That is good up to a point and then it becomes bad, very bad. So, do you have any solution under present law for that problem?

Admiral GOODING. No, sir, we do not, at least not under DOD regulations which implement the laws. While the law requires a 30-day advance notice, DOD regulations require 60 days to lay off employees in a public yard, as in any DOD installation. So, the employee is entitled to 60 days notice and it takes about 30 days to make up the retention register which adds up to 90 days. By the time the 90 days has passed, if it is a short-term crisis, the crisis has passed too and you have had on the payroll people you cannot get rid of with celerity.

Mr. SIKES. If you would go into some detail on this overall question, I would appreciate it.

[The information follows:]

Admiral GOODING. There is a major problem regarding stability. It is that legislated ceiling controls do not provide needed flexibility in adjusting shipyard employment to workload. The effects are that the yards sometimes do not have the number of people required to accomplish work which has been authorized and funded by the Congress; that temporary employees, some of whom are minimally qualified, are used as a stop-gap measure; and that hiring restrictions imposed to meet ceilings result in imbalances in the numbers of people in the various trades causing deficits of manpower in some trades.

The main problem regarding hiring and firing capability again relates to inadequate flexibility. Hiring must be accomplished under civil service regulations which by law, provide preference to veterans and restrict hiring in other ways which do not necessarily match the special requirements of shipyards. In firing, the law requires a 30 day advance notice in order to reduce force. The Department of Defense has extended this notice period to 60 days by one of its regulations. Requests to change that regulation have been denied within Navy as well as at DOD levels.

Three proposals have recently been made to the Civil Service Commission for changes which, if granted, would increase flexibility and relieve somewhat the problems mentioned above. These are:

- (1) Reduce veterans preference in retention for reduction in force purposes.

- (2) Provide a new indefinite appointing authority for fluctuating workloads.  
 (3) Authorize earlier than usual retirement for any employee whose position is abolished if retiring would preclude the forced separation of another employee.

Mr. SIKES. Mr. Preston?

CONSIDERATION OF GOVERNMENT-OWNED CONTRACTOR OPERATED  
 (GOCO) SHIPYARDS

Mr. PRESTON. Another approach that has been mentioned is for the Government to own shipyards and to hire contractors to operate those shipyards in a Government-owned contractor operated system, such as we have had in other areas. Has the Navy considered this approach and what are some of the pros and cons to this approach?

Admiral HOLLOWAY. I think the Navy has considered them, Mr. Preston. I would like to call on my colleagues here to provide more detail.

Admiral GOODING. The Navy has indeed considered this, sir. There are some rather attractive notions and attractive ideas about this notion. A great deal of the hate and discontent which now exists would disappear.

On the other hand, it seems to be at odds with the usual risk sharing in Navy shipbuilding to do this on a large scale.

Mr. PRESTON. We do it widely in other areas such as ammunition production.

Admiral GOODING. Yes, sir, but I smell some resistance to doing it in this instance in talking to people. It would require, for example, as a purely parochial point of view, that I do some reorganizing in my command to set up some group to administer these GOCO shipyards if we were to do that. I don't have people trained to administer those types of contracts and if it was decided that we would go that way, I would have to train people.

Mr. GARRITY. A contract has just been let for the leasing of Hunters Point to a private concern. I believe it is a Triple A corporation in California.

Admiral GOODING. Yes, sir.

Mr. GARRITY. Does that contract include a clause which provides for the new construction of vessels?

Admiral GOODING. No, sir, it does not.

Mr. GARRITY. Does Hunters Point have the capability and capacity to go into new construction if it is so desired by the Navy?

Admiral GOODING. The capacity of Hunters Point to build new construction ships is minimal. It is a small yard with rather inadequate facilities for that kind of endeavor. It has one large dry dock and a couple of small ones. I could not recommend to the committee or anybody that Hunters Point be put into the new construction business, short of a major war.

Mr. SIKES. Mr. Murphy, do you have some questions on this subject?

Mr. MURPHY. Yes, sir. In connection with the discussion we just had about GOCO operations, as you well know the Navy and Air Force build their aircraft in GOCO plants, the Army manufactures its ammunition and tanks in GOCO plants and I believe the Poseidon and Trident missiles are built in contractor-operated Government-owned plants.

Has the Navy considered, say, buying Newport News shipyard or the Litton shipyard and contracting out its operation in order to overcome the apparent impasse that we have in the shipbuilding area.

Admiral HOLLOWAY. Yes, the Navy has considered it. Under the difficulties that we are encountering in our relationships with the shipbuilders, we have considered virtually all reasonable alternatives. Referring to the comment made by Admiral Gooding, let me say that it would be difficult. However, we may be talking about two different situations: one in which a private shipyard is already in operation and is then taken over by the Navy, as opposed to starting a new program on an agreed GOCO basis.

Having said that to differentiate between an emotional and an unemotional situation, let me ask the Chief of Naval Material to comment.

Mr. MURPHY. I had that in mind. If Newport News or Litton is no longer interested in building ships for the Navy and if we consider the shipbuilding industry in this country to be a national asset, then perhaps the Government should buy the yards and compete their operation among contractors much like we do many other GOCO plants.

Admiral HOLLOWAY. Exactly. I didn't mean to mislead you in attempting to clarify the point that Admiral Gooding had made earlier but I think there is a difference between the production of ammunition on the part of the Army which may be initiated as a GOCO operation, and the extreme case where the Navy is forced to take over an ongoing production on a GOCO basis because of a deteriorating relationship with the contractor.

Having said that, Admiral Gooding, would you pick it up from there?

Admiral GOODING. Yes, sir. Those two situations are somewhat different. In the one case you are creating an operation to be run as a GOCO facility from the start, and in the other you are buying an existing concern and transforming it into a GOCO facility. These strike me as horses of different colors. I would be happy to supply additional information regarding this subject for the record.

Mr. MURPHY. Has the Navy given any serious consideration to having contractors operate its public yards rather than having the Government operate them?

Admiral GOODING. Yes, sir. I characterize this as a crocus. It comes up with spring. I have file drawers full of studies on this subject and I would be happy to provide you with the most recent copy which I think is only 2 years old.

The conclusion has been that it really doesn't make any real sense and we have abandoned the notion.

[The information follows:]

In April 1976 the Department of Defense proposed to utilize Public Law 85-804 to grant extracontractual relief to certain shipbuilders in return for which the shipbuilders would withdraw their claims. At that time a proposal was made that if these shipbuilders, upon which the Navy depends, could force the Navy to make extracontractual payments under threat of stopping work on present contracts and refusing to enter into new Navy shipbuilding contracts, the Navy should buy title to these shipyards as part of any extracontractual payment. The Navy would then operate these shipyards as Government-owned, contractor-operated (GOCO) facilities. That is, the Government would place a long-term management contract with a private firm to operate the shipyard.

There are some very attractive aspects to this proposal. Foremost among these is that the Navy would be assured a source of supply for the ships it needs. This is particularly important in view of the experiences of the past year in which the Navy has twice been forced to obtain court orders to prevent shipyards from stopping work on their Navy shipbuilding contracts. There have also been similar threats on other contracts and one shipbuilder has indicated it may not accept new Navy shipbuilding contracts. These problems would not occur if the shipyards were GOCO facilities.

There have also been instances where shipbuilders have diverted resources, particularly manpower, to commercial ship construction to the detriment of Navy ships under construction in the shipyard. If the Navy had control of the facilities, it could better insure that Navy ships were delivered in a timely manner.

These management contracts would also be very attractive to the shipbuilders. Shipbuilders have complained about the amount of risk they undertake in current shipbuilding contracts and have testified that they feel they should be guaranteed a reasonable profit on Navy shipbuilding contracts. Under a GOCO type operation, the contractor would have no investment, no risk, and would earn a guaranteed profit. Thus, this arrangement would be financially attractive.

Further, if the shipyards were run as GOCO facilities, the guaranteed profit eliminates the potential for claims and the resultant acrimonious atmosphere. Both the Government and the contractor could then concentrate their energies on ship construction rather than contractual issues. If the contractor's performance were inadequate, the Government could change contractors at the time of contract renewal.

The GOCO type of operation is widely used in defense procurement, although it has not previously been used in shipbuilding. There are currently 88 facilities wholly or partially owned by the Government which produce defense weapon systems. The Air Force has plants working on the B-1 bomber; the F-4, F-15 and F-16 fighters; the F-111 fighter-bomber; and the C-5A, C-130, C-140 and C-141 cargo planes. The Air Force also produces Titan, Minuteman, Genie, Phoenix, Maverick and Harpoon missile systems in facilities utilizing Government-owned equipment. The Army produces its M-60 tanks in GOCO facilities. The Navy also produces planes (the F-14 fighter, the A-6E bomber, the EA-6B electronic warfare aircraft, the E-2C early warning aircraft, the A-7 Corsair II bomber), missile systems (Standard, and Redeye) and missiles (Condor, Sparrow III, Polaris, Poseidon and Trident I) in plants using Government-owned facilities.

The existing Department of Defense GOCO facilities do a big business. The Government's acquisition cost for these facilities (mostly procured during the 1940's and 1950's) is almost \$4 billion. In fiscal year 1976 alone, over \$3 billion was appropriated for programs conducted primarily in Department of Defense owned facilities.

There would, of course, be some problems in implementing a decision to transform these shipyards into GOCO facilities. However, based on the Government's extensive experience with facilities of this nature, both in the Department of Defense and in other agencies, it would appear that these problems could be surmounted.

From a purely personal standpoint, such a decision would require retraining of some people in my command to administer these types of contracts. While there already exists at Naval Sea Systems Command Headquarters a group experienced in managing naval shipyards through the shipyard commanders' organization, they would have to acquire some additional skills to do the same job through a private management contractor. Similarly, the Navy currently has a supervisor of shipbuilding with a large staff at each of these private shipyards to monitor shipbuilder performance under current shipbuilding contracts. Again some retraining and perhaps a change of skills mix would be required for these existing organizations to monitor performance of the shipbuilder under a management contract rather than current shipbuilding contracts.

The Navy is currently attempting to settle the shipbuilding claims under accelerated claims processing procedures, while still retaining the established safeguards to enforce existing contracts instead of providing extracontractual relief. If the Navy is unsuccessful in reestablishing satisfactory relations with any shipbuilder through this process then I think that, on a case basis, serious consideration should be given to the alternative of buying the shipyard concerned and operating it on a GOCO basis.

**Mr. MURPHY.** Could you give us some idea of the comparison of wage rates in public versus private yards including the fringe benefits and

the overhead problem? Do you have a ball park figure that you can provide now? I obtained that data a couple of years ago and I recall that it was fairly significant.

Admiral HOLLOWAY. I have it, sir. It is approximately \$20 for a public yard versus \$11 for Newport News and about \$14 for Electric Boat. I will supply the decimal points for the record.

[The information follows:]

Mare Island.....	\$20.06
Electric Boat.....	14.43
Newport News.....	10.75

Mr. SIKES. Do you have any other questions?

Mr. ROBINSON. No, Mr. Chairman.

Mr. SIKES. Mr. Kemp?

Mr. KEMP. No.

Mr. SIKES. Mr. Murphy?

### CSGN STRIKE CRUISER

Mr. MURPHY. Admiral Holloway, there was much debate last year and this year over the Navy's proposal to build a nuclear-powered CSGN strike cruiser, which will cost between \$1.2 and \$1.4 billion. What is the justification for a large and expensive ship of this type?

Admiral HOLLOWAY. The Navy's primary responsibility is to assure free use of the sea. To do this, we have to be able to protect our commerce from the threat of submarine, surface, or air attack. The primary platform around which all navies are structured is the surface ship. We also have submarines because of their unique capabilities and characteristics. We have aircraft carriers which are a specialized form of surface ship.

The strike cruiser represents the ultimate in the surface combatant. It is the extension of a concept which began with the *Monitor*, a steel hull, mechanically propelled warship that projects a missile.

In designing the modern surface combatant, air, surface, and sub-surface capabilities of the Soviet Navy were considered. Therefore, the most capable weapons systems available to surface combatants were incorporated. These systems would include in radars, the Aegis; in guns, the 8-inch lightweight gun; in surface-to-air missiles the SM-2; and in surface-to-surface missiles, the Harpoon to be followed by a ship-launched cruise missile in the future. Aviation capability would include V/STOL aircraft as well as LAMPS-III helicopters. The antisubmarine warfare suite would be equally advanced.

The most advanced propulsion system available is nuclear propulsion. The final decision to make this a nuclear-propelled ship is based upon our concept of operations. To maintain our superiority at sea we must be able to defeat hostile naval forces. To meet the most intense combined air, submarine, and surface threats, we will operate in integrated task forces of carriers, cruisers, and submarines.

We have a unique capability in our Navy in the all-nuclear task force, the first of which, deployed to the Mediterranean just this month. With a total of five nuclear-powered carriers, we will have the basis for five all-nuclear-powered task groups. The advantages of all-nuclear-powered task groups are as follows: They can steam unlimited distances at high speed, ready to fight on arrival and able to stay in

the objective area either until the situation is resolved or until logistical support forces catch up.

These nuclear-powered task groups are our most powerful and capable forces. Being the most capable, they are lightning rods which will attract the strongest enemy counterattacks. Therefore, in this all-nuclear-powered task force, it is essential we have at least one and eventually two Aegis platforms.

If a DDG-47, which is a conventionally powered Aegis ship, is in the all-nuclear-powered task force, we no longer have an all nuclear task force. The DDG-47 will have to be refueled at frequent intervals.

The strike cruiser fills the role of the Aegis platform for the nuclear-powered taskforce.

Mr. MURPHY. Why would you assign a ship of this size and at this cost to be a part of the carrier task force? Could you do this with a less expensive nuclear-powered ship?

Admiral HOLLOWAY. Let me say it is possible, but it is impractical. The smallest sized ship that will take the Aegis radar is the DDG-47, which displaces about 9,000 tons. If we put nuclear propulsion in that ship, it would run about 11,000 tons. At that displacement, it would not include such necessary features as armor, cruise missiles, additional V/STOL capability, and missile capacity.

By a relatively modest increase in size from about 11,000 to about 17,000 tons we not only get a ship that has an Aegis radar, but also represents the ultimate in modern surface combatant capability, which can operate independently when the tactical or strategic situation demands.

So to answer your questions, there is no inexpensive nuclear-powered Aegis ship that could be assigned to the group. The cost savings would be about 20 percent on a bare bones nuclear-powered ship. I will refine that figure and provide it for the record.

[The information follows:]

An approximately 22 percent reduction in the \$1.37 billion estimated end cost of the lead CSGN could be realized by building an Aegis system on a *Virginia*, CGN-38, class hull. By doing so, the following features that are now in the CSGN design could not be incorporated:

1. About one-half CSGN missile capacity.
2. The cruise missiles (SLCM).
3. Shipboard toxicological operational protective system (STOPS).
4. Fragmentation armor.
5. Usual margins for design and service growth, both electrical and mechanical.
6. VTOL capability or expanded helicopter facilities.
7. The 8-inch gun vice one or two 5-inch guns.
8. Task force coordination center.

Mr. BURLISON. Will you yield?

Mr. MURPHY. Yes, sir.

#### ANALYSIS ON AN ALL-OUT NUCLEAR WAR

Mr. BURLISON. Admiral, in case of an all-out war, what would be your judgment as to what segment of our Armed Forces would be most vulnerable and would most likely be destroyed first in an all-out war?

Admiral HOLLOWAY. I would ask, Mr. Burlison, if you would define all-out war as being nuclear or nonnuclear?

Mr. BURLISON. Nuclear.

Admiral HOLLOWAY. I believe that should we get into a nuclear conflict through a massive strategic exchange, very little of any military force would remain. But I am not sure that is relatively significant because of the devastation which would occur to our industry and the casualties our civil population would sustain.

Mr. BURLISON. Are you saying that there would not be a substantial time lag between the destruction of one part of the Military Establishment from the destruction of some other segment of it?

Admiral HOLLOWAY. I think that all of those forces which are not mobile and deployed would probably be destroyed, that means that the principal surviving military force in the United States would be the Navy. I believe that the submarine force which was at sea and deployed would be about 100 percent survivable. I think that a very high percentage of surface combatants would survive in the case of general war involving a massive exchange of strategic nuclear weapons.

#### ANALYSIS ON AN ALL-OUT NONNUCLEAR WAR

Mr. BURLISON. Would you give your analysis on an all-out nonnuclear war?

Admiral HOLLOWAY. In an all-out nonnuclear war, which I would see occurring as a result of a Warsaw Pact invasion of NATO, the battlefield in central Europe would bear the brunt of the initial assault. I also believe that there would be heavy losses on both sides in the Mediterranean if the 6th Fleet were to fight in the eastern Mediterranean. But in a period of rising tensions, I believe there is a possibility, as I explained yesterday, that the 6th Fleet would want to take up dispositions in the western Mediterranean. In fact there may be certain conditions under which the 6th Fleet force might redeploy from the Mediterranean to the Atlantic, if the need for naval forces was greater there. The 6th Fleet would operate in the Mediterranean only in such force that it could defeat the enemy.

The battle of the Atlantic would be characterized by high ship losses initially, as those Soviet submarine which were at sea when the war began, conducted operations. When these submarines expend their torpedoes and missiles, their return to Soviet bases to replenish and refit would be blocked by our ASW forces. At this point we would then anticipate reduction in the submarine attacks on our naval forces and convoys at sea.

There would remain a severe threat from the Soviet aviation arm. As the Backfire bomber comes into the inventory, Soviet naval aviation will become a greater threat and could eventually be more severe than the submarine threat.

Mr. BURLISON. Thank you.

#### STRIKE CRUISER

Mr. MURPHY. What can the strike cruiser do in attriting Soviet surface ships that aircraft carriers and submarines cannot do?

Admiral HOLLOWAY. Comparisons of ships or sizes of ships can be misleading. We need to build a balanced Navy that can support U.S. military strategy. We must build aircraft carriers, cruisers, destroyers, submarines, frigates, amphibious ships, support ships, and mine coun-

termesures ships, each of which has important missions to perform. Each must be built to the size and tonnage and include the sensors and weapons systems necessary to do the job. In the case of the CSGN, the Aegis combat system is a key factor. Nuclear powered Aegis cruisers are required to operate with each nuclear powered task force in order to make up the most formidable force in terms of offensive and defensive operations. In addition we need strike cruisers for independent operations in remote areas where a U.S. naval presence is required to protect our interests and to conduct naval warfare when carrier forces are required elsewhere.

#### PRIMARY JUSTIFICATION FOR STRIKE CRUISER

Mr. MURPHY. Is the primary justification for this ship to escort carriers? If not, what percentage of the justification for this ship is attributed to carrier escort and what percentage to other uses?

Admiral HOLLOWAY. The basis for our requirement for the strike cruiser is primarily in terms of her capabilities which include the Aegis anti-air-warfare system with associated SM-2 surface-to-air missiles, the Harpoon and Tomahawk antiship missiles, the light-weight 8-inch caliber gun with extended range guided projectiles, ASW weapons consisting of ASROC and deck launched torpedoes, the passive towed array sonar (TACTAS), the SQS-53 active sonar, helicopter/VTOL aviation facilities, fragmentation protection in vital areas, a tactical flag command center and nuclear propulsion.

The Navy plans to operate its nuclear strike cruisers in integrated task groups, each consisting of a carrier, cruisers, and submarines. These task groups will represent the most powerful naval tactical units afloat. The CSGN, with Aegis, will enable the force to operate effectively in areas of the most severe threat.

The strike cruiser is also needed to fulfill the requirements of maintaining maritime superiority against the Soviet Navy, which is growing in capability in all areas of naval warfare—surface, air, and submarine. Therefore, strike cruisers will operate in areas of the world's oceans where U.S. naval presence is required to protect our interests and conduct naval warfare when carrier forces are required elsewhere. The strike cruiser is designed to do this.

The percentage of time the CSGN will be assigned to a carrier task group as compared to other missions is totally dependent upon the requirements and mission objectives at the time. The operational commander would make that decision.

#### SITES FOR BUILDING CARRIER OR A STRIKE CRUISER

Mr. MURPHY. Admiral Holloway, at the present time, Newport News is the only shipyard that has the facilities, manpower, and skills to build a nuclear-powered strike cruiser or a nuclear-powered aircraft carrier. In view of your current problems and claims with that shipbuilder, where do you propose to build a carrier or a strike cruiser if Congress funds them next year?

Admiral HOLLOWAY. With long lead funding requested for both of those ships in fiscal year 1977, the authorization and appropriation for the ships would be requested in the fiscal year 1978 program, so

contracting could not occur before October 1977. I am not only hopeful but confident that we can resolve our problems by that time. That only represents my opinion and we have to look to what alternatives we have should Newport News get out of the naval shipbuilding business.

The carrier could be built in a public yard, Puget Sound Naval Shipyard. At the present time I don't believe there is another private yard that could construct a Nimitz class ship.

In the case of the strike cruiser, it could be built by one of several private yards, Quincy, the yard which constructed the *Long Beach*, and Litton's Ingall's Yard.

In addition, there are several naval shipyards, including Puget Sound, which could build a nuclear-powered cruiser. Several other naval shipyards also have that capability. Although it will be more expensive to build these ships in public yards, I see no alternative but to do so if Newport News should cease naval ship construction. I do not believe that the country can accept a situation in which we as a nation cannot produce nuclear-powered warships which the Congress has provided for in response to our naval requirements.

I believe that the executive branch and the legislative branch will take the necessary actions to insure that this country retain the industrial capability to build the kind of Navy that the Nation needs.

Mr. MURPHY. I certainly agree with you, Admiral. However, as you well know better than I, Newport News has threatened, or I guess suggested, that an alternative to their problem would be to move the CVN-70 to Puget Sound and five SSN-688's to Mare Island.

In the case of the Quincy Yard, I would imagine from previous testimony that it would take them a couple of years to rebuild their nuclear construction capability and to hire the skills required to build a strike cruiser at Quincy. That leaves you, in such an eventuality, with long-lead funding this year for another carrier and a strike cruiser with no hope of being able to build those ships in the next year.

Admiral HOLLOWAY. Well, sir, let's take the worst case that you postulate, that Newport News gets out of naval shipbuilding. We have talked about the alternatives, first solving of the problem, and second, the possibility of a GOCO arrangement.

We would not want to see Newport News, as a national industrial asset, getting out of the naval shipbuilding business. If they did, I think you agree with me that we must, as a national strategic requirement obtain a capability to produce those kinds of ships. Unless we have long-lead funding this year and obtain funding and authorization in fiscal year 1978, we are not going to develop a new capacity to build these ships if Newport News is lost. To develop capacity takes money, and no one is going to make that investment until the money is provided.

So regardless of what happens, if we want those ships, the ships must be authorized and the funds appropriated. Then if it is going to take a year or two longer and cost 10 to 15 percent more, I think that is the price we pay to insure an adequate industrial base in a free economy. It is a question of national need.

To defer the authorization and funding for those ships to build up

a capacity to construct them is just not realistic. Capacity will only come with funds.

I would like to ask Admiral Michaelis to comment if he thinks I am incorrect in that assumption.

Admiral MICHAELIS. I think you are entirely correct. I would like to point out a little bit more on correlative dates between the problems at Newport News and the date we would have to be clear for building. We certainly expect by this time next year, if our plans work out, in putting our shoulders together with Newport News on solving the present problems that we are well nigh to being finished about this time next year with our current problems.

In any long leadtime for this year with full funding next year, we would be talking about a keel laying sometime in the springtime of 1980. I wanted to point out these differentials in dates so far as the preparation time for building a ship at that time.

We are speaking of moving through the process of requests for proposals, for letting the contract, completing the design, the contract design, and finally then with the long leadtime, material going ahead with the fabrication. That is the important start point. That would probably be in the spring of about 1980 with long leadtime this year and full funding next year—right, Bob?

Admiral GOODING. Keel laying?

Admiral MICHAELIS. Yes.

Admiral GOODING. May I add something? Mr. Murphy, you said it would take something like 2 years to hire and train the people. That is approximately correct. I would like to point out that 2 years is approximately what we have with long lead funding in this year and full funding next year.

On the awarding of a contract, the first thing you do is order material. The start of fabrication is approximately 1 year after the award of the contract and the laying of the keel is about a year after that. So we have the adequate time if the Congress chooses to approve long leadtime this year and full funding next year, the time is available.

#### ADEQUACY OF SHIPYARDS TO EXECUTE THE SHIPBUILDING PROGRAM

Mr. MURPHY. When the President signed the Defense authorization bill on July 14th, he indicated in his message that a fourth nuclear attack submarine for fiscal year 1977 cannot be used owing to shipyard capacity limitations.

Is this contrary to what we have been hearing today and yesterday about the total adequacy of shipyard capacity to date to prosecute the shipbuilding program that you recommend, Admiral?

Admiral HOLLOWAY. This is a very complex question and can be viewed in several ways. One is that if we say that there is insufficient industrial capacity to build a fourth submarine in the fiscal year 1977 program, we mean that we cannot lay the keel that year. That is a correct statement.

But, as the commander of the Naval Sea Systems Command pointed out, the building of a ship is initiated with the ordering of material. We certainly have the capacity to initiate the acquisition and procurement process on that submarine.

I have made the statement that industry is responsive to the demand,

but, of course, it is not instantaneously responsive to the demands. It takes a while to gear up.

Admiral GOODING. I have assumed that what the President meant in that press release which I read Monday was that there was not existing capacity in business today, in construction of nuclear submarines, to accommodate a fourth submarine in fiscal year 1977. In actuality, there is adequate shipbuilding capacity which could be developed for this submarine. However, it is a fact that the delivery date of the fourth submarine would be pictured as if it were a fiscal year 1978 award rather than one for fiscal year 1977.

But if you want to talk total capacity, there are five shipyards which have built nuclear submarines. Therefore, the total capacity is not the limiting factor, as the CNO has stated. Capacity responds to demand. So, if it is necessary to put another shipyard into the business of building nuclear submarines, that can be easily done for a price.

Mr. MAHON. Off the record.

[Discussion off the record.]

Mr. MAHON. On the record.

#### U.S.S. *LONG BEACH*—PROPOSED CONVERSION

I would like to hear your discussion of the proposed conversion of the cruiser *Long Beach*. What is our situation with respect to that matter? The President apparently has said that this could readily be postponed. What is the Navy reaction to this? What are the pros and cons of this proposal?

Admiral HOLLOWAY. The *Long Beach* is a nuclear-powered guided missile cruiser currently in operation in the fleet. It is desperately in need of weapons system upgrading. The radars are old and difficult to maintain. The missile batteries need improvement. The Navy's proposal was that the *Long Beach* be given an overhaul in 1978 on schedule with the long-term fleet maintenance plan.

In that modernization, changes would be made to its fire control, electronics and missile system so that it would be a more capable ship in the fleet. It would however fall short of being a strike cruiser since the Aegis radar would not be installed during the 1978 overhaul. We would plan to put the Aegis on the *Long Beach* in 1984. Nuclear refueling would occur in 1988 or later.

The Navy's plan was based on the premise that it was essential to get moving with the construction of new ships. The available SCN money would be invested in modern capable new ships which would increase the size of the fleet, such as the DDG-47, for which we see a number of subsequent units, and in the strike cruiser, also the prototype of a class of ships. This would allow new construction programs to get going rather than assigning the limited SCN dollars into upgrading an existing unit which we had already planned to overhaul in 1978.

There is no question about the merit of the proposal that the *Long Beach* be converted to a strike cruiser immediately. As a matter of fact, the Navy would be delighted to have that happen. It was a question of a limited SCN budget. In the priorities of a coordinated, orderly, progressive shipbuilding program, our plans were to modernize *Long Beach* after we had gotten our new ship programs underway.

I would say one final thing, Mr. Chairman. Whatever decisions are made by the Congress, I would urge you to insure that the fiscal 1977 SCN program includes at least one ship, hopefully two and we would be delighted to have three, with the Aegis weapon system. This request is for two reasons: First, the anti-air warfare capability provided by Aegis is essential to Navy needs in the next several decades; secondly, the Aegis has been undergoing development for a number of years. It has come to fruition and we have to get it out in the fleet where it belongs so it can do us some good.

Mr. MAHON. The House Armed Services Committee, as you well know, has taken a great deal of interest in the *Long Beach* problem. There are statements with respect to the *Long Beach* which they and others who have supported the program have made. One, it has been said that the conversion of the *Long Beach* would put an Aegis system to sea from 18 months to 3 years sooner than would any other ship.

Is that correct?

Admiral HOLLOWAY. Could I ask Admiral Doyle who is the expert in the Navy on this subject to answer that, sir?

Admiral DOYLE. Mr. Chairman, the conversion of *Long Beach* could put Aegis to sea about 2 or 3 months earlier than the DDG-47, but that is all. It might be that they would come out both about the same time. The conversion of the *Long Beach* would put Aegis to sea approximately 18 to 20 months earlier than a strike cruiser, but then the strike cruiser, as I said, would be a 1978 ship whereas a DDG-47 is a 1977 ship.

Mr. MAHON. The AEGIS system, according to the Armed Services Committee as I understand it, on the *Long Beach* would be more than 90 percent compatible with AEGIS on the other ships, is that correct?

Admiral DOYLE. It will be the same configuration, same SPY-1 radar launchers and associated fire control equipment as on the DDG-47 and the strike cruiser. Yes, sir, close to 100 percent.

Mr. MAHON. It is further said that putting Aegis to sea on the *Long Beach* would give operational experience with Aegis which would be useful in making refinements necessary for later ships such as the strike cruiser. Is that a valid point?

Admiral DOYLE. It would give experience in operating Aegis but it is not the kind of experience that could be fed back into the strike cruiser since if we went ahead with those plans, those ships would already be in construction and design and well along the way before we could really factor anything back.

So there is a qualification to that point.

Mr. MAHON. Refresh my memory. What did the Senate do with respect to Aegis in the authorization bill?

Admiral HOLLOWAY. Mr. Chairman, the Senate and the House Conference omitted the DDG-47, omitted long lead money for the strike cruiser and included the Aegis conversion to the *Long Beach*. The funds involved were \$371 million, which is only part of the total cost of the conversion. The balance would be appropriated in 1978 and 1979. How much would that be, Admiral Doyle?

Admiral DOYLE. \$164 million in 1978 and \$248 million in 1979.

Admiral HOLLOWAY. So that is a total of \$783 million in 3 years to convert the *Long Beach* to a strike cruiser. I will provide a detailed summary showing how each year's funding will be used.

[The information follows:]

Proposed funding schedule for CGN-9 modernization is as follows:

	<i>Millions</i>
Fiscal year 1977—Long lead (ordnance in particular)-----	\$371
Fiscal year 1978—Design, long lead material, and prefabrication-----	164
Fiscal year 1979—Production installation and test-----	248

The fiscal year 1977 funding is to be used to procure long lead time Government furnished equipment to allow timely check out and grooming at a shore site and then to permit controlled delivery to the shipyard for installation. The major items include:

	<i>Millions</i>
a. AEGIS MK-7 weapons system-----	\$265
b. GMLS MK-26 mod 2 (2 each)-----	40
c. MK-71 gun (8" MCLWG)-----	26
d. Other-----	40

NOTE.—Other includes such items as communications equipment, MK 86 FCS, combat system switchboards, switchboards and switchgear for 60 Hz system, SLCM consoles, centrifugally cast sleeve bearings for the main shafts, and ship acquisition project manager management support.

The fiscal year 1978 funding is to be used to continue long lead procurement to fund detail design, and to start the necessary prefabrication work. The major items include:

	<i>Millions</i>
a. Detail design (NAVSEC, Puget Sound Naval Shipyard and commercial design agent)-----	\$29
b. Prefabrication, detail planning and shipyard procurement-----	37
c. Long lead for propulsion planning and procurement-----	27
d. Other ordnance long lead-----	21
e. Documentation support and systems engineering-----	16
f. Other-----	21
g. Project Manager's reserve-----	13

NOTE.—Other includes items such as integration and test support, systems engineering, hull mechanical and electrical long lead items, Test Development Director support, and ship acquisition project manager management support.

The fiscal year 1979 funding is to be used to fund the actual conversion; installation and check out, alternations equivalent to repair, normal repair item etc. Major items include:

	<i>Millions</i>
a. Combat system conversion (manpower and material)-----	\$66
b. Nuclear propulsion repair and alternations-----	29
c. TYCOM repair items-----	18
d. SHIPALTS-----	14
e. Integration and test support-----	30
f. Other-----	22
g. Escalation-----	26
h. Change orders-----	13
i. Project manager's reserve-----	30

NOTE.—Other includes such items as systems engineering, ships qualification tests, consolidated operability tests, Test Development Director support, ship acquisition project manager management support, accommodations barge.

To insure an additional 30 years of supportable life, many of the ship's distributive systems will be reviewed for adequacy, and supportability. These systems include:

- a. 60 Hz Power Distribution.
- b. 400 Hz Power Distribution.
- c. Heating, Air Conditioning and Ventilation System.
- d. Ships Dry Air System.

e. Electronics Cooling System.

f. Interior Communications System.

g. Aircraft Handling and Shipborne Flight Safety Systems.

In the field of habitability there are significant maintenance problems in the laundry, galley and scullery, which must be corrected.

Mr. MAHON. Remind us again how old the *Long Beach* is.

Admiral HOLLOWAY. It was commissioned in 1961. I would point out, Mr. Chairman, that our original plans were to overhaul *Long Beach* in 1978 to give it a fleet anti-air capability equivalent to the most modern suites on ships currently in the fleet. In 1984, the ship would be converted to a strike cruiser. It would gain a service life extension similar to what we plan to accomplish for the carriers, which would extend its total life for a period of 10 to 15 years.

We would not undertake the strike cruiser Aegis conversion without a substantial upgrading of all systems. This action would probably push its total life span out to 40-45 years or more, as the time spent in these conversions would not be included as service life.

#### DISADVANTAGE OF DELAY IN GETTING AEGIS TO SEA

Mr. MAHON. What is the great advantage of getting Aegis to sea at the earliest possible moment? What is the disadvantage of some delay?

Admiral HOLLOWAY. There are two disadvantages, Mr. Chairman. The first is an industrial one. This system has been under development for 6 years or more. As a matter of fact, some sectors of the Congress have indicated that unless we get Aegis to sea as an operating system this year that they are simply going to do away with it and wait for the next generation system to come along. Aegis is developed. It is ready to go. We should get it into the fleet.

The second point relates to naval capability. In our analytical studies, we compared the capability of the U.S. Navy against the capability of the Soviet Navy 10 years from now to determine if we could carry out our mission, or whether they could prevent us. The analyses determined that the U.S. Navy's most severe deficiency would be our ability to defend against high speed air targets, which could be cruise missiles or high performance aircraft.

The defense against air systems has to be multilayered. Our fighter aircraft can shoot down their aircraft, but where cruise missiles are launched from close-in, hostile submarines, only Aegis is effective because it can track numerous targets simultaneously with practically instantaneous response. The Aegis system will not only detect and track enemy incoming missiles but also guide up to ——— of our own missiles to intercept.

Therefore, it is imperative that we get Aegis to sea to fill this critical deficiency in our naval capability of the next decade.

#### EFFECTIVENESS OF AEGIS SYSTEM

Mr. MAHON. I understand that Aegis has its fans. Some people are very enthusiastic about it. The mission, of course, of Aegis is important. Now just how much confidence can we have in the effectiveness of the Aegis system?

Admiral HOLLOWAY. Mr. Chairman, we have today an Aegis sys-

tem operating in the U.S.S. *Norton Sound*, which is a test and evaluation ship. Of the last 15 shots, 14 have been direct hits. It is simply astounding what this Aegis system can do against high speed targets at high altitude, at low altitude, in incoming or crossing situations.

Mr. SIKES. Off the record.

[Discussion off the record.]

Mr. MURPHY. The Aegis on the *Norton Sound* I believe is more like a partial Aegis?

Admiral HOLLOWAY. Yes, sir.

Mr. MURPHY. The shot you had is the SM-1 missile?

Admiral HOLLOWAY. Yes, sir.

Mr. MURPHY. It has not been used with the SM-2 missile. I think that is the missile designed to be used with Aegis eventually.

When will you build an all-up Aegis with 360-degree capability, proper software, and weapons fire control system at a test bed site so that it can be tested with the SM-2 missile?

Admiral HOLLOWAY. May I ask Admiral Doyle to answer that one?

Mr. MURPHY. You can put that in the record, Admiral.

[The information follows:]

The first testing of SM-2 with Aegis components has been accomplished at White Sands Missile Range. Testing of Aegis/SM-2 in U.S.S. *Norton Sound* will commence this fall using Aegis engineering development model, EDM-1.

In addition, a combat system engineering development site at Moorestown, N.J., is in process, and testing with a two-face (180-degree) Aegis will start in 1978. Simulations of the SM-2 missile will be used.

The first four-face (360-degree) testing of Aegis/SM-2 will be aboard the first Aegis combatant ship.

Mr. MURPHY. I believe you said that the *Long Beach* was delivered in 1961, is that right?

Admiral HOLLOWAY. It was commissioned in September 1961.

#### CONVERSION OF THE *LONG BEACH* TO THE AEGIS SYSTEM

Mr. MURPHY. It is 15 years old now. I believe your statement indicates that normally ships have a life expectancy of 25 to 30 years. How long will it take to convert the *Long Beach* to the Aegis system?

Admiral DOYLE. Thirty-three months.

Mr. MURPHY. Thirty-three months. Then it will come back later for recoring and for other work.

Admiral HOLLOWAY. In the early 1990's if the Aegis conversion is accomplished in the late 1970's.

Mr. MURPHY. The early 1990's. How long will it be out of commission then?

Admiral HOLLOWAY. About 2 years.

Admiral DOYLE. I would say on the recoring that it can be done in about 1½ years if it is just the nuclear recoring.

Mr. MURPHY. No. I mean the plan you have.

Admiral HOLLOWAY. The initial plan would be in 1978 to put the ship in for an AAW modernization to update the missile systems that are currently installed. This will give it a capability that is equal to the systems in the fleet now and take it into the early 1980's. That would be an 18-month overhaul.

In 1984 we would bring the ship in for its Aegis conversion for 36 months. Thereafter, whenever it is determined to be the appropriate point in core life, we would recore the ship.

Mr. MURPHY. You would have it out of commission 18 months to 2 years, then you would have it out close to 3 years. Would there be another overhaul in its life?

I am trying to determine how many years of actual use you would have left in the *Long Beach*? It is 15 years old now.

Admiral DOYLE. Yes. And we are figuring on operating with a service life extension during her Aegis conversion for probably 40 to 45 years.

Mr. MURPHY. Can you do that with all Navy ships; can they now last 35 or 40 years with a service life extension program?

Admiral HOLLOWAY. I would say that with the kind of investment that we would put into a service life extension program, we could push 40 to 45 years.

The SLEP is expensive and we only do it for very high investment systems.

Mr. MURPHY. Could you put in the record then, according to the current plans, if this were funded, how many months it would be out for updating its antiaircraft suit, then later on how much it will be out of commission for the Aegis system installation and the service life extension and so forth, so we can determine how many years of use you will have in the *Long Beach*?

Admiral HOLLOWAY. Yes, sir.

[The information follows:]

With the current Navy recommended plan in support of the President's budget, *Long Beach* would be operated and overhauled approximately as shown in the following table:

July 1976 to September 1978: Operating—27 months.

October 1978 to February 1980: Overhaul.

March 1980 to December 1983: Operating—46 months.

January 1984 to January 1987: Modernize.

February 1987 to December 2006: Operating—239 months.

This shows 312 months or 26 years of operating time. During the latter operating period, some time in the early 1990's, the nuclear powerplant will require a new core. The ship will be in the shipyard for approximately 18 months for that work. In addition, the latter operating period will include regular overhaul periods, but it is anticipated that *Long Beach* will be available for about 23 or 24 years of operations if this plan is followed.

In the event the ship is authorized for conversion in the fiscal year 1977 budget, the operating/conversion cycle will be approximately as follows:

July 1976 to September 1978: Operating—27 months.

October 1978 to October 1981: Conversion.

November 1981 to August 2005: Operating—285 months.

Again the plan includes 312 months or 26 years of operating time. The requirements for regular overhauls and a new core for the nuclear power will shift to some extent under this plan, but the total operating life will remain approximately the same. The October 1978 to October 1981 conversion will include the installation of the Aegis system.

Mr. MURPHY. Do you believe, Admiral, that this *Long Beach* conversion could be deferred until next year?

Admiral HOLLOWAY. Yes, sir. I think it is practical to defer it until next year.

I would point out, in tab C to my statement, that this is the President's budget as amended. I was involved in the formulation of the

original President's budget which was submitted in January. Therefore, that represented my position.

Further, I was consulted and had the opportunity to contribute to the NSC deliberations which led to the amendment which was submitted in May.

The point I am trying to make, Mr. Murphy, is that this is the President's budget for SCN, and, of course, not only do I support the President's budget but want to assure the committee that I was heavily involved in its formulation.

#### LIFESPAN OF A CARRIER AFTER SLEP PROGRAM

Mr. MURPHY. How many years do you expect to realize in our aircraft carriers after a SLEP program?

Admiral HOLLOWAY. About 15 years.

Mr. MURPHY. About 15 more years?

Admiral HOLLOWAY. Yes, sir.

Mr. MURPHY. Of the normal life of what, 25 or 30 years?

Admiral HOLLOWAY. We look at the normal lifespan of a carrier as being about 30 years; this is plus or minus a few years, depending upon how well-constructed the ship was initially. As you know, some yards produced better ships than others.

The second consideration is how hard that carrier has been used during its lifetime. We have found, for example, in the case of the *Essex* class carriers, that after about 30 years such things as the propeller shafts break and drop off. Major breakdowns occur to the ships which are not ones that can be simply pasted over.

The great advantage of the carrier in a SLEP program is that we can restore the strength of the ship without a large investment in its weapons system, because the carriers weapons system are the aircraft that are embarked. Essentially in a carrier SLEP, we maintain its combat capability out into the future by refurbishing its hull and its propulsion plant. Then, by putting on modern aircraft, we provide the update of the weapons system.

In the case of *Long Beach*, Aegis will provide the new weapons system in the eighties, and then the hull systems will be upgraded in order to extend the service life and make the investment in Aegis cost effective.

#### AEGIS DESTROYER AND AEGIS STRIKE CRUISER

Mr. MURPHY. Why do you propose to build both a DDG-47 Aegis destroyer and a CSGN Aegis strike cruiser? If the conventional destroyer can do the job, why do you need a nuclear-powered strike cruiser?

#### CSGN

Admiral HOLLOWAY. The all-nuclear-powered task forces, which have a unique capability in that they can be immediately dispatched in time of tension, to proceed at high speed regardless of distance to the scene of a crisis without pausing to replenish or refuel, and arrive in the objective area ready for combat, must be equipped with the Aegis system. These task forces can remain in the objective area until

the crisis has been resolved or retire at high speed to join up with the logistics train.

The Aegis system will permit naval forces to defeat large numbers of sophisticated air weapons systems including cruise missiles. To maintain the advantage of an all-nuclear task force, the cruisers in which Aegis is installed must also be nuclear powered. The additional weapons suite in the strike cruiser further adds flexibility to the carrier and its task force by complementing the carrier's weapons systems both offensively and defensively. Strike cruisers will also operate in areas of the world's oceans where U.S. Naval presence is required to protect our interests and conduct naval warfare when carrier forces are required elsewhere. The strike cruiser, the most advanced iteration of a surface combatant, is designed to do this.

#### DDG-47

The Aegis equipped DDG-47, although lacking the endurance at the high extended speeds required of a nuclear powered ship in nuclear powered task force without refueling, is the most heavily armed and generally capable surface combatant in our Navy with the sole exception of the strike cruiser. The DDG-47, with her superb AAW and ASW systems, will operate primarily with conventionally powered task forces, amphibious task forces, and logistic forces in high threat areas. The DDG-47 is a ship with a configuration maximized for task force operations, but a ship which also possesses a substantial offensive capability—a powerful warship which can fill a vital need in the U.S. Navy order of battle.

This mixed CSGN/DDG-47 program is the most achievable means available to get the Aegis system to sea at the earliest practicable time in the numbers required.

In summary, the DDG-47 cannot perform the mission called out for the DSGN; the CSGN is required. On the other hand, the DDG-47 does have a distinct mission to perform with conventionally powered forces and is also required.

Mr. MURPHY. What are the pros and cons of each type Aegis ship?

Admiral HOLLOWAY. Although the CSGN and DDG-47 will each be equipped with Aegis both ships are needed to perform different missions and therefore they cannot be compared from a pro-con standpoint. With Aegis plus advanced antisubmarine and antisurface systems, the CSGN and DDG-47 will be the most highly capable surface combatants in the fleet. Because the CSGN is needed to operate with all nuclear task groups in the highest threat areas and/or independently in the remote areas of the world's oceans, she is armed with the Tomahawk cruise missile, a larger gun, and a greater number of antiwar and antisurface missiles than the DDG-47. She is also designed with more extensive command and control capabilities and passive survivability features.

Both ships will capitalize on commonality, with each other and with existing ships to realize cost benefits associated with reduced design requirements and fleet standardization. The DDG-47 is a "forward fit" of the DD-963 *Spruance* class employing the same hull and virtually identical propulsion system. The CSGN will employ an

upgraded version of the D2G reactor currently in the U.S.S. *Virginia* (CGN-38) and will maintain, where their mission requirements are similar, maximum combat system commonality with the DDG-47, both in hardware and software.

The primary issue that has been raised with regard to the CSGN is cost. With the DDG-47 concern has been expressed with regard to vulnerability and stability.

#### CSGN COST

The need for great combat capabilities and survivability features was discussed above. With regard to nuclear power, studies of the life-cycle costs of nuclear and non-nuclear task groups of roughly equal capability show that the total cost differential is much smaller than the procurement cost difference suggests. The demonstrated military worth of nuclear power clearly warrants that only nuclear propulsion be considered for large deck carriers. Cruisers which accompany these nuclear aircraft carriers must be compatible ships that are capable of operating in the high threat situations, capable of steaming at high speeds for indefinite periods and capable of providing the requisite military support for task group effectiveness. We also have requirements for ships with these characteristics which can operate independently of carriers. Ships with these capabilities must be nuclear powered.

#### DDG-47 STABILITY/VULNERABILITY

The DDG-47 will meet or exceed all applicable stability and buoyancy criteria of U.S. warships in both intact and damaged condition; she compares favorably with, and exceeds most existing ships of her size in this respect. Design margins for weight and stability, and for weight growth during the lifetime of the ships, also conform to normal practice for U.S. warships. The ship's powerful array of weapons combined with her stability in the damaged condition and other passive protection features, such as redundancy of systems and shock resistance, provide excellent survivability compared to other ships of her size. The Navy has full confidence in the technical excellence of the DDG-47 design.

Mr. MURPHY. There has been criticism that the DDG-47 Aegis destroyer, a variant of the DD-963 destroyer, will result in a top-heavy, marginally seaworthy ship, with critical electronic equipment virtually unprotected in the topside superstructure. How do you answer such criticism?

Admiral HOLLOWAY. Addition of the Aegis system and other improvements to the baseline DD-963 does not result in a top heavy or unstable ship. Preliminary Design, recently completed, confirms that the DDG-47 will meet or exceed all applicable stability and buoyancy criteria of U.S. warships in both intact and damaged condition; it compares favorably with, and exceeds most existing ships of its size in this respect. Design margins for weight and stability, and for weight growth during the lifetime of the ship, also conform to normal practice for U.S. warships. The ship's powerful array of weapons combine with its stability in the damaged condition and other passive protection features, such as redundancy of systems and shock resistance, to provide excellent survivability compared to other ships of its

size. The Navy has full confidence in the technical excellence of the DDG-47 design and in her prospects for survivability in battle.

Mr. MURPHY. In a recent TV program entitled "Rise of the Red Navy", a program in which you appeared, it was pointed out that in naval ship construction, the Soviets place their priorities first on weapons, second on propulsion, followed by electronics, endurance and habitability, in that order. Reportedly, these were the same order of priorities upon which our own World War II ships were designed and built. The program explained that today, U.S. warships are designed and built with emphasis first on electronics, second on habitability, third on endurance, fourth on weapons and lastly on propulsion. Admiral Holloway, do you agree with that assessment?

Admiral HOLLOWAY. In a word, no.

The statement, like most generalities, is quite misleading.

In the case of Soviet ship construction, the assessment is intended to support the postulate that ship design is determined by the strategy, and this is true. With the mission of interdicting the sea lines of communication of the western powers, operating relatively close to friendly bases, and facing a formidable U.S. Naval and Air Force, earlier Soviet ships tended to be small, fast, and with multiple weapons in topside launchers. All of these are characteristics of a surprise attack strategy or hit-and-run tactics.

However, recent additions to the Soviet fleet such as the Moskva, Kara, and Kiev classes of surface ships, and the new nuclear submarines do not at all fit the suggested order of priorities, but are quite similar in design and construction to their counterparts in the U.S. and allied navies.

In the case of U.S. naval ship construction, it should be first made clear that our ships are not designed around these fixed sets of priorities. Each class of U.S. naval ship is designed to fulfill a mission which is to be carried out against the perceived technological weapon threat, and in coordination with other U.S. Forces. Therefore, priorities will vary widely with different classes. Certainly propulsion and endurance rank high in nuclear-powered ships. Conversely, habitability must be ranked low on U.S. submarines and carriers in comparison with other ships. Weapons have the highest priority in all U.S. naval ships, but these are not necessarily guns or missiles. The carrier's weapons are its aircraft, marines in the amphibious, and in a fleet oiler its main battery is considered to be the refueling rigs.

The process of determining the characteristics of U.S. naval ships is described in more detail on pages 9-11 of my statement submitted for the record.

#### DESIGN PRIORITIES OF U.S. WARSHIPS

Mr. MURPHY. In your professional opinion, have we misplaced our priorities in designing our warships? If so, in what areas, and how has this contributed to the inordinate cost of our Navy ships?

Admiral HOLLOWAY. The design priorities of U.S. warships are in the correct balance when all factors influencing these priorities are taken into account—that is, missions, roles, living standards, and so forth.

The ranking or emphasis placed on various design areas has very little influence on the overall cost of a ship. It is the sum total of the

ship design requirements and the economic facts of shipbuilding that determine the costs of our Navy ships. The price of our warships is very high but the increase in these costs is a reflection of advances in technology, economic change, and social influences.

As an example, an increase in ship cost devoted to habitability is not necessarily an indication of a decrease in combat capability. An estimate made in 1972 indicated that habitability and personnel support had increased the total cost of a ship approximately 0.8 to 1.1 percent. At the same time, environmental requirements resulted in a cost increase of 1.2 to 1.5 percent. In both cases the cost of the ship increased but not at the expense of combat capability. On a volumetric basis, a combat system is allocated approximately 20 percent of the total volume of the ship. Advances in technology over the past years and projected into the future have enabled the Navy to put more combat capability into the same volume. Additionally, systems having multimission capability and advanced electronics—for example, microminiature circuitry—have reduced the total volume required and at the same time have increased system capability and reliability.

#### REDUCING AND CONTROLLING SHIP COSTS

**Mr. MURPHY.** In your judgment, what can be done to reduce the cost of war ships and cause them to be delivered within the scheduled timeframe?

**Admiral HOLLOWAY.** The Navy has always had a goal toward reducing and controlling ship costs. There have been innumerable studies, reports, and recommendations just to that specific goal. A study conducted for the Secretary of the Navy in 1939 addressed—"Why do naval vessels cost so much? How can the cost of naval vessels be controlled?" The study analyzed the many influences and made historical comparisons. The conclusions of that study are as valid today as they were in 1939. That costs are affected the same way that the cost of living is affected from an economic, social, and technical point of view.

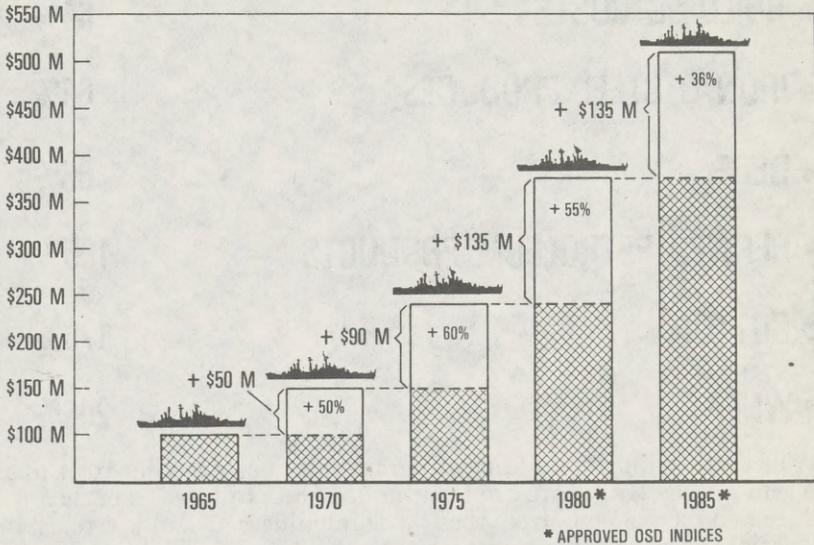
The many subsequent studies continue to address this problem. Some of the studies used different approaches and some developed different recommendations. However, the overriding problem has always been inflation. In spite of this overall conclusion we are actively reviewing the application of our technical specifications and standards to identify the cost drivers. Many cost tradeoffs are conducted in the early design stage to minimize the size of ships needed. Offsetting some of these gains in cost reduction are the increased cost for true technological improvement. We recognize the Navy has been criticized at times for overemphasis of inflation. We have not and do not identify inflation as the sole cause for cost increases, notwithstanding that it has had a great impact. During the congressional hearings we have attempted to identify our other problems namely the shipbuilding market conditions with limited competition and higher overhead and profit costs. We have had quantity changes, program changes, technical changes, poor performance, and claims.

Nevertheless, at the risk of being criticized again for overemphasis on inflation I must repeat inflation has been the greatest driver of ship costs.

Figure 1 is presented to illustrate the compounding effect and how a small increase in the percentage rate significantly affects the total dollars. Moreover it shows how a hypothetical ship to 1965 standards and level of technology costing \$100 million will cost over one-half billion dollars in 1985 even assuming greatly reduced inflation in the outyears. Since we are already estimating ships, in the 5-year defense plan, for the 1980's you can see why relatively simple naval auxiliaries and small combatant ships can approach a \$500 million price tag. Inflation has not only affected shipbuilding costs, many other consumer items as well. Figure 2 is a comparison of shipbuilding costs to private consumer items for a 5-year period.

## SHIP PRICE INFLATION

(EXACT SAME SHIP, NO CHANGE TO SPECIFICATIONS, WEAPONS, SYSTEMS OR PERFORMANCE)



## INFLATION - 5 YEAR EFFECT (10/70 - 10/75)

	% CHANGE
● SHIPBUILDING COST (BLS INDICES)	52%
● SHIPBUILDING PRICE (MARKET PRICE)	58%
● BUILDING COSTS	64%
● IRON & STEEL PRODUCTS	68%
● BEEF	68%
● REFINED PETROLEUM PRODUCTS	165%
● COTTON	176%
● WHEAT	206%

Fluctuations in shipbuilding programs make contracting for ships difficult and costly. There are those added costs to hire, train, layoff, rehire and retrain employees that the shipbuilders are subject to. Stabilization of naval ship procurements should provide the industry some assurance of continued work load and better enable the industry to plan schedules and resources utilization that should result in better schedule performance, greater productivity, and more predictable costs.

In summary, we have and will continue to strive to reduce ship costs to the extent possible through management and technical improvement programs. The outlook is however bleak unless inflation can be kept under control.

### DELIVERY DATE SLIPPAGE OF SHIPS

Mr. SIKES. How many total years have our ships under construction or on contract slipped their schedules from the original contract delivery dates, and how many ships are involved?

Admiral MICHAELIS. Based on the original contract delivery date 62 ships have experienced delivery date slippage in the aggregate, totaling 87 years and 6 months. These figures are derived from a total of 78 U.S. Navy ships under construction.

Mr. SIKES. Will you provide a table for the record showing the hull number, the shipyard, the contract delivery date, the current estimated delivery date, and the month or years each ship is behind its scheduled delivery date? Identify those not on contract with their proposed contract delivery dates.

[The information follows:]

Fiscal year and ships	Shipbuilder	Current contract delivery date (fiscal years)	Current estimated delivery date (fiscal years)	Months each ship is behind its scheduled delivery date
1973: FFG-7	Bath Iron Works	3d quarter, 1977	1st quarter, 1978	
1975: FFG-8	do	2d quarter, 1980	2d quarter, 1980	
1976:				
FFG-11	do	3d quarter 1980	3d quarter, 1980	
FFG-13	do	1st quarter, 1981	1st quarter, 1981	
FFG-15	do	2d quarter, 1981	2d quarter 1981	
FFG-16	do	3d quarter, 1981	3d quarter, 1981	
1974: DDG-41(C)	Boland Marine	4th quarter, 1976	1st quarter, 1977	7
1970: SSN-690	Electric Boat (General Dynamics)	3d quarter, 1976	do	9
1971:				
SSN-692	do	1st quarter, 1977	3d quarter, 1977	18
SSN-694	do	3d quarter, 1977	1st quarter, 1978	17
1972:				
SSN-696	do	4th quarter 1977	3d quarter, 1978	7
SSN-697	do	1st quarter 1978	4th quarter, 1977	10
SSN-698	do	2d quarter 1978	1st quarter, 1979	8
SSN-699	do	4th quarter, 1978	2d quarter, 1979	7
1973:				
SSN-700	do	1st quarter, 1978	3d quarter, 1979	20
SSN-701	do	2d quarter, 1978	4th quarter, 1979	18
SSN-702	do	4th quarter, 1978	1st quarter, 1980	17
SSN-703	do	1st quarter, 1979	2d quarter, 1980	16
SSN-704	do	2d quarter, 1979	3d quarter, 1980	17
SSN-705	do	3d quarter, 1979	4th quarter, 1980	16
1974:				
SSN-706	do	4th quarter, 1979	1st quarter, 1981	15
SSN-707	do	2d quarter, 1980	2d quarter, 1981	13
SSN-708	do	3d quarter, 1980	3d quarter, 1981	13
SSN-709	do	4th quarter, 1980	4th quarter, 1981	12
SSN-710	do	2d quarter, 1981	1st quarter, 1982	11
SSN-726	do	3d quarter, 1979	1st quarter, 1979	
1975:				
SSBN-727	do	4th quarter, 1980	1st quarter, 1980	
SSBN-728	do	1st quarter, 1981	4th quarter, 1980	
1976: SSBN-729	do	4th quarter, 1981	3d quarter, 1981	
1970:				
LHA-2	Ingalls Division (Litton Ind.)	2d quarter, 1976	3d quarter, 1977	19
LHA-3	do	4th quarter, 1976	3d quarter, 1978	25
1971:				
LHA-4	do	19 Transition quarter	1st quarter, 1979	26
LHA-5	do	2d quarter, 1977	3d quarter, 1979	28
DD-966	do	1st quarter, 1976	19 Transition quarter	13
DD-967	do	2d quarter, 1976	1st quarter, 1977	12
DD-968	do	3d quarter, 1976	do	9
DD-969	Ingalls Division	4th quarter, 1976	2d quarter, 1977	9
DD-970	do	19 transition quarter	do	9
DD-971	do	do	3d quarter, 1977	10
1972:				
DD-972	do	do	do	8
DD-973	do	1st quarter, 1977	4th quarter, 1977	9
DD-974	do	do	do	9
DD-975	do	2d quarter, 1977	do	10
DD-976	do	do	1st quarter, 1978	10
DD-977	do	do	2d quarter, 1978	12
DD-978	do	do	do	13
1974:				
DD-979	do	3d quarter, 1977	3d quarter, 1978	13
DD-980	do	do	do	13
DD-981	do	4th quarter, 1977	4th quarter, 1978	13
DD-982	do	do	do	13
DD-983	do	do	do	13
DD-984	do	1st quarter, 1978	1st quarter, 1979	14
DD-985	do	do	2d quarter, 1979	14

Footnote at end of table, p. 220.

Fiscal year and ships	Shipbuilder	Current contract delivery date (fiscal years)	Current estimated delivery date (fiscal years)	Months each ship is behind its scheduled delivery date
1975:				
DD-986	Ingalls Division	1st quarter, 1978	2d quarter, 1979	14
DD-987	do	2d quarter, 1978	do	14
DD-988	do	do	3d quarter, 1979	14
DD-989	do	2d quarter, 1978	do	14
DD-990	do	3d quarter, 1978	do	14
DD-991	do	do	4th quarter, 1979	14
DD-992	do	do	do	14
1972: AS-39	Lockheed Shipbuilding	4th quarter, 1978	4th quarter, 1978	
1973: AS-40	do	2d quarter, 1979	2d quarter, 1979	
1975: T-AFT-166	Marinette Marine	4th quarter, 1978	4th quarter, 1978	
1972: AOR-7	National Steel & Shipbuilding	4th quarter, 1976	19 transition quarter	9
1970:				
CGN-39	Newport News	4th quarter, 1975	do	15
CVN-69	do	2d quarter, 1977	do	5
SSN-688	do	2d quarter, 1975	19 transition quarter	23
SSN-689	do	4th quarter, 1975	3d quarter, 1977	23
1971:				
CGN-39	do	3d quarter, 1976	4th quarter, 1977	18
SSN-691	do	1st quarter, 1976	1st quarter, 1978	26
SSN-693	do	3d quarter, 1976	3d quarter, 1978	27
1972:				
CGN-40	do	19 transition quarter	4th quarter, 1978	22
SSN-695	do	do	1st quarter, 1979	28
1974: CVN-70	do	4th quarter, 1980	4th quarter, 1980	
1975:				
CGN-41	do	1st quarter, 1979	3d quarter, 1980	19
SSN-711	do	4th quarter, 1980	4th quarter, 1980	0
SSN-712	do	3d quarter, 1981	3d quarter, 1981	
SSN-713	do	2d quarter, 1982	2d quarter, 1982	
SSBN-622(C)	do	19 transition quarter	1st quarter, 1977	
1976:				
SSN-714	do	4th quarter, 1982	4th quarter, 1982	
SSN-715	do	2d quarter, 1983	2d quarter, 1983	
1975: SSBN-625(C)	Portsmouth Naval Shipyard	1st quarter, 1977	3d quarter, 1977	5
1974: CGN-25(C)	Puget Sound	3d quarter, 1976	19TQ	
1975:				
FFG-9	Todd Shipbuilding (Los Angeles)	2d quarter, 1980	2d quarter, 1980	
FFG-10	Todd Shipbuilding (San Pedro)	do	do	
1976:				
FFG-12	Todd Shipbuilding (Los Angeles)	4th quarter, 1980	4th quarter, 1980	
FFG-14	do	1st quarter, 1981	1st quarter, 1981	
1975: AJ-41	National Steel & Shipbuilding	2d quarter, 1980	2d quarter, 1980	
1976: AD-42	do	4th quarter, 1980	4th quarter, 1980	
Approved ships not awarded				
1975:				
PHM-3			3d quarter, 1980	
PHM-4			4th quarter, 1980	
PHM-5			1st quarter, 1981	
PHM-6			do	
1976:				
AO-177			1st quarter, 1980	
AO-178			2d quarter, 1980	

<sup>1</sup> When more than 1 ship of the same class are requested from Congress in 1 fiscal year, only the delivery dates for the 1st and last ships in the class have been estimated in fiscal year 1972 and subsequent requests. The SSN-696 through SSN-699 were requested as part of a 5-ship procurement, in which the first ship, SSN-695 was awarded to Newport News. For reference purposes, the initial ship delivery date estimated for the SSN-695 when these ships were requested was in the transition quarter, fiscal year 197Q. Whenever possible dates will be shown for the 1st and last ships of a class requested in a fiscal year.

Mr. MURPHY. If all the ships under contract had been delivered on schedule would you have had the trained and skilled personnel available at the time to man those ships with a full crew complement? If not, what percentage of shortages would you have experienced?

Admiral HOLLOWAY. The required quantity and quality of officers would have been available had those ships been delivered on schedule. In the case of fleet ballistic missile submarines (SSBN) and DD-963 class destroyers, skilled enlisted personnel have been, and will

continue to be, available to man these ships to full allowance by virtue of the high manning priority assigned to these units. For attack submarines (SSN) and all other surface ships under construction, manning would have been 100 percent of allowance. However, Navy-wide shortages of petty officers would have resulted in these ships being manned to approximately 94.5 percent of petty officer allowance. Petty officer shortages would have been offset by the assignment of additional nonrated personnel. Specific manning shortfalls may have been experienced in those skills which are currently critically undermanned.

Mr. SIKES. At the time of our hearings, the Navy had not awarded construction contracts for a CVN nuclear-powered aircraft carrier funded in fiscal year 1974, for an AD destroyer tender funded in fiscal year 1976, and for two AO fleet oilers funded in fiscal year 1976. Are these four ships now under definitized contracts? If not, what are the problems?

Admiral MICHAELIS. The original Navy target of September 1974 for definitization of the contract to construct CVN-70 was not met. The president of Newport News Shipbuilding & Dry Dock Co. stated in testimony before the Seapower Subcommittee of the House Armed Services Committee on August 6, 1974, that certain agreements with the Navy must be reached before the new Navy shipbuilding contracts will be undertaken. This policy decision has affected progress toward CVN-70 negotiations. In an effort to secure a definitized contract for construction of the CVN-70 at the earliest possible date, the Navy revised its negotiating plan to accommodate incremental negotiations in these areas where progress could be made. These negotiations, which were primarily concerned with the technical baseline have been completed. We are currently awaiting the shipbuilder's submission of the updated pricing proposal for CVN-70.

The fiscal year 1976 AD was awarded as option on March 11, 1976, to National Steel Shipbuilding Co. The two fiscal year 1976 AO's are scheduled for award in August 1976. The award has been delayed at the request of bidders who need more time in order to submit responsive proposals.

Mr. MURPHY. Would you like to get into shipbuilding claims now, Mr. Chairman?

Mr. SIKES. I think that would be well.

Let me first see if there are questions from the committee members.

Mr. Burlison?

Mr. BURLISON. No questions.

Mr. SIKES. On my left are there questions?

#### CONGRESSIONAL SUPPORT ON SHIPBUILDING AND OVERHAUL WORK

Mr. EDWARDS. I have a general question I would like to ask. I wrote this down, so I hope I can say it the way I meant to say it.

If you could have Congress give you the ultimate support in shipbuilding and in overhaul, what would you propose regarding authorization and funding? Maybe you want to think on that and come back.

Admiral HOLLOWAY. If I could, sir. I do not think I have ever been offered such a deal before.

Mr. EDWARDS. You may not get it. But we have been talking about—

Mr. SIKES. I would take that one off-the-cuff right quickly.

Mr. EDWARDS. We have been talking about the shipyards generally arising to the occasion when they know what the occasion is. We have been talking about problems of authorizing long leadtime items and when you get enough of a go-ahead so you can say to a shipyard: Yes; you can gear up because we are going to build this, you have problems of inflation and all the rest.

The more I think about it, it may not be something you ought to try to answer now. I think it is something that ought to be answered.

Admiral HOLLOWAY. Yes, sir.

Mr. EDWARDS. If you had your "druthers," as we say back home, what would you "druther" we do to get you the ships built in the quickest possible way, in the most efficient way, and in a way that would engender a good workable relationship with those shipyards?

Admiral HOLLOWAY. Well, sir, if I could just very quickly answer it and then be permitted to expand in the record.

I will go back to the premise that I presented yesterday. If the Congress would approve a 5-year shipbuilding program in a way to give it high credibility, it would enormously help the shipbuilding industry. Because it would permit them to plan their workload and their capital inventory. In addition, I think it would give the Congress a sense that they had better control over the direction in which the Navy was going.

[The information follows:]

I have mentioned previously in this testimony the process presently in use to determine size and composition of our naval forces, and my statement discusses it at considerable length. Implicit in this process is the formulation of judgments which cause debate among reasonable men. Fundamental to such a debate is the determination of risk. What levels of forces provide acceptable levels of risk? Obviously, this is a dynamic problem. On one end of the scale of forces is the zero point where risk is maximum. The other end of the scale is not so easily perceived. Risk can never be zeroed out. One is faced with making a value judgment that a certain force structure will be able to carry out our national strategy at acceptable levels. In addition force structure can change as new weapons become available. That is, new weapons technology may allow us greater efficiency in dealing with a given threat. Indeed, the threat may change in ways that cause us to change our force structure in response. Finally, the threat driven technology and inflationary pressures significantly influence the costs of shipbuilding. Consequently, because of the dynamics of the problem, it is not inconsistent for the current request to be different in some details from that of my predecessor. However, the recommended program is by no means entirely new. There are changes, and, undoubtedly, my successor will have a program with some differences, not entirely new, but one that will be the best judgment of what is required in the face of the threat at that time at acceptable levels of risk. The changes are more likely to occur in the outyears, reflecting the narrowing of uncertainty as we approach those years. A broad comparison of the current plan with that recommended by my predecessor will not show, however, differences as great as the question suggests.

Mr. EDWARDS. By approved, do you mean authorized?

Admiral HOLLOWAY. I am not sure if that is feasible. That would be the ideal situation. If it were a perfect world, it could be a 5-year authorization. However, realistically I think there are pros and cons. Although it would provide stability, it also could cause inflexibility. We would need provisions to be able to change the plan as new technology developed or as a new threat emerges. I have come to the conclusion that 5 years is a pretty good planning period. Even if new threats do appear or new technologies arise, we really cannot incorporate the associated hardware systems into operating ships until about 5 or 6 years later because of R. & D. and production leadtimes.

I feel we should consider very seriously a 5-year authorization. Then I believe we should examine very carefully means to provide some form of allocation of ships to the industry. This would allow all sectors of the shipbuilding industry a balanced workload and provide the opportunity for different yards to specialize and keep the industry healthy.

Then, third, I think we have to write better contracts and make sure that we properly spread the share of responsibility if things go wrong. Part of this would be to insure realistic delivery dates for ships.

Those three steps could help a great deal in improving our ability to produce good ships in a timely fashion.

Mr. EDWARDS. I really want you to expand on that for the record, so kind of get your troops together. And for my part, this may be the biggest question I will ask in this 2-day period. I would like to have a good answer to it.

Admiral HOLLOWAY. Mr. Edwards, we are just delighted to have the opportunity to—

Mr. SIKES. To send a letter to Santa Claus.

Admiral HOLLOWAY. We will be very tough-minded on this, because there is no point in asking for the impossible. But then, on the other hand, we should advise you of things that we think could be done but which may be difficult. I am convinced we are not going to cure the ills that we have now by being timid. I feel a certain degree of boldness is required, and I think it is only the Congress that can solve the problem.

I think the sense of our discussion yesterday and today indicates that many of our problems are due to the Navy's having to operate under difficult and unrealistic administrative and legal constraints.

Mr. SIKES. I would like as a part of the answer that you tell us whether you would build these ships in public or private yards; rather, that you would give us any changes in the mix of public and private yards in order to accomplish this in the most expedient, effective, and economical manner.

Admiral HOLLOWAY. Yes, sir.

[The information follows:]

One of the more important actions that the Congress could accomplish in order to assist the Navy in its efforts to insure that new ships are built in the most efficient way would be to formally authorize a 5-year shipbuilding program.

There are several advantages to be gained from a 5-year shipbuilding program authorization. These advantages include such considerations as:

Presentation in the form of a consolidated long-term plan would provide the Congress, and the country, with a broad perspective of proposed programs and thus give a better understanding of the rationale supporting the current and budget year's program.

Authorization of the program by the Congress would enhance the credibility of a long-term shipbuilding plan.

Clear-cut long-term programs would provide incentive to the shipbuilding industry to plan ahead for the use of capital, facilities and manpower.

It would provide a firm base about which the Navy planners could more effectively plan for the necessary R. & D. and support dollar allocations.

In order for such an authorization to be pursued in a constructive manner, and to realize the advantages outlined above, legislation in this regard must provide flexibility for annual updating of the program to reflect unpredictable factors such as changes in threat, changes to national strategy and priorities, advances in technology and changing conditions in the shipbuilding industry. Internal priorities established at each annual updating must insure the maintenance of a balanced shipbuilding program in the event that the entire authorized amount

cannot be appropriated in that particular fiscal year. Accordingly, it should be recognized that each 5-year authorization would have to be amended annually. A balanced construction program is absolutely essential to maintain an adequate naval force in terms of quality, numbers, and types of ships.

#### NEW CONSTRUCTION IN NAVAL SHIPYARDS

I strongly endorse the plan to reinstitute naval shipbuilding in Naval yards and request your support in providing the additional funding that will be required. This will permit an in-house competent technical capability to direct and administer major naval shipbuilding programs and will establish an industrial base readily expandable for mobilization purposes.

The Navy is currently formulating a plan to build some new ships in naval shipyards. Three yards are being considered—Mare Island, Calif., Puget Sound, Wash., and Philadelphia—each offers something unique in its area. Mare Island is experienced in nuclear submarine work; Puget Sound is presently overhauling large nuclear surface vessels and could build such ships. Also, Puget Sound has previously constructed and converted large combatant and auxiliary type ships. Philadelphia has the experience and physical plant needed for the construction of nonnuclear ships. These yards could provide the surge capability to insure timely delivery of the Navy's ships when needed. Within the private sector, there are no west coast yards that currently have the capability to build nuclear vessels.

Several advantages would accrue to the Navy by building ships in both private and public yards. The Navy would have greater flexibility in placing contracts. In-house (Navy) ship construction design and engineering would be improved and a much needed benchmark for evaluating costs in private yards would be provided. Additionally, a greater return from certain fixed overhead costs would be realized by permitting a more efficient utilization of existing facilities. The plant capacity is available, but we need the manpower to use them.

#### MANPOWER CONSIDERATIONS

In order to perform new ship construction in naval shipyards, substantial increases in manpower will be required in fiscal year 1977 and subsequent years. A phased plan to support certain ship construction in Naval shipyards will be submitted to Secretary Clements early in September. This plan will include the additional manpower requirements, ceilings, and grades required for the shipyards, field activities and Headquarters. A particularly important manpower consideration is the need to expand and improve apprentice programs in all U.S. shipyards, private and public, and to provide funding for these programs by the Navy department in the naval yards and the Labor Department for the private sector. Successful apprentice programs are essential to providing the skilled workers needed for more efficient and effective shipyard operation.

#### ALLOCATION

The shipbuilding industry must be utilized more effectively if new ships are to be delivered in a timely fashion at the least possible cost to the taxpayer. This is true with or without naval shipyard participation. Perhaps some form of ship construction allocation should be implemented in the future whereby ships will be awarded to building yards on the basis of total benefit to the country. This would include considerations of delivery dates, industry viability, individual shipyard contribution and potential, as well as the present value of the resources required. This concept envisions some form of allocation of ships to industry so that there is perhaps an opportunity for shipyards to specialize. Such a conceptual change will require an indepth review, and this review is underway.

#### CONTRACTUAL ASPECTS

Another aspect involved in the shipbuilding program is a revamping of the Navy's contracting procedures. As it stands now, the burden of risk is shared by the Government and the shipbuilder. The industry complains that their share of this risk is disproportionately high. In past contracts, this may have been so. However, the Navy has been steadily adjusting the share pattern for the last

several years. Most of the industry approves of the modern contractual initiatives, such as the more liberal escalation clause in shipbuilding contracts which compensates the shipbuilder for inflation which occurs after the base reference date, as allowable costs are incurred. These contractual initiatives on fiscal year 1973 and later contracts have yet to stand the test of time and it is not yet clear what future changes might still be required in the clause.

When I testified before the Sea Power Subcommittee 2 years ago, I said, "We must have the numbers, the quality, and the balance." That is still the key to an effective shipbuilding program. I think that with the support of the Congress in the areas that I have outlined we can make significant headway in achieving the force levels needed in a much more efficient manner than we have in the past.

Mr. SIKES. Further questions on my left?

Mr. ROBINSON. No questions.

Mr. KEMP. I have no questions, Mr. Chairman, except to say that I think our colleague from Alabama has really asked as key a question as has been asked, it seems to me, in the hearings I have attended, that will put a little perspective on the whole question of the deterioration of the relations between the Congress and the Navy and the shipbuilders.

There needs to be some careful, analytical, and thoughtful consideration given to how we in the legislative branch can address the problems from more than 1, just a 1-year crisis-oriented subjective emotional basis the way it seems to be going at this point. So I look forward to that answer and appreciate the leadership of Mr. Edwards for asking it.

But I have no questions, thank you.

#### SHIPBUILDING CLAIMS

Mr. SIKES. I should now like to turn to another serious matter, one that virtually threatens to curtail, if not undermine, our efforts to build a Navy second to none. I, of course, refer to the matter of shipbuilders' claims. Congress appropriated \$932.4 million in fiscal year 1976 for cost growth and \$420.3 million for escalation on prior year programs. How much of these amounts were made available to pay claims?

Admiral MICHAELIS. None of the \$1,352.7 million appropriated by Congress in fiscal year 1976 for cost growth and escalation has, thus far, been used to pay shipbuilder claims.

Mr. SIKES. How much of the \$1,623.2 million budgeted in fiscal year 1977 for cost growth and escalation was to be used to satisfy claims?

Admiral MICHAELIS. Of the \$1,623.2 million requested for cost growth and escalation in fiscal year 1977, \$320 million is intended to be used to satisfy shipbuilder claims.

Mr. SIKES. How much was appropriated in fiscal year 1975 and prior years to satisfy claims and how much is still available for this purpose?

Admiral MICHAELIS. \$278 million was appropriated by the Congress to satisfy claims requirements. From within existing resources, the Navy has made an additional \$546 million available to settle claims. Of the total \$824 million, \$611 million has been applied to claims now settled. Of the remaining \$213 million, \$107 million has been provisionally paid on currently unsettled claims. Therefore, \$106 million remains available to satisfy claims; \$320 million requested in fiscal

year 1977 will be additive to the available coverage when it is appropriate.

#### TOTAL BACKLOG OF CLAIMS

Mr. SIKES. What is the total backlog of claims or request for equitable adjustment outstanding at the present time?

Admiral MICHAELIS. As of June 30, 1976 there are 11 shipbuilding claims and appeals totaling \$1,731 million.

#### OUTSTANDING CLAIMS

Mr. SIKES. Will you provide for the record a table showing the total outstanding claims and requests for equitable adjustment by shipbuilder, ship hull numbers, fiscal year program, initial contract value, amount appropriated for each, period of performance, months behind schedule, contract number, and amount of each claim? Also show the same data for other probable claims or requests for equitable adjustments.

Admiral MICHAELIS. The data for claims, other probable claims, or requests for equitable adjustment is provided.

[The information follows:]

CONTRACTOR	CONTRACT NO.	HULL NO	ORIGINAL CONTRACT \$ VALUE (OOO)	CONTRACT DELIVERY SCHEDULE	FISCAL YEAR PROGRAM	AMOUNT APPROPRIATED FOR EACH (OOO) 3/	MONTHS BEHIND SCHEDULE	CURRENT AMOUNT OF CLAIM (OOO)	
<u>1/Boland Marine</u>	N00024-74 -C-0241	DLG 10	\$ 22,365	5-16-76	1974	\$ 63,900	7	\$ 3,297	
Ingalls Shpblgd,	N00024-69 -C-0283	LHA 1	672,200	3-30-73	1969	252,394	2/	701,709	
		2	(U/C)	6-29-73	1970	450,055	48		
		3	(5 Ships)	10-1-73	1970		55		
		4		12-31-73	1971	459,985	59		
		5		4-1-74	1971		61		
Ingalls Shpblgd.	NObs 4374	SSN 621	23,406	12-63	1961	95,097	2/	107,820 8/	
		SSN 639	29,500	4-65	1962	81,263	2/		
		SSN 648 652	59,972	8-66	1963	71,067	2/		
				1-67	1963	71,310	2/		
		LPD 7 8	51,458	N/A	1964	35,159	2/		
				N/A	1964	32,148	2/		
		NObs 4616	IPH 10	31,972	N/A	1963	41,791	2/	
			IPH 12	37,874	N/A	1966	48,430	2/	
		NObs 4924	LSD 36	24,374	N/A	1965		2/	
			CGN 36	175,000	12-73	1967	220,421	2/	151,041
Newport News Shipblgd.	N00024-68 -C-0355	37		7-74	1968	206,160	2/		
		CGN 38	300,000	5-75	1970	279,200	15	159,775	
	-C-0252	39		1-76	1971	256,200	18		
		40		9-76	1972	263,200	22		

CONTRACTOR	CONTRACT NO.	HULL NO	ORIGINAL CONTRACT \$ VALUE (000)	CONTRACT DELIVERY SCHEDULE	FISCAL YEAR PROGRAM	AMOUNT APPROPRIATED FOR EACH (000) 3/	MONTHS BEHIND SCHEDULE	CURRENT AMOUNT OF CLAIM (000)
Newport News Cont.	N00024-70 -C-0269	SSN 688	\$ 83,300	8-31-74	1970	\$226,180	25	\$ 78,543
	N00024-71 -C-0270	SSN 689 691 693 695	247,644	5-30-75 9-30-75 2-27-76 7-30-76	1970 1971 1971 1972	293,400 4/ 641,100 5/ 903,900 6/	23 26 27 28	191,567
	N00024-69 -C-0307	SSN 686 687	96,800	12-5-73 4-5-74	1969 1969	189,280	2/ 2/	92,099
	N00024-67 -C-0325	CVN 68 69	638,400	12-9-74 1-77	1967 1970	667,094 733,481	2/ 5	221,280
Todd Shipyd, Seattle	N00024-69 -C-0256	AGOR 16	13,950	4-10-71	1967	16,992	2/	2,964
Z/National Steel	N00024-73 -C-0227	AOR 7	51,474	12-15-75	1972	86,300	9	20,669

- 1/ Conversion  
2/ Ships have been delivered  
3/ Amounts do not include outfitting and Post Delivery  
4/ Amount appropriated for two ships, SSN 690 also funded in this line has been awarded to Electric Boat Division, General Dynamics Corporation  
5/ Amount appropriated for four ships, SSN 692 and SSN 694 also funded in this line were awarded to EB Div., G. D. Corp.  
6/ This is the total appropriate through FT 1977. The SSN 696 through SSN 699 also funded in this line were awarded to EB Div., G. D. Corp.  
7/ Submitted and withdrawn as a claim, however, included in proposed PL 85-804 action.  
8/ Ingalls "Consolidated" or "Impact" Claim

CONTRACTOR	CONTRACT NO.	HULL NO	ORIGINAL CONTRACT \$ VALUE (000)	CONTRACT DELIVERY SCHEDULE	FISCAL YEAR PROGRAM	AMOUNT APPROPRIATED FOR EACH (000) 3/	MONTHS BEHIND SCHEDULE	CURRENT AMOUNT OF CLAIM (000)
<b>PROBABLE CLAIMS</b>								
Electric Boat Div., General Dynamics Corp.	N00024-74 -C-0206	SSN 700	\$ 846,780	10-30-77	1973	\$201,093	19	
		701		2-28-78	1973	190,542	17	
		702		7-10-78	1973	190,542	16	
		703		11-10-78	1973	190,542	17	
		704		1-31-79	1973	190,542	15	
		705		5-31-79	1973	190,542	15	
		706		9-30-79	1974	213,380	13	
		707		1-31-80	1974	213,380	13	
		708		5-31-80	1974	213,380	12	
		709		9-30-80	1974	213,380	12	
		710		1-31-81	1974	213,380	11	
Ingalls Shpblg. Div. Litton Indus.	N00024-70 -C-0275	DD 963	2,139,900	10-31-74	1970	360,512 9/	10	
		964		4-30-75	1970		12	
		965		6-30-75	1970		11	
		966		7-31-75	1971		11	
		967		10-31-75	1971		9	
		968		2-27-76	1971		9	
		969		4-30-76	1971		8	
		970		6-30-76	1971		9	
		971		7-30-76	1971		8	
		972		9-30-76	1972		8	
		973		10-29-76	1972		9	
		974		11-30-76	1972		9	
		975		12-31-76	1972		9	
		976		1-31-77	1972		10	
		977		2-28-77	1972		10	
		978		3-31-77	1972		11	
		979		4-29-77	1974		11	
980	5-31-77	1974	12					
981	7-29-77	1974	11					

CONTRACTOR	CONTRACT NO.	HULL NO	ORIGINAL CONTRACT \$ VALUE (000)	CONTRACT DELIVERY SCHEDULE	FISCAL YEAR PROGRAM	AMOUNT APPROPRIATED FOR EACH (000) 3/	MONTHS BEHIND SCHEDULE	CURRENT AMOUNT OF CLAIM (000)		
Ingalls Shipbldg. Cont.	N00024-70 -C-0275	DD 982		8-31-77	1974	\$817,900 9/	12			
		983		9-30-77	1974		12			
		984		10-31-77	1974		13			
		985		11-30-77	1974		13			
		986		12-30-77	1975		14			
		987		1-31-78	1975		14			
		988		2-28-78	1975		14			
		989		3-31-78	1975		14			
		990		4-28-78	1975		14	833,550 9/	14	
		991		5-31-78	1975		14		14	
		992		6-30-78	1975		14		14	

9/ Includes reprogramming action

Mr. SIKES. On April 30, 1976, the Deputy Secretary of Defense announced his intention to use the authority of Public Law 85-804 to settle 11 shipbuilding contract disputes, and that he had appointed an executive shipbuilding committee to guide and monitor Navy actions necessary in implementing his decision. We were subsequently informed that the 11 contracts involved Newport News claims totaling \$894.3 million on three nuclear-powered aircraft carriers, six nuclear-powered cruisers, and seven nuclear-powered attack submarines; Litton claims totaling \$504.8 million involving five LHA ships; Electric Boat claims totaling \$231.5 million involving seven nuclear-powered attack submarines; and National Steel on a replenishment oiler, in all, \$1,630.6 million. On June 9, 1976, the Deputy Secretary of Defense announced that despite intensive efforts, the Department was unable to reach agreement with all four shipbuilders concerned. Admiral Holloway, can you advise the committee what approach was being taken to settle these disputes and why these efforts were unsuccessful?

Admiral MICHAELIS. The approach which was proposed in the Public Law 85-804 action was to "back fit" a new escalation clause on those contracts with undelivered ships. This new clause would have been similar to that being used now in new shipbuilding contracts. It is designed to insure that the compensation to the shipbuilder more closely matches and compensates for the impact of inflation upon the cost as the building of the ship progresses.

The proposed approach would have been acceptable to two of the shipyards involved. However, two, Newport News and Ingalls Division of Litton, did not accept. Apparently they felt that the estimated value of the proposed action did not meet their expectations or did not equal the estimated value of other courses of action.

Mr. SIKES. We were subsequently informed that the total face value of claims outstanding as of May 1, 1976, was \$1,903.2 million, yet total claims liabilities was \$2,122.5 million. Can you reconcile these two figures for us, Admiral?

Admiral MICHAELIS. These two figures were supplied in information provided to congressional staffs in support of the Public Law 85-804 proposal. However, there appears to be a misunderstanding of what the numbers are. The \$1,903.2 million was a summation of the face amount of claims in hand or anticipated on that date. The \$2,122.5 million is not claims at all. It was an estimate of the additional liability of the Government on prior year programs for escalation, Public Law 85-804 expected requirements, and for claims settlements.

Mr. SIKES. We were also advised that the net cost of implementing Public Law 85-804 would have been \$747 million. Does that mean that the Navy hoped to satisfy about \$1.9 billion worth of claims for \$747 million, or would the Navy still have been required to settle these claims?

Admiral MICHAELIS. It should be emphasized that the Public Law 85-804 action was not a "claims settlement" action. However, except for certain claims on contracts where all ships had been delivered, Deputy Secretary of Defense Clements intended to restore equity to the contracts. It was intended that one result of this action should have been the withdrawal of all outstanding and pending claims with four shipbuilders. Two of the four shipbuilders agreed to those terms; the other two, Newport News and Ingalls, in belief that recovery under

Public Law 85-804 would not provide adequate consideration, refused to relinquish their rights to continue the claim actions.

Mr. SIKES. We understand that the proposed Public Law 85-804 settlement with shipbuilders involved changing the terms of the contract with respect to escalation; that is, that the Navy would pay quarters of escalation until actual ship delivery, rather than the current escalation payment termination which is the delivery date specified in the contract. Is this correct?

Admiral MICHAELIS. It was intended to substitute a new escalation clause providing for escalation recovery until actual delivery of the ship or until base costs—deescalated—equal the ceiling price of the contract.

Mr. SIKES. If the Navy had been successful in amending the escalation provisions of those shipbuilding contracts to provide escalation payments until the ship is delivered, what protection would be provided for the Government to prevent a shipbuilder from unduly delaying the ship deliveries?

Admiral MICHAELIS. There are two aspects of the revised escalation clause which continue to provide incentive for prompt delivery and completion within cost estimated.

First, the clause provides the BLS index be capped at the contract delivery date. That is, for purposes of calculating escalation entitlement no increase in the BLS is recognized after the contract delivery date, however, a decrease in the index would be recognized and used in such calculations.

Second, the revised escalation clause provides for the cessation of all payments, including escalation when actual, allowable costs minus escalation payments equals ceiling price. A builder who permitted his schedule to be destroyed would increase the risk of losing control of the cost and face the possibility of shutting off all payments by exceeding ceiling.

Mr. SIKES. What protection would be provided to prevent shipbuilders from taking workers from naval work and moving them to commercial work?

Admiral MICHAELIS. The features described in response to your previous question would apply. However, there is no absolute guarantee in any contract that the contractor will apply his resources for the least costly accomplishment of the Navy portion of his work.

Some actions and agreements have been directed at this aspect. For example, in a February 12, 1973, letter to the Navy Mr. Freeman, chairman of the board, Tenneco Corp. agreed to:

"1. Tenneco will not allow performance of work on non-Navy contracts to interfere with the performance of work necessary to meet Newport News commitments on Navy contracts.

"2. The policy to be followed by Newport News will be that the skilled personnel required for non-Navy work will be developed from manpower and training resources other than those developed on Navy contracts which exceed those required to meet Newport News commitments on Navy contracts."

Mr. SIKES. Would changing contractual escalation clauses in the manner proposed tend to provide little incentive for shipbuilders to

quickly settle strikes because he would be protected as far as quarters of escalation is concerned by the actual ship delivery date?

Admiral MICHAELIS. Again, the features of the new clause described previously are pertinent. However, the following comparison may be helpful:

Under the old clause, a strike would not have affected the amount of escalation. While it might have caused an extension of the delivery date, even a so called excusable delay, it would not have changed the period for which escalation would be paid.

Under the new clause an excusable delay would cause a change in the date the BLS indexes would be capped. This could decrease the incentive to hold strikes short unless the contractor is in danger of hitting ceiling price constraints described.

Mr. SIKES. We understand that the Public Law 85-804 approach would have involved the amendment of all other current Navy shipbuilding contracts by inclusion of the new escalation clause, even though there were no claims filed on those contracts. If this is true, what contracts would have been amended and how much additionally would these contract changes have cost the Government?

Admiral MICHAELIS. Only nine contracts were to be amended. These will be provided for the record.

[The information follows:]

Contractor/contract No. :

Electric Boat Division, General Dynamics Corp. :	Type of ship
N00024-71-C-0268 -----	SSN 688 class.
N00024-74-C-0206 -----	SSN 688 2d ft.
Ingalls Shipbuilding Division, Litton Systems Inc.	
N00024-69-C-0283 -----	LHA 1-5.
N00024-70-C-0275 -----	DD 963.
Newport News Shipbuilding & Drydock Co. (Tenneco Corp. subsidiary)	
N00024-67-C-0325 -----	CVN 68, 69.
N00024-70-C-0252 -----	CGN 38-40.
N00024-70-C-0269 -----	SSN 688.
N00024-71-C-0270 -----	SSN 688 class.
National Steel & Shipbuilding Co.	
N00024-73-C-0227 -----	AOR-7.

These proposed contract changes would have resulted in an estimated total cost to the Government of between \$500 million to \$700 million. The exact amount was not determined because negotiations were never finalized.

Mr. MURPHY. Admiral, as you know, the proposed Public Law 85-804 action was met with charges of "bailout" by many, and both retired and active Navy officers have testified before Congress that Navy shipbuilding contracts had not been so unfair as to justify the magnitude of claims. Some have stated that there is no reason why shipbuilders should be excused from the terms of the contracts they signed.

Admiral, what are your feelings concerning whether or not the Navy should recognize these claims, pay them, and amend contractual clauses?

Admiral HOLLOWAY. Well, sir, I think that the Navy must receive these claims, adjudicate them, and make judgments on each claim in every case. I think it is wrong to even predict what percentage of the claims would be paid.

I would like to ask my colleagues to respond to your question, as

they deal directly with the claims business; however, let me say, Mr. Murphy, I was heavily involved in the decision process that led to Public Law 85-804 and to the present Special Claims Board. In this light, I would like to ask Admiral Michaelis to respond.

Admiral MICHAELIS. If I could refer back to Public Law 85-804 for just a moment; Public Law 85-804 was an effort to improve equity following a period of economic trauma that the country had been exposed to subsequent to the signing of contracts in the late 1960's and early 1970's.

The question of both paying claims and providing the new escalation clause never was the intent of Public Law 85-804 action. The objective was, as a matter of equity, to reform the contracts by including a newer escalation clause which takes into account the severe economic variations over the past few years. As a result, it was expected that the contractors would withdraw certain claims. So it was not a dual process.

We never intended to pay the claims and at the same time to change the contracts. When Public Law 85-804 action was once withdrawn, the contracts were not reformed and we were back in the claims-settling mode.

As I mentioned yesterday, each claim must be carefully analyzed before a determination can be made as to how much it is worth. Involved in the claims are the causes for delay, whether they are caused by the Navy or the shipbuilder or a combination of both.

Mr. MURPHY. Has the Navy determined what net losses each of the contractors will incur on each of these shipbuilding contracts under negotiations? If so, will you provide this information at this time?

Admiral MICHAELIS. The Navy has generated numerous dollar figures that would represent the profit or losses associated with the contracts involved in the Public Law 85-804 approach depending upon the various and changing conditions involved. These dollar figures were discussed with the various contractors and two of the contractors, Litton and Newport News, disagreed with our approach. Amounts determined by the Navy are as follows:

Contractor/contract No.	Type of ship	Profit/ (loss)
<b>Electric Boat Division General Dynamics Corp.:</b>		
N00024-71-C-0268	SSN 688 class	(\$105.9)
N00024-74-C-0206	SSN 688 2d flt	(28.8)
Total ED GDC		(134.7)
<b>Ingalls Shipbuilding Division Litton Systems Inc.:</b>		
N00024-69-C-0283	LHA 1-5	(319.0)
N00024-70-C-0275	DD 963	112.0
Total Ingalls		(207.0)
<b>Newport News Shipbuilding Drydock Co. (Tenneco Corp. subsidiary):</b>		
N00024-67-C-0325	CVN 68 69	31.3
N00024-68-C-0355	CGN 36 37	(15.9)
N00024-69-C-0307	SSN 686 687	(25.1)
N00024-70-C-0252	CGN 38-40	(38.8)
N00024-70-C-0269	SSN 688	(25.3)
N00024-71-C-0270	SSN 688 class	(53.6)
Total NNSB & DD		(127.4)
National Steel & Shipbuilding Co.: N00024-73-C-0227	AOR-7	(.5)

The Shipbuilding Executive Committee established by Deputy Secretary of Defense Clements, through numerous iterations, attempted to reach an understanding with the contractors involved in the Public Law 85-804 settlement. The committee was unsuccessful in this endeavor and Deputy Secretary of Defense Clements withdrew his proposed use of Public Law 85-804. Since this was to be a negotiated settlement and since agreement was not reached with the contractors involved, it is impossible to determine what the profits or losses associated with the nine contracts involved would have been under a Public Law 85-804 settlement.

Mr. MURPHY. It has been alleged that if Public Law 85-804 had been successful, a reported \$207 million Litton loss would have become a \$22 million profit; that Electric Boat's alleged \$134 million loss would have become a \$20 million profit, and Newport News alleged \$127 million loss would have become a \$32 million profit. Are these allegations correct? If not what are the correct figures?

Admiral MICHAELIS. The allegations are correct to the extent that Public Law 85-804 action would have lessened contractor losses. However, the planned use of Public Law 85-804 was to reform selected shipbuilding contracts by substituting currently authorized escalation clauses for the now obsolete escalation clauses contained in the contracts which generated the claims. This was an equity action and not one related to profit or loss. It simply recognized that the old escalation clauses were not fair in their application, taking into consideration the state of the economy during the last several years and the lengthy period required to determine responsibility for delay. The Shipbuilding Executive Committee established by Deputy Secretary of Defense Clements, through numerous iterations, attempted to reach an understanding with the contractors involved in the Public Law 85-804 settlement. The committee was unsuccessful in this endeavor and Deputy Secretary of Defense Clements withdrew his proposed use of Public Law 85-804. Had the Public Law 85-804 action been successful it was estimated Litton would have sustained about a \$90 million loss, Electric Boat would have realized profit of about \$44 million and Newport News a profit within the range of \$20 million to \$40 million on the contracts which would have been modified.

Mr. MURPHY. Will you provide for the record a table showing the date each contractor filed its claim against the Navy, the full number of ships involved, the date each claim was amended, the amount of each amendment and so forth?

Admiral MICHAELIS. There were nine contracts involved in the Public Law 85-804 action. Six claims and one request (AOR-7) for equitable adjustment pursuant to contract changes clause were in Navy hands at the time extraordinary relief was being pursued and it was anticipated that two additional claims would be submitted by shipbuilding contractors. Secretary Clements' action under Public Law 85-804 was an attempt to provide relief to contractors on both the seven claims in hand and the two anticipated claims. The chart attached provides information concerning dates and amount of initial claims, their amendments, and the current totals.

[Dollar amounts in thousands]

Contractor and ship type	Initial submission		Amendments		Current Total
	Date	Amount	Date	Amount	
Electric boat: N00024-71-C-0268: SSN 688 class..... N00024-74-C-0206: SSN 688 2d flt.*.....	February 1975.....	252.2	May 1975.....	(20.7)	231.5
Ingalls Shipbuilding Division: N00024-69-C-0283: LHA 1-5.....	March 1972.....	270.7	{ March 1973..... July 1974..... April 1975..... June 1976.....	{ 105.3 24.0 104.8 196.9	701.7
N00024-70-C-0275: DD 963.....	(*).....				
Newport News Shipbuilding: N00024-67-C-0325: CVN 68, 69..... N00024-70-C-0252: CGN 38-40..... N00024-70-C-0269: SSN 688..... N00024-71-C-0270: SSN 688 class.....	February 1976..... August 1975 (rev.)..... July 1975..... do.....	221.3 159.8 46.2 96.3	None..... None..... March 1976..... do.....		221.3 159.8 78.5 191.6
National Steel: N00024-73-C-0227: AOR 7.....	November 1975*.....		Not applicable		

<sup>1</sup> Claim under this contract settled on Apr. 7, 1976, through negotiation; hence not involved in Public Law 85-804.

<sup>2</sup> No claim received to date.

<sup>3</sup> Withdrawn as a claim on December 1975. In process of negotiation pursuant to changes clause of the contract but included in Public Law 85-804 action.

## DOCUMENTATION ON CLAIMS

Mr. MURPHY. Does the Navy believe that it has received sufficient data documenting each claim? If not, please provide specific details showing the lack of sufficient documentation on each claim.

Admiral HOLLOWAY. Let me ask Admiral Michaelis to respond to that, sir.

Mr. MURPHY. All right.

Admiral MICHAELIS. Mr. Murphy, the claims as de receive them are normally quite sizable and usually complete. However, there are variances from corporation to corporation and claim to claim. Claims preparation take a long time. Some of the claims have been worked on by a group of technical people and lawyers for as much as 18 months.

They come to us in large volumes, maybe totaling 17 for a claim. In many cases we have all the information we need to get started on the analysis. But there is always some question we have to ask as we move along to determine cause and effect and make sure that we determine as closely as we can what portion of that claim is the responsibility of the Government and which portion is not.

Claims come in differently. In one claim we have had to ask for a lot more backup, a lot more support. As I noted earlier, we have been working on one claim which we took out of the ASBCA last January and worked it on a planned, piece-by-piece basis. The contractors agreed to provide to us the required information by given dates and we have agreed to complete our analysis and to make individual provisional payments based on entitlement as we move along until such time as we can settle the whole claim.

Mr. MURPHY. I think we would like to get a little more specific. I would like for you to provide some additional information for the record indicating what claims have not, in the opinion of the Navy, been sufficiently documented at this time.

[The information follows:]

Contractor/contract No.	Type of ship	Status of documentation <sup>1</sup>
Ingalls:		
N00024-69-C-0283	LHA	Partially documented. <sup>2</sup>
N00024-70-C-0275	DD 963 class	Claim not received.
Newport News Shipbuilding:		
N00024-67-C-0325	CVN 68/69	Adequate to commence evaluation.
N00024-68-C-0355	CGN 36/37	Adequate to the extent reviewed.
N00024-69-C-0307	SSN 686/687	Adequate to commence evaluation.
N00024-70-C-0237	CGN 39-40	Do.
N00024-70-C-0252	SSN 688	Do.
N00024-71-C-0270	SSN 688 class	Do.
National Steel: N00024-73-C-0227	AOR 7	Do.

<sup>1</sup> As the claim review proceeds it must be recognized additional data may be needed.

<sup>2</sup> Ingalls submits available data including a cause and effect analysis and quantification in accordance with an agreed upon schedule. The end date for initial submissions is December 1976.

Mr. MURPHY. Mr. Lewis?

Mr. LEWIS. I just want to add a couple of comments.

One of the problems that the Navy had 3 or 4 years ago when it was suddenly hit with this huge mass of claims problems was the documentation. One of the problems was the contractor did not really know what was needed to document its claim. It had never filed such a huge mass of claims against the Navy before.

In many respects the Navy did not really know what it needed to completely analyze these claims and come out with the figure.

I think in many respects in the past 3 years, both sides now have an awareness of what needs to be submitted to the Navy and what the Navy needs to document properly its claim, settlements.

I am rather encouraged in the submissions which have been made to the Navy by some of these contractors in the last year. I think the quality of these submissions has improved substantially. Of course, the better documentation that can initially be submitted to the Navy, the quicker the Navy can begin analyzing the material and the quicker it can come up with a negotiating figure.

Mr. BURLISON. Will the gentleman yield?

Mr. MURPHY. Yes, sir.

#### PERSONNEL IN CLAIMS-SETTLING WORK

Mr. BURLISON. To what extent is the Government at a disadvantage on these claims that grow out over the months and over the years because of the turnover in Navy personnel which are in the claims-settling business and handling these claims?

Admiral HOLLOWAY. Mr. Burlison, I do not perceive any significant disadvantage, because the people who are reviewing the claims are not normally turned over in the process of review of a particular claim. As the commander of the the Naval Sea Systems Command has indicated, he has been in the headquarters for 7 years. He is now very close and has always been very close to the claims business. As for the people who are adjudicating a particular set of claims, I would have to ask Admiral Michaelis to comment, but I do not believe we have had any real turnover in that adjudication team.

Admiral MICHAELIS. Mr. Burlison, I think what the CNO has indicated is completely correct. You know our teams are a mix of military and civilians. We have a great number of civilians in our claims anal-

ysis teams. Many of them have amassed several years experience and certainly are key people in this business of claims analysis and knowledge of contracting. Several of the people who are doing the technical analysis have had many years of experience in this area.

The turnover as we normally speak of it in the uniformed military is not necessarily applicable here.

I think we have pretty good continuity. We do have attrition in that good claims and contracting people tend to move on to better jobs if they can be offered a higher civil service position in another agency. So we do have that problem. We have that sort of turnover and attrition.

Mr. LEWIS. If I could add, too; we do contract out for some of the technical analysis in some of these large claims, to outfits like Booz-Allen.

Mr. BURLISON. Do you have any substantial numbers of your personnel going over to the other side? That is, being hired by the other side at the negotiating table?

Mr. LEWIS. I can only answer that as far as the lawyers are concerned; not any substantial numbers, no. We have, occasionally lawyers will be hired by the private bar into the so-called contract law firms, but I would say maybe only two or three a year. I do not consider it a serious problem.

Admiral MICHAELIS. Might I add, sir, while we are speaking of losses and turnover, that we cannot handle all claims simultaneously. We have to prioritize them. We have had many reductions due to loss of force cuts taken in the past few years. These across-the-board cuts affect our contracting personnel and claims adjudication personnel along with the rest, so we have been getting smaller in size.

I wanted to clarify that there are two issues: One is turnover and the other is the total size of the headquarters element.

Mr. BURLISON. Thank you.

Mr. MURPHY. Thank you, Mr. Burlison.

Has each contractor submitted a sworn affidavit certifying as to the accuracy and completeness of each claim filed in accordance with the Truth in Negotiations Act?

Admiral MICHAELIS. There really are two types of affidavits and I would like to clarify them because I think the question may mix the two of them.

There is one affidavit required under the Truth in Negotiations Act. That one is required for procurement actions of \$100,000 or more. But that is something that is provided at the end of a negotiation.

There is a second affidavit that we have been requiring in our Navy procurement directives which is to accompany the claim when it is submitted. This affidavit attests to timeliness, completeness, and factual content.

The objective of that affidavit, of course, is to make sure that we use our resources to the greatest benefit by not having to interrupt the analysis of a claim because that claim is pulled, changed, and resubmitted. That happened to us in the past, so we started the affidavit system.

Now, with regard to the truth in negotiations affidavit, we have or will receive those on every one of our claims except the LHA claim,

which I mentioned earlier we are doing in segments. We will get a truth in negotiations affidavit at the end of that effort, which is scheduled to be at about this time next year.

With regard to the affidavits that we have asked for in our own Navy procurement directives, we have been getting them on all claims, but we have not gotten them from Newport News in the same form that we have asked for. They have been submitted in a much less restrictive form.

The Newport News contention is that there is nothing in their contracts which requires them to submit this affidavit. We are now writing the requirement for this affidavit in all new contracts.

So little by little the system will catch up with the contracting that we do in the future.

I would just end up by saying that we have gone ahead with the analysis of the Newport News claims because it is my desire with the Navy Claims Settlement Board we have set up that we do not in any way tie up the adjudication of claims.

So far as the rest of the contractors are concerned, we have affidavits from them.

Mr. MURPHY. Thank you, Admiral.

#### AUDIT REVIEW OF CLAIMS

Has the Navy thoroughly analyzed each claim and has each been subjected to a proper audit?

Admiral HOLLOWAY. Yes, sir, the Navy is currently analyzing each of the claims and several of them are under audit review by the DCAA.

The balance of the claims will be audited in accordance with our claims settlement schedule.

Mr. MURPHY. Could you provide something for the record indicating which claims have not been audited as of this time?

Admiral HOLLOWAY. I will do that.

[The information follows:]

Contractor/contract No.	Type of ship	Status of audit review
<b>Ingalls:</b>		
N00024-69-C-0283	LHA	Currently under review. <sup>1</sup>
N00024-70-C-0275	DD 963 class	Claim not received.
<b>Newport News Shipbuilding:</b>		
N00024-67-C-0325	CVN 68/69	Not started.
N00024-68-C-0355	CGN 36/37	Pt. 1-completed, pt. 2-not started.
N00024-69-C-0307	SSN 686/687	Not started.
N00024-70-C-0252	CGN 38-40	Audit is being performed.
N00024-70-C-0269	SSN 688	Delay portion completed, balance not started.
N00024-71-C-0270	SSN 688 class	Not started.
National Steel: N00024-73-C-0227	AOR 7	Partially complete. Not started on 3 of 9 items comprising the bulk of the total REA.

<sup>1</sup> The contractor and Navy have an agreed to schedule for Ingalls to submit documentation in connection with each claim element. Audits are performed when the documentation is delivered.

Mr. MURPHY. Mr. Lewis?

Mr. LEWIS. In this regard, if I could add a point here, GAO has reviewed our claims. They reviewed them approximately 3 years ago and made a report. Several months ago they recently came out with a new report. They looked into all our claims which we have settled

recently, almost all of them. The report was very favorable to the Navy, indicating they were pleased with our settlement process, and they did make some comments concerning things we should do. But it was a very favorable report.

Mr. MURPHY. Those are claims that you had settled?

Mr. LEWIS. Yes.

Mr. MURPHY. Was it an audit-type review that GAO performed?

Mr. LEWIS. What they did was, they looked at DCAA audit reviews and at the legal entitlement papers filed with each claim, and they spoke with people in the Navy. They go into an analysis rather thoroughly. They send several people down for a number of weeks analyzing our settlements.

Mr. MURPHY. With respect to the Newport News claim of \$92.1 million on the SSN-686 and SSN-687, it has been alleged that Electric Boat built four submarines of the same class in the same time period using the same design with no claim against the Navy. Is this correct?

Admiral HOLLOWAY. Yes, sir, it is. And if I could in amplification ask Admiral Gooding to elaborate.

Admiral GOODING. Yes, sir. The statement and the question are essentially correct. These were four submarines of the 637 class; their numbers were 678, 679, 681, and 684, which were authorized in fiscal 1967 and fiscal 1968. The SSN-686 and SSN-687 were authorized in fiscal year 1969.

A provision of the contract was that if the contractor delivered the ships on or ahead of the contract delivery date, he was paid \$1 million bonus, right on top of profit. And this apparently got his attention because he earned the \$1 million bonus in each of those submarines. So his total profit was increased \$4 million.

Mr. MURPHY. Has Newport News admitted that with respect to its claim of \$159.8 million on CSGN-38, CSGN-39, CSGN-40, CSGN-41, some errors have been made?

Admiral MICHAELIS. Newport News submitted a claim of \$159.8 million on CGN-38, CGN-39, CGN-40. No claim has been submitted on CGN-41. Newport News has never acknowledged there are errors in its claims. They have stated that any errors discovered will be corrected.

Mr. MURPHY. Did Newport News admit to certain errors that may be involved in its claim on the nuclear submarines?

Admiral MICHAELIS. Newport News has never acknowledged there are errors in its claims. Newport News submitted an affidavit supporting its first claim submission on the submarines. The first claim was superseded by a second which was unaccompanied by an affidavit. The second modified the first by adding to some issues and deleting or decreasing others as well as adding some new items. The affidavit required by the Navy procurement directives does not call for the contractor to correct any errors discovered by the Navy.

Mr. MURPHY. Is it true, as alleged, that Newport News completed its price estimates on the submarine claim as far back as May 1975, but did not file claim until March 1976? If so, what was Newport News' explanation for the delay?

Admiral MICHAELIS. Yes; the SSN 686/687 submitted March 8, 1976, was completed in calendar year 1975. Newport News has not provided the Navy with any rationale as to why they were so long in submitting the claim.

Mr. MURPHY. Does Litton still owe the Navy \$36 million in fees due to schedule slippages?

Admiral MICHAELIS. No payments have been made as the result of late delivery of LHA's. Under the terms of the LHA contract, the maximum amount that the contractor can be assessed for any late delivery is \$9 million (\$1.8 million per ship) liquidated damages. As is the normal procedure in shipbuilding contracts, whatever amount is assessed is collected only as one of several items that are part of the final contract settlement following completion of all work required by the contract.

#### LITTON CLAIM REFERRED TO JUSTICE DEPARTMENT

Mr. MURPHY. The Navy referred a Litton claim on a submarine contract to the Justice Department for investigation of possible fraud. When was this done, what submarines were involved, and what is the status of this matter?

Admiral MICHAELIS. A Litton claim against the construction contract for SSN's 680, 682, and 683 was referred to the Justice Department in 1974 for possible fraud. It is currently being investigated by Justice before a sitting grand jury.

#### LITTON CLAIMS

Mr. MURPHY. Does the Navy anticipate that Litton will file a claim on the DD-963 destroyers? If so, of what magnitude will this claim probably be?

[The following claims are anticipated from the shipbuilder:]

(1) A LHA impact claim of approximately \$200 million is expected and a manufacturing process development claim of approximately \$90 million is expected; the latter is part of the continuing effort to find a legitimate home for start-up costs. Both of these were disclosed during Public Law 85-804 negotiation and the LHA impact claim has been expected for a long time.

(2) An MK-86 GFCS claim of approximately \$20 million which was the result of GFM problems complicated by a poor installation by shipbuilders.

(3) Litton stated recently that there is a potential claim for "Over Inspection." There is no estimate of the amount.

(4) A sonar dome rubber window claim of unknown estimate. Litton has had installation problems with the sonar dome rubber window and even though the installation is Litton's design and material, the window is a standard Navy product. No other information on the basis of this potential claim is known at this time.

#### LHA DELIVERED BY LITTON

Mr. MURPHY. What is the condition of the first LHA delivered by Litton? Does it have a large number of deficiencies? Will Litton be required to correct any deficiencies at the contractor's expense?

Admiral MICHAELIS. The LHA-1 had a number of deficiencies when reviewed by the Board of Inspection and Survey (Insurv) in March; however, the number was not out of line with the size and

complexity of the ship. When the ship sailed away from the yard on July 7, 1976, most of these had been corrected by the contractor at no further expense to the Navy. A few lines are to be corrected at the post shakedown availability (PSA) and these costs will be back-charged to the Contractor. There are some which were contested as to responsibility; however, the Navy expects these to be resolved by traditional contract administration procedures and we believe that Ingalls will live up to its responsibilities for guarantee and warranty items.

Mr. MURPHY. Subsequent to the collapse of Public Law 85-804 negotiations, several dramatic events occurred. On June 14, 1976, Newport News advised the DOD that unless a prompt reconciliation of outstanding claims was made, the shipbuilder would propose that the CVN 70 nuclear-powered aircraft carrier be transferred to the Puget Sound Naval Shipyard, that five SSN-688 class nuclear-powered attack submarines be transferred to the Mare Island Naval Shipyard, and that work on the CGN-41 nuclear-powered cruiser would be terminated. Additionally, on June 29, 1976, Litton advised DOD that because of the inability to resolve during the last 4 years the \$504.8 million claim on the LHA program, that Litton would cease all work on the four remaining LHA ships on August 1, 1976. Admiral Holloway, what has been the Navy reaction to these notices, and are there renewed active negotiations ongoing today in another effort to resolve these claims disputes?

Admiral MICHAELIS. The Navy's reaction to Litton's stop-work action and Newport News' effort to divest themselves of Navy work is greatly increased emphasis in expediting the resolution of all outstanding contractual issues while maintaining the integrity of the contracts with these companies. A renewed effort to resolve these claims disputes through active negotiations is being conducted by a specially appointed Claims Settlement Board.

Mr. MURPHY. What does the Navy propose to do at the present time and what impact do these problems have on your fiscal year 1977 and prior year shipbuilding programs?

Admiral HOLLOWAY. A three-man claims settlement board, headed by Rear Admiral Manganaro, has been established with special authority to review, analyze, and negotiate outstanding claims with Newport News. The purpose of this special board is to reduce the multilevel review process and, consequently, to reduce the time required to reach an agreement or, failing that, to allow the contractor to appeal to the Armed Services Board of Contract Appeals.

Current planning is to proceed with issue of requests for proposals (RFP) to all potential builders. In the case of the fiscal year 1977 SSN ships, it is planned to negotiate this procurement with Newport News Shipbuilding and Electric Boat Division which are currently building ships of the class and considered fully qualified to build the fiscal year 1977 SSN's. In addition, Ingalls Shipbuilding has requested that it be placed on the bidders list, however, no decision has yet been reached on this request. Further, the Navy is conducting a study regarding the feasibility of assigning a portion of the fiscal year 1977 ships to a naval shipyard for construction, and prospective bidders have been so advised.

If the problems at Newport News and Ingalls are resolved by the ongoing efforts then, of course, there will be no problem. Even if the two shipyards do carry out the threat to stop work as indicated, it is still expected that the fiscal year 1977 ships can be built. There could be some impact upon cost and delivery but this can only be determined when the circumstances are known.

**Mr. MURPHY.** The Litton letter indicates that on April 16, 1976, the Armed Services Board of Contract Appeals decided that Litton was entitled to an equitable adjustment of \$17,360,000 on the contract for SSN 680, 682, and 683 nuclear-attack submarines, but the Navy refused to execute the contract modification and refused to pay the above amount. What were the reasons for the Navy refusal, and are you legally liable to pay that amount?

**Admiral MICHAELIS.** The amount of \$17.3 million is the amount decided by an ASBCA decision on a \$31.5 million claim. Certain issues of fraud were under investigation by Department of Justice prior to the appeal to the ASBCA. This investigation is continuing. Pending the outcome of its investigation, the Justice Department has instructed the Navy to withhold the payment of \$17.3 million to Litton. The Navy is liable for this amount only if it is determined that fraud does not exist.

**Mr. MURPHY.** The Litton notice to DOD cited a Comptroller General decision of February 27, 1976, G-184830—unpublished—that the best estimate of program costs which give rise to Government liability must include contractor claims. Is there any possible validity, therefore, to the Litton assertion that the Navy is in technical violation of the Antideficiency Act—31 U.S.C. 665—because the Navy had failed to obtain adequate appropriations to cover all LHA program costs?

**Admiral MICHAELIS.** The Navy's interpretation of the Comptroller General decision is that the Navy is not in violation of the Antideficiency Act by proceeding with the contract.

**Mr. MURPHY.** In fiscal year 1972, the Congress appropriated \$109.7 million to pay Litton nonrecurring costs on the LHA program under the provisions of the contract termination clause because the Navy canceled four of the nine LHA's originally under contract. Has the Navy paid Litton this money? If not, why not?

**Admiral MICHAELIS.** In the contract officer's decision of February 1973, the \$109.7 million was included in the target price of the LHA contract for nonrecurring and other costs that constitute the cancellation charges. The contractor is paid by applying the percent of physical progress completed to the target price. As of June 27, 1976, the percent complete was 84.4 percent; therefore, \$92.6 million of the \$109.7 million has been paid to date. The balance will be paid as a part of the weekly payments to the contractor determined by the physical progress that he attains each week.

#### NAVY SETTLEMENT OF CLAIMS

**Mr. MURPHY.** We understand that on the average the Navy has been settling claims at about 47.9 percent of their face value. Is this a recognition by the Navy that it is responsible for about half of the causes of the claims that have been submitted over the years?

Admiral MICHAELIS. Navy settlements since January 1974 on major claims ranged from as little as 5.9 percent to as much as 63.9 percent of the total claim. All negotiated settlements are founded upon technical and legal analysis and recognition of Navy responsible causes, and the cost impact thereof, on the contractors.

Mr. MURPHY. In what ways has the Navy been responsible for about 48 percent of the claims?

Admiral MICHAELIS. Following technical and legal analysis, the Navy has paid for those items in the claims which were acknowledged to be the Navy's responsibility. These items include late or deficient Government/furnished property/equipment-information, constructive changes, delay, disruption, and acceleration.

Mr. MURPHY. If there are about \$1.9 billion in claims outstanding, does that mean that perhaps the Navy is responsible and liable for about \$900 million?

Admiral MICHAELIS. The amount which the Navy will pay depends upon the technical and legal analysis, the results of the DCAA audit review, and finally, negotiations. The total amount cannot be predicted with any accuracy at this time.

#### AMOUNT OF PAYMENTS MADE ON CLAIMS FILED

Mr. MURPHY. How much has the Navy paid in the past 10 to 15 years on claims filed and what was the total amount of the claims when submitted?

Admiral MICHAELIS. To date, the Navy has paid \$719 million including provisional payments on claims filed which totaled \$3.066 billion.

#### AMOUNT RECEIVED AND BUDGETED FOR ESCALATION AND COST GROWTH FOR PRIOR-YEAR PROGRAMS

Mr. MURPHY. Admiral, could you provide for the record the total amount that the Navy has received and budgeted for escalation and cost growth in prior-year programs in the last 10 years?

How much of this amount has been satisfied through cancellation of ships; how much of this has been satisfied through reprogramming action, and how much has been satisfied by direct appropriations by Congress? And of this amount, how much was to pay claims?

You can provide that for the record.

Admiral HOLLOWAY. Yes, sir, I will.

[The information follows:]

Admiral HOLLOWAY. The total amount that the Navy has received or budgeted for escalation and cost growth for prior year programs in the last 10 years is \$4,291.2 million. Of this amount \$176.1 million has been satisfied through cancellation of ships; \$74.2 million through reprogramming actions; \$2,417.8 million through direct appropriation by Congress; and \$1,623.2 million is now requested in the fiscal year 1977 budget. Of the \$4,291.3 million total, \$598.0 million was requested to pay claims.

#### CHANGES IN CIVIL SERVICE REGULATIONS

Mr. SIKES. At this point there is one additional question on possible changes to civil service regulations which could be important to a decision on whether to use additional public rather than private yards.

Mr. Casey?

Mr. CASEY. Have any studies or recommendations been made on possible changes to the civil service regulations that would eliminate or at least decrease the hourly salary differential and other limitations on personnel management that were referred to previously, when talking about public versus private yards?

Admiral HOLLOWAY. I would like to pass that question to Admiral Michaelis.

Admiral MICHAELIS. The question, sir, would that help us?

Mr. CASEY. Would it? Have you studied it? Has there been any recommendation in this area?

Admiral MICHAELIS. No. I am aware that there are concerns in OCMM, our Office of Civilian Manpower Management. There is a recognition that the blue collar wage situation is imbalanced at the present time because of the five steps that are included in each one of the wage grade levels and the problem of equating the local wage level with the second step, while most of the people working for the shipyard are either in the fourth or fifth step. So it is bound to have a significant effect on the wage scale in comparing private and public shipyard costs.

There have been recommendations for legislation on this. I cannot elaborate much further on it.

Admiral GOODING. There has been continuing dialog, sir, between the OCMM and the Navy, at least my part of the Navy, on this subject over the past couple of years.

I am aware of no formal studies on this subject, however.

Mr. CASEY. No recommendations or suggested legislation has come forward on this?

Admiral GOODING. Not to my knowledge, but I am being very unfair when I say that.

Admiral HOLLOWAY. Admiral Fine has some information.

Admiral FINE. I think we have this year taken some proposals before the Congress to try to alleviate this situation. One would in fact reduce the five-steps down to three-steps blue collar grades. The second is the repeal of the Monroney amendment which has caused the blue collar wage rates in the public sector to increase more rapidly than they have in the private sector because of the application of the Monroney amendment.

Those are two specifics that are before the Congress this year that have yet to be acted on.

Mr. SIKES. Has any action been taken insofar as you know on either proposal?

Admiral FINE. On the authorization side, there has been no authorization action on those two proposals so far as I know, to my knowledge. I will have to supply for the record what the congressional action is.

Mr. SIKES. Has there been an inclination shown by the Congress in recent years to act on recommendations of this nature or have they generally been ignored?

Admiral FINE. Mr. Sikes, I would have to supply that for the record, too.

[The information follows:]

H.R. 12843, sponsored by OMB and CSC, was introduced into the House on March 29, 1976, by Mr. Derwinski (by request) and referred to the House Post Office and Civil Service Committee. No action has been taken on the bill. A similar bill was referred to the Senate Post Office and Civil Service Committee but, in this case also, no action has been taken.

DOD sponsored legislation in the House in 1975 to repeal the Monroney amendment (section 5343(d) (1) and (2) of title 5, United States Code), but no action was taken.

Mr. SIKES. Admiral Holloway, some of these questions have been rather complex and, in fairness to the committee, I would like for you to feel free to add or even modify the answers that you have given where you feel there is justification for it. We want complete and accurate answers and we know that is what you want to give.

Admiral HOLLOWAY. Yes, sir.

#### U.S.S. LONG BEACH

One comes to mind, Mr. Sikes, that I would like to amplify. It was an answer I gave to the chairman's question, which was, could the *Long Beach* be deferred until 1978? And my answer was that, "Yes," it was possible.

The point I want to make is that such is possible only if there were another Aegis ship in the program. I must reiterate and reemphasize the fact that it is terribly important that we have Aegis in the fiscal 1977 SCN program.

#### COMPARISON OF UNITED STATES/SOVIET NAVIES

Mr. SIKES. Much has been said this year on and off the record concerning the size of the United States and Soviet navies, as well as the United States and Soviet shipbuilding trends in the past 5, 10, and 15 years. Many comparisons have been made, and I believe it safe to say, somewhat misleading inferences can be drawn from data supplied by those on each side of the issue. As we know, a simple comparison of numbers is not very meaningful. The mission of the Soviet Navy is somewhat different than that of our Navy. Admiral Holloway, would you discuss this issue in a very general way at this time.

Admiral HOLLOWAY. Comparisons of the type mentioned generally attempt to contribute to an understanding of the naval balance. Estimating the naval balance, however, is a very difficult and very uncertain business. It is not just a matter of comparing force levels. The real question is which Navy can carry out its mission successfully, in the face of determined opposition by the other.

For example, DOD's No. 1 force planning case is a "world war with the Soviet Union and its allies." In this case, a major function of the U.S. Navy is to insure the resupply of NATO and our other allies. On the other hand, the corresponding function of the Soviet Navy would be to interrupt our sea lines of communication (or SLOC's). The very nature of such warfare makes it much easier to interrupt the SLOC's than to prevent someone from interrupting them. Thus if the two navies had identical forces, the balance in this case would be much in favor of the Soviet Navy.

So how can one go about estimating the naval balance? Let us consider the range of available analytical approaches in order of increasing complexity:

First—examine and compare the force levels of the two navies. This might be interesting but would be of very little utility.

Second—examine and compare force levels as a function of time. This approach is of little utility for estimating the naval balance, but it is an excellent vehicle for identifying important trends that can affect the naval balance.

Third—carry out battle analysis. This provides an estimate of the relative capability of the specific ships involved in the scenario considered. However, this is still of little utility in estimating the naval balance.

In order to estimate the naval balance it is necessary to go the last step in complexity—to campaign analysis. Here we examine an entire campaign which considers: Each Navy's objectives; its strategy and tactics; its entire order of battle, and other pertinent factors.

The objective in such an analysis would be to estimate who wins. This is the only analytical means available to estimate the naval balance.

In summary, comparisons of the type mentioned are very valuable since they can reveal trends that can affect the naval balance; however, they cannot lead to estimates of the balance itself.

#### U.S. AND SOVIET SHIPBUILDING COMPARISONS

Mr. SIKES. The Chairman of the Joint Chiefs of Staff, General Brown, testified this year as follows: "The overall force level of Soviet major surface combatants is expected to gradually decrease slightly over the next decade as older units are retired and not replaced on a one-for-one basis \* \* \* a decade from now two-thirds of the Soviet Navy will probably still consist of units that are currently operational \* \* \*" Are the Soviets probably having the same problems we had a few years ago, and find it necessary to retire ships that are obsolete and too costly to maintain?

Admiral HOLLOWAY. Yes, sir, but I would not characterize it as a problem. It is a fact of life that at a certain point a ship needs to be retired for one of two reasons; it is either mechanically worn out or it is not capable for modern warfare in terms of its weapons systems.

I believe that the Soviets are experiencing ships wearing out and, in replacing them, they are producing more capable ships in every case.

Mr. SIKES. I think at this point—we have had this before but at this point in the record it would be useful to have again—some information on the number of new ships which are being added year-by-year to the Soviet fleet in comparison with ours.

Mr. ADDABBO. Will the chairman yield?

Mr. SIKES. Yes.

Mr. ADDABBO. I would like to get for the record, along the lines of the chairman's questions—we have seen and I know newspapers carry the story of Congressman Aspin's comparisons. He has placed great emphasis on the fact of weight for weight. In other words, instead of numbers, if in this answer to the question for the record there could

be a comparison on type of ship, because you say you have 100 3,000-ton ships vis-a-vis 10 10,000- or 11,000-ton ships. I think that would give us a better feel of where we are now and where we are going.

Admiral HOLLOWAY. I will do that.

Mr. SIKES. Can you give us some details on the number of attack submarines, cruisers, destroyers, and frigates the Soviets had in, say, 1965, and the number of each of these class ships they have in their order of battle today?

Admiral HOLLOWAY. I will provide this information for the record. [The information is classified and was submitted to the committee.]

Mr. SIKES. Every year we are reminded that the U.S. Navy ship inventory has declined from some 950 ships in mid-1968 to about 475 or 480 today. We, like the Soviets, do not propose to replace our retired ships on a one-for-one basis. Is that true of the Soviets?

Admiral HOLLOWAY. Yes, sir, in some categories.

For example, 59 of our diesel-powered submarines were replaced by only 29 nuclear-powered attack submarines which provide substantially greater capability than the diesel submarines they replaced. The same can be said for other classes of ships. As discussed earlier, the question is on what the size and composition our Navy should be to meet the threat of the 1980' and 1990's, whether it be a 500-ship Navy or a 600-ship Navy.

Mr. SIKES. Do you feel that we have the capability, that we are building into our Navy a capability that more than offsets the ships that are being retired?

Admiral HOLLOWAY. Yes, sir, I do.

I would refer you, sir, to tab A and tab B of my statement, which is the shipbuilding program that I would propose, and the kind of Navy it would provide.

In my opinion, this force structure would give us individual units which would be capable of meeting the weapon system technology that they will face over their lifespan. It also would provide enough of those units in the proper balance to be able to do what this country expects its Navy to do in the face of what we project the Soviet capability to be.

The variation ——— is largely one of risk, because there are several ways to win. One is to win just barely after a protracted 3- or 4-year war with great damage and devastation visited upon ourselves and our allies. Another is to have a greater margin of success and to cause the war to be ended quickly on conditions more favorable to us and our allies.

The degree of the risk that is unacceptable is the situation in which the chances are greater than 50 percent that we would lose rather than win.

Mr. SIKES. Do you feel the Soviets are going to be following this same trend of a smaller number of more capable ships?

Admiral HOLLOWAY. I think that that is a strong possibility.

Mr. SIKES. At what point in time?

Admiral HOLLOWAY. I think we are already seeing a tendency in that direction. The trend of a steady growth in numbers is already slowing and the numbers of ships in the Soviet fleet will soon begin to level off.

Mr. SIKES. What do you base that on, Admiral? Now particularly

in ground warfare, conventional weapons, the Soviets have excellent weapons, some of them definitely superior to ours, others at least comparable to ours. But they do not stop on a comparable number with ours; they continue to build. In most categories they have several times as many weapon systems as ours, such as tanks, armored personnel carriers, et cetera.

Why do you think it would be different with the Navy?

Admiral HOLLOWAY. Because I see the Soviets changing their maritime strategy.

After World War II, their navy was simply a coastal force with the primary mission of protecting the flanks of the army. It then evolved into a striking force specifically designed to make a quick, almost suicidal type of attack on our major naval units.

Their ships were small, poorly armored, all of their weapons were topside with few reloads in the ship's magazine. They exemplified a strike sacrifice philosophy. We are now seeing the Soviets build cruisers which, instead of being 3,800 tons, are 9,000- and 10,000-ton such as the *Kara* class; these ships designed to go far from home to fight and stay.

We are seeing them build carriers of 40,000 tons, which are ships capable of providing a Soviet presence far from home and for long deployments. Furthermore, these carriers represent a capability of the Soviets to provide air cover to their fleet and project power ashore in remote localities. As they reduce their inventory of the large number of small patrol craft, that will bring the force levels down. As they put into the fleet carriers and large cruisers, that will bring their net naval war-fighting capability up.

I believe they have come to a shift in their maritime strategy. This is substantiated from what Admiral Gorshkov has recently written, and which is included in section 2 of my statement. The Soviets have realized that having built a navy to protect their homeland and interdict the free world's sealanes of communications, they can add on the margin such ships as big as cruisers and carriers, capable of operating tactical aircraft and have a navy that is capable of projecting Soviet influence overseas.

At the present time, the Soviet Union is negotiating with Tonga and Western Samoa in the South Pacific to ———. The U.S.S.R. has no discernible presence now in this area which sits astride the main sea routes between Australia-New Zealand and Hawaii-North America.

We are seeing the Soviet Navy moving to areas of the world's ocean new and remote to them, and they are building a navy that is going to permit them to operate effectively in those remote parts of the world.

#### BUILDUP IN THE NAVY

Mr. SIKES. Do you see a sufficient buildup in the Soviet Navy, in numbers of ships that, just by weight or numbers, they become a serious threat to us?

Admiral HOLLOWAY. I see a buildup in the Soviet Navy which, in 5 to 7 years, could prevent the U.S. Navy from carrying out its mission

of maintaining the security of the sealanes of communication between the United States, Europe, the Persian Gulf, and the Western Pacific, unless we take positive action now to maintain the level of superiority we have today.

I do not see the Soviet Navy gaining an overall naval superiority over the U.S. Navy which would permit the U.S.S.R. to extend its influence and project its power overseas when opposed by the United States in less than the next 10 years. Their new strategy needs about 7 to 10 years of naval growth to become effective. They can develop their present strategy of interdiction to the point where they can prevent our Navy from carrying out its mission in 5 to 7 years, if we do not take the necessary actions to maintain our level of superiority.

Mr. SIKES. Will the program which has been submitted for the buildup in our shipbuilding program be adequate to offset this possibility?

Admiral HOLLOWAY. Yes, sir, I think it will. It is a turnaround program which will arrest the downward trend in our net naval capability.

Mr. SIKES. Do you feel safe with this new proposal? Considering the answer you have just given us, and the rather limited projection for additional ships before us, it sounds like a lot of numbers, but it is a rather limited number of ships. Do you feel safe with that?

Admiral HOLLOWAY. I think that the force that I propose in Tab A of my statement gives me about an 85-percent confidence that we will not relinquish our superiority at sea in the next 10 years.

But, Mr. Sikes, let me say I believe that my estimate has to be updated every year because it is based upon Soviet naval capabilities as well as our own. As intelligence estimates will show, Soviet activity is not always predictable. My confidence level is based on today's intelligence. Our experience has been that we have more often than not — the Soviets — over the past 15 years.

Mr. SIKES. And their shipbuilding program is a much more flexible one than ours?

Admiral HOLLOWAY. No, sir, I do not think so.

Mr. SIKES. Are you disregarding the difficulty of getting programs past the Office of Management and Budget and through Congress? That is what I meant by flexible.

Admiral HOLLOWAY. I agree with you in that regard. Between now and this time next year there is a much greater possibility that Soviet production and strategy could radically change.

Mr. SIKES. It could change direction much more readily than we can?

Admiral HOLLOWAY. Absolutely yes.

Mr. SIKES. And if they see a need for a new type of development, they can move immediately into it, and you cannot?

Admiral HOLLOWAY. Yes, Mr. Sikes, they have the industrial capacity to support it. Their submarine-building capacity today is enough to produce 20 nuclear-powered submarines per year, working on a single-shift basis. That is not being fully utilized. They are only producing 8 to 10.

The alarming feature is the fact that, even with our ———, we will probably have a ———.

Mr. SIKES. I would like to have an updated comparison of their shipbuilding capability insofar as we know it with ours, at this time.

Admiral HOLLOWAY. Yes, sir.

[The information follows:]

#### SUMMARY OF SOVIET NAVAL SHIPBUILDING CAPABILITY

1. *Submarines*.—There have been some significant additions to the five Soviet submarine building yards over the last decade, particularly ———. It is estimated that the Soviets have the physical plant to produce at least 20 nuclear submarines per year on a single shift basis with ———.

However, their recent construction rate has averaged 8-10 nuclear units per year and ——— diesel submarines.

2. *Major combatants*.—There are five Soviet shipyards presently engaged in building major combatants; all these yards also build commercial ships. The construction capabilities of these five yards have been expanded to varying degrees ——— but the majority of this effort appears to be initially intended ———. Of these building ways usually dedicated to naval construction ——— under construction thereon. Construction rates from these yards are averaging about ———.

3. *Minor combatants*.—There are 11 construction yards in the Soviet Union and ——— producing the great majority of the minor combatants, mine warfare and amphibious ships currently entering the naval inventory. These yards are averaging about ———.

4. *Building capacity*.—Sufficient surplus shipbuilding capacity, resources and trained manpower are available throughout the Soviet Union to rapidly expand ship production of any type or types, if a priority to do so is established by the country's leadership.

5. *Submarines*.—There are currently two private shipyards building nuclear submarines for the U.S. Navy. Submarine production has averaged about three units per year over the last several years. Potential additional capacity does exist by employing the two navy yards or two private yards that have built nuclear submarines in the past, but no longer do so. Bringing this additional capacity on the line would be limited to the trained manpower and resources which would be made available.

6. *Major combatants*.—There are eight private shipyards currently under contract to build major combatants and auxiliaries. Major combatant construction has been averaging about five units over the last several years. Major combatant capacity could be expanded further by greater utilization of the aforementioned yards in addition there are six private yards and two naval yards which have the ability to build major combatants but are not so engaged at present. Another five private shipyards are available which could produce auxiliary ships.

7. *Minor combatants*.—There is presently one private shipyard building minor combatants. An average of less than one minor combatant per year has been built over the last several years. About 30 private shipyards are available which could produce minor combatants.

8. There is a significant potential capacity in the U.S. shipbuilding industry to build naval ships. Capacity responds to demands as long as the demand is planned and orderly. The shipbuilding industry in the United States has the capacity to expand at a steady rate of 10-15 percent per year.

#### SOVIET SUBMARINE CONSTRUCTION

Mr. SIKES. Data provided the committee indicates that in the last 15 years, from 1960 to 1975, the Soviets have built 80 nuclear-powered submarines to our 60. In addition, the Soviets have built 93 diesel-powered submarines. We and the Soviets have agreed to the number

of FBM type submarines each side may build. How many of the 80 nuclear-powered Soviet submarines are FBM types and how many are purely attack submarines?

Admiral HOLLOWAY. In the years 1960 through 1975 the Soviets built a total of \_\_\_\_\_ nuclear-powered submarines of which \_\_\_\_\_ were attack submarines and \_\_\_\_\_ were ballistic missile submarines. Of these \_\_\_\_\_ attack submarines, \_\_\_\_\_ were equipped with antiship missiles.

Mr. SIKES. How many more nuclear attack submarines would we have today if all those under construction had been delivered on schedule according to their contract delivery dates?

Admiral HOLLOWAY. The Navy would have eight more nuclear attack submarines today if all of the SSN 688 class submarines under construction had been delivered on their original scheduled delivery dates at time of contract award.

Mr. SIKES. In the last 5 years, the Soviets have built 24 nuclear-powered submarines to our 21 nuclear-powered attack submarines. How many of the 24 Soviet nuclear-powered submarines were of the attack class?

Admiral HOLLOWAY. In the past 5 years (1971 through 1975) the Soviets have produced a total of \_\_\_\_\_ nuclear-powered submarines; \_\_\_\_\_ are ballistic missile submarines, and \_\_\_\_\_ are nuclear-attack submarines of which \_\_\_\_\_ are equipped with antiship missiles.

#### SOVIET DIESEL SUBMARINES

Mr. SIKES. Admiral Holloway, why do you suppose the Soviets continue to build diesel submarines? Do diesel submarines provide a unique ASW problem or otherwise compound our ASW efforts?

Admiral HOLLOWAY. The Soviet Navy continues to design and build diesel-electric submarines because they have missions for which these submarines are well-suited. Though lacking mobility and submerged endurance, diesel submarines are very quiet when operated prudently. They are relatively inexpensive when compared to their nuclear counterparts and have been produced in large numbers. The Soviets would most likely employ their diesel submarines in ASW and antishipping mobile minefield roles at critical choke points. Many of these choke points are close to Soviet home waters within easy reach of the short-legged diesels. Others, such as those in the Mediterranean, would be manned by units deployed to that sea. Due to their large numbers and relative invulnerability to passive acoustic detection, their presence significantly complicates our ASW efforts. They are, however, susceptible to detection during required snorkel charging periods and can be countered with active sonar.

#### MAJOR SURFACE COMBATANT SHIPS

Mr. SIKES. We note that in the last 15 years, we have built 124 major surface combatants over 3,000 tons, including six aircraft carriers. In the same time frame, the Soviets have built 60 major surface combatants over 3,000 tons, all nonnuclear powered. Admiral, is a 3,000 ton or larger major surface combatant the size of a warship

that would be considered best suited for a deep-water or blue-water or openocean navy? If not, why not?

Admiral HOLLOWAY. Modern naval warfare requires modern technology, which means sophisticated systems. These systems are large and complex and require large platforms. To carry out the Navy's missions at sea in a high density hostile AAW combat environment, the Aegis system is required. It is large and complex and it takes a large ship to carry it. The ship design process includes rigorous analyses to optimize the tradeoffs among ship size, payload, and mission capability. Smaller ships can perform some important roles, but we have to have a number of ships big enough to provide the systems we need at sea.

Our largest and most capable surface ships are less vulnerable than the smaller, less capable surface ships. In the carrier and strike cruiser, because of their size and tonnage, we are able to include significant self protection and armor features. In addition, they will have a great deal of redundancy and highly effective damage control and fire-fighting systems.

The U.S. Navy must be structured to carry out the functions of sea control and projections. The Soviets build their Navy to deny us the accomplishment of our mission. We should not attempt to make our Navy a mirror image of theirs. We must have sight of our mission and must build our ships accordingly.

Mr. SIKES. We note that the Soviets have built some 80 major surface combatant ships in the 1,000 to 3,000-ton class in the last 15 years, while we have built only three such ships in that time frame. What are these three U.S. ships, and why have we apparently placed far less emphasis in major surface combatants of that size than the Soviet Union?

Admiral HOLLOWAY. The three U.S. ships built in the last 15 years in the 1,000 to 3,000-ton class are the:

Unit	Commissioning date	Full load displacement
McMorris (DE-1036).....	March 1960.....	1, 775
Bronstein (FF-1037).....	June 1963.....	2, 710
McCloy (FF-1038).....	October 1963.....	2, 710

The DE-1036 was the last of a four-ship class built to verify a low-cost escort that could be quickly mass produced during a mobilization or wartime period. The FF-1037/1038 were constructed as prototype ships for advanced ASW systems. This design led to the FF-1040 class (3,400 tons), FFG-1 class (3,245 tons) and FF-1052 class (4,100 tons) which were produced in large numbers.

The United States has always had major interests and allies overseas and, hence, required a Navy on distant deployment and in a constant state of readiness. This requires big ships. Traditionally, the Soviet Navy missions were defensive, involving coastal action or relatively short forays to sea. This does not require large ships. However, in the early 1960's, the U.S.S.R. recognized the real value of a world power navy from the U.S. naval actions in the Cuban quarantine and the Lebanon crisis of 1958. Since that time, the Soviet Navy

has been building larger and larger ships to support the expanding scope of its naval missions. Currently each navy has about the same number of ships of greater than 5,000 tons full load displacement.

In essence, the disparity in relative emphasis in 1,000- to 3,000-ton surface combatants arose because the Soviets had a mission for such units, while the U.S. Navy with its forward strategy had no such requirement.

#### UNITED STATES/SOVIET SURFACE COMBATANT SHIPS

Mr. SIKES. We are told that as of May 1, 1976, the Soviets had 228 major surface combatants of 1,000 tons or over compared with our 172. Of the Soviet total, 107, or 47 percent, are frigates between 1,140 and 1,500 tons. All of our major surface combatants are over 3,000 tons with the exception of two frigates of 2,629 tons. In your opinion, are these small Soviet frigates somewhat restricted to primarily coastal use because they would have to seek shelter in heavy seas and would require refueling and resupply more often than larger ships, thereby limiting their range? In other words, are they a serious threat to interdicting our lines of communication or attacking our ships on the open ocean?

Admiral HOLLOWAY. These units may be somewhat restricted in range when compared to the units of one of our attack carrier task groups. However, if one looks at the areas in which U.S. and Soviet units would most likely engage during a possible conflict—the Mediterranean Sea, the Norwegian Sea, the Western Pacific—it becomes obvious that range and endurance are not such critical factors for the Soviets. In fact, the Soviets routinely deploy such units (RIGA's, PETYA's, MIRKA's) in all of these areas where they are a significant potential threat to the U.S. Navy and its sea control function. The primary mission of these units is ASW, and in this mission they threaten our SSN's that constitute a major element of our defense against the Soviet submarine force. Thus these ASW surface ships present an indirect threat to the SLOC's by freeing more Soviet submarines to attack the SLOC's directly.

Mr. SIKES. Our 172 major surface combatants, on the other hand, include 13 aircraft carriers (of which two are nuclear powered) and 26 missile cruisers (of which 5 are nuclear powered). Would you say these classes of U.S. ships compare favorably with the Soviet's Kiev V/STOL carrier, the 2 helicopter carriers, and 35 Soviet cruisers? Would you say that our 38 missile destroyers compare favorably with the 34 Soviet missile destroyers?

Admiral HOLLOWAY. The U.S. aircraft carrier is by far the most powerful offensive conventional weapons system ever built. Soviet efforts at building carriers have only recently begun and, therefore, their current carriers are not really comparable to ours at all. In fact, theirs are primarily ASW-oriented.

With regard to missile cruisers and destroyers, the Soviet *Kynda*, *Kresta I*, modified *Kashin*, and *Kilden* classes have antiship cruise missile systems which none of our cruisers and destroyers have as yet (the fleet introduction of Harpoon will change that). With that exception, both navies' cruisers and destroyers are designed for ASW, AAW, or both. The U.S. combatants are appreciably more capable

in both categories but the Soviet Navy has placed considerable emphasis on both ASW and AAW for many years now and their capability is growing both in quality and quantity of systems. It should be noted that the Soviets have demonstrated no desire to build nuclear-powered surface combatants.

Operationally the U.S. Navy utilizes a multimission task force concept of employment. As such, the carrier and its embarked aircraft provide overwhelming standoff attack for both the sea control and power projection functions. The missile cruisers and destroyers are designed to accompany the carrier within the task force and operate in mutual support against hostile aircraft, missiles, and submarines.

The Soviets, on the other hand, initially designed their cruisers and destroyers as an anticarrier force armed with ASCM's. As the Soviets perceived our SSBN force as a major threat to the Soviet Union, their ship design began to emphasize ASW capabilities, including helicopters and standoff ASW weapons. The ASW requirement led to the *Moskva* class CHG which can carry up to 16 helos in addition to ASW detection and weapons systems. The present culmination of this evolution is the *Kiev* class ASW aircraft carrier. In addition to its extensive ASW capability, it has an air defense capability and the potential for limited power projection with its V/STOL aircraft.

Thus, it appears that each navy has built combatants that are designed to support its unique mission requirements.

Mr. SIKES. How many more major surface combatants would we have today if those under contract had been delivered on schedule according to their contract delivery dates?

Admiral HOLLOWAY. If all major surface combatants had been delivered by their original contract delivery date we would have 7 more today; 2 more cruisers and 5 more destroyers for a total of 28 cruisers and 43 destroyers.

#### UNDERWAY REPLENISHMENT SHIPS

Mr. SIKES. Data provided to the committee indicates that the Soviet Union has built only six underway replenishment ships in the last 15 years. As a matter of fact, these six ships were built since 1971. On the other hand, since 1960, we have delivered 25 underway replenishment ships, which are so vital to a "blue water" Navy. At the present time we have 43 underway replenishment ships, while the Soviets have only 14 such ships capable of alongside refueling operations. Testimony this year from the Chairman of the Joint Chiefs of Staff indicates that alongside underway replenishment is still not well developed in the Soviet Navy. Does the apparent lack of Soviet capability in this area tend to restrict the Soviet Navy at this time in their efforts to interdict our lines of communication and deny us full use of the open oceans?

Admiral HOLLOWAY. The Soviets have in the past operated their naval ships relatively close to replenishment bases ——— When deployed, ——— from the large Soviet merchant fleet which is routinely used as a source of resupply. The Soviet surface forces are ——— to our sea lines of communications beyond Soviet ——— the most formidable interdiction threat is their large submarine force. We do

see an increasing emphasis by the Soviets in developing their \_\_\_\_\_ which may indicate their intention to enhance the \_\_\_\_\_ but the submarine is, and for the foreseeable future will continue to be, the most serious interdiction threat.

#### SOVIET NUCLEAR POWERED SUBMARINES

Mr. SIKES. When did the Soviet Union begin to build nuclear-powered submarines, and in your opinion, why is it that the Soviets have not begun to build nuclear-powered surface ships?

Admiral HOLLOWAY. The first Soviet nuclear submarine became operational in 1958. Thus far the only application of nuclear-powered surface ships has been on icebreakers, the first of which was launched in 1957. The reason the Soviets have not used nuclear power \_\_\_\_\_.

In the past, the Soviets experienced a \_\_\_\_\_ which, coupled with the initial cost of such plants, may have militated against its use. It can be speculated further that their \_\_\_\_\_.

#### COAST GUARD SHIPS

Mr. SIKES. We note that the Coast Guard has 23 high endurance cutters of between 2,000 and 3,000 tons, which are much larger than the 107 frigates in the Soviet Navy, and 23 medium endurance cutters of between 754 and 1,925 tons. Has the Navy considered installing the Harpoon missile and other offensive and ASW weapons on these Coast Guard ships in order to augment in a realistic way our Navy in time of war?

Admiral HOLLOWAY. The Navy has not considered installing Harpoon on any Coast Guard ship at this time. Since the primary wartime mission of Coast Guard cutters is to augment Navy ASW forces, emphasis has been placed on providing the best ASW equipment and self-defense capability that Navy budgets and equipment availability will allow. It is not envisioned that the Coast Guard would be involved in a head-to-head combat with enemy surface forces to a degree commensurate with the expense involved. Defense against enemy surface forces will continue to be provided by Navy surface combatants and tactical air forces.

Mr. SIKES. Has the Navy considered the use of long-range aircraft, similar to those used by the Soviet Navy, to help in the maritime surveillance role, in addition to our P-3C ASW aircraft?

Admiral HOLLOWAY. The Air Force has an assigned collateral function to train forces for maritime surveillance. Under the concept of mutual support by and for the services, the Air Force is expected to have forces trained for this and other maritime related tasks when these capabilities are needed by a unified commander, and when their use is approved by the JCS.

It is envisioned that, in peacetime, Navy forces will be adequate to conduct any and all required maritime operations. Participation in maritime roles by the Air Force in peacetime would be for the purpose of training their aircrews, as opposed to providing support to the Navy. The Navy should continue its operational responsibility for these maritime roles, with Air Force units training as necessary in

maritime related tasks to prepare for action in wartime or in crisis contingencies.

Design characteristics and cost-effectiveness of Navy maritime air resources make them more suitable and more efficient than the B-52D for peacetime operations. Consequently, the Navy recommends that B-52D aircraft not be used in routine peacetime operations, but that these forces be employed as available in wartime or crisis situations in which support of Navy forces is deemed necessary by the area unified commander. The operating cost of B-52D aircraft would dictate against a force of B-52D's dedicated to the maritime mission. It would be far more cost effective to cancel present plans to reduce the existing Navy VP force level and/or to recall P3's from the reserve force than it would be to support a standing force of maritime B-52D's.

Mr. SIKES. Would the Navy welcome the use of Air Force B-52D bomber aircraft equipped with standoff ordnance to assist the maritime surveillance mission of the Navy?

Admiral HOLLOWAY. Standoff weaponry is not needed for the surveillance collateral function but would be desirable for the Air Force collateral functions involving protection of shipping and surface interdiction. As with Navy P-3 and S-3 aircraft, standoff weaponry would provide a degree of tactical advantage over modern threat surface forces.

#### OCEAN SURVEILLANCE PROGRAM

Mr. SIKES. What is the Navy doing to provide ——— of Soviet warships as they might move to interdict our lines of communications or carrier task groups?

Admiral HOLLOWAY. The U.S. Navy has a surface ocean surveillance program ——— in being. Many of the specific details are at a higher level of classification. However, a new system, which uses proven technology, is nearing initial operational capability. Additionally, an ——— to determine if the system can provide benefits commensurate with the costs; if so, the need will be documented in a formal operational requirement.

Mr. SIKES. Mr. Murphy, do you have any questions at this time?

Mr. MURPHY. Yes, Mr. Chairman.

Mr. SIKES. Mr. Edwards?

Mr. EDWARDS. No.

Mr. SIKES. On my left, anyone?

Mr. KEMP. Mr. Chairman, I would like to congratulate the admiral on his statement. It seems to me one of the cliches that is growing up in our debate over defense spending is the idea that somehow this attempt to match dollar-for-ruble or ship-for-ship or missile-for-missile spending between the United States and Soviet Russia is totally rendered inoperative because of either our NATO allies or the difference in their forces structure or the difference in their goals for their military.

While I would agree in certain instances that that debate is perhaps academic, it seems to me that the ends that they seek to achieve, that is, the projection of their forces around the world to interrupt those vital sea lanes of communication that you talk about, that is something that must need be brought to the attention of more people, especially this

legislative branch, because somehow too many people simply think that this buildup is just an academic exercise.

They do not see the end to which this is being projected.

As I read your eloquent remarks, Admiral Holloway, we could foresee the possible day in which the supply of our resources and those sealanes of communication are interrupted by this projection of Soviet naval power. Is that not a legitimate end to which this buildup is committed?

Admiral HOLLOWAY. Yes, sir, I think it is.

As I pointed out and included in my statement, since Russia is a land power, why are they building this enormous navy?

Mr. KEMP. Absolutely.

Admiral HOLLOWAY. It is certainly not to protect them from the Chinese, nor from NATO-Western Europe.

Mr. KEMP. This changed from a defensive naval structure to a blue water navy. It seems it is more vital than ever to bring this to the attention of the American people, so there will be a constituency out there that will understand that the difficult decisions spendingwise that are being made in this Congress will be supported. It is not enough to talk about ships versus ships, missiles versus missiles, or number of people in the military vis-a-vis our numbers; it seems to me we have to talk in terms of goals, ends, projections, trends, and this is a message that more people need to hear.

I compliment you on doing it.

Admiral HOLLOWAY. Thank you, sir.

Mr. ADDABBO. Admiral, you say you can't understand why Russia, a land power, is increasing its Navy. Are we a sea power?

Admiral HOLLOWAY. Yes, we are. I consider that the United States is primarily overseas oriented when one considers the very close association that we have, with Western Europe and in consideration of our NATO Pact in which an attack against one partner is an attack against all.

Mr. ADDABBO. That makes us a sea power and not a land power?

Admiral HOLLOWAY. I don't know of any requirement for us to provide troops to defend the United States from an invasion either from Mexico or Canada.

Mr. ADDABBO. You speak about the possibility and the closeness of Cuba, the closeness of Alaska, so I think some of those projections might be a little different.

Are you saying that because of our cultural affiliations with Europe that we should be considered the sea power because we are the protectors of the world?

Admiral HOLLOWAY. I am reflecting what I consider to be our national strategy which does include either defense agreements or treaties with 43 other nations; 41 of those nations lie overseas.

Mr. ADDABBO. I am reflecting this and other administrations have said that we are not going to be the policeman of the world. Are you saying we must be a sea power because we are going to be the policeman of the world?

Admiral HOLLOWAY. No, sir. I am saying that we must be a sea power because of certainly our defense strategy. I did make the point,

I believe, earlier in these hearings that if our strategy were to change so that we eliminated our associations with NATO and overseas nations, that would be possible to adopt the fortress America strategy which has been enunciated from some quarters.

But that is not the strategy which I, as the Chief of Naval Operations, am being called upon to support.

Mr. ADDABBO. I didn't say I support that either. We could say we will ring ourselves with missiles and see what happens when somebody comes. I don't think that is the position of anyone in this committee or in the Congress.

We have heard the story about the great Russian buildup and therefore we have to build up. Congressman Aspin and I looked at his report and in your statements for the record. He points out that actually if we look at the age of the Soviet Navy, its present program, not its old program but its present existing program, and its projected program, that we actually have reversed our trend and we are building more than the Russians and proportionately we are increasing our Navy greater than the forces of the Russian Navy.

Admiral HOLLOWAY. We consider that statement to be based upon selective data and I would like to provide for the record what we consider to be a better and more complete presentation of all the data available to us.

[The information follows:]

Admiral HOLLOWAY. First there is the issue of relative ages of the two fleets. The U.S. Navy in the past 5 to 8 years has reduced the size of its fleet to less than 50 percent of its 1968 size. This has resulted in a healthy average age. As a result, as Mr. Aspin states the average age of Soviet ships is now a little higher than that of U.S. ships, at a little less than 14 years to about 12 years. This is true but he seems to indicate that Soviet ships will age somewhat rapidly while U.S. ships will not. Of course, all such calculations require a number of assumptions; however, our calculations indicate that in 1983 the Soviet age will be a little less than 14 while the U.S. will be a little less than 13. As fleets go, this is a relatively young and healthy age in either case.

Now let us turn to your specific point concerning trends in the two navies. I want to make it clear that the historic data provided by Mr. Aspin (to the present time) is essentially correct. I do not wish to take issue with that. My concern is with the choice of data and the manner in which he organized it.

As a result of the selection and organization of the data, he arrives at totally incorrect conclusions. For example:

In nuclear submarines, he does not consider SSBN's. He picks the period 1966 to 1975, and finds the U.S. built more nuclear submarines—45 to 43. This is misleading. The U.S. finished its SSBN crash building program by 1966 and shifted its emphasis to SSN's. On the other hand the Soviets shifted emphasis to SSBN's during this period. As a result, the Soviets outbuilt us in SSBN's by 51 to 8 and in total nuclear submarines by 93 to 53. To call this shift in emphasis a change in long-term Soviet trends is misleading since we doubled our building rate of nuclear attack submarines when we finished building SSBN's.

In surface ships, he arbitrarily limited surface combatants to 1,000 tons displacement (omitting the approximately 845-ton *Nanuchka* which carries 6 SSM's an SA-N-4 AAW missile system, a twin 57-millimeter gun system, goes 31 knots and has a combat radius in excess of 1,000 nautical miles). Later he shifted to 3,000 tons for another purpose. The accompanying chart shows the futility of such comparisons. By selecting the cutoff tonnage appropriately the ratio of numbers of ships can be made to shift from 5 to 1 for the Soviets to at least 7 to 1 for the United States.

His selection of the 5-year period 1971-75 was most fortunate for his argument. Had he stayed with long-term trends, the building advantage would have been with the Soviets and not the U.S. Navy. In addition, had he chosen to go back only 4 years, or 3, or 2, or 1, this could also have been the case. This results

from the peculiar fact that in 1971 two U.S. shipbuilding programs end with a big year: the FF-1052, with 11 ships in 1971; and the SSN-637, with 7 units. For example, the data for surface combatant construction shows that during the period 1971 to 1975 the U.S. Navy outbuilt the Soviets 32 to 29 (as Mr. Aspin says); however, from 1972 to 1975, the Soviets outbuilt us 24 to 21. The corresponding data for attack nuclear submarines shows: for 1971-75 U.S. outbuilt Soviet 18 to 17; however, for 1972 to 1975, the Soviets outbuilt us 13 to 11.

Another failing is that he compares only forces that are alike. As a result comparative trends lose real meaning. For example, he shows that although the Soviet Navy now dominates in antiship missiles (ASMs), the United States will deploy Harpoon and in a number of years have more ASMs than the Soviets. He implies that at that time all will be well. This is not the case. ASM's attack surface ships only. For the United States this includes the carriers—the heart of our Navy—as well as the supply ships that bring to the carriers the fuel and ammunition without which they become inoperative. On the other hand, the ASM's are useless against the major threats from the Soviet Navy, the submarines and aircraft.

Let me make a more general point concerning trends. The whole tone of Mr. Aspin's paper accuses the Navy and OSD of falsely claiming that the Soviet Navy is growing in size. This is not true! For a number of years, the Navy and OSD have been trying hard to draw public attention to the rapidly growing Soviet naval threat. The total number of Soviet naval ships has been decreasing for years. The growing threat stems not from numbers but, rather, from rapid and steady increases in capability. These increases continue today, for example:

Surface ships are increasing in: size, range sophistication and numbers of ASW and AAW systems.

The submarine force has a growing number of nuclear-powered attack submarines many of which can fire antiship cruise missiles as well as a large number of torpedoes.

The older Badgers of the Soviet Naval Air Force are being replaced by the new, long-range, supersonic BACKFIRE bombers.

They are building aircraft carriers.

To tie these forces together they have developed a worldwide ocean surveillance system which is still improving.

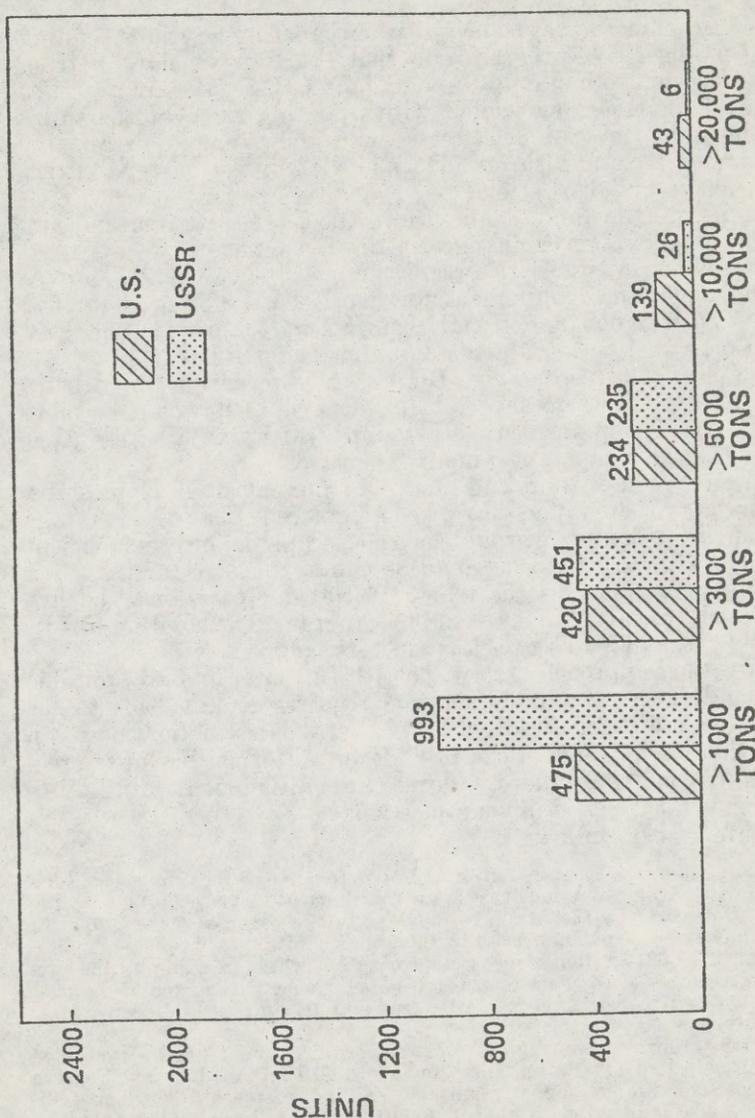
One must always remember in estimating the naval balance that one cannot merely compare numbers or tonnage or, perhaps even the capability of individual ships. One must consider the missions of the two navies. For example, the U.S. Navy is committed to the resupply of its overseas allies in case of war. The Soviet Navy mission would be to interrupt these seaborne supply lines at times and locations of their choosing. The Soviet mission is clearly easier and thus if both navies had identical forces, the balance in this case would decidedly favor the Soviets.

Another aspect of missions affects the size of ships a navy chooses. The United States has always had major interests and allies overseas and, hence, required a Navy on distant deployment and in a constant state of readiness. This requires big ships. Traditionally, the Soviet Navy missions were defensive, involving coastal action of relatively short forays to sea. This does not require large ships. However, in the early 1960's the U.S.S.R. recognized the real value of a world power navy from the U.S. naval actions in the Cuban quarantine and the Lebanon crisis. Since that time the Soviet Navy has been building larger and larger ships. As the earlier chart shows each navy now has the same number of ships over 5000 tons.

I note that Mr. Aspin states that "The U.S. is now expanding . . .". The following table lists total number of ships in the U.S. Navy at the end of each fiscal year from 1968 to present. From this table, it is difficult to understand how Mr. Aspin can conclude that our Navy is expanding.

1968	-----	976
1969	-----	926
1970	-----	769
1971	-----	702
1972	-----	654
1973	-----	584
1974	-----	512
1975	-----	496
1976 (July 3)	-----	473

Mr. Aspin's analysis shows a reversal of adverse trends in the 1980's and that the U.S. Navy surpasses the Soviet Navy in a number of important categories. These improvements result from an aggressive ship-building program based upon an assumed increase funding level. However, this is still a proposed program and one must be careful about "counting chickens before they hatch". In earlier years, the U.S. Navy's downward trend was projected to be reversed in 1974, then 1975, then 1976. Now Mr. Aspin, based upon how well we are going to get based on his projected get-well programs, proposes to cut sizeable funds from the very U.S. Navy building programs that are planned to "get us well". This is exactly the sort of move that did in our earlier get-well program.



**COMPARISON OF U.S. AND SOVIET NAVIES IN 1975  
BY NUMBERS IN TONNAGE CATEGORIES**

Mr. ADDABBO. Thank you, Mr. Chairman.  
Mr. SIKES. Mr. Edwards?

## LHA PROGRAM

Mr. EDWARDS. Admiral, yesterday we discussed the LHA, and I had some questions. I asked you one question about it, and we tended to get off on a general discussion. I never got a specific answer to the question. I would like to go back to it, if I may. So I will just restate the question and we will try to confine ourselves to LHA and not get too general.

## FUNDING OF LHA'S

It has been humred that the Navy is anticipating a serious funding shortage in the LHA program and that the Navy is now drifting toward a decision to buy only three or four LHA's. We are aware of a \$75 million increase associated with updating some of the ship's equipment and prior claims, et cetera, and know that the Navy may soon be facing a claim of up to \$701.7 million by Litton for contract changes, delays, and disruption.

Please discuss the funding picture in the LHA program and any tentative plans as regards changes in the LHA buy.

Admiral HOLLOWAY. Mr. Edwards, first let me say that I foresee no falling off of the requirement for five LHA's. The need for five LHA's is based upon a national requirement to provide the U.S. Marine Corps with a 1½ Marine amphibious force lift.

If we were not to get the five LHA's, the alternative would be to buy other ships. That doesn't seem prudent since it would be more expensive to design and procure other ships which would be less capable, or at the same capability, more expensive.

Were we to attempt to extend the use of present amphibious ships, sooner or later they would have to be replaced. The disadvantage there is in the interim we would have less capable and less efficient ships and in the long term it would be more expensive for us.

So, I fully support, as the Chief of Naval Operations, the five LHA's which we currently have in our program. The solution to Litton's problems, as I said yesterday, are very complex.

In general my approach is to work with Litton to find an equitable solution and if that equitable solution requires coming back to the Congress for additional funding, I feel that it is my obligation to do so. I say that at this point. I can provide full information for the record. I can ask my colleagues to address the individual funding problems which you have cited in your questions.

[The information follows:]

The funding picture for the LHA, as reported in our most recent SAR's through March 31 shows a level estimate for the past 2 years, reflecting the Navy's position that the Litton allegations—as to the reported \$500 million to \$700 million claim—are not supported by the data submitted to date.

The total of \$1,004 million already appropriated, while standing as the previous Navy estimate of contract cost, has been supplemented in each of the past two Navy budgets to permit claim settlement activity to proceed toward some final resolution.

In addition, a current shortage is foreseen, brought about by the continued slippages in ship delivery dates. These include a \$10 million increase in fixed overhead costs for project support, and a \$40 million increase to be applied directly to the last four ships in way of updating the hardware to current fleet specifications. The DOD is exploring methods to fund these elements which together total \$50 million. There are no plans to change the number of LHA ships in the program. We reaffirm the full requirements for all five ships.

Mr. EDWARDS. All right, sir.

Admiral MICHAELIS. In the funding picture during the period that we were involved with the 85804 and we were asking for additional information from all of the contractors involved, there was an indication from Litton that they were going to be in a greater loss position, both on the LHA and going from a profit position to a loss position on the destroyer.

Now this was mainly a reported increase in the acknowledgment of additional man-hours. There were other elements involved. Taking longer, more man-hours per ship to get the five ships built. We received some information but it has been limited. We are now trying to track our information from our superintendent of shipbuilding at Pascagoula to bring into coordination with the Litton statements and from there expand the information, trying to determine where these additional losses are, the additional man-hours.

We have not as yet changed our position in which we had gone into an 85804. I think that is so far as the addition, those are the only ones that we know of.

Admiral DOYLE. If I could add to that, Mr. Edwards, the lead ship, of course, went through her board of inspection and survey trials. As a result of that, certain discrepancies did arise. Almost all of those were corrected. Of the starred items, all but about 69 were corrected.

Mr. EDWARDS. Is it true that there were some 2,750 deficiencies cited by the board?

Admiral DOYLE. Yes, sir. Of those, 440 were starred, in other words serious deficiencies. Of those 440, 371 were corrected prior to the delivery of the ship; 69 having either deferred or waived because they were not considered mandatory for mission or safety. We are still evaluating those discrepancies. Some of those may be significant enough to do work on the follow ships. We will have to wait until the *Tarawa* completes her special operational evaluation scheduled this fall.

Mr. EDWARDS. In any case if they were starred, they were considered serious deficiencies.

Admiral DOYLE. Yes, sir. I went over each one of those personally myself. We made significant progress in correcting them.

As I say, 371 of those were corrected. I am confident that ship will be an outstanding amphibious ship. I am looking forward to a very good operational evaluation.

Mr. EDWARDS. How does a ship come out with that many deficiencies where you have a superintendent of ships there on the scene?

Admiral DOYLE. With these discrepancies you have to realize they go from everything from a door handle not being properly secured all the way up to something more serious.

Mr. EDWARDS. But where you have some 400-odd starred items which I believe you said were of a serious nature, is that usual or is that surprising that a ship would come out with that many starred deficiencies?

Admiral HOLLOWAY. Could I ask Admiral Gooding to respond to that, Mr. Edwards, since the supervisor of shipbuilding works for him.

Admiral GOODING. The number 2,750 is a little bit larger than usual but not fantastically so. In the case of the U.S.S. *Kennedy* which was delivered in the last decade, the number was 2,450. In fact, it is not at all uncommon for the lead ship of a new class to have a relatively large number of cards as a result of INSURV.

As to the question of why we have that many cards, Admiral Doyle has pointed out that some of them are rather trivial and are corrected in a few hours. As to what the supervisor was doing, he was documenting the deficiencies. He provides to the INSURV onboard a number of cards. I would guess that 80 percent of the cards that INSURV turned in had been turned into them by the U.S. Navy supervisor. Some of these are matters of honest dispute and the shipbuilders say it is not in my contract and the supervisor says it is in the contract. They say let's wait for the INSURV and let's argue about it at that time.

Most of these have been settled. There are still some in which the contractor does not agree with the U.S. Navy. We plan to correct those at a naval shipyard and bill him for the work.

#### PHM PROGRAM

Mr. EDWARDS. We have not really talked about the PHM, unless I was out. You made quite a statement in your overall testimony about the PHM. You support very strongly the concept of a six-ship squadron to give you the proper training. If I mischaracterized what you said, I hope you will correct me but that is my understanding of what you were saying. It has been argued that if you really were serious about the PHM, you would be in here pressing for more than six. Personally, I would like to have your comment on that because there is a feeling that perhaps the admirals are not all that sold on the PHM and that is the reason you are really in here pushing for six.

I wonder if you would comment on that first.

Admiral HOLLOWAY. Yes, sir. The PHM, with hydrofoil, represents a new hull technology. It offers the opportunity to give our warships stability at high speed. If we could adapt this sort of technology to major warships of cruiser and carrier size, you can imagine the enormous benefits that would accrue.

Initially we were pushed very hard in the area of hydrofoil technology to go immediately to larger ships. I think very wisely it was decided to approach this new technology on a step-by-step basis. There are several choices. One is to build a research and development platform. It is expensive and good only for research and development.

In the case of the PHM, we foresaw a current need for a fast patrol boat, so we could combine both research and development with an operational craft. At the time that the requirement for 30 was submitted, we were involved in Southeast Asia. Our overseas basing situation at that time was considerably different from what it is today.

We have demonstrated that the technology is a suitable technology advantageous for a ship of that size. We know what a single PHM can do. We are asking for the six-ship procurement because it represents a tactical unit, a squadron. This gives us two benefits:

One, those six ships are a valuable national military asset. They can be deployed overseas to operate in archipelagos and coastal areas

in a very useful military function. Six of them are similar to a squadron of airplanes. One or two PHM's aren't much good operationally, but a squadron is a useful entity because of the coordinated manner in which high-speed patrol boats are operated.

In evaluating the performance of the PHM, it is not our sole objective to see how well a single PHM will fly when it is on its foils, and what are the maintenance considerations. We want to take those six ships and see what kind of a military contribution they make to the overall Navy mission.

If we have two, we can't accomplish a realistic evaluation. It would be a paper exercise in extrapolating the capability of those two ships to determine a squadron's effectiveness.

In summary, with two PHM, we have just R. & D. platforms. With a squadron of six PHM, we have a militarily capable unit that we can deploy in either a cold war or combat as a war fighting asset.

Mr. EDWARDS. Is it your contention that the 1,000 hours that you have on the PHM-1 is sufficient to warrant going ahead with the six?

Admiral HOLLOWAY. Yes, sir. It did complete the successful operation evaluation. It was on that basis that we proposed to go ahead with the six.

#### UNIT COST OF PHM

Mr. EDWARDS. You started off to buy 30 at a unit cost of \$24.2 million. In 1974 you reduced it to 24 at a cost of \$52.7 million. Then in late 1975, you reduced the buy again to six at a cost per unit of \$64.1 million. I know everything has been going up, but where is the end of the road on the unit cost?

Admiral HOLLOWAY. I think that is the end of the road. If we go below six, of course, it is simply a cancellation. I would like to ask Admiral Doyle who is the sponsor of the hydrofoil to amplify what has been said.

Admiral DOYLE. We have had cost increases associated with the program. We feel that with the money that we have asked for in the budget, that these five ships can be completed and completed as a production unit of the lead ship.

Mr. EDWARDS. I believe we gave you \$39 million last year for PHM-2. I am told that preliminary estimates indicate that to complete PHM-2 would now cost \$54.6 million. Is that right?

Admiral DOYLE. Yes, sir, that is correct. But if we have a contract for five PHM's, we can build those five for the amount of money that is in the budget. If we go down to one, there simply would not be enough in the budget to build one. The cost, of course, would increase for a single-unit buy.

Mr. EDWARDS. I understand the Senate committee has restored the funds for six. Assume you end up with six as you request, what do you then anticipate in the future for the PHM?

Admiral HOLLOWAY. I anticipate that six-ship squadron, being operated as an operational unit, deployed where we feel it will make the greatest contributions. As we gain experience in the operation of these ships in both the technology of hydrofoils and in the use of integrated tactics with that size patrol craft, and as emergent requirements may develop, as they did during Vietnam, these ships may

satisfy developing needs. We must remember that we built *Asheville* class gunboats and found them extremely useful in that campaign. We have a capability either in those ships to build more of them or to learn enough about the technology to produce larger ships of that kind of hull design.

Mr. EDWARDS. I understand the Italians have decided they are not going to buy any at least in the near future; the Germans are still interested in 10 but what assurances do you have that they will in fact buy 10?

Admiral HOLLOWAY. Going back to the Italian Navy, they have embarked on a hydrofoil construction program and are building a somewhat smaller ship. They intend to build quite a few which will represent a very important part of their Navy. They are going to employ them primarily in the Adriatic. The hydrofoil is a very good concept as far as they are concerned. They consider that the NATO hydrofoil is more than they need and can afford for their particular application.

I have discussed the NATO hydrofoil with the Germans. Their problem as I understand it, is a political one and the decision as to whether they will be procured or not cannot be made until after the national elections.

#### NEED FOR SIX PHM'S

Mr. MURPHY. I don't think I am too clear on why you need six versus two PHM's to do what you want to do, Admiral. If you want to test them in a tactical mode, do you intend to send all six out on one mission at one time or a couple out on a mission? I am not clear why you can't use two to accomplish the purpose for which you plan to test them and the tactics you plan to see. Why do you need six to do it.

Admiral HOLLOWAY. I would say that the principal reason for getting six is to have a reasonable operational number. Two would simply be a pair of test vehicles that, in my view, wouldn't constitute a particularly useful naval force. Six would be a squadron for which we could find many applications. Six could be used, for example, in South Korea, in the Straits of Tsushima, in the Sea of Japan, in the Philippine archipelago and in areas of the Mediterranean. The deployment of two of them simply would be inadequate to represent any kind of a useful force.

Mr. EDWARDS. So your theory is you would just end up with two R. & D. items?

Admiral HOLLOWAY. Yes, sir. I think you have really summed it up. With two PHM, you have two R. & D. items. With six PHM you have a force that can be used as a tactical entity and will make a military contribution to our naval strength.

Mr. EDWARDS. These ships weigh about 200 tons, is it?

Admiral HOLLOWAY. 235 metric tons.

#### HYDROFOIL TECHNOLOGY

Mr. EDWARDS. What does the Navy believe to be the largest size ship that could be handled with hydrofoil in its present technology?

Admiral HOLLOWAY. I would like to ask Admiral Gooding to respond. I was involved in the initial discussions as to how we should

proceed in hydrofoil technology. We were talking about very large ships in the 10,000-ton or larger category, but we became convinced that to get there, we had to take it step-by-step.

Admiral GOODING. Mr. Edwards, the current folklore on this is that at somewhere near 800 tons you would stop hydrofoil and start on Surface Effect Ships. That was the current folklore up to about 10 months ago. Recent studies indicate that maybe that is wrong and you could build a larger hydrofoil.

As an engineer I would hesitate to talk to anybody seriously about a hydrofoil bigger than 800 tons right now.

#### CHARACTERISTICS OF HYDROFOIL AND THE SURFACE EFFECT SHIPS

Mr. EDWARDS. Does the hydrofoil and the surface effect ship do much the same thing?

Admiral GOODING. They have one very important and common characteristic. That is the ability to maintain speed in a high sea state where a displacement hull must slow down or beat itself to death. A hydrofoil which goes over the waves can maintain speeds in high seas. The PHM-1 can maintain about 40 knots in a sea state five. The destroyer would have to slow down to 15 or 20 depending on course.

Mr. EDWARDS. From what you know, would you rather have a hydrofoil or surface effect ship?

Admiral GOODING. That question is not answerable. The hydrofoil is more suitable to smaller craft than the surface effect ship, but I am unable to say for a given mission I want one or the other until you tell me what the mission is. They have their own peculiarities.

Mr. EDWARDS. You know what the mission is. That is one of our problems. What is the mission?

Admiral HOLLOWAY. Mr. Edwards, the PHM is a fast patrol craft. They very definitely have a mission. The Federal Republic of Germany Navy concept of NATO operations in the Baltic is based upon fast patrol craft. The Italians base their naval strategy in the Adriatic on fast patrol craft.

But the surface effect ship, because of its different configuration, totally different appearance, is better suited for tasks other than fast patrol. It is an ASW platform.

Perhaps I could ask Admiral Doyle to expand on that. Where the PHM is a displacement hull ship which flies on foils at high speeds, the SES is quite a different concept.

Admiral DOYLE. The SES ship gives us an opportunity to really make a quantum jump in speed up to say 80, 90, or 100 miles an hour. It could also accommodate a much larger platform. We are going ahead in building a prototype of 3,000 tons. We intend to put various weapons and sensors on this ship, particularly as Admiral Holloway mentioned, ASW sensors, weapons systems, Lamps helicopter, a Mark-92 fire control system.

So we are looking at a down-the-road ASW ship, a follow-on, say, to the FFG-7 class frigate somewhere down the road.

On the other hand, the PHM is limited in tasks to patrol kinds of tasks, the hit-and-run actions with Harpoon and her gun systems. So they are not in competition for missions.

Mr. EDWARDS. Finally, if we don't buy 6 PHM's, will that have any material effect on what Germany does, in your opinion?

Admiral HOLLOWAY. I would ask Admiral Doyle to answer.

Admiral DOYLE. I think they will be watching this action very closely. I don't know what effect it will have.

We do know that there is considerable interest in the German Government in the PHM program. They are participating with us fully right now in the plans and the R. & D. that is ongoing. What their final decision will be I don't know, but I think they will be looking at what action the Congress takes very closely.

Mr. MURPHY. Admiral, what do you mean by they are interested? They put up R. & D. money. I am sure they are interested because they invested funds in the program, but are they serious about building the PHM's in Germany?

Admiral HOLLOWAY. Yes. I recently was in Germany as a guest of the FRG Navy, and on that trip had conversations with military people who believed that the PHM was ideally suited for their fast patrol boat operations in the Baltic, where the Germans provide naval forces as their share of the NATO responsibility.

The German spokesman for the Under Minister of Defense for Procurement said that his government was not able to make the final decision at this time on the PHM because of political considerations of the upcoming elections. The decision has to be put off until after the elections.

I asked him specifically if he would give me a yes or no whether the Germans were going to buy the PHM. He said he definitely would not tell me they were not going to buy it. It is an issue of priorities. They are buying the Tornado, multirole maritime aircraft and they are hoping to acquire some seagoing frigates that would be used in the North Sea. The decisions as to which and how many of these naval systems will be procured will have to wait until after the elections.

Mr. EDWARDS. Thank you, Mr. Chairman.

Mr. MAHON. Should we pursue any of these matters further?

Mr. MURPHY. No, sir.

Mr. MAHON. Have you any questions?

#### FIVE-YEAR SHIPBUILDING PROGRAM

Mr. MURPHY. I have just one on the 5-year shipbuilding program and the significance thereof.

Admiral, I seem to have difficulty understanding how the publication of a 5-year shipbuilding program is going to assist you in prosecuting your proposed shipbuilding program.

As we know, the shipbuilding industry, much like other defense industries, is very adept at determining future programs by the Defense Department. I think their intelligence is sufficient enough to clue them in just about where the Navy shipbuilding program will go each year or where it will go the next few years, and approximately what it will contain.

As we see this year, and I know this year is an unusual year, there have been four 5-year shipbuilding programs. You indicated just a few minutes ago that while you have in tab C provided the committee with 5-year shipbuilding program you would like to see, and hope that the administration would approve, at the same time you feel you need the

flexibility to adjust that program as the threat changes and so forth. We can understand that.

So I guess what I am trying to determine and would like for you to put in the record, the real significance of a published 5-year shipbuilding program and how that is going to help the shipbuilders help you in your quest for a Navy of the size you would like to see.

#### FIVE-YEAR SHIP AUTHORIZATION

Admiral HOLLOWAY. I will put it in the record. But I would like to say this: I am interested primarily in a 5-year ship authorization for the Navy. We must have some stability and continuity in our planning. Under the current system, we change our plans every year. This is difficult for the Navy, confusing to the Congress, and disruptive to the shipbuilding industry.

I agree with you that any 5-year program that is not credible and does not have some degree of commitment—and I am not sure what that degree is and I will expand on that for the record—is not very useful.

But I think the 5-year shipbuilding program should tell the Navy what they should plan on, to give the Congress a confidence in the execution of its responsibility to provide a Navy, and to give industry an indication of the magnitude of the industrial capacity they should plan and the workload to expect.

There has been no approved 5-year program this year because the Congress has not enacted one. We have a number of proposals, and I think that is our problem. We need to move on from proposals and get congressional approval of a plan which will be recognized as the intent of the Congress.

Mr. MAHON. Admiral, if you are going to have a credible 5-year plan, would you propose that over a period of 5 years or more you not change the position of the Chief of Naval Operations?

Whenever you change the position of the Chief of Naval Operations, then there is a tendency to restructure some of the plan.

Admiral HOLLOWAY. No, sir. Mr. Chairman, it is very interesting, but I have really very little influence on the structure of the Navy for the next 5 years.

For the next 5 years, the composition of the Navy will be the result of what my predecessors and Congress have done in years before. Today, as I present the fiscal year 1977 SCN plan, I am proposing ships which will not enter the fleet until 3 to 7 years from now. We need a long-term basis for solid planning, and we have come to the conclusion that it takes about 5 years to translate the emerging threat and developing technology into hardware systems which can be introduced in the fleet.

There are several ways to approach it. One way would be that the first 2 years would be firm authorizations, and some changes would be permitted in the 3rd, 4th, and 5th years by an annual update which would move the whole program forward each year but staying within a fiscal total for the 5-year period.

The committee staffs are more competent than I to visualize what is most reasonable. As this committee has asked, I will make some suggestions as to how I would see the mechanics of it and what advantages I believe we might derive from it.

Mr. EDWARDS. Then if you would, put all of this in the same place in the record so we do not separate out these answers.

Admiral HOLLOWAY. Yes, sir.

[The information follows:]

There are several advantages to be gained from a 5-year shipbuilding program authorization. These advantages include such considerations as:

Presentation in the form of a consolidated long-term plan would provide the Congress, and the country, with a broad perspective of proposed programs and thus give a better understanding of the rationale supporting the current and budget year's program.

Authorization of the program by the Congress would constitute approval in principle of long-term shipbuilding planning.

Clear-cut long-term programs would also improve the ability of the shipbuilding industry to plan ahead for the use of capital, facilities and manpower.

It would also allow Navy planners to determine the most favorable acquisition rates and strategies and the most efficient and economical application of programmed funding; and would facilitate timely planning for the distribution of R.D.T. & E., N funds for preliminary and contract design.

In order for such an authorization to be pursued in a constructive manner, and to realize the advantages outlined above, legislation in this regard must provide flexibility for annual updating of the program to reflect unpredictable factors such as changes in threat, changes to national strategy and priorities, advances in technology and changing conditions in the shipbuilding industry. Internal priorities established at each annual updating must insure the maintenance of a balanced shipbuilding program in the event that the entire authorized amount cannot be appropriated in that particular fiscal year. Accordingly, it should be recognized that each 5-year authorization would have to be amended annually. This balanced construction program is absolutely essential to maintain an adequate naval force in terms of quality, numbers, and types of ships.

Mr. MURPHY. The chairman's question is very credible because we are being told by you that a 600-ship Navy would be within a reasonable risk that you would take. Your predecessor I think spoke of something like an 850-ship Navy. So what the chairman says is true, as a new CNO comes in we may see an entirely new 5-year shipbuilding program, or if the numbers are about the same, the composition might change.

So I wish you would address that issue also.

Admiral HOLLOWAY. All right, sir.

That is a very good point, Mr. Chairman.

[The information follows:]

I have mentioned previously in this testimony the process presently in use to determine size and composition of our naval forces, and my statement discusses it at considerable length. Implicit in this process is the formulation of judgments which cause debate among reasonable men. Fundamental to such a debate is the determination of risk. What levels of forces provide acceptable levels of risk? Obviously, this is a dynamic problem. On one end of the scale of forces is the zero point where risk is maximum. The other end of the scale is not so easily perceived. Risk can never be zeroed out. One is faced with making a value judgment that a certain force structure will be able to carry out our national strategy at acceptable levels. In addition force structure can change as new weapons become available. That is, new weapons technology may allow us greater efficiency in dealing with a given threat. Indeed, the threat may change in ways that cause us to change our force structure in response. Finally, the threat driven technology and inflationary pressures significantly influence the costs of shipbuilding. Consequently, because of the dynamics of the problem, it is not inconsistent for the current request to be different in some details from that of my predecessor. However, the recommended program is by no means entirely new. There are changes, and, undoubtedly, my successor will have a program with some differences, not entirely new, but one that will be the best judgment of what is required in the face of the threat at that time at acceptable levels of risk. The changes are more likely to occur in the outyears, reflecting the narrowing of uncertainty as we

approach those years. A broad comparison of the current plan with that recommended by my predecessor will not show, however, differences as great as the question suggests.

### ALTERATION, OVERHAUL, AND REPAIR

Mr. MAHON. Admiral, the alteration, overhaul, and repair of naval vessels is a significant request each year. For example, the request for fiscal year 1977 is about \$2.5 billion. The gist of these hearings are towards a more modern Navy. If in the course of the next decade the Navy is appropriated funds to modernize its surface fleet to the extent it is proposing, how will this affect the request for alteration, overhaul, and repair funds?

Admiral HOLLOWAY. There are many factors that will impact upon the request for alteration, overhaul, and repair funds over the next decade. The Navy is continuing to develop even more effective ways of maintaining ships, such as the engineered operating cycle (EOC), wherein the operating intervals of ships will be extended significantly. This lower frequency of overhauls will be compensated for by increasing the maintenance requirements at the intermediate level (tender or base) and by scheduling short, intensive shipyard availabilities between overhauls. The operating intervals of selected nuclear attack submarines, for example, have been extended from 43 to 70 months as a result of this program. In addition to these improved procedures we also hope to reduce some maintenance requirements through improved reliability of equipment. In spite of these improvements we know that our newer and complex warships will require significant shipyard work during overhaul periods to maintain the high standards of material readiness we expect to achieve. The net long term effect of these factors on the funding requirements for alteration, overhaul, and repair is not known. Until experience dictates some change we would plan on about the same level of effort as at present.

Mr. MAHON. I recognize that the amount of funds included in each year's budget request is largely dependent upon the number of ships to be overhauled. But the cost per overhaul is also increasing. This is due in part to an increase in the work to be performed. With a more modern Navy do you foresee that the work to be required in each overhaul will be decreasing or do you believe that there will continue to be a need to perform substantial work on those ships scheduled for overhaul?

Admiral HOLLOWAY. A more modern Navy of complex warships will necessitate a continued need for the performance of substantial work on those ships scheduled for overhaul. The engineered operating cycle (EOC), planned for several classes of ships will permit the significant extension of operating intervals thus decreasing the number of overhauls required in a given period. But in order to implement the EOC program and thus decrease the frequency of overhauls, it will be necessary to bring the candidate ships up to an adequate level of material readiness through a baseline overhaul, which of course will necessitate substantial shipyard work. In addition it should be noted that even as the newer ships become older, they will require additional work during future overhauls.

Mr. MAHON. When planning the alteration, overhaul and repair program, is it predicated upon the requirement to keep all Navy Yards operating at a certain level?

Admiral HOLLOWAY. No, sir. Planning for the fleet overhaul and modernization program is predicated on the need to overhaul ships at a rate which will cause the backlog of deferred maintenance to decline to an acceptable level by 1980 and maintain all ships on approved overhaul cycles thereafter.

#### CIVILIAN EMPLOYMENT IN NAVY YARDS

Mr. MAHON. Is the Navy planning on a certain level of civilian employment in Navy yards for the next 10 years?

Admiral HOLLOWAY. Yes, sir. The Navy has a plan to reduce the backlog of deferred ship overhauls to acceptable levels by fiscal year 1980. The fleet overhaul schedule is based on this plan. Shipyard employment level is determined from the number of man-years of employment required to accomplish the scheduled workload. The currently planned program will require employment rising gradually from an end strength of 65,000 in the current budget request to 72,600 in the early eighties.

Mr. MAHON. What is the Navy's planning guideline for civilian employment in Navy yards?

Admiral HOLLOWAY. Employment is a direct function of workload at a true industrial activity like a naval shipyard. Since naval shipyard operating funds are provided by the customers, funded ship-work programs govern employment. The customers are primarily the fleet commanders in chief and the Naval Sea Systems Command. Employment projections, therefore, are based on required manpower to accomplish the Navy's planned fleet overhaul and modernization program. Employment is limited by civilian manpower ceilings imposed by Congress and allocated to various activities by the Defense and Navy Departments. This limitation, which is frequently at variance with requirements, leads to inefficiencies in the naval shipyards because workload and work force do not match.

Mr. MAHON. Does the Navy foresee a need to reopen any of the yards that have been closed in order to meet its repair work in the next decade?

Admiral HOLLOWAY. The need to reopen the navy yards previously closed is not foreseen. A recent study of navy ship maintenance requirements with the goal of reducing the backlog of deferred maintenance to an acceptable level by 1980 and beyond indicates that the eight (8) naval shipyards can achieve their portion of the required work within their facilities employment limitation of approximately 76,000 which is based on a one-shift operation.

Mr. MAHON. If the Navy opens one of its closed yards for new shipbuilding construction, would or could it also be used for alteration, overhaul, and repair work?

Admiral HOLLOWAY. If a portion of the new construction program were assigned to naval shipyards, and if the additional workload required that another naval shipyard be opened, the Navy would assign a certain amount of alteration, overhaul and repair work to that shipyard in order to provide flexibility to operations in that yard and the entire naval shipyard complex.

Mr. MAHON. Is there sufficient private capacity available now and for the foreseeable future to meet navy repair requirements?

Admiral HOLLOWAY. The projected private shipyard workload over the next several years indicates that total existing capacity will not be

exceeded by currently funded and estimated programs. Like the public shipyard complex, the private sector is generally not facilities limited.

Mr. MAHON. In navy planning for future alteration, overhead, and repair work, is more emphasis being given to the use of navy yards or private yards?

Admiral HOLLOWAY. In apportioning the total workload the Navy, governed by practice which represents a practical balance, assigns at least 30 percent of the repair and alteration work to private shipyards. Within the parameters of this policy, the Navy is planning to allocate significantly increased funds to both the private and public sectors for ship overhauls in fiscal year 1977 and fiscal year 1978.

#### PRODUCTIVITY IN SHIPYARDS

Mr. MAHON. Navy yards have been troubled by the lack of productivity. Information previously provided indicated productivity at a rate of 65 to 70 percent. This has increased in the last few years to between 70 and 75 percent. The fiscal year 1977 budget was predicated upon an increase in productivity of 5 percent. Admiral, do you have current comparison of productivity in navy and private yards for alteration, overhaul, and repair work?

Admiral HOLLOWAY. The most direct answer to this question is that there are no, nor have there ever been, any true, scientific measures of productivity in either naval or private shipyards in the generally accepted business world definition of "input/output" relationships. For the past 3 or 4 years a certain myth has enshrouded the term "naval shipyard productivity" and percentages such as 50 to 70, 65 to 70, and 70 to 75 have cropped up repeatedly in congressional inquiries. These figures relate to worker activity counts made by the naval shipyards themselves, by headquarters personnel during monthly visits to the shipyards, and by a headquarters evaluation team during its annual review of shipyard operations. They do not measure productivity. They are merely observations as to whether a mechanic is hammer swinging or not at the point in time that the observation is made. They are somewhat subjective, depending on the skill of the observer. They do not measure overhead functions. They are employed for the sole purpose of portraying trends for management improvement efforts.

Over the years numerous inhouse and contractor studies have been made to develop more scientific measures of shipyard productivity. All of these have failed for the simple reason that ship repair and overhaul work is a job shop operation, involving extremely complex systems and lacking in consistency in the scope of work performed. The Naval Sea Systems Command has, therefore, judged a shipyard's performance as its ability to return a ship to an operational status on time, with the requisite quality and at reasonable cost. There can be no doubt that tremendous improvement has been made in this all important area. In fiscal year 1974 only 33 percent were completed on time. In fiscal year 1975 it rose to 68.8 percent, and for the first three quarters of fiscal year 1976 it was 78.8 percent. When measured statistically there is appreciable little difference between the naval and private shipyard performance. However, it must be borne in mind that the naval shipyards work primarily on the complex, sophisticated com-

batant ships while the private shipyards, except for submarines, concentrate on the easier to overhaul auxiliaries and amphibious-type ships.

Mr. MAHON. What is the Navy's prospects for the future of increasing productivity in navy yards?

Admiral HOLLOWAY. The Navy has projected a 5-percent productivity target increase in fiscal year 1977 which permitted the addition of four overhauls to the fiscal year 1977 overhaul schedule with no increase in total cost. It is anticipated that this will be accomplished through concentrated management attention at all levels and achievement of stability in the program through better advance planning, earlier material ordering, and more realistic scheduling practices.

One step which would assist shipyard commanders in continuing their improvements in productivity would be the removal of congressionally imposed ceilings on naval shipyard employment. This would allow matching of employment to the workload determined by congressional action. The shipyard commanders could make adjustments to their employment based on work assigned, and have enough manpower to accomplish the scheduled availabilities without having to pay excess workers.

Mr. MAHON. We have discussed civilian employment in navy yards. Of course, the Congress has established for fiscal years 1976 and 1977 an overall ceiling on the total number of civilian employees in the Department of Defense. In considering the total ceiling to be established there have been some members who would like to exempt employees working in industrial funded operations; such as navy yards. The Congress has never accepted their arguments for such an exemption. However, do you believe such an exemption would help or hinder productivity in navy shipyards?

Admiral HOLLOWAY. Ceiling constraints in naval shipyards restrict the freedom of the shipyard commander to match his work force to his assigned workload at certain peak periods during the fiscal year. The workload is fixed by the Navy budget which is appropriated by the Congress each year. When the personnel ceilings cannot be matched to the congressionally approved program dollar amounts, there may be a loss in productivity and delays in production. We believe that efficient and economical management would be enhanced by removal of ceiling constraints as advocated by the Department of Defense.

Mr. MAHON. If there were no limit on the number of civilians working in navy shipyards, would the Navy plan a program much larger than is now being executed and contemplated for the future?

Admiral HOLLOWAY. No. The Navy's ship overhaul and modernization program is determined by factors other than shipyard employment and would not be affected by removal of ceiling constraints on naval shipyards. The Navy would still limit work done in naval shipyards to 70 percent of the total authorized in accordance with Department of Defense policy.

Mr. MAHON. Is one of the factors affecting productivity the availability of skilled employees?

Admiral HOLLOWAY. Yes; in that the Navy has had to hire predominantly unskilled and semiskilled personnel; most of the unskilled and semiskilled workers hired are then put through formal in-house training courses, such as apprenticeships, in which they acquire the

requisite skills in shipyard trades and crafts. With infrequent exceptions of limited duration, the naval shipyards have not encountered significant difficulties in recruiting raw labor in recent years and have been able to hire essentially all of the workers that their employment ceilings have permitted.

Mr. MAHON. Has a significant number of Navy trained skilled employees been hired away by private yards?

Admiral HOLLOWAY. No; attrition from the naval shipyards has averaged in the neighborhood of only 6 percent per annum in recent years, with most of that due to retirements of personnel who first entered onboard during World War II or earlier.

#### TRAINING PROGRAMS IN NAVY SHIPYARDS

Mr. MAHON. What training programs has the Navy initiated to increase the number of skilled employees in Navy yards?

Admiral HOLLOWAY. The naval shipyards have increased enrollment in their apprentice programs, the primary source of journeyman-level talent in naval-shipyard trades and crafts, from 3,800 in 1974 to almost 5,700 in 1976. It is planned to hire approximately 2,100 apprentices a year for the foreseeable future. This level of input will permit the replacement of anticipated journeyman retirements and slight improvement in the ratios of skilled journeymen to semiskilled and unskilled workers. Employment ceilings, the availability of training facilities, and similar limiting factors preclude the hiring of significant additional numbers of apprentices without significant additional workload in the naval shipyards. As was stated earlier, their apprentice programs are the naval shipyards' primary source of skilled workers. In addition to the \$10.6 to \$14.1 million spent annually on naval shipyard apprentice training, the shipyards spent \$18.5 to \$19.9 million on other training programs that include advanced and specialized training to upgrade and update the skills of journeymen to equip them to repair and modernize the Navy's newest and most sophisticated shipboard machinery, electronic, and weapon systems.

Mr. MAHON. Will you list these for the record showing the number of trainees in each program by yard and the actual cost for fiscal years 1975 and 1976 and the estimated cost for fiscal years 1977 and 1978.

[The information follows:]

#### NAVAL SHIPYARD TRAINING

	Fiscal year—		
	1975	1976 (estimate)	1977 (estimate)
Apprentice programs—Average enrollment, cost:			
Shipyard:			
Portsmouth.....	327	482	517
Philadelphia.....	618	564	507
Norfolk.....	825	859	912
Charleston.....	858	957	1,276
Long Beach.....	439	507	520
Mare Island.....	588	959	1,071
Puget Sound.....	763	851	900
Pearl Harbor.....	458	500	512
Total.....	4,876	5,679	6,215
Cost (millions).....	\$10.6	\$12.1	\$14.1
All other training: cost (millions).....	\$18.5	\$18.7	\$19.9

Figures for fiscal year 1978 are not yet available, as fiscal year 1978 budgets have not yet been submitted, but it can be expected that fiscal year 1978 will bring no significant deviation from the cost and enrollment picture for the previous 3 years. The fiscal year 1975-77 apprentice enrollment figures show the average number enrolled for each fiscal year; actual numbers on board in each yard vary during each year as a result of apprentice graduations, normal attrition, and the bringing aboard of new apprentice classes. Records of the numbers of workers enrolled in other training courses are not centrally maintained as the numbers enrolled and the specific training administered both vary considerably at any two points in time, since both are primarily functions of the demands of the workload.

#### OVERHAUL CYCLE

**Mr. MAHON.** For several years the Navy has been trying to develop a comprehensive overhaul cycle for the various types of naval vessels now in the fleet and those planned for the future. To the committee's knowledge the Navy has not as yet completed development of this planning document. What is its status at this time?

**Admiral HOLLOWAY.** The Navy is continuing to develop comprehensive—engineered—overhaul cycles and maintenance strategies for various existing and future ships. This engineering effort is being done on a class by class basis which establishes a standard overhaul periodicity and develops a maintenance plan for the operating interval—the period between overhauls.

Many of the nuclear attack submarines (SSN) and fleet ballistic missile submarines (SSBN) have already been placed on engineered operating cycles (EOC). For the designated SSN's, the operating intervals have been extended from 43 months to 70 months. This lower frequency of overhauls has been compensated for by increasing the maintenance requirements at the intermediate level (tender of base) and by scheduling short, intensive shipyard availabilities between overhauls. For the designated SSBN's, the operating intervals have been extended from 6 years to 9 years. An essential feature of the SSBN EOC is an engineered program of material condition monitoring using the latest techniques for diagnostic measurements and trend analysis without disassembly of equipments.

For the surface ships, a program is now being developed to extend destroyer overhaul cycles from 37 months to 54 months after accomplishment of baseline overhauls. The program, entitled the destroyer engineered operating cycle (DDEOC), includes brief midcycle shipyard repair periods and periodic intermediate level repair periods. The first ships entering this program are the FF-1052 class frigates scheduled for baseline overhauls in fiscal year 1977 in both private and public shipyards. The objective of these initial—and somewhat more extensive—overhauls is to restore the ships to a condition such that, with a well engineered and executed maintenance program, the ship can be expected to fulfill her operational commitments throughout the extended cycle.

The remaining Navy ships are candidates for this program, and several classes are now being investigated for inclusion. In particular, we are planning to include the DDG 37, CG 16 and CG 26 classes and are investigating the feasibility of including the DDG 2 class.

**Mr. MAHON.** How has changes put into operation at the current time affected the overhaul cycle? Has it reduced the number of overhauls or increased them?

**Admiral HOLLOWAY.** The changes made to date have lengthened the overhaul cycles of certain nuclear submarines. *Knox* class frigates will

begin an engineered operating cycle with their overhauls in fiscal year 1977 and later, which allows an extension of their overhaul cycles. Similarly, guided missile destroyers of the *Farragut* class will begin engineered operating cycles in fiscal year 1978, while *Leahy* and *Bellknop* class guided missile cruisers will enter engineered operating cycles in fiscal year 1979. In each case the number of ships due for overhaul in each subsequent year is reduced.

#### BACKLOG OF OVERHAULS

Mr. MAHON. The Navy claims that there is a backlog of ship overhauls. Has this backlog been reduced by the revised overhaul cycle already put into effect?

Admiral HOLLOWAY. At the present time, only submarines are operating with extended overhaul cycles. Some of these ships would have been due in fiscal year 1976 and 1977 had they been operating under the old cycle.

Mr. MAHON. What is the number of ships in the backlog at this time and what class of ship are they?

Admiral HOLLOWAY. At the end of fiscal year TQ, the backlog of deferred overhauls will be 68 active fleet ships. They are classed as follows:

Carriers .....	5
Surface combatants .....	28
Submarines .....	7
Amphibious ships .....	9
Support ships .....	19

Mr. MAHON. Will you provide for the record a detailed list of the ships now in the overhaul backlog and the date they last completed overhaul? The scheduled should also show the dates these ships received work under the restricted availability program. When will these ships now in overhaul backlog be included in the overhaul schedule?

[The information follows:]

#### ACTIVE SHIPS OVERDUE ON SEPT. 30, 1976

Ship	End date last overhaul	Fiscal year restricted availabilities	Fiscal year next overhaul
Midway (CV-41) .....	Jan. 3, 1971	1971, 1972, 1973, 1974, 1975, 1976	1981
Coral Sea (CV-43) .....	June 1, 1971	1973, 1974, 1975	1978
Forrestal (CV-59) .....	Apr. 14, 1972	1972, 1973, 1974, 1975, 1976	1977
Ranger (CV-61) .....	May 31, 1972	1973, 1974, 1975	1977
Enterprise (CVN-65) .....	Jan. 30, 1971	1972, 1974, 1975	1979
Leahy (CG-16) .....	May 9, 1973	1973, 1974, 1975, 1976	1977
Dale (CG-19) .....	Oct. 6, 1972	1973, 1974, 1975, 1976	1977
Richmond K. Turner (CG-20) .....	Apr. 4, 1973	1973, 1974, 1975, 1976	1977
Halsey (CG-23) .....	Aug. 13, 1973	1974, 1975, 1976	1977
Horne (CG-30) .....	Jan. 14, 1971	1971, 1972, 1973, 1974, 1975, 1976	1977
William H. Standley (CG-32) .....	Aug. 28, 1973	1974, 1975, 1976	1978
Long Beach (CGN-9) .....	Sept. 29, 1971	1973, 1974, 1975, 1976	1978
Turner Joy (DD-951) .....	Aug. 11, 1972	1974, 1975, 1976	1977
Mitscher (DDG-35) .....	Sept. 1, 1972	1973, 1974, 1975, 1976	1978
John S. McCain (DDG-36) .....	Aug. 8, 1973	1974, 1975, 1976	1977
Luce (DDG-38) .....	Mar. 17, 1972	1972, 1973, 1974, 1975, 1976	1977
Coontz (DDG-40) .....	Feb. 4, 1973	1973, 1974, 1975, 1976	1977
Garcia (FF-1040) .....	Aug. 15, 1972	1973, 1974, 1975, 1976	1977
Edward McDonnell (FF-1043) .....	Apr. 6, 1973	1973, 1974, 1975, 1976	1977
Brumby (FF-1044) .....	Apr. 27, 1972	1972, 1973, 1974, 1975, 1976	1977
Patterson (FF-1061) .....	Mar. 26, 1971	1971, 1972, 1973, 1974, 1975, 1976	1978
Bagley (FF-1069) .....	May 2, 1973	1975, 1976	1977
Downes (FF-1070) .....	Mar. 3, 1972	1973, 1974, 1975, 1976	1977
Robert E. Peary (FF-1073) .....	July 13, 1973	1974, 1975, 1976	1977
Harold E. Holt (FF-1074) .....	Feb. 8, 1972	1973, 1974, 1975, 1976	1977
Fanning (FF-1076) .....	Aug. 31, 1972	1973, 1974, 1975, 1976	1977
Paul (FF-1080) .....	July 10, 1972	1973, 1974, 1975, 1976	1977
Elmer Montgomery (FF-1082) .....	Oct. 6, 1972	1973, 1974, 1975, 1976	1977
Cook (FF-1083) .....	Nov. 9, 1972	1973, 1974, 1975, 1976	1977

## ACTIVE SHIPS OVERDUE ON SEPT. 30, 1976—Continued

Ship	End date last overhaul	Fiscal year restricted availabilities	Fiscal year next overhaul
McCandless (FF-1084)	Mar. 6, 1973	1973, 1974, 1975, 1976	1977
Donald B. Beary (FF-1085)	June 18, 1973	1974, 1975, 1976	1977
Brewton (FF-1086)	Apr. 20, 1973	1974, 1975, 1976	1977
Kirk (FF-1087)	July 16, 1973	1974, 1975, 1976	1977
Gudgeon (SS-567)	Dec. 21, 1973	None	1978
Grayback (SS-574)	June 11, 1973	1973, 1974, 1975, 1976	1977
Greenling (SSN-614)	Mar. 6, 1972	1972, 1973, 1974, 1975, 1976	1977
Haddock (SSN-621)	Dec. 31, 1972	1973, 1974, 1975, 1976	1977
Hammerhead (SSN-663)	Feb. 9, 1973	1973, 1974, 1975, 1976	1977
Drum (SSN-677)	Apr. 14, 1972	None	1977
Silversides (SSN-679)	May 5, 1972	1973, 1974, 1975, 1976	1977
Durham (LKA-114)	Aug. 11, 1972	1972, 1973, 1974, 1975, 1976	1977
Vancouver (LPD-2)	Feb. 4, 1973	1972, 1973, 1974, 1975, 1976	1977
Austin (LPD-4)	Mar. 15, 1973	1973, 1974, 1975, 1976	1977
Ponce (LPD-15)	Apr. 14, 1972	1973, 1974, 1975, 1976	1977
Iwo Jima (LPH-2)	do	1972, 1973, 1974, 1975, 1976	1977
Boulder (LST-1190)	Feb. 23, 1972	1972, 1973, 1974, 1975, 1976	1977
Spartanburg County (LST-1192)	June 1, 1972	1972, 1973, 1974, 1975, 1976	1977
Fairfax County (LST-1193)	June 20, 1972	1972, 1973, 1974, 1975, 1976	1977
La Moure County (LST-1194)	Sept. 15, 1972	1972, 1973, 1974, 1975, 1976	1977
Piedmont (AD-17)	July 15, 1971	1974, 1975, 1976	1977
Shenandoah (AD-26)	Dec. 12, 1971	1973, 1974, 1975, 1976	Retire
Bryce Canyon (AD-36)	May 19, 1972	1973, 1974, 1975, 1976	Retire
Nitro (AE-23)	Jan. 15, 1972	1972, 1973, 1974, 1975, 1976	1977
Pyro (AE-24)	Oct. 26, 1971	1973, 1974, 1975, 1976	1977
Flint (AE-32)	Sept. 5, 1972	1974, 1975, 1976	1977
Vega (AF-59)	May 7, 1973	1974, 1975, 1976	Retire
Mars (AFS-1)	Jan. 10, 1972	1972, 1973, 1974, 1975, 1976	1977
Ashtabula (AO-51)	Aug. 9, 1971	1973, 1974, 1975, 1976	1977
Neosho (AO-143)	Feb. 1, 1971	1971, 1972, 1973, 1974, 1975, 1976	(1)
Camden (AOE-2)	Oct. 22, 1971	1973, 1974, 1975, 1976	1977
Wabash (AOR-5)	Sept. 18, 1972	1975, 1976	1977
Ajax (AR-6)	May 8, 1971	1973, 1974, 1976	1977
Jason (AR-8)	Apr. 16, 1972	1974, 1975, 1976	1978
Simon Lake (AS-33)	Aug. 23, 1971	None	1977
L.Y. Spear (AS-36)	Nov. 16, 1970	1971, 1972, 1973, 1974, 1975, 1976	1977
Dixon (AS-37)	Sept. 22, 1972	None	1978
Petrel (ASR-14)	June 29, 1973	1974, 1976	1977
Papago (ATF-160)	Nov. 17, 1972	1973, 1974, 1975, 1976	1977

<sup>1</sup> MSC transfer.

It should not be inferred that a restricted availability is provided in lieu of an overhaul. Restricted availabilities for ships overdue for overhaul serve only to sustain minimum reliability and safety standards, and are not sufficient to continue the desired level of maintenance.

Mr. MAHON. We take note of the fact that you, Admiral Gooding, are scheduled to depart the Active Navy in the near future; is that correct?

Admiral GOODING. Yes, sir, on September 1, 1976.

Mr. MAHON. September 1?

Admiral GOODING. Yes, sir.

Mr. MAHON. This may be your last important appearance before the committee.

Admiral GOODING. It may indeed be, sir.

Mr. MAHON. You are highly experienced in Navy matters and you are an old hand insofar as the Appropriations Committee is concerned. We have appreciated the opportunity of working with you on this committee. We think you have performed well for the defense of the country.

Admiral GOODING. The chairman is most kind.

Mr. MAHON. We wish you every happiness in your further endeavors.

Admiral GOODING. Thank you, sir.

Mr. EDWARDS. I would like to echo that, too, Mr. Chairman. He has been a great help to us. We have certainly profited by your testimony over the years.

Admiral GOODING. Thank you, sir.

Mr. MAHON. Thank you very much.

Now that we have settled all these problems, let's relax and get on to some other business.

Admiral HOLLOWAY. Thank you, Mr. Chairman.

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THURSDAY, JUNE 24, 1976.

REFORGER (MOBILITY EXERCISE)

REPROGRAMING FISCAL YEAR 76-81 P/A

WITNESSES

MAJ. GEN E. C. MEYER, ASSISTANT DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS, DEPARTMENT OF THE ARMY

MAJ. GEN. R. L. WEST, DIRECTOR OF ARMY BUDGET, OFFICE, COMPTROLLER OF THE ARMY

REAR ADM. JOHN S. KERN, DIRECTOR OF LOGISTICS PLANS DIVISION, OFFICE OF THE DEPUTY CHIEF OF NAVAL OPERATIONS [LOGISTICS]

BRIG. GEN. WALTER C. SCHRUPP, ACTING DEPUTY DIRECTOR OF OPERATIONS AND READINESS, OFFICE OF THE DEPUTY CHIEF OF STAFF [PLANS AND OPERATIONS], DEPARTMENT OF AIR FORCE

BRIG. GEN. G. C. LYNCH, DIRECTOR OF AIR FORCE BUDGET, OFFICE OF COMPTROLLER OF THE AIR FORCE

Mr. MAHON. The committee will come to order.

We are meeting principally as a result of our denial of the reprogramming request of \$5.248 million in the transition quarter for funds for Reforger and Crested Cap. The committee previously denied this request for reprogramming of funds based upon direction given the Department of Defense in conjunction with the 1976 Defense appropriations bill, in which the committee stated that the 1976 exercises, October 1975, were to be the last Reforger exercises.

The committee's reasons for terminating the Reforger/Crested CAP exercises are rather lengthy and involved and, thus, cannot be discussed in detail in this short introduction. However, we will get into many of the details as we proceed with the hearing this morning. The essential reason for recommending termination was that the purpose for which the exercises were originally agreed to have been eliminated through the deployment of additional U.S. combat forces to Europe.

As part of the process of withdrawing certain combat units from the Federal Republic of Germany in 1967, the Federal Republic, the United States, and the United Kingdom signed an agreement which, among other things, provided for the withdrawal of certain U.S. and U.K. forces from West Germany with the understanding that such

forces would be dual-based in the continental United States and the United Kingdom respectively, and remain fully committed to the North Atlantic Treaty Organization (NATO). U.S. forces were to return each year for exercises. As you know, for the last 6 or 7 years the exercises became known as Reforger, an acronym for Redeployment of Forces to Germany.

Even before the terminology Reforger was used, the United States participated in similar exercises for at least 2 years which were referred to as Operation Big Lift. Reforger exercises began in fiscal year 1967 as the result of the withdrawal of two brigades of one U.S. division from our force structure in Europe. These two brigades were to be returned to Europe each year under the dual basing concept. As a result of implementation of the Nunn amendment, Public Law 93-365, the United States has, in fact, replaced the two brigades withdrawn by eliminating about 18,000 military support positions in Europe and converting them to combat position. The two brigades added to the force structure in Europe are referred to as Brigade 75 and Brigade 76. The Army has plans to make the deployment of these brigades permanent and to build a new brigade base to house one portion in northern Germany. With this short introduction, we will proceed with the hearing.

Appearing before the committee in support of the Reforger reprogramming request are Army Major Generals E. C. Meyer and Richard L. West. Also supporting them and the Crested Cap portion of these exercises will be Air Force Generals Walter C. Schrupp and G. C. Lynch. Rear Adm. John S. Kern, who is familiar with Navy support to be provided Reforger, is also in attendance.

We will insert the reprogramming document at this point in the record.

[The document follows:]

REPROGRAMMING ACTION								
APPROPRIATION ACCOUNT TITLE Operation and Maintenance, Army 21T2020							DOD SERIAL NUMBER FY 76-31 P/A	
APPROPRIATION SERIAL NUMBER FY 19TQ-2 P/A			(Amounts in Thousands of Dollars)					
LINE ITEM	PROGRAM BASE REFLECTING CONGRESSIONAL ACTION		PROGRAM PREVIOUSLY APPROVED BY SEC DEF		REPROGRAMMING ACTION		REVISED PROGRAM	
	QUANTITY b	AMOUNT c	QUANTITY d	AMOUNT e	QUANTITY f	AMOUNT g	QUANTITY h	AMOUNT i
<u>Prior Approval Action</u>								
This reprogramming action is submitted for prior approval since it involves the Joint Chiefs of Staff Exercise Program which is an area of special interest based on the FY 1976 DoD Appropriations Act. Funding is requested for the conduct of a strategic mobility exercise (REFORGER) which is a higher priority than the unit training activities being reduced. This action is not reflected in the FY 1977 column of the FY 1977 Budget.								
GENERAL PURPOSE FORCES JCS EXERCISES		554,003 (4,188)		563,880 (4,188)		0 (+5,248)		563,880 (9,436)
EXPLANATION: The increase is required to support the REFORGER series of exercises which beginning in calendar year 1976 will be conducted in the September-October time frame to permit their incorporation in the annual NATO exercise series AUTUMN FORGE. This change in exercise date requires increased funding in FY 1976 since the planning and deployment of the troops will take place in that period.								
(Deleted)								
support this requirement will be provided by curtailing other lower priority unit activities within the General Purpose Forces budget activity.							Funds to	
REQUESTED (Signature and Date) <i>[Signature]</i> 3/18/76 Asst. Secy Army (FM)					APPROVED (Signature and Date) <i>[Signature]</i> 1 APR 1976 DEPUTY SECRETARY OF DEFENSE			

DD FORM 1415-1

CLASSIFICATION

REPORT CONTROL SYMBOL  
DD-Comp (AR) 483  
D 2 2 6 6 8

I also want to make special mention of the fact that this will be Col. Tom McHugh's last hearing with the committee. Tom has served as the Air Force liaison with the committee for approximately 2 years. The committee appreciates your efforts, Tom. We have found you to be ever helpful in expediting the committee's work. Certainly your quiet and efficient manner in getting the job done will be missed. We wish you well on your new assignment.

Colonel McHUGH. Thank you, Mr. Chairman, I appreciated the privilege of working with the committee and look forward to be of what assistance I can in my new assignment.

Mr. MAHON. Do you know what your next assignment is?

Colonel McHUGH. Yes, sir, Director of Program Control in the F-15 System Project Office.

Mr. MAHON. Good luck.

Colonel McHUGH. Thank you, sir.

Mr. MAHON. General Meyer, you may proceed.

STATEMENT OF ASSISTANT DEPUTY CHIEF OF STAFF FOR OPERATIONS  
AND PLANS, DEPARTMENT OF THE ARMY

General MEYER. I am Major General Meyer, Assistant Deputy Chief of Staff for Operations and Plans, Department of the Army. I would like to read my statement at this time.

Mr. MAHON. Very well.

General MEYER. The Army is here to present a request for prior approval reprogramming action to support Exercise Reforger 76. Exercise Reforger 76 is a JCS directed, CINCEUR sponsored, annual strategic mobility exercise which will be conducted in the fall of 1976.

In the past, Reforger exercises have been conducted in the October-November time frame. This year, in order to integrate the exercise into the NATO Autumn Forge exercise series, the exercise is scheduled in September. The troop and equipment deployment to Europe will therefore occur in the transition quarter with redeployment to Conus occurring in fiscal year 1977. In order to support the deployment and exercise in fiscal year 1977, approval of Army reprogramming of \$5.248 million is required. The total Army exercise cost for Reforger 76 will be \$15.99 million, consisting of \$2.30 million in fiscal year 1976, \$7.82 million in the transition quarter and \$5.87 million in fiscal year 1977.

This reprogramming action was previously considered by the committee and disapproved. The reason we have asked for reconsideration is our concern that the concepts for this year's strategic mobility exercise were not adequately explained by the Army and that the committee considered this exercise to be the same as past Reforger exercises. The Army therefore intends to fully explain Reforger 76 and to stress its importance as a strategic mobility exercise and the significant difference between this year's exercise and past Reforger exercises.

Previous Reforger exercises used only airlift for deployment and redeployment, and deploying forces fell in on equipment prepositioned in Europe (POMCUS). The strategic mobility exercise to be conducted this year will be substantially different. In this exercise, two brigades of the 101st Airborne Division (Air Assault), the 1st Battalion (Ranger) of the 75th Infantry and other Conus elements, will deploy by both air and sea. The equipment will deploy by sea thereby providing a long overdue demonstration of our strategic sealift capability. Sealift deployment will be from Norfolk, Va., using three roll-on/roll-off ships and one break-bulk ship. Reception ports are Vlissingen, Netherlands, and Ghent, Belgium. Air deployment of personnel will be from multiple airfields in Conus to airfields in the Benelux and Federal Republic of Germany. The deployment phase of

the exercise is scheduled to occur between August 10 and September 2, 1976. Upon arrival at the reception ports and airfields, the personnel will marry up with the equipment which has been sealifted. During the arrival phase, major reliances will be placed on host nation support.

That means the support we are going to receive from the Belgians, Netherlands, Luxembourg, and Germany.

The exercising of this support is critical since the concept of host nation support has underlaid the United States efforts to reduce its own support forces in Europe.

While in Europe, the Reforger 76 forces will participate in two major field training exercises in the Central Army Group area with the V and VII U.S. Corps. In addition, a battalion task force from the division will participate in two smaller exercises with the Belgians and British respectively. The field training exercise phase is scheduled to occur between Sept. 7-17, 1976. Upon completion of the exercises and preparation for redeployment, the personnel and equipment will redeploy from Bremerhaven and Federal Republic of Germany airfields. The redeployment phase is scheduled to occur between Sept. 24 and Oct. 17, 1976.

The major differences between the strategic mobility exercise conducted this year and previous Reforger exercises are:

1. Deployment and redeployment will be by both sea and air. This will provide a long overdue demonstration of our strategic sealift capability.

2. The equipment for the deploying forces will be moved by sea and air. The prepositioned equipment that we have traditionally exercised in past Reforger's will not be utilized.

3. The 101st Airborne Division (air assault) will be exercised in Europe.

This is a division principally moved by helicopters and has never been tested in a European environment.

4. The concept of host nation support will be tested. This will be the first extensive test of this concept and the first time Benelux territory has been used for the reception and transit of U.S. troops and materiel.

5. Exercise Reforger 76 is being conducted earlier in the calendar year than previous Reforger exercises. This scheduling will allow Reforger to be included in the NATO Autumn Forge 76 series of exercises. Autumn Forge is the name given to the grouping, under a common scenario, of a number of NATO and National exercises taking place each fall. The series concept was initiated in 1975 by the Supreme Allied Commander, Europe. About 30 exercises taking place, all across Europe, from Norway to Turkey, are incorporated in the 1976 program. The broad objectives of the Autumn Forge concept are to improve the capability of NATO forces to react quickly, to improve allied command, Europe, standardization and interoperability, and to find ways to increase the flexibility in employment of allied command, Europe, forces. To delay Reforger 76 until after October 1, 1976 would seriously limit the amount of training the Conus based U.S. forces would receive with their NATO allies. Additionally, valuable lessons in standardization and interoperability would be lost. Incidentally, since the major unit involved in Reforger 76 is air mobile, there should be less maneuver damage to the terrain

and vegetation despite the fact that the exercises have been moved forward in time.

Failure to conduct the exercise would have serious political and military impacts. Most important would be the resulting concerns among our NATO allies and possible misconceptions of our capabilities and resolve among Warsaw Pact Nations.

You have received, sir, letters from the Secretary of Defense, the Secretary of State, the Chairman of the Joint Chiefs of Staff, and the Supreme Allied Commander, Europe, all indicating their support.

General Weyand sent you a letter yesterday expressing his personal concern and views supporting the exercise.

Mr. MAHON. Our ambassador to NATO called me on the telephone. So you really have maneuvered the forces into a very aggressive posture. Very well.

General MEYER. The key to this reprogramming, sir, is that the 101st Airborne Division must begin preparing equipment for movement in July and contracts must be let by the end of June with the railroads and shipping agencies who will support this first exercise of our sealift capability.

This completes my statement.

Since Reforger is a joint and NATO exercise, I have with me to assist in answering questions representatives of the Air Force, General Schrupp, Director of Operations and Readiness on the Air Staff; Admiral Kern from the Navy Staff, and General Lynch, Director of the Air Force Budget.

Mr. MAHON. The gentleman from Florida.

Mr. SIKES. Mr. Chairman, I move that the hearings to be held today on Reforger exercises be held in executive session because of the material to be discussed.

Mr. MAHON. This requires a rollcall.

Mr. VANDER SCHAAF. Mr. Mahon?

Mr. MAHON. Aye.

Mr. VANDER SCHAAF. Mr. Sikes?

Mr. SIKES. Aye.

Mr. VANDER SCHAAF. Mr. Flood.

[No response.]

Mr. VANDER SCHAAF. Mr. Addabbo?

[No response.]

Mr. VANDER SCHAAF. Mr. McFall?

Mr. McFALL. Aye.

Mr. VANDER SCHAAF. Mr. Flynt?

[No response.]

Mr. VANDER SCHAAF. Mr. Giaimo?

[No response.]

Mr. VANDER SCHAAF. Mr. Chappell?

[No response.]

Mr. VANDER SCHAAF. Mr. Burlison?

Mr. BURLISON. Aye.

Mr. VANDER SCHAAF. Mr. Edwards?

Mr. EDWARDS. Aye.

Mr. VANDER SCHAAF. Mr. Robinson?

Mr. ROBINSON. Aye.

Mr. VANDER SCHAAF. Mr. Kemp?

[No response.]

Mr. VANDER SCHAAF. Mr. Cederberg?

Mr. CEDERBERG. Aye.

Mr. VANDER SCHAAF. Seven Members voting affirmatively, sir.

Mr. MAHON. A sufficient number of votes have been recorded and the hearing will be closed.

[Discussion off the record.]

Mr. MAHON. The committee will resume.

I am very much impressed with your statement. Frankly, this committee has felt, over the last several years, in fact since the program started, that it was not a very defensible program in view of the costs and so forth. But I am impressed with the changes that you have made, and it seems to me that it is going to be much more meaningful this year than in prior years.

I am about ready to say yes, you may have the authority to reprogram the funds.

#### PLANNING FOR A CHANGED REFORGER EXERCISE

Mr. MAHON. Your statement indicates that you are proposing some major changes to the Reforger exercise to be conducted in September, 1976, when compared with previous Reforger exercises. When did planning commence to significantly change the nature of this exercise?

General MEYER. On November 4, 1974, the Army Deputy Chief of Staff for Operations and Plans asked the Army staff to prepare an analysis of deploying the 101st Airborne Division to Europe for an exercise. MTMC, in conjunction with the Army staff and the 101st Airborne Division, conducted the analysis and completed it on March 17, 1975. As a result of this analysis and discussions with USAREUR, CINCEUR on May 30, 1975, in a message to JCS listed the deployment of the 101st Airborne Division as an option for Reforger 76. The JCS response on June 10, 1975 supported the option of deploying the 101st Airborne Division for Reforger 76. On July 16, 1975, the Acting Secretary of the Army recommended to the Secretary of Defense the inclusion of the 101st Airborne Division in Reforger 76. Approval was received from OSD on October 22, 1975 to deploy the 101st Airborne Division in Reforger 76 by both sea and air.

Mr. MAHON. Why did you retain the name Reforger when you changed the units which were to be sent to Europe, the nature of the training within Europe, and the method by which the units' equipment would arrive in Europe?

General MEYER. Evolution of the Reforger objectives and concepts has resulted in Reforger becoming a strategic mobility exercise with associated FTX's and CPX's including Conus and European-based forces in medium- and large-scale maneuvers conducted in a NATO multinational environment. The planned deployment of the highly mobile 101st Airborne Division (Air Assault) evidences the change from the typical Reforger to the strategic mobility concept and introduced a new dimension to the exercise. Admittedly, the changes did prompt some discussions concerning changing the name of exercise Reforger.

Two factors mitigated against a name change:

(1) It could be misinterpreted as an intent to abrogate the 1967 trilateral agreement, which both State and ISA believe would, at least, stir apprehension of Germans and other allies.

(2) Continuity was required in strategic mobility exercises.

Mr. MAHON. On what date was the 101st Airborne Division (Air Assault) notified that it had been selected to participate in this year's Reforger exercise?

General MEYER. The 101st Airborne Division (Air Assault) was involved in the planning for the deployment to Europe from the inception on November 4, 1974. The CINCEUR concept of the use of the 101st Airborne Division (Air Assault) in Reforger 76 was transmitted by message on October 6, 1975. The JCS concurrence with the CINCEUR concept was dispatched on October 16, 1975. Final OSD approval was granted on October 22, 1975.

Mr. MAHON. What documentation do you have which verifies the date the 101st was notified and at what level of detail was the division informed as to the nature of this year's exercise?

General MEYER. A message from the Department of the Army to the division on October 7, 1975, which states that JCS had concurred in the use of the 101st Airborne Division.

Mr. MAHON. Did the fact that the committee recommended termination of the Reforger/Crested Cap exercises last year play any role in your decision to significantly change this year's exercise? If not, why did you desire to change this year's exercise? What advantages will this year's exercise offer over the previous Reforger exercises?

General MEYER. No; it had no impact, sir, and we had started as early as November 1974 in looking at other options for Reforger. Basically, for the reasons that we have discussed in the past with some of your staff. Principally that we feel we have a need to do other than just the fall-in on the prepositioned war stocks over there; we need to exercise sealift, we need to look into other types of units that might be required over there. For example, we are attempting to determine the applicable role over there for Army aviation.

More importantly, there has been great pressure, properly, by Congress on the military to go for host nation support.

This year for the first time we are going to use the host nation support in the Benelux territory and in the FRG to help us in moving equipment from the Belgian-Netherlands ports across Luxembourg into the FRG. So we need to exercise that host nation support in peacetime, sir.

Mr. MAHON. Well, if you have been planning to change the Reforger exercises over a number of years, why did not the Secretary of the Army's statement, or the statement of the Chief of Staff give any indication of these changes?

General MEYER. I would say we did not do a good job in making our presentation to Congress in this area. The first time that we provided you that information was in a subsequent insert that we provided on about the 3rd of March.

Mr. MAHON. Kind of an afterthought, apparently?

General MEYER. Yes, sir.

Mr. MAHON. Testimony before the committee in support of the fiscal year 1977 request did not indicate that any significant changes

in Reforger were being proposed. But as you say, there was an insert in the record which followed the testimony by some weeks and gave an indication that the exercise would be conducted in a significantly different manner.

Why was the 101st Airborne (Air Assault) Division selected instead of a mechanized armor or armored division?

General MEYER. Sir, we looked at two basic alternatives, an air assault division and an armored division from Fort Hood. There were basic differences. The key differences were: 1, we wanted to exercise this new aviation capability in Europe; 2, the costs for the movement of a tank division from Fort Hood ran about two times what the costs were for the movement of an air assault division.

Mr. MAHON. Do we have the capacity to move an armored division to Europe by sea?

General MEYER. ———.

Those are in the Military Sealift Command Nucleus Fleet at the present time.

Mr. MAHON. What would be the additional cost?

General MEYER. ———.

#### ABILITY OF C-5A FLEET TO HANDLE REFORGER EXERCISE

Mr. VANDER SCHAAF. General Meyer, we have repeatedly heard statements about using the C-5A fleet to move outsized cargo and oversized cargo. In the current situation, is that fleet in such bad shape with respect to its ability to make the lift that you were in effect forced to use sealift this time in that the C-5, with its current weight limitations, could you have moved if you wanted to move that way?

General MEYER. To the best of my ability, that was not a matter that ever came up in the discussion. General Schrupp, would you care to comment on that?

General SCHRUPP. I would like to confirm General Meyer's observation.

In order to extend wing life, we use the C-5 in JCS exercises to airlift only outsize cargo. All the outsize cargo for Reforger is scheduled to be sealifted. Had there been a requirement to airlift outside cargo, we would have used the C-5, sir. It was not, to my knowledge, a consideration in the structure of the exercises.

Mr. VANDER SCHAAF. Let me pursue this a bit further. What outsize cargo are we talking about in an air mobile division that is different than, say, an armored division? What items do we have that are going to go on the three ships involved?

General MEYER. The three ships include the CH-47 type, large-cargo type helicopters. We have the other helicopters, UH-1 helicopters and LOH helicopters. Those are the key items.

Mr. VANDER SCHAAF. No self-propelled artillery?

General MEYER. No, nor any mechanized type equipment that you would normally associate with an armored division.

Mr. VANDER SCHAAF. What would be the weight of that helicopter? Would it exceed the 60,000- or 70,000-pound limitation currently placed on the C-5?

General MEYER. No. The weight would be no problem. The cube is the problem in loading CH-47's.

Mr. VANDER SCHAAF. But under the current guidelines, General Schrupp, you would be unable to move an armored division or give an armored division support with the C-5A under the current weight limitations; is that correct?

General SCHRUPP. The current weight restriction we have now I believe is 50 tons. Let me check on that for the record.

Mr. VANDER SCHAAF. OK, but I understand on good authority that the C-5A could not perform the Reforger mission under current limitation.

[The information follows:]

There is no piece of designated or authorized combat equipment in Army combat units that cannot be airlifted by the C-5A.

General MEYER. I think basically the answer to your question is that, in all of our plans, basically we would move the tanks and the mechanized equipment by sea and move the people and smaller items by air.

Mr. MAHON. As the committee knows, we rejected the reprogramming originally presented for the Reforger exercise. We felt we were on a sound basis and still think so, based upon the presentation that was made to us.

Now I think the committee will recognize that the military people have done their homework and they have made this into a more meaningful exercise, and it seems to me it is perhaps quite significant from the standpoint of our position in Europe with the NATO countries.

I do not have any desire myself to belabor the issue at this stage. But we must proceed through the hearing and develop the facts which will be helpful to us at this time, and also as we doublecheck in the future on what the conclusions and plans were as of this date.

Off the record.

[Discussion off the record.]

Mr. MAHON. Mr. Sikes?

#### REASON FOR CHANGING REFORGER TO AN AIRMOBILE DIVISION

Mr. SIKES. One or two questions.

I think the chairman has stated the situation very well. I agree with the position he has taken.

Would you normally in a crisis condition move an air mobile-airborne division rather than a mechanized armor or armored division to Europe? Would that be your first choice?

General MEYER. No; normally we would move one of the divisions which had its equipment prepositioned there, which would be an\_\_\_\_\_.

Mr. SIKES. How would you move it?

General MEYER. It would be moved by airlift.

Mr. SIKES. Then why do you follow this route for this exercise?

General MEYER. Because in this exercise we wanted to test the host nation support concept, and to exercise our sealift, and the other requirements of follow-on movement.

Mr. SIKES. This is your first move by sea?

General MEYER. Yes, sir, it is.

Mr. SIKES. I think that is a very significant statement. Of course, it is important to be able to move by sea and to demonstrate the ability to move by sea.

What would be your procedure next year?

General MEYER. We have not decided on that. It depends on what we find out with this year's exercise. It is in the planning stage right now.

Mr. SIKES. Would this move be accompanied by the regular surface support forces, the forces that you normally would use to protect a movement by sea?

General MEYER. It will not this year. This year it is principally an exercise in determining how we operate the ports, the reception facilities at Norfolk and again at the reception facilities on the other side. That could be a follow-on type exercise conducted in the future; it is not intended this year.

Mr. SIKES. It is not the type of support required for your purposes this year?

General MEYER. That is correct, sir.

Mr. SIKES. It is a type of exercise that would benefit the Navy more than it would benefit you?

General MEYER. Yes, sir.

Mr. SIKES. Your job is to show that you can move units and equipment by surface transportation. At this point you are not concerned with defense. So that aspect would not influence your activity, is that correct?

General MEYER. That is correct, sir.

Mr. SIKES. That is all.

Mr. MAHON. Mr. Addabbo?

#### MILITARY VS. POLITICAL IMPACT OF NOT CONDUCTING REFORGER

Mr. ADDABBO. Thank you, Mr. Chairman.

On page 4 of your statement you say failure to conduct the exercise would have serious political and military impacts. Would it have more serious political than military impact?

General MEYER. It would be difficult for me to evaluate that, sir.

I can say that we have had comments from Ambassador Firestone in Belgium, Ambassador Hillenbrand in Germany, evaluating the impact, Ambassador Strausz-Hupe from NATO. In the case of Belgium, since this is the first year we have ever asked for host nation support on the part of the Belgians, were we now to say we do not want that support after we asked them for it. Mr. Firestone feels it would have significant political impact.

In the case of Ambassador Hillenbrand in Germany, he feels it would have significant political impact.

My personal view is that these strategic mobility exercises are required annually so that we can hone our military skills. This is the single major strategic mobility exercise where we marshal, or surge the Air Force with integrated sealift, and where we do a mobility exercise of this size. So in my view it is essential for that reason.

Mr. ADDABBO. In view of the fact that there are serious political questions involved, and the exercise is probably as important if not

more so, to our NATO allies than it is to us, are we still going to have to pay the host countries for damage to their terrain or anything?

Is any part of the \$30 million to be spent for that?

General MEYER. Yes; there still will be the requirement to pay for damage that occurs just as we pay for damage that occurs here in the United States, when we have damage outside our own training areas.

I would anticipate, however, this year that the damage would be much less because in taking an air mobile division over there, we are taking a division without tracks, without tanks, so the costs for host nation support, for damage, would be significantly less.

Mr. SIKES. What is the travel time, the additional travel time which results from a sealift rather than an airlift operation?

General MEYER. We normally figure we could move by air and close in on the pre-positioned equipment in ——. The shipping time for the division, that I indicated earlier, from Fort Hood to Europe is indicated to be ——. That goes into Bremerhaven. We would hope not to have to go there in future exercises, but would rather go into the Benelux, which would cut a couple of days off.

Mr. ADDABBO. General, I understand that the Army's share of Reformer is a little over \$15 million, and the Air Force will be about \$15 million.

In view of the fact, again as I said before, this involves political implications and military implications, why cannot the host nations be responsible for the use of their terrain in the event of any damage done during the exercise?

General MEYER. Let me just talk about two aspects of that, if I might, sir.

First, by the host nation providing us with railroad units various types of materiel handling equipment, transportation units and other units of this nature, we have been able to reduce requirements on our force structure, provided they are provided by the host nation. So that is important.

Second, 75 percent of the requirements are paid by the United States for the damage that is done over there during these exercises. The other 25 percent the host nation pays as their share of damages during those exercises.

Mr. SIKES. From the standpoint of feasibility in the military exercise, it would appear that the move into Bremerhaven would simply be untenable.

In the event of war, the force would be cut off almost certainly. The question is, why do you, in this exercise, follow a pattern that you would not entertain during actual conditions of warfare?

General MEYER. Sir, I think the important thing is that this year for the first time we are following a pattern which we would follow in wartime. In the past we have always intended to use Bremerhaven, which is in the extreme north, and come down.

Mr. SIKES. Are you planning on that?

General MEYER. No; we are planning to go into the Benelux.

Mr. SIKES. You are not planning to use Bremerhaven?

General MEYER. No, sir.

In our plans for support, we have emphasized our ability to go through the Benelux and, in alternate plans, through France.

## COST OF REFORGER

Mr. ADDABBO. General, according to the figures provided by the committee, the Army will require \$5.866 million in fiscal year 1977 for the Reforger exercises, but has requested a total of \$12.446 million.

It now appears that \$12.4 million request is the amount that you originally estimated to run the complete Reforger exercise during fiscal year 1977; is that correct?

General WEST. Mr. Addabbo, the 1977 budget has in it the \$12.4 million figure. That includes two pieces.

One is the redeployment for what we call Reforger 76 that we are discussing here, bringing the troops home.

The other piece is the deployment phase of the next exercise which will be called Reforger 77, or some other name that implies strategic deployment.

So in the 1977 budget, there is a sum total that represents two pieces that supports two different exercises. That is because of the idiosyncrasy of the timing of the budget year or the fiscal year; it overlaps two exercises.

Mr. ADDABBO. Would you say the leftover of \$6.580 million is going to be used to pay for the redeployment of the 1977 Reforger, leaving you a balance of \$6.580 million? Is that what you are going to use to redeploy the 1976 Reforger?

General WEST. No; it is the other way around. The \$5.9 million is against the 1976 Reforger to bring the troops home—not to bring them home, but to cover costs that have to be made subsequent to the beginning of the fiscal year.

The \$6.6 is the beginning cost of the next exercise, which will take place during fiscal 1977.

Mr. VANDER SCHAAF. But General West, the question we have is, When you put the money in the budget originally, \$12.4 million was to run the full exercise, the way I would understand, because you had not planned to do the exercise in the transition quarter. Previous Reforgers took place in October.

Now you moved it to September, which changes the financing. What we need to know is, Was the \$12.4 million figure a full Reforger, from the Army's point of view?

General WEST. The full figure, when it went into the budget based on the historic estimate, average estimates, that was really a figure simply carried forward from previous Reforger exercises. When it went into the budget, that really dates back to last July and August when that figure was first derived.

With the present Reforger exercise, with the sealift and the additional troops involved, including the Ranger battalions, the total cost of Reforger has in fact been priced upward.

The reprogramming in the 1977 period represents not only moving the exercise forward, but an increased cost that went into Reforger 76.

Mr. VANDER SCHAAF. In order to save some time this morning, let me just ask some questions on the financing and then maybe you can follow up in more detail.

Mr. CHAPPELL. Might I ask a couple of general questions before we get to that?

Will there be any simulated opposing exercise forces used to oppose the sealift portion of Reforger?

General MEYER. No, sir. This is the first time we have done this; we are interested in this particular exercise in focusing on how to go about doing this, in how to move the forces.

Mr. VANDER SCHAAF. What will be the extent of the maneuvers with NATO land units?

General MEYER. We have four maneuvers planned. There has been some concern over time expressed properly by both the military and Congress, over whether or not the units in Europe are properly positioned. This year we intend to have the 101st Airborne Division (Air Assault) operate first as a division in and around the Frankfurt area, a battalion will then go up and work with the United Kingdom, a battalion will work with a Belgian corps, then the division minus one battalion will operate in and around the Stuttgart area.

So we will operate for the first time a division from the north all the way to the south.

Mr. CHAPPELL. How many men will we have involved altogether and how many U.S. men?

General MEYER. The division that is going over will be about 12,000. The total NATO exercise will—again these are pieces of exercise—be in the neighborhood of over 100,000 total.

That is a reasonably accurate figure.

Mr. CHAPPELL. That is all the questions I have.

Mr. VANDER SCHAAF. We will place in the record two information papers which summarize the financing plan for Reforger. These papers are not the first attempt to explain the cost of this exercise and probably will not be the last either.

[The information follows:]

#### AIR FORCE FACTSHEET ON REFORGER

Airlift support of the Reforger exercise has been provided/programed as follows:

	[In thousands]		
	1976	1977	1977
Reforger 75 deployment.....	\$7,971		
Reforger 75 redeployment.....	7,632		
Reforger 76 deployment.....		\$8,040	
Reforger 76 redeployment.....			7,073
Reforger 77 deployment.....			5,668
<b>Total.....</b>	<b>15,603</b>	<b>8,040</b>	<b>12,741</b>

Reforger is the major annual air mobility exercise in support of the Trilateral Agreement (United Kingdom, Federal Republic of Germany, and United States) and NATO commitments. This exercise provides joint service training through the strategic airlift of the 101st Airborne Division from Conus to Europe. The reduction of \$12.7 million and the related cancellation of Reforger will degrade joint service/NATO readiness to a point where the ability to successfully deploy a joint task force in contingency operations is seriously jeopardized. In addition, the \$12.7 million within the JCS exercise program is a source of funding required to provide for the minimum readiness training of strategic airlift aircrews. This training is essential to capability of the airlift force to respond in contingencies and is required whether or not Reforger is conducted.

## ARMY INFORMATION PAPER

DACA-OMO

Subject: Estimated funding schedule for Reforger 76.

Purpose: To provide information to Mr. Derek Vander Schaaf of the House Appropriations Committee on the proposed obligation of funds for Reforger 76.

Facts: 1. Reforger 76 funding in fiscal year 1976, fiscal year 197 transition quarter, and fiscal year 1977 is estimated to require approximately \$15.9 million. Funds in the amount of \$7.8 million are required in fiscal year transition quarter, of which \$5.28 million has been requested in a reprogramming action; and, \$5.8 million are required in fiscal year 1977.

2. The following is the proposed schedule of obligations in each fiscal period to accommodate Reforger 76:

[In thousands of dollars]

Category	Fiscal year—			Total
	1976	1977Q	1977	
Civilian pay.....	\$20	\$213	\$41	\$274
Travel.....	1,244	919	424	1,587
Transportation.....	0	2,988	1,024	4,012
Rents, utilities, and commo.....	51	222	8	281
Purchased services.....	1,261	1,316	1,175	3,752
Supplies and equipment.....	724	2,162	3,194	6,080
Total.....	2,300	7,820	5,866	15,986
Reforger 77.....			6,580	
Total.....			12,446	

<sup>1</sup> Travel funds requested, but held by DA for Exercise approval.

<sup>2</sup> \$1,137,000 Benelux LOC contracts requested but delayed pending Exercise approval.

<sup>3</sup> The dollars requested in this period are based upon command estimates to repair vehicles and equipment used in the Exercise, replenish parts and supplies consumed during the Exercise, but not available for replacement during the actual course of the maneuvers and to replenish shelf stock drawn down particularly in USAREUR. These estimates encompass obligations incurred after the units arrive at home station in fiscal year 1977.

3. Attached at Inclosure 1 is the breakout of the Air Force funding for the Exercise. Informal information from the Navy indicates that they have programed \$2.1 million in fiscal year 1977Q and in fiscal year 1977 to reimburse for sealift requirements.

Mr. VANDER SCHAAF. General West, is the revised estimate for the total cost of the 1976 Reforger exercise now about \$31.1 million for all the military departments, is that correct?

General WEST. That is essentially correct, but it leaves out the Navy piece, which is \$4.1 million. So your total would be approximately \$35 million.

Mr. VANDER SCHAAF. \$35 million.

## ARMY PORTION OF TOTAL COST

Mr. VANDER SCHAAF. Now we have greatly complicated the financing of this exercise by moving it from October to September with this transition quarter.

Now, there is some indication that the funds for the 1977 appropriation will not be available to finance the Reforger exercise because they cannot be made available until October 1, at which time the exercise is completed.

I have been told that the actual exercise itself terminates on the 17th of September. In view of this, it is kind of difficult to understand why you do not have more funds in the transition quarter and maybe less funding in the 1977 fiscal year.

General MEYER. Let me answer it on the broad point, and let General West respond to the specifics of the financing, if I might.

First of all, the exercise ends on the dates indicated there. However, for the next two weeks it is intended that the equipment be prepared for rail loading, there are some demonstrations and exercises for the troops over there to expand the understanding of the American troops in Europe of the capability of an air assault unit, and the attack helicopter units over there. These efforts will fill the troops' time in preparing for debarkation, so that the debarkation and the air movement will begin after the 1st of October, with some minor exceptions.

Mr. VANDER SCHAAF. It seems to me this exercise would cost a lot more money in September than it would cost in October, and you do not see that when you look at these budget estimates you have presented. That is hard to understand.

General WEST. Let me explain that. I think it goes back to the fact that we obligate when we actually receive the goods or services. Example: If I am in a unit and I requisition a repair part, I do not in fact obligate the funds until I receive that part.

During these exercises, there is a significant draw-down, either in the stockage in Europe or in terms of the basic repair parts load that the units carry. What is actually paid for in October are those things, the replenishment of stocks in Europe, the replenishment of the spare parts, loads that the units have and certain transportation and contract costs after the units redeploy.

That is the best estimate that we have on those costs that will take place after the exercise is over. In other words, you pay the piper after the fact.

Mr. VANDER SCHAAF. You are saying it is unnecessary for you to have the funds in hand when you begin an exercise to complete an exercise?

General WEST. That is correct. You have to have the funds to replace the stockage. By our system they are obligated in the year in which you actually receive the item, or obtain the service.

Mr. VANDER SCHAAF. It just seems rather strange under full funding guidelines not to have the funds to bring the troops back home when you start the exercise. You have the funds to send them over there but you have no money to bring them back home. You have in effect committed and obligated money you do not have, whether it appears that way or not.

I just wanted to bring that point out.

Another question I think the committee would be interested in getting into a bit is the question of the line of communication (LOC) and who pays the costs associated with it.

About 5 years ago our investigative staff looked at an Army proposal to spend a considerable amount of money to develop the new LOC, which runs through the Benelux nations into southern Germany. At that point the committee turned down your proposal to buy some locomotives, barges, lighters, material-handling equipment and some rail cars I believe were included. The committee stated that we felt the NATO allies should buy that equipment since it was basically to be used on their road nets and their rivers and harbors and what have you.

Now, has that agreement been accomplished, and what does it provide, and if so, why are we spending about \$3.7 million to pay the Belgians for port handling cost in this exercise?

General MEYER. First, as far as the lines of communications/port operations—LOC/PORT—plan, which is the plan you have outlined, you are absolutely correct. The initial proposal required a large number of American troops and equipment in the Benelux area.

At the insistence of Congress, we have developed a plan called minimum required logistic augmentation, Europe—MR LOGAEUR—in which we have far greater reliance on host nation support. That program—the MR LOGAEUR plan—is funded in the 1976 and 1977 budget. The Army directed implementation of the plan on the 12th of February this year. All of the agreements for host nation support between the United States, Belgium, the Netherlands, Luxembourg, United Kingdom, and the Federal Republic of Germany, have been written. The formal signing of those agreements is a matter of time and protocol.

Mr. VANDER SCHAAF. Would you place a set of those prepared agreements in our record, please?

General MEYER. I shall.

[The information was provided to the committee separately and is too voluminous to print as a part of these hearings.]

General WEST. May I make some comments as soon as you finish?

General MEYER. Yes.

So we have, I believe, instituted this program. We have moved the focus of effort from Bremerhaven to the Benelux area. We are relying upon host nation support and, as I pointed out, this is the first year we will have to test those agreements. That is why I think it is so significant this year, to test those agreements.

The question on the amount of money that we have to pay for the exercise is something I would ask General West to address.

Mr. VANDER SCHAAF. I used the \$3.7 million port handling cost. Do we in fact incur these port handling costs for Belgium?

General WEST. Only \$1.137 million is associated with the port handling costs; as a matter of fact, it includes the port handling, berthing costs, and certain costs of billets for troops associated with that activity. The rest of it, \$2.615 million, are for other costs, such as transportation and port handling costs in the United States. So we are talking about a lesser amount which is paid to the Belgian and Holland port activities.

I might say the facilities agreed upon are to be provided by those host countries through the use of wartime agreements being tested in Reforger 76 and these technical agreements provide for payment of services at agreed-upon rates.

That is the present arrangement.

Mr. VANDER SCHAAF. Then the agreements look like they will read something like this in wartime: "In wartime we will provide you these services essentially free to the United States"; in peacetime you are going to have to pay them so we can keep our total amounts given to support our NATO allies sort of in line for comparative purposes?

General WEST. I have not read the agreements.

General MEYER. We will clarify that for you.

[The information follows:]

The technical agreements which have been agreed to by the United States with the United Kingdom, the Benelux countries and the Federal Republic of Germany do provide for reimbursement to be made for services furnished during wartime.

The savings to the United States in using host nation support are realized by reducing investments in our military programs for organizations, equipment, facilities, training, and manpower which are readily available in the respective host nation. This action is in consonance with the expressed desires of Congress to place more reliance upon proven host nation support capabilities.

General WEST. There is a technical agreement on rate when used in other than under emergency circumstances.

Mr. VANDER SCHAAF. You propose to use the \$6.580 million left over in fiscal 1977 to begin what you call the Reforger 77?

General WEST. That is correct.

Mr. VANDER SCHAAF. That means you will have to have a reprogramming, again to conduct the Reforger next year?

When I say next year, I mean October 1977 rather than September 1976.

General WEST. There will be a piece in the 1978 budget for re-deployment for the next year's exercise. Again, that exercise will be split between two fiscal years.

General MEYER. But the answer to your question is, there may be requirement for reprogramming and we have the responsibility to come in when we decide how we are going to run Reforger 77 to explain to you the specifics of it and how we plan on financing it.

Mr. VANDER SCHAAF. Would it not be a better idea just to start financing these in total in the year which you are going to have to run and not carry on with the reprogramming action each year?

General MEYER. It would, if we were able to be specific about what we intend to do.

As you understand, the plans have to be made significantly in advance. To come in with an exact cost of how much you need in any given year would be extremely difficult a year and a half ahead of time.

For example, for next year's Reforger we still want to learn from what we get this year so we get more out of next year.

General WEST. Reforger is an exercise that is a subset to JCS exercises. Actually, the line item in the conference reports limits it; JCS exercise is the line that is listed.

Mr. VANDER SCHAAF. Normally that would be correct. But this committee took special interest with respect to Reforger and by doing that sort of built a fence around the Reforger amounts so they are not to be mixed up with the overall JCS exercise money.

General MEYER. That is right. That is why we are trying to identify the Reforger costs and we feel we have the responsibility to explain them to you.

#### NAVY PORTION OF THE TOTAL COST

Mr. VANDER SCHAAF. \$4.1 million Navy sealift money is involved here. Was the request for that money contained in the original 1976 justification?

Admiral KERN. Not in the original. It is a reprogramming in 1976, half of it, \$2.05 million.

Mr. VANDER SCHAAF. Has reprogramming action been submitted for that purpose?

Admiral KERN. I think it has, and it has been approved, maybe not properly identified.

Mr. VANDER SCHAAF. It has?

Admiral KERN. Yes.

Mr. VANDER SCHAAF. If a reprogramming request has been submitted, would you place in the record the reprogramming number, when it was approved, that kind of thing? I am not familiar with it.

[Clerk's Note.—It was subsequently established that a reprogramming was not submitted although the reprogramming agreements clearly required the submission of a reprogramming action by the Navy.]

Mr. VANDER SCHAAF. It would seem you should have come forward with the reprogramming action since you did not make any—

Admiral KERN. It is a reprogramming action. The details of it I will have to get for you. It was not in the original budget submission, I know that.

The 1977 portion is in the 1977 budget request.

#### AIR FORCE PORTION OF TOTAL COST

Mr. VANDER SCHAAF. Now then with respect to Air Force financing of Reforger, your original budget request, as we understood it last year, was \$6.8 million for support of Reforger during the fall of 1976, and now, according to the finance paper, I think the members have a copy in front of them, you need \$8.040 million.

General LYNCH. That is correct, sir.

Mr. VANDER SCHAAF. Now, it would seem once again there should have been a reprogramming action presented to the committee from the Air Force, since this is a matter of the committee's interest, and you have increased the amount from roughly \$6.8 million to \$8 million, or \$1.2 million in addition to the program during the transition period.

Why was no reprogramming action submitted?

General LYNCH. Sir, the \$6.8 million that was identified for the transition quarter was our best estimate of the cost approximately 15 months ago, at the time that the budget was submitted.

The \$8.040 million to which you alluded reflects a repricing of these requirements in support of Reforger.

The additional \$1.2 million for Reforger, the difference between those two figures was obtained from within the overall JCS exercise funding provided in the transition quarter.

The Department's view was that a reprogramming was not required; since there was adequate funding available within the JCS exercise line to cover it. As a consequence, we did not come forward with a reprogramming.

Mr. VANDER SCHAAF. We just heard testimony that the committee had by its action last year fenced Reforger from the JCS line, and you were not to mingle those funds together. Then it is the current Air Force position, that it was all right to go ahead and add \$1.2 million without a reprogramming action.

General LYNCH. Within the JCS exercise line, that is correct, sir. Our DD form 1414, the base for reprogramming, reflected of course the approved amount, approximately \$16 million for the total exercise program in fiscal year third quarter. We were operating within that; a separate break below that, by exercise, was not included in our 1414.

Mr. VANDER SCHAAF. Your Reforger request for fiscal 1977, which totals \$12.7 million, is again partly to bring troops home this year and to deploy troops next year?

General LYNCH. That is correct, sir.

Mr. VANDER SCHAAF. Is the amount to deploy troops next year adequate?

General LYNCH. We believe, sir, at this time, based on planning figures, that that represents a realistic estimate. Quite obviously if, during the course of the year, there are changes in the structure of the exercise, we would, of course, reprice the requirements. Based on the knowledge we have that—

Mr. VANDER SCHAAF. It would appear if it cost \$8 million in the transition quarter alone, then \$5.6 million is not going to be adequate to do the job.

We will see another reprogramming, I would assume?

General LYNCH. Let me respond in this way: Effective in fiscal year 1977, the tariff rate for MAC, in the case of the C-141 aircraft, declines approximately \$200 per hour. In the case of the C-5 there is going to be a decrease somewhere in the order of \$230 an hour. So obviously a reduction in tariff rate in fiscal year 1977 enters into our calculations.

Additionally, in this fiscal year the number of troops that are going to be moved is approximately 12,900. Our planning figure for the number of troops that would be moved next year is around 10,000. So two factors, fewer people and lower tariff rates, are significant items that enter into the calculations of our requirements for fiscal year 1977.

Mr. VANDER SCHAAF. Are you denying the fact that a reprogramming for the 1977 exercise will be likely? Are you saying it is unlikely? I am not quite sure I understand what you are saying.

General LYNCH. For fiscal year 1977, sir, the committee action was to cut \$12.7 million for Reforger from the fiscal 1977 requirements stated by the Air Force. We have appealed this action.

If the \$12.7 million is in fact restored, if the action of this committee is in fact to support Reforger, then in all probability a reprogramming action for fiscal year 1977 would not be required. I think it would be premature to judge it at this time.

General MEYER. Yes, I would say from the overall point of view, the overall cost of Reforger 77 is something we have a responsibility to tell you based on what we decide for next year's Reforger, and it may be that there is a reprogramming requirement.

Mr. VANDER SCHAAF. It would seem to the staff over here that we are looking at two more additional reprogrammings at least, coming in 1977, and we probably should have two additional reprogrammings in 1976 if we were to operate under our usual procedures, one from the Navy and one from the Air Force, which we did not receive.

Admiral KERN. Ours might well have been small enough to be internal. My army budget friends tell me that. We will clarify that.

Mr. VANDER SCHAAF. It could not have been internal, because of the fact that once it becomes a matter of special interest to the committee, there is no threshold, the threshold is zero.

Admiral KERN. I understand.

Mr. VANDER SCHAAF. According to the timetable provided the committee, all "exercising" will terminate on September 17, 1976. Yet, the Air Force funding indicates that no troops will be returned to the United States until 2 weeks later, after the first of October. This is evident by the fact that your request contains \$8,040,000 for deploying forces to Europe in the transition quarter and \$7,073,000 to return them in the fiscal year 1977 budget. What will the troops be doing for 2 weeks after the exercise ends?

General MEYER. They will be preparing their equipment for redeployment. The air mobile unit over there will be giving demonstrations of what the air mobility concept that has been developed here in the States can do in Europe to both European allies and to our own U.S. Forces, additionally they will be preparing themselves for debarkation.

In the past, as you know, sir, they have gone and fired their weapons and everything else. This year we are not doing that during that period.

Mr. VANDER SCHAAF. It requires a full 2 weeks to reload this equipment?

General MEYER. In addition to the training they are going to participate in during that period of time, and the demonstrations that they intend to put on.

Mr. SIKES. Are there further questions on my left?

Mr. ROBINSON?

Mr. ROBINSON. No questions, Mr. Chairman.

#### DUAL BASING

Mr. SIKES. The committee report cited the fact that the United States has replaced the combat forces which were withdrawn from Europe as a reason for no longer conducting Reforger exercises. The committee is also concerned that these exercises tend to "misinform" both the Army and its political leaders as to the viability of the dual basing concept. Would you briefly tell the committee what the dual basing concept involves and how you would foresee it working in wartime? You may expand your comments for the record in order to make them more complete. Tell us briefly at this time.

General MEYER. The dual basing concept involves having units stationed, for example, at \_\_\_\_\_ with equipment that they would fall in on in Europe. The concept is based on the assumption that there would be some period of warning and during which the individuals could be flown over to fall in on the equipment in Europe.

What this means is, essentially, we need less sealift because we have prepositioned materiel over there that people can be moved to quickly by air. That is the basic concept. Its viability depends upon how much warning we get and how quickly the decisionmakers decide to employ the forces.

Mr. SIKES. How did Reforger exercises serve as a test of the practicality of the dual basing concept?

General MEYER. The past Reforger exercises have principally focused on whether or not you could fly people over, have them fall in on their equipment, and how long it would take to marry them up and move them out into the field.

As I have indicated, we now see, as a result of additional emphasis on the part of the Soviets, that we have to look at other alternatives also.

Mr. SIKES. This of course is an exercise and exercises are needed by military forces, particularly exercises involving large bodies of troops.

Now, if during a period of tension when we were sending large numbers of troops to Europe, would this be viewed by the allies or the Warsaw Pact nations as inflammatory?

Would it offer an excuse for a preemptive attack?

General MEYER. I think that is a decision that would weigh very heavily upon the decisionmakers at that particular point in time.

I think the key there as far as we are concerned in having this capability is that it provides one additional capability that our country would have at a very critical point in time.

Mr. SIKES. That is the whole purpose, is it not, to show that we can do it?

General MEYER. To show we can do it.

Mr. SIKES. And be ready to do it in case it becomes necessary?

General MEYER. That is the purpose of this exercise.

The political aspects, those are the things that can be argued and have been argued, pro and con, by the political scientists.

Mr. SIKES. They are not within your sphere of responsibility, political decisions?

General MEYER. Political decisions basically are not.

Mr. VANDER SCHAAF. This is not done without cost? By "without cost" I do not mean the cost of storing the equipment. The cost I am talking about is the possibility of losing the equipment and finding yourself two divisions short of equipment which you need to prosecute the war.

That is a risk you take with this alternative, this dual basing concept.

General MEYER. That is correct, that is a risk you take based upon your ability to move forces over there more quickly, assuming you have that period of warning. But your contention is absolutely correct.

Mr. SIKES. The entire dual basing concept is centered upon the receipt of adequate warning. The problem is one of distinguishing the ——. For example, it seems strange that the United States — were surprised that the Japanese attacked Pearl Harbor. The problem is that we were unable to ignore all the "noise" in which the — for an attack on Pearl Harbor were imbedded. Pearl Harbor has not been the first, nor the last time, in modern warfare in which all the — were available but went unheeded. Other examples include the Barbarossa operation (Hitler's invasion of the Soviet Union); the Chinese intervention into the Korean war; the Sino-Indian border

war, October 1962; the Tet offensive of 1968; the Soviet invasion of Czechoslovakia; and the Arab/Israeli war of October 1973.

In your opinion, how likely is it that the United States will be able to react to ——— prior to any future war in Europe?

General MEYER. I think, sir, it is quite clear that our ability to ——— is going to be extremely difficult. I would point out that in addition to the United States' ability ——— it also will be very important for the ——— so that I can see a great emphasis on the part of the intelligence communities across in the NATO area looking specifically at ———. It is going to be a NATO decision, a NATO problem as well as ours. Subsequent decisions based on whatever warning is received to mobilize is going to be political, and I don't think there is much else I could add to that, sir.

Mr. SIKES. Of course the facts are that you cannot react to every possible situation, every rumor. You have to be prepared. You have to train for any actual outbreak that occurred; isn't that about the size of it?

General MEYER. Yes, sir, it is, and I think that is the importance of maintaining the capability to react.

Mr. SIKES. In testifying before the committee this year, Secretary Rumsfeld told us "the Warsaw Pact air forces could stage a surprise attack on NATO air bases in Central Europe. Such an attack could even be expected with a minimum of discernable preparation, carried out by forces in position—primarily the Soviet's 16th Tactical Air Army in East Germany." General Weyand has said that "the possibility of a Warsaw Pact attack with little or no warning is very real."

What changes are proposed to the dual basing concept as a result of the changing military situation? For example, have you considered moving the Pomcus stocks north and west into Belgium or the Netherlands to make them less vulnerable? What would be the contribution of an exercise like this to an actual surprise attack, in preparation against an actual surprise attack?

General MEYER. I think that is one of the reasons that we are emphasizing this year going through the Benelux. It is obvious we have to reevaluate where our Pomcus is stationed in light of the views which you presented. We intend to put into the United Kingdom-Benelux all of the Mr Logaeur equipment. About 50,000 short tons will be prepositioned there to begin this effort so that the whole focus of support will swing from Bremerhaven down into the Benelux area.

Mr. SIKES. It is not an immediate situation which enters into this discussion of the military exercise, but the fact remains that our prepositioned stocks are vulnerable to a sudden attack, a surprise attack, by air and land.

Is consideration being given to moving our Pomcus stocks north and west to make them less vulnerable?

General MEYER. There are currently no plans to move our present Pomcus to other sites because of vulnerability. The concept of Pomcus is to deploy our forces by air as rapidly as possible to the FRG and marry-up with equipment before the outbreak of hostilities. In essence Pomcus is a hedge against short warning. The eight Pomcus

sites behind the Rhine River are as far back as reasonable and still permit rapid marry-up and subsequent employment into the operational area. However, as I mentioned earlier, we are programing to preposition equipment for our Mr Logaeur units in the United Kingdom-Benelux.

Mr. SIKES. What is the status of those plans?

General MEYER. At the present time we plan that approximately 50,000 short tons would be stored in the United Kingdom-Benelux for Mr Logaeur. These units are authorized to initially open the LOC and assist the host nations in receiving U.S. reinforcements. Currently, the Army and the host nations are developing detailed support plans. That is a logical follow-on to the bilateral technical agreements. These support plans are required in order to orchestrate the massive flow of forces and materiel through the United Kingdom-Benelux ports and onto the battle area. Plans for additional prepositioning however, in the Northag area are currently being studied here and in Europe, and are in the formative stage.

Mr. SIKES. This is not something that can be accomplished speedily or at little cost. It is a very large undertaking. I gather that primarily it still is in the study stage.

Can you tell us any more about it?

General MEYER. Yes, the entire issue is in the study stage and it is looking into greater use of the line of communication through the Benelux. ———. It includes prepositioning of war reserves in the Northag area. And it is being done, as I have indicated, with our allies, so that they pickup a share of the support costs.

Mr. SIKES. Do our allies share our concern?

General MEYER. Yes, sir, they do.

Mr. SIKES. It is generally recognized by many military experts that the U.S. 7th Army is deployed too far south in Germany and will likely be forced to move to block the main avenues of attack from East Germany and to prevent its short and exposed LOC from being overrun. In a letter from the Chairman of the Joint Chiefs of Staff, General Brown, supporting the Reforger exercise, a statement is made that "it is invaluable to do so (train) on the terrain and in the environment in which we may some day have to fight. Personal reconnaissance of the battle area is one of the most proven requirements for command ever identified, and is valid down to the man in the foxhole and the pilot in an aircraft above him." The committee agrees with the statement, but the statement does not necessarily support the Reforger exercise since it would seem as important to have the 7th Army, which is already deployed in Europe, practice and train on the terrain over which it is likely to fight as it is for a unit which may or may not be deployed to Europe to spend 2 weeks on that terrain.

Would you comment on that?

General MEYER. Yes; I would be happy to, sir.

Prior to the time I came back to Washington, I commanded a division in Wurzburg in Germany, and our division literally lived in the area in which it was going to operate. Each quarter the requirement was for the units to go out and learn the terrain so that each soldier knew the general area in which he might be called upon to fight. That type training is on a continuing basis.

It is unlikely, in my mind, that the units that are prepositioned there in Wurzburg-meiningen gap area and the Fulda gap around

Frankfurt would be called upon to move, so that the units that are there now are in fact training in their assigned area.

The 7th Army units are training there now. It is the units that are coming over later, the Reforger units, and other units which are coming in which it might be necessary to use in the northern army group or in the central army group.

Mr. SIKES. What you are saying is that in the event of war practically every resource that we have is going to be called upon to be in position and taking place in the fighting as quickly as possible.

General MEYER. Yes, sir.

Mr. SIKES. And this exercise you feel would contribute to the capability.

General MEYER. Yes, sir, I do.

Mr. SIKES. How often do U.S. ground commanders actually train on the terrain over which they are likely to fight, instead of at Hohenfels, Grafenwoehr, or Wildflicken?

General MEYER. The divisions that are in Europe at the present time, the units that are committed there, in each quarter go out into their general defense positions and train in that area. The average battalion in my division spent 54 days at one of the major training areas. As it turned out, Wildflecken, a major training area, was in my division area, so I would hardly call that out-of-sector training, but that is the scope of how much time is spent in training in major training areas.

Mr. VANDER SCHAAF. General Meyer, from your statement, are you saying that you really pretty much believe that the U.S. 7th Army and its two corps will remain in the initial stages of the battle essentially in the positions in which it happens to be deployed today?

General MEYER. I am saying that the divisions that are predeployed over there, under conditions of short or intermediate warning, would stay in those general positions, and it is the follow-on reinforcing forces that would be required to do the filling elsewhere.

Mr. VANDER SCHAAF. When you look at a map, you get the feeling that maybe they are going to have to move north in order to protect their own LOC, but you feel that the West Germans and the British will take care of that problem for us, and we won't get caught short, without having that line of communication necessary to supply our own forces.

General MEYER. I think one of the things that helps us in that area has been the transfer of the line of communications from Bremerhaven to the Benelux which gives us greater protection.

In addition, I think there is some concern about the number of brigades and so forth in areas, and I looked at that specifically. In the northern area there are 29 brigades in a 250-kilometer area. In the Centag area, the southern area, there are 37 brigades in a 680-kilometer area, so the density of brigades is greater in Northtag than it is in Centag.

#### THE BENELUX LINE OF COMMUNICATION

Mr. VANDER SCHAAF. The letter from the Joint Chiefs of Staff dated June 14, 1976, also states that this exercise will "test procedures and recently concluded international agreements in the newly developed Benelux line of communication."

What do the recently concluded international agreements on this LOC involve, and how much has been provided by the NATO allies in support of this LOC?

General MEYER. I will provide that for the record.

[The information follows:]

The Benelux LOC is based upon a series of government-to-government agreements with the United Kingdom, Belgium, Netherlands, Luxembourg, and the Federal Republic of Germany which establish the authority for the LOC, provide for its activation based upon national emergency legislation and authorize the use of U.S. combat service support units to control the reception and onward movement of personnel and equipment through the LOC (MR LOGAEUR support units).

Backing up these umbrella agreements are a series of technical agreements with each nation which authorize the provision of facilities and services needed to operate the LOC, that is, transportation, airfields, telecommunications, power and utilities, procurement, civilian labor, real estate, facilities, construction, and general technical procedures covering legal aspects and the disestablishment of the LOC following hostilities.

The host nations have agreed to the responsibility to provide the capability for the transport of all ———, the discharge of dry cargo tonnage, the transport of ——— of the dry cargo tonnage from ports to ——— and the provision of labor, facilities and resources to accomplish these tasks.

#### SUPPORT ELEMENTS PARTICIPATION IN REFORGER

Mr. SIKES. Both the Secretary of Defense and the Chairman of the Joint Chiefs of Staff have indicated some concern over the significant reduction of U.S. Forces support elements in Europe. However, there is no indication that support elements will be deployed as part of Reforger.

Is it not important that there be additional support used as a part of this exercise?

General MEYER. Yes, sir, it is. There are some combat service support elements moving. There are signal battalions, petroleum companies, relay teams, ordnance and ambulance companies from Fort Devens, Fort Dix, signal detachments from Lakehurst, N.J., signal companies from Fort Hood that are deploying as support forces. We are restricted in an exercise on the number of people we take. This year we plan on moving this new division, this air assault division over and therefore reduced the support.

Mr. SIKES. Are you saying that funding limitations require a reduction in the amount of support you would like to provide?

General MEYER. I think that is a valid statement, yes, sir, that is correct, plus this year we really want to push host nation support, and if we can see that host nation support——

Mr. SIKES. Are the host nations providing additional support?

General MEYER. Yes, sir, they are.

Mr. SIKES. Do you feel it will be fully adequate and realistic?

General MEYER. It will be realistic. Whether it is fully adequate or not is something that we have to test, because as you know we have reduced our combat strength over there under the assumption that we can rely upon host nation support. I think that is a valid assumption.

Mr. SIKES. It has also been stated that it is necessary to conduct a Reforger exercise in order to gain the experience needed with respect to operation of an air mobile division in Europe. In view of this, why are you breaking the 101st Division up and not exercising it as

a division but are exercising various components of the division in conjunction with elements of British, West German, and Belgium forces?

General MEYER. Yes sir, it will be together as a division for about 3 days. It will be together as a division during the Vth Corps FTX. The reason it is being broken up is to do two things: One, it is to show our allies what the air assault capability is and two, it is to begin work on how we interoperate. That is how an American and a British and an American and a Belgium force work together. We feel it is important to exercise interoperability in this exercise.

Mr. SIKES. Do you feel it is even more significant for a unit not stationed in Europe to have this experience?

General MEYER. Absolutely, sir.

Mr. SIKES. And practice?

General MEYER. Absolutely, sir, for all the reasons that you have indicated earlier, that they might more likely be moved to the northern area.

Mr. SIKES. From your standpoint, is there any serious concern with the fact that a part of this decision, part of the need which has been expressed for Reforger is political rather than military? Are you satisfied the military requirements are sufficient to fully justify this, regardless of any political considerations such as strengthening the support of our allies, helping to maintain a more stable political balance in Europe generally?

General MEYER. Yes. While I think all of those political implications are important, I think the military need to have a major exercise once a year, to do all the things that we have outlined here today, is essential if we want our Army, Air Force, and Navy to operate as a coherent force. This is the only opportunity we have.

Mr. SIKES. Is the decision to stress the importance and to seek the funding for Reforger purely a military decision originating within the Department of Defense rather than one which was suggested or even directed from other sources?

General MEYER. Sir, this is a JCS, Joint Chiefs of Staff, exercise, so we have to answer that yes.

Mr. SIKES. Within the Department of Defense.

General MEYER. Yes, sir.

Mr. SIKES. Because of the military need.

General MEYER. Of the military need.

Mr. SIKES. For this.

General MEYER. I think we have tended to overemphasize the political need in this discussion, because I think there was probably a mistaken assumption on the part of the military that the military value was self-evident, so I think the political aspects of it have been overemphasized.

Mr. SIKES. Mr. Burlison.

Mr. BURLISON. No questions.

Mr. SIKES. Mr. Chairman, we have finished.

Mr. MAHON. Gentlemen, we are pleased to have you before the committee. We have been impressed with your testimony. Of course we are very much concerned about the security of the United States and our position in the world, and we will take action promptly with respect to the matter which has been before us.

Thank you very much.

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THURSDAY, JULY 29, 1976.

CLAIMS, DEFENSE (76-43 P/A REPROGRAMING, FISCAL  
YEAR 1976/7T)

WITNESSES

JOHN R. QUETSCH, DEPUTY ASSISTANT SECRETARY OF DEFENSE  
(PROGRAM/BUDGET), OFFICE OF THE ASSISTANT SECRETARY OF  
DEFENSE (COMPTROLLER)

FRANK L. McLAUGHLIN, DEPUTY DIRECTOR FOR OPERATIONS,  
OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE (COMP-  
TROLLER)

BRIG. GEN. JOHN B. BLOUNT, DIRECTOR OF OPERATIONS AND  
MAINTENANCE, ARMY, OFFICE OF THE COMPTROLLER OF THE  
ARMY

REAR ADM. E. P. TRAVERS, DEPUTY DIRECTOR OF BUDGET AND  
REPORTS, HEADQUARTERS, DEPARTMENT OF THE NAVY

MAJ. GEN. CHARLES C. BLANTON, DIRECTOR OF BUDGET, HEAD-  
QUARTERS, DEPARTMENT OF THE AIR FORCE

COL. WILLIAM A. MARTIN, CHIEF, CLAIMS AND TORT LITIGATION  
DIVISION, OFFICE OF THE JUDGE ADVOCATE GENERAL, HQ, U.S.  
AIR FORCE

INTRODUCTION

Mr. MAHON. The committee will come to order.

This morning the committee will give consideration to reprogram-  
ing request fiscal year 76-43 P/A. The request is to allow the transfer  
of \$12.6 million from other appropriation accounts to Claims, Defense  
under the authority of section 733 of the fiscal year 1976 Defense  
Appropriation Act, Public Law 94-212. Of the funds to be transferred,  
\$10.2 million will be transferred from the military personnel approp-  
riations and \$2.4 million from Operation and Maintenance, Defense  
Agencies.

The reprogramming document states that \$5.9 million of the addi-  
tional claims funds is required because of personal property losses in-  
curred by DOD personnel as a result of Typhoon Pamela which struck  
Guam on May 20. The remaining \$6.7 million is based on judgment  
factors which indicate that additional funds will be required for tort  
and admiralty claims which will exceed the appropriation amounts  
made available for fiscal year 1976 and the transition quarter.

For fiscal year 1976 and the transition quarter, the President re-  
quested \$71.6 million and \$15.5 million, respectively. The fiscal year  
1976 request was an increase of \$17 million above the amount of \$54  
million appropriation for fiscal year 1975. The Congress approved the  
full amount requested for both fiscal year 1976 and the transition  
quarter.

Committee members should also be mindful that the Congress has passed legislation which allows the executive department to carry forward into the transition quarter funds remaining unobligated at the end of fiscal year 1976.

We have with us today to present this request Mr. John R. Quetsch, Deputy Assistant Secretary of Defense for Program and Budget. We welcome you once again before the committee, Mr. Quetsch, and all your supporting witnesses. You have been here many times before and it is always a pleasure to see you once again.

Mr. Quetsch, I see that your statement is very short, so would you please proceed and read it for the committee.

#### SUMMARY STATEMENT BY MR. QUETSCH

MR. QUETSCH. Mr. Chairman, I will read sort of an abbreviated version of the statement.

I am appearing to discuss the proposed reprogramming action of \$12.6 million for the appropriation, "Claims." This provides funds for the payment of noncontractual claims against the Department of Defense.

For fiscal year 1976, and the transition quarter, Congress appropriated \$71.6 and \$15.5 million respectively. The funding proposed for transfer into "Claims" is from amounts previously appropriated for various military personnel appropriations and for the Uniformed Services University of the Health Sciences. That is an Operation and Maintenance Defense Agency.

These additional funds are necessary to pay claims resulting from Typhoon Pamela which hit Guam, and to avoid a shortfall in other claims areas.

Claims, of course, is largely an uncontrollable appropriation. Claims are filed by military personnel and others. They are adjudicated by review authorities and to the extent they are determined payable, they must legally be paid.

They are neither programed in advance nor controllable except in terms of time. However, it is only equitable that we pay the claims as promptly as possible when they have been adjudicated.

While we can defer nominal amounts of claims from one year to another, we are just pushing our financial problems forward from one fiscal year into the next.

Major "acts of nature," as they have in the instance of Typhoon Pamela, have a considerable impact on the amount of personal claims which can be processed very rapidly for immediate payment.

We have promptly paid the claims of our personnel in this case in order to mitigate the personal hardships which have arisen as a result of the typhoon damage.

I have attached to this statement a summary of the sources of the \$12.6 million which is proposed for transfer as well as the application of the additional resources by service program. I have with me representatives from the services to discuss the details of the program changes which caused these funds to become available. We will attempt to answer any questions which you may have.

## REVISED ESTIMATE

I would like to add for the record that based on our latest look at the claims requirements it now appears that we can get along with about \$9.3 million in lieu of the \$12.6 million that we requested.

That revised estimate is based on more recent experience, that is, one more month's experience of trends, and some revised estimates on specific items such as the claims paid to the Federal Republic of Germany, revised estimates for Typhoon Pamela, and other specifics.

[Mr. Quetsch's prepared statement follows:]

Mr. Chairman and members of the committee, I am appearing before your committee today to discuss the proposed reprogramming action to provide section 733 transfer authority of \$12.6 million of additional funding for fiscal year 1976 and the transition quarter for the appropriation, "Claims, Defense." This appropriation provides the necessary funds for the payment, as prescribed by law, of non-contractual claims against the Department of Defense.

For fiscal year 1976 and the transition quarter, the Congress appropriated \$71.6 and \$15.5 million respectively. The DOD request, currently under consideration, for fiscal year 1977 is \$82.5 million. The funding authority which is proposed for transfer into Claims, Defense is from amounts previously appropriated for various military personnel appropriations and for the Uniformed Services University of the Health Sciences. These additional funds for claims are necessary to pay claims resulting from Typhoon Pamela, which devastated various installations on the island of Guam in May, and to avoid a shortfall in other claims areas where the fiscal year 1976 and transition quarter amounts have proven to be inadequate.

I should point out that Claims, Defense is largely an uncontrollable appropriation, and it is very difficult to develop estimates for this account. The claims are filed by military personnel and others; they are adjudicated by properly constituted review authorities and to the extent they are determined payable they must legally be paid. They are neither programed in advance, nor controllable. Only the timing of the payment can be controlled. However, it is only equitable that we pay the claims as promptly as possible when they have been completely adjudicated.

While we can defer nominal amounts of claims from one year to another in order to keep within our obligational authority, it is clear that we are just pushing our financial problems forward like a "bow wave" from one fiscal year into the next when we do this. And, of course, the Government would to a degree be denying equitable settlement of the adjudicated claim by denial of prompt payment as directed.

Our fiscal year 1976 and transition quarter estimates, consistent with past practice, could not have anticipated major "acts of nature" which can, as they have in the instance of Typhoon Pamela, have a considerable impact on the amount of personnel claims which can be processed very rapidly for immediate payment. We have promptly paid the claims of our personnel in order to mitigate the personal hardships which have arisen as a result of the typhoon damage.

I have attached to this statement a summary of the sources of the \$12.6 million of funding which is proposed for transfer as well as the application of the additional resources by service program. Service representatives are with me today to discuss the details of the program changes which caused these funds to become available. This completes my prepared statement on this subject. I will attempt to answer any questions which the chairman or members of the committee may have.

## FACT SHEET

## SOURCE OF FUNDS FOR FISCAL YEAR 1976 CLAIMS REPROGRAMING

The following is the source of funds for the fiscal year 1976 claims reprogramming:

*Appropriation*

Military personnel, Army, —\$1 million.

*Explanation.*—Funds available due to reduced estimate for payments of over-sea station allowances (COLA) to officers (—\$1 million).

Reserve personnel, Army, —\$1 million.

*Explanation.*—Funds available due to actual paid drill strength running below budgeted strength.

Military personnel, Navy, —\$3 million.

*Explanation.*—Funds available as a result of minor adjustments in longevity factors for basic pay and changes in BAQ requirements.

Military personnel, Air Force, —\$3 million.

*Explanation.*—Funds available as a result of lower entitlement payments than previously estimated in the President's fiscal year 1976 budget.

National Guard personnel, Air Force, —\$2,200,000.

*Explanation.*—Funds are available due to a lower level of airman retention than that planned in the fiscal year 1976 President's budget.

Operation and maintenance, defense agencies, —\$2,400,000.

*Explanation.*—Funds are available as a result of a change in the opening date of the university. The Medical University beginning class was scheduled to start on January 1, 1976. The revised planned start is now scheduled for October 15, 1976. The funds which have been made available for reprogramming were planned for facility and administrative staff of the university.

#### GENERAL CLAIMS CATEGORIES

##### CLAIMS, DEFENSE APPROPRIATION

The various types of claims for which provision has been made in this appropriation request are grouped into four major categories:

##### *Personnel claims*

The personnel claims category which accounts for about two-thirds of the appropriation includes (1) claims of military and civilian personnel for private property lost or damaged in the military services, (2) repayments of erroneous collections, and (3) claims arising from the correction of military or naval records.

##### *Tort claims*

The tort claims category which accounts for one-third of the appropriation includes payments for personal injury or personal property damage caused by the negligence of an employee of the Department of Defense while acting in the scope of his employment.

##### *Admiralty claims*

Admiralty claims which usually account for less than 1 percent or almost the balance of the appropriation request for fiscal year 1975 include payments under authority of the Admiralty Claims Act and Maritime Claims Act for claims arising from marine accidents and incidents involving vessels of the military departments.

##### *Other miscellaneous claims*

The other miscellaneous claims category usually account for less than one-half of 1 percent of the appropriation request includes (1) amounts for the indemnification of the Post Office Department for claims arising from error, loss, or defalcation by unbonded mail clerks and commissioned officers, and (2) claims by contractors for damage caused by accidents arising under training contracts due to the negligence of military trainees.

#### OBLIGATIONS AS OF MAY 1976

Mr. MAHON. Mr. Giaimo will be recognized at this time.

Mr. GIAIMO. Mr. Quetsch, if I interpret your statement correctly, the amount of the reprogramming request was based upon May 1976 obligations.

Is that correct?

Mr. QUETSCH. May 1976 obligations plus certain known changes since then. It wasn't a straight line projection of May. It was May projected for 4 more months plus certain specific items like Pamela.

Mr. GIAIMO. What was the amount of funds obligated at the end of May?

Mr. QUETSCH. At the end of May we had obligated \$65.9 million. That did not represent, of course, the total requirement through that period because we were holding back on the payment of claims to try to make that money stretch as far as possible, so we were deferring payment of some claims in that period.

#### REVISED ESTIMATE

Mr. GARRITY. Mr. Quetsch, based upon obligations later, say June, is there any estimate or possibility that the reprogramming request may be overstated?

Mr. QUETSCH. Well, the \$12.6 million is overstated right now because of, as I say, revised estimates from the claims officers on Guam. Some of these reductions seem to have stemmed from the fact that private insurance policies covered some of the losses and, therefore, the Government's liability was less, and, of course, we just have more claims adjudicated.

At the time we put this together we were estimating what they would be but the claims officers had not actually completed their reviews. We have also had some other reductions and, therefore, we believe that we can ask for \$3.3 million less or for \$9.3 million instead of \$12.6 million.

Mr. GIAIMO. Was the Department overanticipating the amount of claims it would receive, or was it bad estimating, or what was it? What caused this \$3.3 million reduction or \$3.3 million overstatement?

Mr. QUETSCH. There were a number of cases for that \$3.3 million.

One, we had one more month's experience. We had been estimating rather conservatively based on May because we did not want to fall short and carry any unpaid claims into 1977, so that we didn't want to just repeat this problem in 1977.

Then, as I said, Typhoon Pamela turned out to cost us less, we now think, than before.

There was one claim originally for \$500,000, admiralty claim, where the claimant refused settlement and, therefore, it will be into the courts, and in connection with payments to the Federal Republic of Germany, where we have a country-to-country agreement and the Germans pay the claims and we then reimburse the Germans, there was a reduction in the estimate for that bill.

Mr. GIAIMO. What was the amount of funds obligated for claims at the end of June?

Mr. QUETSCH. We had obligated \$71.463 million at that time.

Mr. GIAIMO. And the remaining balance which was carried forward, how much was that?

#### FUNDS AVAILABLE IN TRANSITION QUARTER

Mr. QUETSCH. Out of the 1976 money itself there was only about \$200,000, less than \$200,000, unobligated at the end of June. That, under this year, will carry into the transition period and can be obligated in the transition period.

Mr. GIAIMO. How much does that make available for claim payments during the transition quarter?

Mr. QUETSCH. About \$15.7 million. We had \$15.5 plus approximately \$200,000 carried over. That \$200,000 is obviously not from lack of need for the money but it is just a fraction in the system. We distribute the money among many claims officers. Some payments simply can't be processed and, therefore, we have inevitably a certain small amount of money left over.

CLAIMS OUTSTANDING AT JUNE 30, 1976

Mr. GIAIMO. Were there any claims outstanding on June 30, and, if so, what was the amount?

Mr. QUETSCH. Yes, sir, there were. I have these by service. In the Army there was about \$2.7 million deferred. \$2.5 million of that was related to the Federal Republic of Germany. We had deferred that payment in order to meet personnel claims from individuals to minimize the hardship.

In the case of the Navy, there was \$2,155,000 unpaid. The Air Force had \$1,362,000 deferred. All of those included some claims related to the typhoon on Guam which were still unpaid on June 30.

Mr. GIAIMO. Were there any claims outstanding at the end of fiscal year 1975 and, if so, what was the amount?

Mr. QUETSCH. There was about \$9.3 million of claims that had been adjudicated but could not be paid for lack of funds that were brought into this year. Those were essentially paid in July.

Mr. GARRITY. Mr. Quetsch, how many of the \$9.3 million outstanding at June 30, 1976, from the Army, Navy, and Air Force have been adjudicated as valid for payment?

Mr. QUETSCH. All of them should have been adjudicated but not paid for lack of money.

Mr. GARRITY. These are all valid claims then, representing potential obligations to the Government?

Mr. QUETSCH. We believe so.

Always, Mr. Garrity, you have a situation where at a later period it is found that you did, in fact, overpay someone or that they had collected from another insurance company and we didn't know about it, so there are recoveries netted out but they are a very small piece of the whole picture.

Mr. GARRITY. Thank you.

ALLOCATION AND CONTROL OF CLAIMS APPROPRIATION

Mr. GIAIMO. Is the appropriation for Claims, Defense, centrally controlled in OSD or is it allocated to the services?

Mr. QUETSCH. It is allocated to the services and the services in turn allocate it to, I believe all, claims officers throughout the world at various levels.

Mr. GIAIMO. How long does it normally take to process a claim through the responsible department for payment?

Mr. QUETSCH. I don't have current figures on that. In some cases it may take years where there is an adjudication through the courts involved. If it is a small personal claim, the claims authorities locally, up to a certain amount, have the authority to settle on the spot and pay it immediately.

Larger ones have to go forward. So there are criteria which determine how high up it has to go in the system.

Mr. GARRITY. Mr. Quetsch, what is the extent or the amount of the claims that can be paid under this appropriation?

Mr. QUETSCH. I believe on a personnel claim \$15,000 is the maximum.

Mr. GARRITY. How about a tort and admiralty claim? Do you know?

Mr. QUETSCH. I don't remember that. I have it here.

General BLANTON. Colonel Martin.

Colonel MARTIN. Tort claim under the Federal Tort Claims Act are \$2,500 each out of DOD funds. After that it goes to a fund administered through the Justice Department. For Military Claims Act and National Guard Claims Act, \$25,000 is the most that can be paid out of these funds. If it goes beyond that, the Secretary concerned reports it to Congress for special appropriation.

Mr. GARRITY. There was a recently passed piece of legislation which revised the amount that can be paid by the various departments under the Claims Act. Are the figures you cited in accordance with that?

Colonel MARTIN. Yes, sir.

There have been various acts that were changed.

Mr. GARRITY. That is right, but there was one, I think, just passed the Congress here a month or so ago that revised the tort and admiralty claims and that is what I was wondering about, whether or not the figures you cited are in accordance with that piece of new legislation.

Colonel MARTIN. I am not familiar with that legislation, sir.

Mr. GARRITY. Well, anything above \$25,000 has to go to the Department of Treasury? Is that where it goes for processing, and then special legislation has to be passed to fund that?

Colonel MARTIN. Anything above \$2,500 that falls under the Federal Tort Claims Act must go to the Treasury Department.

Mr. GIAIMO. That is a tort claim. But what about the other type claim that has the \$25,000 limitation? What types of claims are these?

Colonel MARTIN. These are Military Claims Act, Foreign Claims Act, National Guard Claims Act. They pertain to the noncombat activities of our Armed Forces—we drop an airplane on somebody, we run a tank over them, or the tort type activities overseas where we injure someone when the Federal Tort Claims Act does not apply.

Mr. GIAIMO. If a tank runs over someone in this country, does that come in under the Tort Act with the \$2,500 limitation, or the nontort \$25,000 Claims Act?

Colonel MARTIN. That would depend on the negligence aspect. Some of these, particularly military equipment, are hazardous enough that we normally try to avoid making the claimant even prove negligence. We will go ahead and attempt to settle under the Military Claims Act.

However, if we have a breakdown on amount, he may seek to go into court and have a judge determine how much should be paid. So it may come under either act.

Mr. GIAIMO. In which case then it goes under the Tort Act?

Colonel MARTIN. Yes.

Mr. GIAIMO. The Tort Act implying negligence.

Colonel MARTIN. Yes, sir.

## CLAIMS RESULTING FROM TYPHOON PAMELA

Mr. GIAIMO. When do you expect the bulk of the claims resulting from Typhoon Pamela to be adjudicated for payment?

Mr. QUETSCH. I could ask the services to correct me if I am wrong, but I should think that most of those would be paid probably this August or September. We don't have daily reports.

## CLAIMS FILED TO DATE

Mr. GIAIMO. Do you know the amount of claims already filed for payment as a result of Typhoon Pamela?

Mr. QUETSCH. No, sir, I don't. I only have the estimates of what the services expect to have to pay.

Mr. GIAIMO. Can you give us that figure in the record?

Mr. QUETSCH. It was \$4.5 million, I believe.

General BLANTON. In the Air Force case, Mr. Chairman, we are asking for \$3 million. We have paid about \$1.1 million of that already, and we have about another \$165,000 in the adjudication process. We anticipate a total of \$3 million.

Mr. GIAIMO. If we can get that same information from the other services, either now or for the record.

Admiral TRAVERS. I can provide it now or I can provide it for the record.

Mr. GIAIMO. OK.

Admiral TRAVERS. For the Navy, we have received 1,523 claims of a value of \$740,000. We anticipate an additional 1,132 claims for about \$725,000, for a total value of \$1.465 million in connection with Typhoon Pamela.

Mr. GIAIMO. And the Army?

General BLOUNT. For the Army, for Typhoon Pamela, we received 144 claims for a total of \$70,000 and that has all been paid in fiscal year 1976.

## TORT AND ADMIRALTY CLAIMS

Mr. GIAIMO. What was your basis for estimating that tort and admiralty claims would exceed funds available during the transition quarter?

Mr. QUETSCH. That was just a projection of the trends by month through the first 11 months of the year, plus known add-ons.

Mr. GIAIMO. You are claiming \$5.9 million basically as a result of Typhoon Pamela and \$6.7 million based on judgmental factors which indicate that these funds will be required for tort and admiralty claims which will exceed the amounts appropriated for fiscal year 1976.

## EXPLANATION OF \$6.7 MILLION INCREASE

Can you give us a little clearer picture of how you arrive at the judgment of \$6.7 million?

Mr. QUETSCH. That is the area where, in the personnel claims, we rely primarily on trends, on projections of trends, because there are large numbers of small individual claims.

The others, in most cases they are large incidents where we know they have happened but what we have to estimate is when they will be settled and what the court will settle for.

Mr. GIAIMO. Yes, but you are really in here now telling us that you are overshooting your original estimates by \$6.7 million, aren't you?

Mr. QUETSCH. That was the case when we submitted the reprogramming.

Mr. GIAIMO. Yes.

Mr. QUETSCH. Since then we have looked at it and that \$6.7 has now dropped to about \$4.8.

Mr. GIAIMO. Reduced by \$3.3 million.

Mr. QUETSCH. Reduced by about \$3 million.

Mr. GIAIMO. Nevertheless, what has happened to make you increase your estimates from your original? Anything unusual?

Mr. QUETSCH. Remember when we made our original estimates—now we are going back here to the budget estimate; correct?

Mr. GIAIMO. Yes.

You are coming in now asking for \$6.7 million over the budget estimate less, of course, the amount you just mentioned.

Mr. QUETSCH. That is right. Those estimates were made up approximately a year ago. We since have 11 months of experience, or we did when we submitted this reprogramming, and that has been reflected in increased number of claims, increased cost of claims, which we had not anticipated.

In addition, there have specific incidents which we are now estimating specifically but then hadn't even happened, so it is a very tough area to estimate in because it is an uncontrollable.

We are estimating acts of God and carelessness that just aren't susceptible, except in the personnel area where we have a large statistical base, to estimating.

Mr. GIAIMO. What is the percentage of total claims submitted during a fiscal year which are adjudicated valid for payment?

Mr. QUETSCH. Records of claims not paid are not kept in great detail by all the services. However, the records available indicate that for all types of claims acted on by approving authorities in fiscal year 1976 approximately 94 percent were found to be meritorious in some amount. This figure represents the portion of claims on which something was paid. Many of the claimants who were paid received less than they requested. The approval rate varied with the type of claim. As an illustration, Air Force records show that personnel claims—by far the most numerous type—had an approval rate of 95.3 percent; claims under the Military Claims Act had an approval rate of 82 percent; claims under the Federal Tort Claims Act had an approval rate of 77.5 percent.

#### TYPES OF CLAIMS FOR TYPHOON PAMELA

Mr. GIAIMO. What was the nature and type of claims submitted as a result of Typhoon Pamela?

Mr. QUETSCH. All claims resulting from Typhoon Pamela were personnel claims. Almost anything which might be included in a home or barracks room was damaged or destroyed by water, by flying debris, by being blown away or by having objects fall on the property. Cars were overturned or windows broken or hood or fenders dented. Clothes, furniture, drapes, bedding, and similar items were water soaked and ruined by mildew or stains. Television sets, stereos, and other electrical appliances were damaged by rust and corrosion caused

by water. Furniture was cut and scratched by flying glass and other debris.

Mr. GIAIMO. Were most of the claims for personal property losses?

Mr. QUETSCH. Yes.

Mr. GIAIMO. As a result of the typhoon?

Mr. QUETSCH. Yes.

#### BASE FOR PROJECTING "ACT OF NATURE" CLAIMS

Mr. GIAIMO. And you state that in estimating claim requirements the Department could not have anticipated "acts of nature" which will require payment. In preparing its original estimate for a fiscal year, doesn't the Department anticipate that some bases will be damaged by many types of acts of nature—fires, hurricanes, typhoons, and so forth?

Mr. QUETSCH. Yes; we do. That is in our history. It is in our base that we are projecting.

Mr. GIAIMO. You do?

Mr. QUETSCH. But we don't estimate anything specifically for a specific typhoon. We can't predict it will hit.

Mr. GIAIMO. No; but you do build in a factor for overall acts of nature damage estimates; right?

Mr. QUETSCH. That is right. It is indirectly included in the statistical base since we use the total number of claims paid each year. But we do not add on a specific amount for anticipated acts of nature.

Mr. GIAIMO. In the last 5 fiscal years how often have "acts of nature," catastrophe, resulted in damage to military installations or facilities?

Mr. QUETSCH. I will have to research that. It would be a matter of degree. I can remember only one large one in the States in that period.

Mr. GIAIMO. Supply it for the record.

[The information follows:]

The Services do not keep separate claims records of the numerous wind and hail storms, including hurricane and typhoons which cause limited amounts of damage at numerous bases each year. For the unusually bad storms, however, some records were kept. Following is a summary of the more violent storms which caused property damage with an indication of the resulting claims when the records were available.

Fiscal year	Claims	Amount paid
<b>Army:</b>		
1972—Hurricane Agnes (June 1972)	(1)	(1)
1974—Tornado at Fort Rucker (December 1973)	(1)	(1)
1974—Tornado at Redstone Arsenal (April 1974)	(1)	(1)
1974—Flood in Hawaii (April 1974)	(1)	(1)
1975—Tornado at Fort Polk (October 1974)	(1)	(1)
1976—Hurricane Pamela, Guam	144	2 \$70,000
<b>Navy:</b>		
1970—Hurricane Camille	524	92,929
1971—Hurricane Celia	2,767	1,527,111
1973—Tornado, Naval Supply Corps School, Athens, Ga.	105	89,798
1976—Hurricane Pamela, Guam	2,671	2 1,463,000
<b>Air Force:</b>		
1970—Hurricane Camille	(1)	1,280,000
1971—Hurricane Celia	(1)	(1)
1972—Flood at Rapid City, S. Dak. (June 1972)	(1)	(1)
1974—Earthquake in Ismir, Turkey (February 1974)	(1)	(1)
1976—Hurricane at Eglin AFB, Tyndall AFB, and Hurlbert Field in Florida (September 1975)	(1)	(1)
1976—Typhoon Pamela, Guam	3,200	2 3,000,000

<sup>1</sup> Indicates no separate records kept.

<sup>2</sup> Estimated.

During the course of the year there are many minor storms in addition to those indicated above, causing localized damage which do not result in exceptionally large claims payments.

GOVERNMENT RESPONSIBILITY FOR PERSONAL PROPERTY LOSSES

Mr. GIAIMO. Is the Government responsible for personal property losses resulting from "acts of nature"?

Mr. QUETSCH. Yes; that is, on the assumption that the member is assigned there at the convenience of the Government and is put in that particular position.

Quite often, almost exclusively in Guam, they are actually occupying Government quarters and the Government accepts that responsibility. They may have insurance themselves—

Mr. GIAIMO. We are talking about personal property losses now and so we send him to Guam and he occupies quarters. Are we legally responsible—I am saying legally responsible—for the loss of his personal property? Has that been determined, adjudicated, or what, or is it just Department policy?

Mr. QUETSCH. I would have to say that in the 14 years I have been in Defense working with this appropriation we have paid out one heck of a lot of money on that assumption. Not only have claims officers paid those under the law, but the courts have in addition made awards in excess of what we could pay during that time, so I would have to say yes, it certainly is.

Mr. GIAIMO. In the 1972 hearings, page 689, part 7, of the Defense appropriation hearings, Mr. Mahon asked the question:

Mr. Brazier, for what type of losses are the greater portion of the claims being received?

The response of Mr. Brazier was:

Approximately two-thirds of our request for fiscal year 1972 is earmarked for personnel claims. These claims usually involve losses of personal property during PCS moves and losses involving damage or destruction of household goods stored for members of the Armed Forces when they are assigned overseas. In addition, slightly less than one-third is for tort claims.

Now, we are not talking about acts of nature there. There we are talking about damage to goods in shipment and transit and so forth.

What is the legal responsibility of the Government for personal property losses resulting from acts of God and nature?

We used to say acts of God. I notice you are saying acts of nature now.

Colonel MARTIN. These are covered under the military personnel—

Mr. GIAIMO. Give us a short statement on that and if you want to expand it for the record with the legal basis you may. Do you have a legal obligation?

Colonel MARTIN. Yes, sir.

Mr. GIAIMO. Based on what? Court, statute, or what?

Colonel MARTIN. Statute.

Mr. GIAIMO. Statute?

Colonel MARTIN. Yes, sir. Let me expand that for the record.

[The information follows:]

The legal basis for payment of claims for incident to service losses of members and employees of the military departments is the Military Personnel and Civilian Employees Claims Act of 1964 (31 U.S.C. 241-243). In general, this statute authorizes a Secretary of a military department, or his designee, to pay incident to service personal property losses by members and employees of his department where the loss is substantiated and the possession of the property is determined to be reasonable, useful or proper under the circumstances.

Mr. GIAIMO. Saying what? That the Government of the United States is responsible for the personal property losses of a soldier or airman or sailor due to an act of nature?

Colonel MARTIN. No, sir.

Under secretarial regulations the Department may pay for incident to service losses to personal property?

Mr. GIAIMO. May pay?

Colonel MARTIN. May pay.

The law authorizes the payment for incident to service losses. The implementing regulations have specifically named things such as typhoons.

Mr. GIAIMO. Then what you are saying is it is a matter of policy? The law says we can pay these if we want to.

Colonel MARTIN. Yes, sir.

Mr. GIAIMO. And we have decided somewhere along the line in the past that we want to?

Colonel MARTIN. Yes, sir. For the record, I would like to insert the language of title 31, U.S. Code 241 (a) (1).

[The information follows:]

(1) Under such regulations as the Secretary of a military department, or the Secretary of the Treasury with respect to the Coast Guard when it is not operating as a part of the Navy, may prescribe, he or his designee may settle and pay a claim arising after August 31, 1964, against the United States for not more than \$15,000 made by a member of the uniformed services under the jurisdiction of that Department or the Coast Guard or by a civilian officer or employee of that Department or the Coast Guard, for damage to, or loss of, personal property incident to his service. If the claim is substantiated and the possession of that property is determined to be reasonable, useful, or proper under the circumstances, the claim may be paid or the property replaced in kind. This subsection does not apply to claims settled before August 31, 1964.

Mr. GIAIMO. Do these claims mostly result from losses of household goods and effects?

Mr. QUETSCH. Yes. Claims for loss or damage to household goods account for the vast majority of payments under the Military Personnel and Civilian Employees Claims Act.

Colonel MARTIN. Let me amplify that a bit. Of the personal property loss or damage claims approved for payment by the Air Force during fiscal year 1976, 79.3 percent of the amount approved was for loss of and damage to household goods and personal effects during PCS moves, 3.7 percent for loss of and damage to cars being shipped to and from overseas and 16.8 percent for losses and damage to property located at quarters and other authorized places or bases. Claims for typhoon damage fit in this 16.8 percent.

#### CLAIMANTS

Mr. GIAIMO. Also, are these claims filed by both military and civilian personnel employed by the Department of Defense?

Mr. QUETSCH. Yes. Title 31 U.S. Code, section 241(a)(1) lists as proper claimants members of the uniformed services and civilian officers and employees of the departments.

Mr. GIAIMO. I want to get to this question of foreign nationals.

Do these people carry insurance on their personal property?

Mr. QUETSCH. I wouldn't know. I imagine that varies from country to country.

#### NEED FOR INSURANCE ON PERSONAL PROPERTY

Mr. GIAIMO. Are employees of the Department required to carry insurance on their personal property?

Mr. QUETSCH. No.

Mr. GIAIMO. Why wouldn't they be required, employees?

Mr. QUETSCH. I don't know of any employer that requires employees to carry insurance.

Many of these claims I believe are from insurance companies, that is, overseas somebody may be insured and if in the course of one of our exercises his property is damaged it could be that he collects from his insurance company first and the insurance company files the claim. I could check that for the record.

[The information follows:]

Claims by subrogees such as insurance companies are not recognized under the Military Personnel and Civilian Employees Claims Act (31 U.S.C. 241-243). In the settlement of tort claims (involving negligence), subrogation is allowed under the Federal Tort Claims Act (28 U.S.C. 2672). However, claims by inhabitants of foreign countries are settled under the Foreign Claims Act (10 U.S.C. 2734) under which the claim of an insured, but not that of a subrogee, may be considered.

Mr. GIAIMO. He doesn't get double payment, does he?

Mr. QUETSCH. No, not if we can help it. Every effort is made to insure that a claimant does not collect twice on any claim.

Mr. GIAIMO. The insurance company pays him. They are subrogated to his claim and they make claim against you, against the service?

Mr. QUETSCH. Yes. That is one of the reasons that was given that the estimate of claims on Guam has been reduced, because more was covered by private insurance than we had expected.

Mr. GARRITY. Mr. Quetsch, if a military officer or enlisted man, is assigned overseas and living in Government quarters, or a civilian is assigned overseas and living in Government quarters, the Government furnishes the quarters for him. Sometimes they do furnish the household goods and effects also.

Mr. QUETSCH. That is correct.

Mr. GARRITY. Of course, if that is damaged in a typhoon or other acts of God or nature, then the Government is the loser on that and they have to pay for it.

Mr. QUETSCH. Yes.

Mr. GARRITY. But if it is his own personal property and he brings it in there for his own convenience, luxury, so on and so forth, why should the Government be held responsible for the claim even under the instance where the damage resulted from an act of nature?

Mr. QUETSCH. He is not there at his own convenience. He is there at the Government's convenience. We put him in the path of a typhoon.

He might have elected to——

Mr. GIAIMO. We are talking about a person's car or his radio or——

Mr. QUETSCH. Or his television.

Mr. GIAIMO. Or his television set.

Mr. QUETSCH. Furniture.

Mr. GIAIMO. Furniture.

Mr. GARRITY. But did the Government put him there? Didn't he enlist in the service with the knowledge that he was going to be sent overseas someplace? He said that he was going to go. He accepted that when he enlisted in the service. I believe his contract says that.

Mr. QUETSCH. But I don't believe any of them signed away their right to file a claim against the Government for loss of personal property incident thereto. I don't believe so. It is not part of the contract.

Mr. GIAIMO. In any event, I don't think that is going to be adjudicated here by us today.

Mr. QUETSCH. That is correct.

Mr. GIAIMO. The fact of life is that they are entitled to file these claims and you have DOD policy that you do pay them.

Mr. QUETSCH. That is correct. That is not to say we pay all of them, but we pay those that are reasonable.

Mr. GIAIMO. No; but we are arguing the basic concept here and frankly I don't think you or we are in a position to argue that unless we want to change it. We could change it maybe.

Mr. QUETSCH. Our only choice would be to deny the claim and let him go to court.

Mr. GIAIMO. Mr. Robinson.

Mr. ROBINSON. With respect to the reduction in obligation that you mentioned due to privately insured coverage, how then can you reduce your obligation if the insurer himself then comes to you to collect, as you recited he could and sometimes did?

Mr. QUETSCH. That would be the case of negligence I was referring to, let us say in the case of a maneuver we ran a tank through somebody's cornfield, but where it is an act of God to the best of my knowledge that is not negligence on our part and he can't, I don't believe, recover from us.

Mr. ROBINSON. I would hope not.

Mr. QUETSCH. I am not speaking as a lawyer so my neck is out. I will correct that for the record if a lawyer will tell me I am wrong.

[Additional information follows:]

The distinction is correct. Subrogation claims are paid when the claim is based on damage or injury caused to others—to people other than members or employees of our Armed Forces—by the negligence of our personnel or by the hazards of military operations. For the damages or losses of our people which are covered by the Military Personnel and Civilian Employees' Claims Act, such as typhoon damage, our implementing Air Force regulations require that claimants who have personal property insurance, including comprehensive coverage on cars, look first to their insurance company for payment. The statute does not list insurance companies as proper claimants under this law and the Air Force manual on claims specifically excludes subrogation claims under this law. I know the Army regulation also excludes subrogees and I feel certain the other services do also.

#### LOSSES DUE TO ACT OF WAR

Mr. GIAIMO. Is the Department responsible for payment of losses which result from an act of war?

Mr. QUETSCH. I would like to refer to Colonel Martin.

Colonel MARTIN. For the losses of military personnel and our civilian employees, yes, sir.

Mr. GIAIMO. Broaden that out a little.

Colonel MARTIN. For the incident to service losses, we have somebody stationed in Vietnam, and a shell lands on their barracks, destroys their personal property; we will pay for it. But if we shoot the shell and hit a North Vietnamese we do not pay for the damage we cause there under any of the laws that we are concerned with under this appropriation.

Mr. GIAIMO. But for any damage to our own troops or employees they may file a claim?

Colonel MARTIN. Yes, sir.

Mr. GIAIMO. As a result of someone else's hostile act?

Colonel MARTIN. Yes, sir.

Mr. GARRITY. Colonel, does the U.S. Government, as an entity, cover civilian losses in case of an act of war?

Mr. GIAIMO. How about civilian employees?

Mr. GARRITY. No; just the general public. If you had an air raid in the United States and they dropped bombs or a plane crashed and caused damage but you are in a war now, does it cover those losses?

Colonel MARTIN. I am not aware of any law which would cover it. I could anticipate there might be a clamor for coverage if such happened.

Mr. GARRITY. Well, there is a clamor every time there is a natural disaster of any kind in the country. There is always a clamor for additional insurance in case of floods; for instance, when Agnes went through here a few years ago. After that there was a great clamor for the Federal Government to sponsor legislation to provide insurance coverage.

I don't know whether or not anything was ever enacted but I know there always is every time there is a natural disaster, so in case of war or any other natural act of nature, is the Federal Government responsible?

Colonel MARTIN. I know of no law making it responsible.

Mr. GARRITY. I just was wondering does the law itself, as it is on the books today, say that in case of war, in the example that you cited, that the Department of Defense or the Federal Government is responsible for damages suffered by the military personnel or civilians that happened to be stationed there?

Colonel MARTIN. It is not that specific. It is a very broadly written act of grace and leaves it to the Secretary concerned to implement it.

Mr. GARRITY. Then it is more of a policy than it is of a legislative nature?

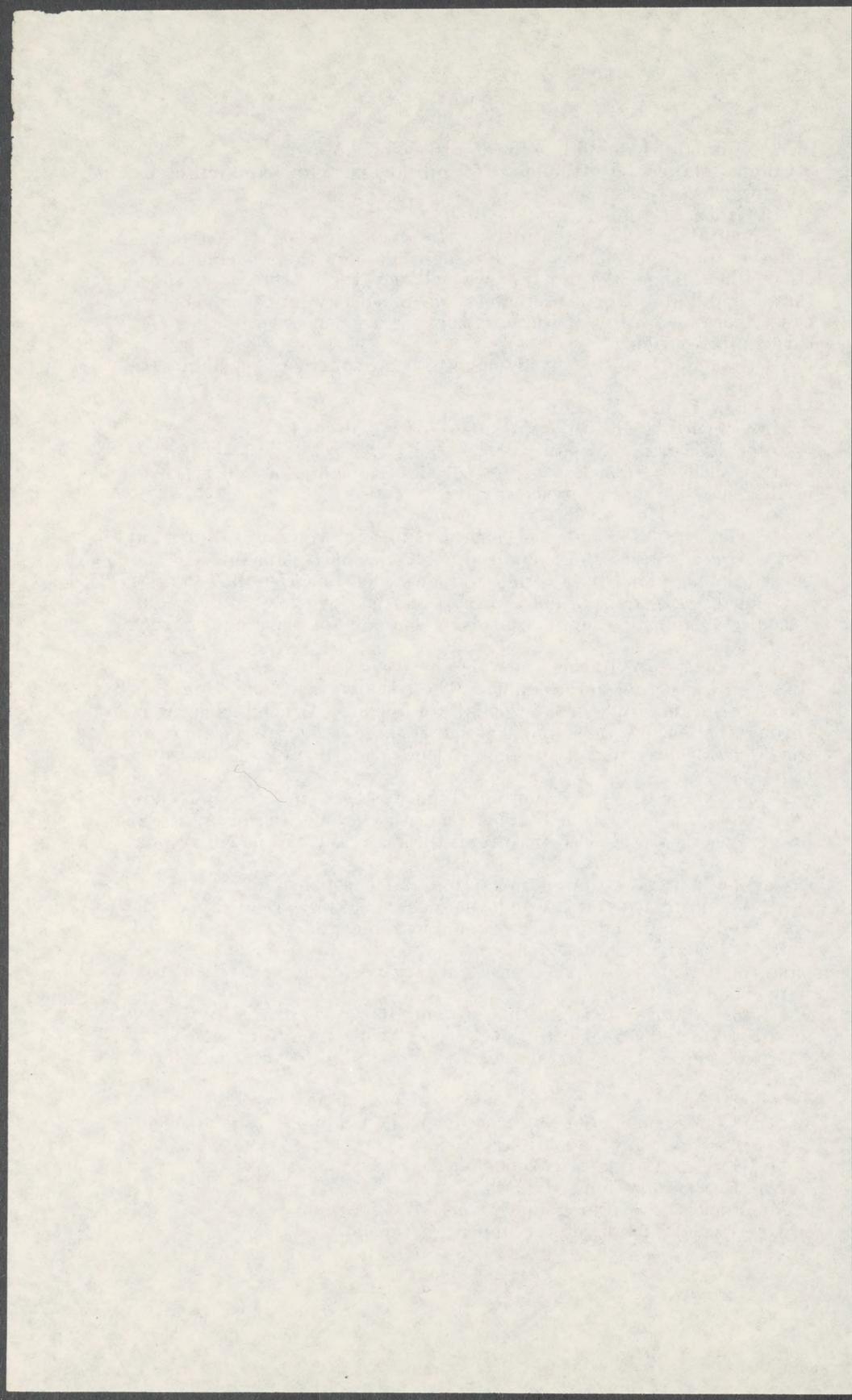
Colonel MARTIN. Yes, sir, although several of my predecessors tell me they have considered guidance from the Claims Subcommittee of the House Judiciary Committee.

Mr. GIAIMO. Thank you, Colonel.

Any further questions, Mr. Robinson?

Mr. ROBINSON. No further questions, Mr. Chairman.

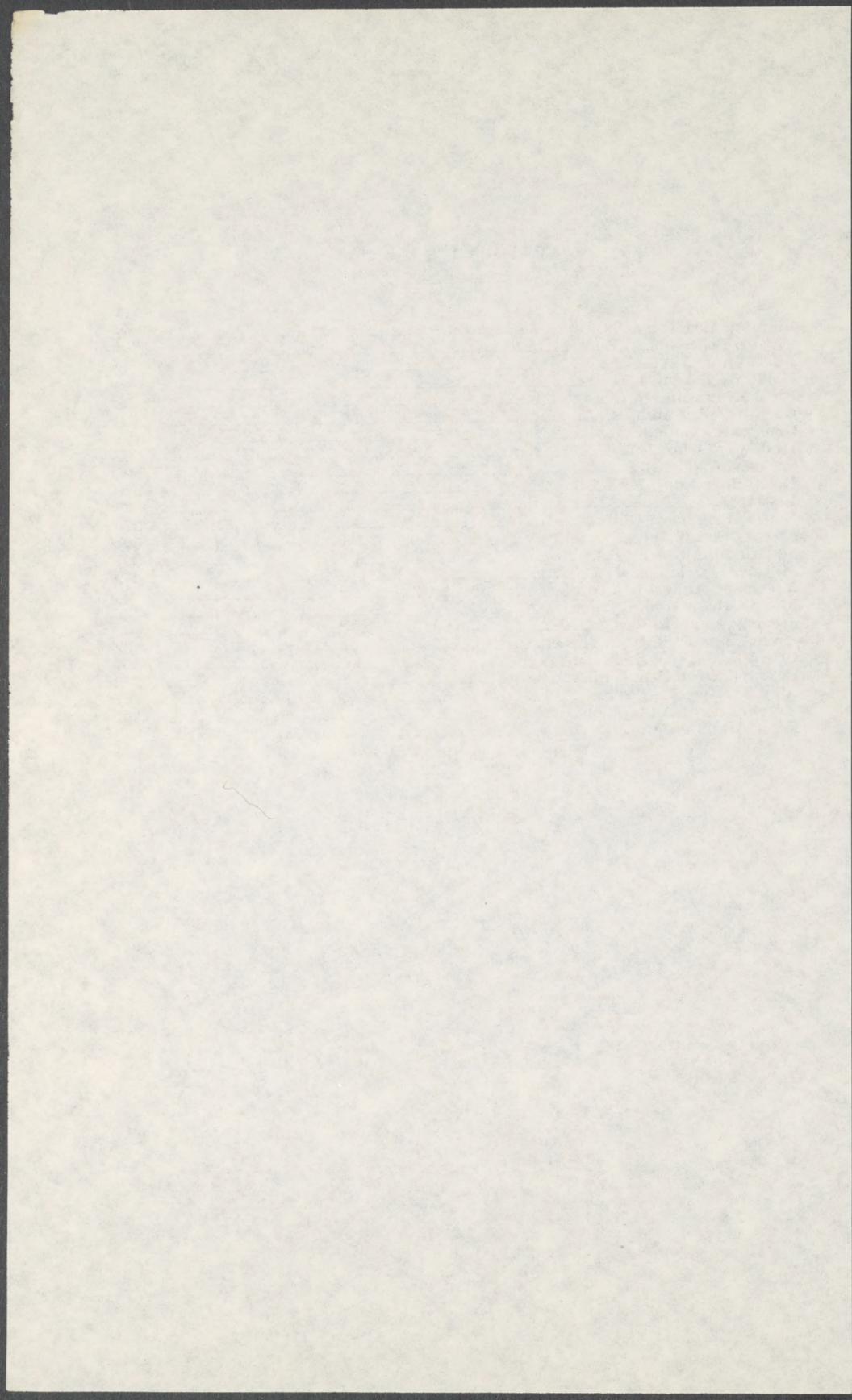
Mr. GIAIMO. Thank you very much, gentlemen.



## WITNESSES

---

	Page
Blanton, Maj. Gen. C. C.-----	1, 307
Blount, Brig. Gen. J. B.-----	307
Buck, Capt. J. A.-----	32
Doyle, Vice Adm. J. H., Jr.-----	98
Fine, Rear Adm. S. S.-----	32, 98
Gooding, Vice Adm. R. C.-----	98
Grunwalt, Cmdr. R. J.-----	98
Holloway, Adm. J. L. III.-----	98
Jackson, Capt. N. P.-----	98
Kern, Rear Adm. J. S.-----	279
Lewis, E. G.-----	98
Lynch, Brig. Gen. G. C.-----	279
Martin, Col. W. A.-----	307
McLaughlin, F. L.-----	307
Meyer, Maj. Gen. E. C.-----	279
Michaelis, Adm. F. H.-----	98
Morris, Rear Adm. R. E.-----	32
Murphy, Capt. R. G.-----	32
Orem, Capt. J. B., Jr.-----	32
Quetsch, J. R.-----	307
Schrupp, Brig. Gen. W. C.-----	279
Slay, Lt. Gen. A. D.-----	1
Travers, Rear Adm. E. P.-----	307
West, Maj. Gen. R. L.-----	279



# INDEX

---

	Page
<b>Claims, Defense Reprograming</b> -----	<b>307</b>
Allocation and control of claims appropriation-----	312
Claimants-----	318
Claims:	
Categories-----	310
Base for projecting "act of nature"-----	316
Filed to date-----	314
Outstanding at June 30, 1976-----	312
Resulting from Typhoon Pamela-----	314
Tort and admiralty-----	314
Types, Typhoon Pamela-----	315
Explanation of \$6.7 million increase-----	314
Funds available in transition quarter-----	311
Government responsibility for personal property losses-----	317
Introduction-----	307
Losses due to act of war-----	320
Need for insurance on personal property-----	319
Obligations as of May 1976-----	310
Revised estimate-----	309, 311
Source of funds for fiscal year 1976-----	309
<b>Navy—Shipbuilding and Conversion</b> -----	<b>1, 32, 98</b>
Aegis destroyer and Aegis strike cruiser-----	212
Aircraft carriers and escort ships-----	186
Aircraft carrier mission-----	180
Amount of payments made on claims filed-----	244
Amount received and budgeted for escalation and cost growth for prior- year programs-----	244
Analysis on an all-out nonnuclear war-----	202
Analysis on an all-out nuclear war-----	201
Audit review of claims-----	239
Biographic sketch of Rear Adm. Robert E. Morris, USN-----	33
Buildup in the Navy-----	249
Capacity of shipbuilding industry to meet Navy's construction demands-----	141
Changes in civil service regulations-----	244
Coast Guard ships-----	256
Comparison of United States Navy vs. Soviet Navy-----	168
Consideration of Government-owned contractor operated (GOCO) shipyards-----	197
Contract design and claims-----	170
CSGN strike cruiser-----	200
Design priorities of U.S. warships-----	215
Disadvantage of delay in getting Aegis to sea-----	209
Documentation on claims-----	236
Employment and retention problems encountered in public versus pri- vate yards-----	196
Five-year shipbuilding program-----	268
General purpose amphibious assault ship (LHA) program-----	149
Harrier aircraft-----	183
Hydrofoil technology-----	266
Justification data-----	33
LHA-1—Deficiencies recorded on <i>Tarawa</i> -----	157
LHA-4 and LHA-5—Lack of progress in the construction of-----	156
Lifespan of a carrier after SLEP program-----	212
Major surface combatant ships-----	252

	Page
Military pressure and capability in the Mediterranean-----	184
Motion and vote to close hearing-----	130
National Security Council study on size and composition of the U.S. Navy-----	178
Naval program development-----	114
Naval petroleum reserves-----	83
Navy settlement of claims-----	243
Navy shipbuilding program-----	98
Need for six PHM's-----	266
New ship construction in Government vs. privately owned shipyards--	194
Ocean surveillance program-----	257
Overhaul cycle-----	276
Overhead expense in public yards-----	196
Personnel and facilities for new construction-----	194
Personnel in claims-settling work-----	237
PHM program-----	264
Reducing and controlling ship costs-----	216
Reprogramming actions fiscal year 76-24 and 76-33 P/A-----	90
Satellite program-----	169
Shipbuilding claims-----	225
Shipbuilding and overhaul work—congressional support-----	221
Soviet and United States naval ship procurement systems-----	193
Soviet diesel submarines-----	252
Soviet nuclear powered submarines-----	256
Soviet submarine construction-----	251
Statement of Chief of Naval Operations-----	101
Statement of Director, Surface Warfare Division, CNO-----	76
Strike cruiser-----	202
Submarine force level—U.S.-----	189
Summary statement of Chief of Naval Operations-----	131
Underway replenishment ships-----	255
Unit cost of PHM-----	265
USS <i>Belknap</i> conversion-----	32
USS <i>Long Beach</i> —proposed conversion-----	206, 210
Utilization of public shipyards-----	191
V/STOL-----	182
<b>Reforger Reprograming-----</b>	<b>279</b>

