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REPORT TO THE CONGRESS

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Navy Logistic Support Of The 7th Fleet In Southeast Asia: Continuing Logistics Issues And Constraints B-146964

Department of The Navy

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

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To the President of the Senate and
the Speaker of the House of Representatives

This is our report on Navy logistic support of the 7th Fleet in Southeast Asia: continuing logistics issues and constraints. We made our examination pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67).

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Copies of this report are being sent to the Director, Office of Management and Budget; the Secretary of Defense; and the Secretary of the Navy.

Thomas P. Blasts

Comptroller General
of the United States

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ABBREVIATIONS

CINCPACFLT	Commander-in-Chief, Pacific Fleet
FPSM	Fleet Program Support Materiel
GAO	General Accounting Office
NSD	Naval Supply Depot
O&M	Operations and Maintenance
OMB	Office of Management and Budget
OSD	Office of the Secretary of Defense
SRF	Ship Repair Facility

D I G E S T

WHY THE REVIEW WAS MADE

The 7th Fleet, engaged in wartime operations in Southeast Asia for several years, was considered the Navy's most significant operational force. Navy logistic support for the 7th Fleet was enormous.

GAO reviewed the Navy's logistic support to determine

- its responsiveness to the operational needs of the 7th Fleet during a wartime situation;
- the general impact that this logistic support had on other fleets; and
- the impact that key logistic issues, such as funding and personnel, have on the logistic support for all fleets.

FINDINGS AND CONCLUSIONS

Through a massive and concerted effort, the Navy was responsive in keeping the ships--carriers and other combatants--at their battle stations in Southeast Asia.

The ships were kept on station by giving them and supporting shore activities priority of resources--financial, materiel, and personnel--before and during the 7th Fleet deployments. Ship and shore personnel worked around the clock. (See pp. 9 and 12.)

The extensive operations of the 7th Fleet:

- Reduced the amount of resources available to other fleets and therefore reduced their operational capabilities. (See p. 9.)
- Deferred maintenance, so additional funds may be needed to return ships to a desired state of readiness. (See pp. 10 and 13.)
- Compounded the problem of retaining qualified, experienced personnel because of extended deployments, frequent redeployments, extended periods on station, and uncertain operating schedules. (See pp. 13 and 38.)

The Navy promptly serviced 7th Fleet ships and aircraft needing repairs and resupply; returned them to their battle stations; and retained them there, in spite of Navy-wide logistic support problems which continue to reduce supply support effectiveness and, in turn, the fleets' operational capabilities.

A shortage of repair parts and components reduces ships' and aircraft's capabilities to perform their designed missions. According to the Navy:

- Of its total operating aircraft, an estimated 21 percent (approximately 1,200 aircraft) were not fully mission ready in fiscal year 1973 due to materiel shortages and 800 of these were not operationally ready.

--As of January 1973, 1,860 essential pieces of equipment on board Navy ships were reported as inoperative because of materiel shortages. This equipment needed 5,924 repair part line items to repair the casualties. (See p. 15.)

Some of the reasons for the less than desirable supply support are beyond the complete control of the Navy, while others are within the Navy's control.

Issues beyond the Navy's complete control

- Limitations on the financial resources to operate and maintain the fleets. (See p. 27.)
- A wide range of nonstandard equipment items on board ships, coupled with the old age of many ships. (See p. 16.)

Issues within the Navy's control

- Logistic support programs emphasize depth of support at various stockage points. This means that some inventories are procured which may never be used and could, eventually, be declared excess. (See p. 20.)
- Programs for repairing aircraft components need major management improvements. (See p. 24.)
- Weapons systems should be tested continually. (See p. 25.)
- Because of the rapid turnover of first-term enlistees and an inability to retain skilled personnel, more personnel with technical expertise and experience are needed. (See p. 35.)

--Decentralized management of Navy contractor and civilian technicians made it difficult to analyze the continuing need for their services. (See p. 40.)

RECOMMENDATIONS OR SUGGESTIONS

GAO recommends that the Secretary of Defense insure that the Navy is able to fully inform the Congress of the trade-offs and impacts for each alternative presented in the section on matters for consideration by the Congress.

GAO also recommends that the Secretary of the Navy consider:

- Stocking low- or no-demand items in the United States and using rapid air transportation when items are needed in the Pacific or Atlantic Fleets. Centralized stockage should make such items more accessible to all fleets and should reduce costs by reducing the number of items stocked.
- Testing the feasibility of directly replenishing authorized stock levels on combatant ships and at advanced bases by air transport in lieu of the normal depot support system. This should reduce amounts of stocks required aboard ships and at advanced bases.
- Giving top management attention to the program for reworking aircraft components, to correct the management problems the Department of Defense, the Navy, and GAO disclosed during recent reviews.
- Testing weapon systems intensively for all designed missions, to obtain data on the personnel training, maintainability,

dependability, and logistic support needs for each mission role.

- Improving personnel retention programs by emphasizing the three most common reasons for not making a career of the Navy--family separation, lack of personal freedom, and less than desirable living conditions on board ships.
- Centralizing the management of Navy civilian and contractor personnel, so that management could determine whether Navy personnel training should be revised and whether the number of civilian and contractor personnel should be increased or decreased.

AGENCY ACTIONS AND UNRESOLVED ISSUES

The Navy said it found no inaccuracies or substantive errors in GAO's report.

The Navy concurred with GAO's recommendations and has planned or initiated management actions to improve and economize the logistic support to the fleets.

Navy comments on each recommendation are summarized in chapter 6. The

Navy response is appendix X.

MATTERS FOR CONSIDERATION
BY THE CONGRESS

During future hearings on the Navy's budget, the Congress may wish to consider the following alternatives:

- Shifting the priority of resource allocation toward the current operational and maintenance needs of the ships, aircraft, and shore activities.
- Allocating additional operational and maintenance resources to upgrade the status of the fleets and shore activities.
- Requiring that the size of the fleets and the number of supporting shore activities be reduced to levels which could be supported with available resources.

The Congress also may wish to weigh the trade-offs and impacts that each alternative will have on the size and combat readiness of the fleets in meeting current and potential threats in certain areas of the world as well as on overall U.S. foreign policy.

CHAPTER 1

INTRODUCTION

GAO reviewed the Navy's logistic support of the 7th Fleet to determine (1) whether Navy logistic support was responsive to the operational needs of the 7th Fleet during a wartime situation, (2) the general impact that this logistic support had on other fleets, and (3) the impact that key logistic issues, such as funding, had on the logistic support for all fleets. We did not measure the Navy's readiness to meet its operational commitments in Southeast Asia.

NAVY ORGANIZATION

The Chief of Naval Operations is responsible for command and policy direction applicable to fleet operations and administration, as well as for the logistic support organization required to provide materiel and manpower needs to mobile forces (fleets) in the Pacific and Atlantic areas.

FLEET OPERATIONAL AND ADMINISTRATIVE ORGANIZATION IN THE PACIFIC AREA

The Commander-in-Chief, Pacific Fleet (CINCPACFLT), under the command and policy direction of the Chief of Naval Operations and the Commander-in-Chief, Pacific, commands and controls logistic support and operational commitments through his operational and administrative commanders.

Operational commanders

The 7th and 3d Fleet Commanders are the principal operational commanders of the Pacific Fleet.

The Commander, 7th Fleet, plans and conducts fleet operations in the western Pacific area. The 7th Fleet area of operations extends from the Bering Sea to the Antarctic Ocean and from Guam to the Indian Ocean; the 7th Fleet was heavily concentrated in the South China Sea and the Gulf of Tonkin during the Vietnam conflict.

The 3d Fleet, only recently designated, combined the 1st Fleet, which operated in the middle and eastern Pacific areas, with the Antisubmarine Warfare Force, Pacific, which operated throughout the Pacific area. The Commander, 3d

Fleet, is responsible for consolidating individual ships, aircraft, and Marine units into effective combat teams. Ships and aircraft of the 3d Fleet are then deployed to the western Pacific area to relieve 7th Fleet units on a rotational basis. He also is CINCPACFLT's principal advisor for antisubmarine warfare, naval control, and protection of shipping.

A ship is considered part of the 3d Fleet if it is east of 160° E., including the Mariana Islands, and part of the 7th Fleet if it is west of 160° E.

Administrative commanders

The administrative commanders, termed "type commanders," are responsible for the administration and support of ships and forces of the same type or same functional category. For example, the Commander, Cruiser Destroyer Force, Pacific, is the type commander responsible for all cruisers and destroyers in the Pacific area. Appendixes I and II contain pictures of the cruiser- and destroyer-type ships. Each type commander insures the continuous materiel and personnel readiness of the individual ships and units of his force, regardless of the operational command with which the ships are deployed.

FLEET OPERATIONAL AND ADMINISTRATIVE ORGANIZATIONS IN THE ATLANTIC AREA

The Commander-in-Chief, Atlantic Fleet, commands and controls logistic support and operational commitments through his operational and administrative commanders. The 2d and 6th Fleets are his principal operational commands. The administrative commanders in the Atlantic Fleet are comparable to those in the Pacific Fleet.

NAVY LOGISTIC SUPPORT ORGANIZATION

Logistic support is the composite of actions necessary to insure effective and economical performance of the system and equipments which, functioning together, constitute a weapon system--ships and aircraft--which in turn, constitute an operating force. The Navy's logistic system is basically designed to provide the necessary materiel support--repair parts, components, consumables, etc.--and personnel for its 586 ships and 6,700 aircraft, wherever they may be deployed.

Materiel support

The Chief of Naval Material, under the command and policy direction of the Chief of Naval Operations, commands and controls the Navy supply system through his various system commands. The hardware system commands, such as the Naval Ships Systems Command and the Naval Ordnance Systems Command, provide technical guidance to the supply function, and the Navy Supply Systems Command is responsible for centralized direction of the Navy supply system.

This responsibility includes determining Navy-wide policy on inventory management of secondary items--repair and spare parts--and procedural direction for stock points both afloat and ashore. In addition, the Naval Supply Systems Command manages the three Navy inventory control points responsible for about 633,000 line items valued at about \$4.5 billion.

The Defense Supply Agency and the General Services Administration distribute all the general consumable materiel the Navy uses.

Naval inventories are distributed through three supply echelons--stocks on board ships for their own use; stocks on board Mobile Logistic Support Force ships, which include repair, ammunition, and stores ships and oilers; and the Navy Supply Centers, primarily at tidewater points in the continental United States. Appendix III shows a refueling operation of an aircraft carrier by an oiler.

In the western Pacific area, the Mobile Logistic Support Force ships have been supplemented by overseas depots at Subic Bay, the Philippines; Yokosuka, Japan; and Guam. According to the Navy, this additional support is needed due to the increased tempo of operations and the distance from continental United States resupply sources--factors which do not apply in the Atlantic and Mediterranean areas. Appendix IV illustrates the time and distance relationships between the Pacific and Atlantic Fleets.

Personnel support

The Chief of Naval Personnel administers the planning, procurement, distribution, career motivation, and promotion

of the 71,000 officers and 494,000 enlisted personnel. The Chief of Naval Training directs the training and education of Navy personnel. According to the Navy, the Chief of Naval Training, in establishing and continuing support of Navy training plans, programs, priorities, and standards, maintains close coordination with the Offices of the Chief of Naval Operation, Chief of Naval Personnel, Chief of Naval Material, and the fleets' Commanders-in-Chief.

CHAPTER 2

RESPONSIVENESS: KEEPING SHIPS

AT THEIR BATTLE STATIONS

During the U.S. involvement in the Southeast Asian conflict, the size and degree of operations of the 7th Fleet varied. In March 1972, when the North Vietnamese invaded South Vietnam, the 7th Fleet significantly increased in size and conducted extensive and sustained operations. Through massive and concerted efforts, the Navy was able to keep carrier and combatant ships at their battle stations in Southeast Asia.

The Commander, 7th Fleet, normally has at his disposal 80 ships and 34 aircraft squadron detachments, to accomplish his continuous mission to uphold U.S. treaty commitments with its Asian allies and to insure unopposed use of sealanes. During the peak tempo of operations in Southeast Asia, he had 160 ships and 65 aircraft squadron detachments. At the time of our review--March 1973--112 ships and 45 aircraft squadron detachments were deployed to the 7th Fleet.

The 7th Fleet, which at one time doubled in size, was kept on station by giving its ships priority of resources--financial, materiel, and personnel--before and during their deployments. This reduced the resources available to other fleets and the ships' operating capabilities and required a concerted effort by personnel at land-based facilities and on board the ships.

LAND-BASED SUPPLY AND MAINTENANCE ORGANIZATIONS IN WESTERN PACIFIC AREA

The land-based naval activities in the Philippines had a major role in supporting 7th Fleet operations because of their proximity to Southeast Asia. (See app. IV.) An aerial view of the Subic Bay complex is on page 11.

Naval Supply Depot, Subic Bay

The Naval Supply Depot (NSD), Subic Bay, is responsible for supplying and supporting the 7th Fleet; the 1st Marine Air Wing; and local activities, such as the Ship Repair

Facility (SRF), Fleet Air Wing Pacific Repair Activity Naval Magazine, and Cubi Point Naval Air Station, on Subic Bay.

Because of the rapid buildup of the 7th Fleet commencing in April 1972, the amount of materiel issued at NSD increased significantly; that is, the average monthly issues in the last quarter of fiscal year 1972 and first quarter of fiscal year 1973 increased 39 and 55 percent, respectively, over the first three quarters of 1972.

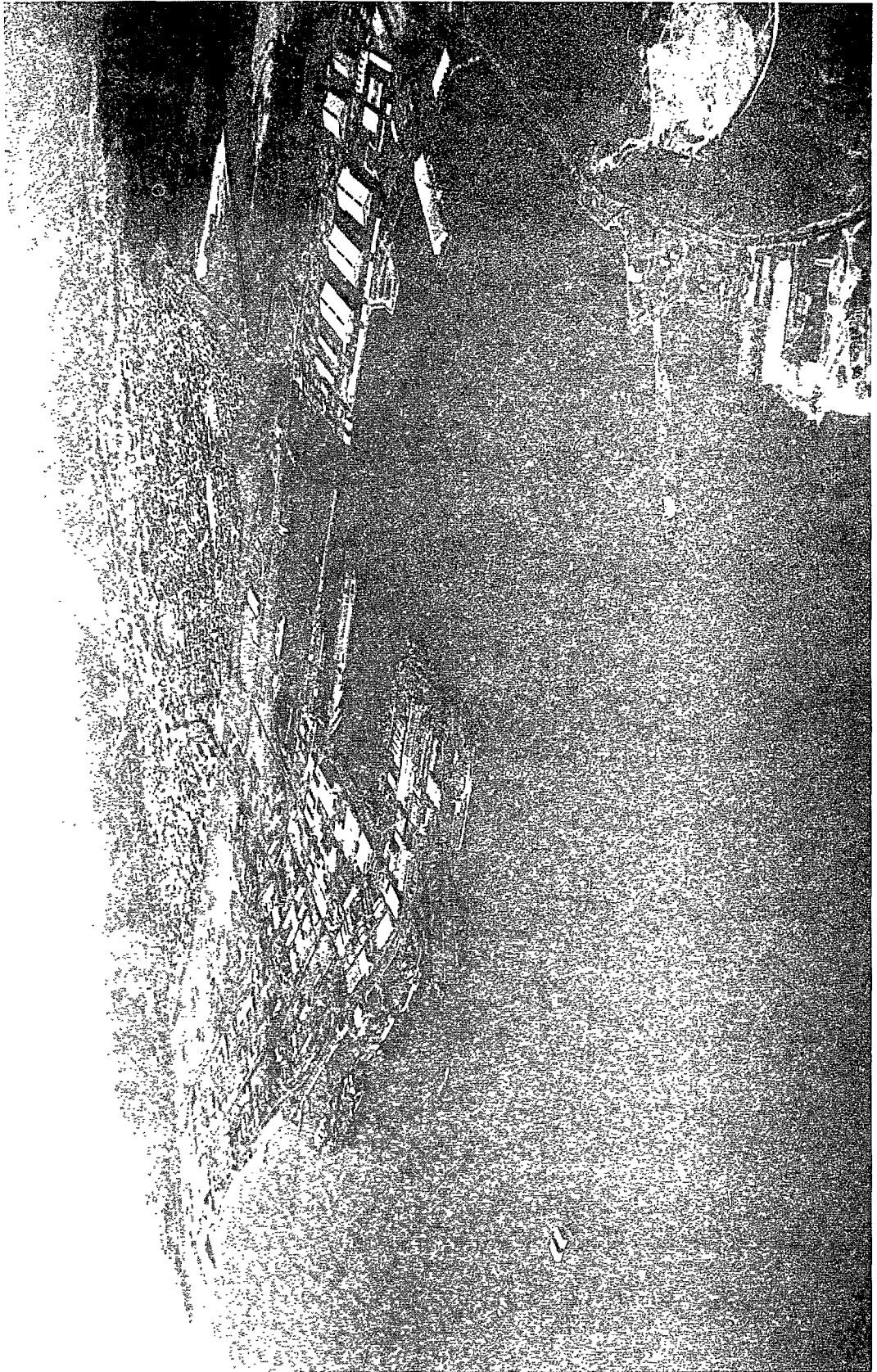
Despite these increases in activity, the overall fill rates (a key logistic support indicator which represents the percentage of requests which were satisfied from inventories on hand for all commodities, such as clothing, subsistence, and repair parts) were only slightly below the locally established goals. The fill rates for key individual commodities, such as aviation and ship equipment repair parts, however, were far below the established goals. (See p. 18.)

SRF, Subic Bay

SRF's mission is to provide logistic support, including drydocking, overhauling, repairing, altering, and converting naval ships and service craft. Between April 1972 and January 1973, the SRF workload increased about 25 percent over the corresponding period 1 year earlier.

Changes in ships' operating schedules were so frequent that normal notice to SRF of a ship's arrival for a restricted-availability period--a maintenance period assigned to a ship for specific work by SRF when the ship is in Subic Bay--was about 5 days. In spite of this short notice, the average turnaround time for a restricted-availability period was 7 days.

Although SRF effectively and promptly carried out its mission, the increased tempo of operations and the corresponding need for short turnaround times resulted generally in completing only work considered absolutely necessary and in deferring other work, which may result in increased future repair and/or overhaul costs.



LAND-BASED NAVAL SUPPORT ACTIVITIES, SUBIC BAY, PHILIPPINES,
EXCLUSIVE OF NAVAL AIR STATION, CUBI POINT

Fleet Air Wing Pacific Repair Activity, Cubi Point

The Fleet Air Wing Pacific Repair Activity at Cubi Point Naval Air Station makes depot-level aircraft structural repairs, modifies aircraft, controls corrosion, and paints aircraft. Work beyond the capability of the repair activity is done by foreign contractors or by Naval Air Rework Facilities in the United States.

The repair activity significantly helped in promptly returning both damaged and modified aircraft to the aircraft carriers on station. The number of aircraft processed through the repair activity each month during fiscal years 1971, 1972, and 1973 (through January 1973) averaged 78, 70, and 91, respectively.

Naval Magazine, Subic Bay

The Naval Magazine receives, segregates, stores, issues, maintains, and renovates ammunition, explosives, expendable ordnance items, weapons, and technical materiel.

During the intensive bombings in Southeast Asia in 1972, much of the ammunition received by Naval Magazine was offloaded temporarily on the docks rather than stored in magazines because of the fast turnover of some items. In calendar year 1972, Naval Magazine received 195,943 tons of ammunition by ocean transportation, which was about 240 percent more than in calendar year 1971. This ammunition was distributed to the fleet.

PERSONNEL ACTIONS

To meet the additional personnel requirements caused by the increased activity at land-based support organizations and on board Navy ships, a number of personnel actions were taken, including voluntarily recalling Reserves, drawing down shore-billet manning, reducing transient personnel and the time in transit, and accelerating school training.

In spite of the personnel increases at land-based activities, personnel at such activities and aboard the ships worked long hours--in some cases around the clock--to meet operational commitments. Many personnel in both shore

and afloat units worked 10 to 15 hours a day; some shipboard personnel worked 16 to 20 hours a day during the intense operations.

Additional personnel were required for operating ships when significant maintenance problems surfaced. For example, personnel on ships with 5"/54 guns had to be augmented with gunners' mates with 5"/54-gun experience. The Navy had a short supply of these personnel and had to obtain them from both within and outside the Pacific Fleet and from shore and ship duty stations.

The increased tempo of operations, coupled with certain personnel shortages, resulted in the maintenance deferrals, including preventive maintenance. For example, the Commander, Cruiser Destroyer Force, Pacific, made a survey which showed that 105 of the force's ships reported that 35,848 man-days of preventive maintenance had been deferred.

The increased tempo of operation resulted in extended ship deployments and short turnaround times after returning from overseas deployments. This contributed to the Navy-wide problem of retaining key personnel. (See ch. 5.)

OTHER MANAGEMENT ACTIONS

Continuous management actions were also required to support the increased tempo of operations in Southeast Asia. These actions included:

- Establishing special management programs, such as those to monitor and follow up on the flow and completion of high-priority requisitions.
- Creating and materially supporting additional asset stockage programs of repair parts to prevent long delays in receiving the material from the supply system.
- Transferring Navy personnel and acquiring technical assistance from contractors to resolve maintenance problems which shipboard personnel had not resolved.
- Shifting ships from one operational mission to another as necessitated by materiel failures, to keep the ships at their battle stations.

--Acquiring ships from other fleets and oceans to satisfy operational commitments.

--Establishing a center in 1971 at the Naval Material Command, to monitor logistic support actions and to resolve problems.

The management actions at the various operational and administrative command levels were effective in keeping the assigned ships at their battle stations in Southeast Asia.

CHAPTER 3

SUPPLY SUPPORT PERFORMANCE

The Navy was generally successful in promptly servicing 7th Fleet ships and aircraft needing repairs and resupply, returning them to their battle stations, and retaining them there, despite some serious Navy-wide logistic support problems. These problems continue to reduce supply support effectiveness in such areas as ship and aircraft repair parts and aviation reparable components and, in turn, the operational capabilities of all fleets.

A shortage of repair parts and components reduces the capabilities of ships and aircraft to perform all the missions for which they were designed. For instance, the Navy advised us that in fiscal year 1973 an estimated 21 percent (approximately 1,200) of its total operating aircraft were not fully mission ready due to materiel shortages and of these about 800 were not operationally ready because of materiel shortages.

Similarly, the Navy reported that, because of materiel shortages, 1,522 essential pieces of equipment on board its ships were inoperative as of January 1972 and 1,860 were inoperative as of January 1973. This equipment needed 4,584 and 5,924 repair part line items, respectively, to correct the casualties.

In attempting to supply materiel needed for ships and aircraft, the Navy is faced with (1) selecting those items which should be stocked at various echelons in the supply system and (2) insuring that, once selected, these authorized stock items are on hand when needed.

MATERIEL SELECTION TASK DIFFICULT

The materiel selection task is difficult principally because of the variety of nonstandard equipment and the age of the ships in the Navy. It is not economically feasible to have an authorized level for each repair part to support the many different equipments. Accordingly, items are authorized for stockage on the basis of two methodologies: (1) if the item has experienced repetitive needs, it is provisioned on the basis of demand support and (2) if the item has been needed infrequently or not at all, its future

needs are predicted on the basis of expected failure rates; these types of stocks are generally referred to as insurance items and their selection is the most difficult task.

A lesson learned in Southeast Asia was that some of the difficult logistic support predictions on materiel failures can be minimized through adequate weapon system testing.

Variety and age of Navy equipment

An illustration of the large number of different equipment items to be supported is the commodity grouping referred to as the Hull, Mechanical, and Electrical equipment, such as boilers, pumps, generators, and motors. Inventories valued at \$1.1 billion are stocked at 41 reporting stockage points for the support of these items on board ships. The chart below shows that over 56 percent of these items managed by the Navy during 1971 apply on only four or fewer ships.

	<u>Ship population</u>	<u>Number of items</u>	<u>Percent of total components</u>
	4	10,309	6.51
	3	14,569	9.21
	2	24,064	15.21
	1	<u>40,555</u>	<u>25.64</u>
		<u>89,497</u>	<u>56.57</u>
Total	<u>702</u>	<u>158,117</u>	<u>100.00</u>

According to the Navy the primary reasons for non-standardization of these items are competitive contract bidding and performance specifications. Thus, the Navy advised us that the problem should be attacked at the source--equipment should be standardized during new ship procurement.

We were advised that the contractor orientation program has been the most effective method of holding down the number of nonstandard equipment items. Through this program the Navy points out to shipbuilders that it is more economical for both the Navy and the shipbuilders to install standard components.

Another illustration is electronic equipment items. Technological advances result in frequent modifications to upgrade both new and old ships with the most modern equipment and are the primary causes of nonstandardization of these items.

The age of the ships also contributes to the nonstandardization problem and causes other support problems because (1) the manufacturer of the equipment is either no longer in business or no longer manufacturing the equipment or repair parts and (2) as a ship gets older, not only are repair parts needed to support the equipment but also the equipment itself begins to experience failures. Under these circumstances, the Navy either manufactures the items or enters into a contract for a special buy, or both.

The average age of Navy ships has decreased from 17.9 to 14.5 years since the end of fiscal year 1969; however, many old ships remain, especially in the combatant forces. At the end of fiscal year 1973, 31.8 percent of the Navy's ships were over 20 years old and 58.2 percent were over 10 years old. Appendix V shows the age of the active fleet, by type of ship. The age of noncombatant ships has decreased much more dramatically than that of the combatant ships. For example, during fiscal years 1969-73, the average age of amphibious ships decreased from 19.2 to 6.6 years, while the average age of destroyers decreased from 18.9 to 18.8 years and the average age of attack carriers increased from 14 to 17.7 years. Appendix VI shows these changes in the active fleet and average age of the ships, by type.

Officials at NSD, Subic Bay, advised us that one of the factors causing difficulty in satisfying requests for parts was the wide variety of equipment in the Navy.

Nonstandard equipment has also adversely affected the ability of the SRF, Subic Bay, to make timely repairs. An adequate range of items cannot be stocked, and many requisitions for items needed by the facility to make repairs must be passed to other supply points or, if the part is not available, it has to be manufactured in-house.

Improvements have been made and are planned for future implementation, including reducing the (1) number of different equipment items through standardization, (2) average age of ships by deactivating some ships and

building new ships, and (3) number of electronic repair parts by substituting many parts with modular components.

Indicators of selection difficulty

Although many insurance-type parts are acquired, many supply performance indicators demonstrate the difficulty in predicting items which will be needed.

Casualty reports are submitted by Navy ships, and these reports reflect a need for repair parts or technical assistance, or both. It is difficult to predict which repair part will be needed as an insurance item. For example, the Navy analyzed all the casualty reports submitted during fiscal year 1972 and found that 34,042 casualty reports had been submitted for 21,631 items. The Navy found also that over 17,000 items, or almost 79 percent, were required only once and that over 94 percent of the items were required three or fewer times.

The gross fill rate is the percentage of items an activity issues in relation to all the items it requests. At the NSD, Subic Bay, this rate ranged from 58 to 60 percent between July 1969 and December 1972 for all commodities requested and ranged from 40 to 43 percent for repair parts and components. Our analysis of these rates for aircraft carriers disclosed that the rate for ship parts ranged from 20 to 80 percent and that in about 30 percent of the instances the rate was below the established goal of 50 percent; for aviation parts the range was 5 to 100 percent with about 39 percent below the goal.

We attempted to analyze the success of the ship and aircraft allowance lists in satisfying user needs by determining the number of items on the lists which were actually being demanded. The Navy provided us with the results of a test of demands for aviation allowance items on three aircraft carriers which showed that an average 12.5 percent (7.6, 8.4, and 22.2 percent, respectively) of the items on the allowance lists were actually demanded during 12 months of a 24-month period. The dollar value of the allowance lists for carriers is substantial; for these three ships the allowance list values as of the date of their last revision were \$30.2, \$29.1, and \$28.8 million. We were unable to obtain similar information to test ship allowance lists.

We reviewed 398 casualty reports submitted by 11 cruiser and destroyer ships while they were operating in the Pacific Fleet area. Of these casualty reports, 266 had been submitted because repair parts were required to correct equipment failures. According to these reports, 365, or 77 percent, of the 471 repair parts required were not authorized to be carried on board the ships.

We recognize that it is difficult for the Navy to support a wide variety of equipment, and the Navy has taken some actions to reduce the number of equipment items and the depth of repair parts in support of these items. We believe that continuing actions should be taken to reduce the depth of insurance items at various stockage points.

PROBLEMS EXPERIENCED IN SUPPORTING AUTHORIZED STOCK LEVELS

For authorized stockage levels the Navy is also experiencing problems in supporting these known requirements. Because the authorized repair parts are not on board, many casualties, which normally could be corrected with little or no readiness degradations, remain outstanding for weeks.

We believe that such management areas as provisioning for insurance items, supply management, and the component rework program offer opportunities for improvement toward more economic and effective Navy logistic support.

Impact of shortages

When materiel is not available, operational and administrative commanders are alerted to the severity of needs through casualty reports and reports on aircraft not operationally ready due to supply or not fully equipped. Higher priorities are authorized for the requisitions submitted to repair equipment which is essential in performing the designed missions of ships and aircraft.

Our analysis of casualty reports submitted by selected aircraft carriers, cruisers, and destroyers in the Pacific area disclosed that many casualties could have been quickly corrected with little or no readiness degradation if the authorized repair parts had been on board.

For example, we reviewed 426 casualty reports submitted because of supply shortages on four aircraft carriers between July 1, 1971, and February 2, 1973, and found that in 29 percent of the reports the supply parts required were authorized for stockage. Had the items been on board there would have been little or no degradation of the ships' ability to perform their missions. In an additional 11 percent of the reports, some of the parts were authorized for stockage and should have been on hand.

As of February 2, 1973, 4 aircraft carriers in the 7th Fleet had 935 of these requisitions which were outstanding and which had been outstanding an average of 24 days; 8 had been outstanding over 100 days.

We could not readily determine from supply records and reports which requisitions were for items authorized to be stocked on the carriers; a detailed analysis would have been required for each ship. While on board one of the carriers, we tested these requisitions and found that 36 percent were for items authorized for stockage.

Provisioning for insurance items

The Navy logistic programs emphasize range and depth of support at various stockage levels--ships and shore activities. Therefore, substantial financial resources are invested for inventories which, because of the randomness and infrequency of actual need, may never be used and eventually could be declared excess.

A substantial amount of the Navy's financial resources is used to procure slow-moving, insurance-type items.¹ We inquired into the number and value of insurance items managed by two of the three Navy inventory control points whose primary responsibility is managing materiel in support of ships' equipment. The chart below demonstrates the extent of insurance items at these inventory control points.

¹Generally, items with predicted annual demands of 4 or less.

	<u>Line items</u>			<u>Value</u>		
	<u>Total</u>	<u>In- surance</u>	<u>Per- cent</u>	<u>Total</u>	<u>In- surance</u>	<u>Per- cent</u>
	(000 omitted)					
Electronic Supply Office	117,062	79,048	67.5	\$ 390,000	\$157,000	40.2
Ships Parts Control Center	264,076	178,129	47.1	1,100,000	517,169	47.1

We do not question the establishment of a selective range for these items; however, we believe continuing improvements can be made by reducing the depth of support.

In a prior GAO report,¹ we recommended that reductions be made in the depth of support during the process of providing initial provisions for new ships. The Navy initiated corrective action which requires that, in computing requirements for insurance items, certain conditions must be met before the item can be stocked and, once met, procurement is limited to a quantity of one or \$25 worth of materiel, whichever is greater. The Navy estimates that the current average range of parts stocked under the initial provisioning process is 25 percent of the total possible range.

We believe there are additional opportunities for reducing the depth of supply support. These include special programs, such as the Fleet Program Support Materiel (FPSM) program, which represents an insurance-type program. It consists of stocking materiel at overseas bases in advance of demand requirements as insurance for greater responsiveness in support of ship and air operations.

The FPSM program in the Pacific reached a high point of \$55.5 million in April 1970 and a low of \$17.8 million in December 1971. As of March 12, 1973, the FPSM at NSD, Subic Bay--the majority of FPSM Pacific is here--consisted of 56 projects containing 55,461 line items with assets, either on hand or due in, valued at \$19.2 million.

¹"Reducing Procurement of Initial Support Stocks for Navy Ships" (B-133058, June 28, 1972).

Under the FPSM program, the type commanders request that individual projects applicable to an aircraft, a weapons system, etc., be established on the basis of estimated needs. After the type commanders' requests are approved by the Commander Service Force, Pacific, they are forwarded to NSD, Subic Bay. NSD analyzes the line items to determine whether they currently have sufficient demand support and, in turn, stock levels or whether separate or additive quantities should be stocked as part of FPSM.

At the time of our review the Navy had not measured the effectiveness of the FPSM projects, by comparing the requirements with actual usages. We selected five FPSM projects valued at about \$6 million and requested that a computer program be developed to determine, in part, the extent to which FPSM line items were nonmovers (no demand experience). For the five selected projects, we found that there had been no demand for 7,654 of the 16,258 line items, or about 47 percent in the 12-month period ended April 9, 1973. These zero-demand items had an FPSM value of \$1.6 million--\$1.2 million worth on hand and about \$440,000 worth due in. The results of this analysis are shown in appendix VIII. Unit prices ranged from one cent to \$8,120.

We discussed with Navy officials the possibility of canceling the due-ins for which there was no demand. The Navy stated that each project would be reviewed and the appropriate action would be taken on each individual item. The Navy also stated that the depth of items in the FPSM projects will also be evaluated and reduced whenever possible. A complete review was promised, to begin after the final conclusion of hostilities in Southeast Asia.

In addition, they stated that the instruction governing the FPSM projects was under revision and would require more extensive review by management. As now proposed it will include the following statement:

"The demand development period authorized for FPSM will be one year from installation or operation date, but may be extended in writing by the fleet commander to two years if the operating environment or essentiality so dictates."

The proposed criterion thus establishes a normal demand development period of 1 year for FPSM project line items.

Since our test indicated many FPSM items have no demand for a year, we believe this instruction should be implemented as soon as possible and unneeded due-ins identified by GAO should be canceled.

The proposed revision to the instruction governing the FPSM projects will provide for more extensive management of these projects on both a project and line-item basis. The Navy stated that reductions in the depth of support on a line-item basis will be considered and accomplished whenever possible during these reviews.

We believe also that all insurance programs which involve large amounts of money should be continually analyzed. We suggest that these analyses consider the alternative of centrally stocking selected items in the United States and using air transportation to distribute them.

Our analysis of Navy records disclosed that even at the peak tempo of airlifting materiel to Subic Bay in 1972, there was no apparent problem in meeting the standard allowed transportation times for high-priority requisitions.

Supply management improvements needed

Many supply management actions at and between various supply support activities need improvement.

At NSD, Subic Bay, we found that significant delays were being experienced in satisfying requisitions to replenish authorized stock levels. As of November 4, 1972, outstanding requisitions totaled 31,221, of which 5,473 were outstanding more than 180 days.

We selected 30 priority-5 requisitions (the highest priority allowed at NSD) which were outstanding more than 120 days for followup at the inventory control points to determine the reasons for the excessive delays. These 30 requisitions involved 400 individual items valued at about \$250,000. Our followup disclosed no primary reason for the delays but a combination of varied management problems.

--In five instances the items had to be procured under contract--in some cases they were further delayed by problems in contract administration.

- Four requisitions were rejected by the inventory control point because the quantities ordered appeared excessive; these requisitions were still outstanding according to NSD records.
- The inventory control points indicated that NSD had authorized the cancellation of two requisitions, and yet NSD's records showed them as being outstanding.
- In five instances there was no record of receipt at the inventory control point.
- The remaining requisitions were passed on to stock distribution points for issue, and we did not go to these activities to determine the reasons for the delays.

After completing the followup at the inventory control points, we selected 15 of the 30 requisitions to determine their status on the NSD records and found that seven requisitions had been filled, two remained outstanding and were still needed, four were outstanding and the materiel was not needed, there was no record of one requisition, and one had been previously canceled. NSD initiated cancellation actions totaling \$84,235 for the four requisitions outstanding for which materiel was no longer needed.

We performed a similar analysis of the reasons for delays in filling high-priority requisitions and stock shortages at the inventory control points. These analyses showed that the factors contributing to delays and stock shortages have included (1) unpredictable increased demands, (2) delays in procurement contract awards and contractor deliveries, (3) delays in repairing reparable, and (4) disparities in information (specification data, manufacturers, federal stock number, etc.) maintained by the inventory control point, the Navy hardware-system commands, and the requisitioning activity.

Improvement needed in the management
of the component rework program

The aircraft component rework program, which involves the return of components to depots for repair or overhaul, needs continuous top management attention to correct those

significant problems disclosed in recent Department of Defense, Navy, and GAO management reviews and, in turn, preclude delays in requisitioning components for mission-essential equipment. Some of the findings included in these reports were:

- The fiscal year 1972 apportionment request and the fiscal year 1973 budget estimate were not supported fully and could not be evaluated effectively to determine the validity of the funding requirements.
- The supply activities were not promptly returning the components needing repair to designated overhaul activities.
- There were problems in computing requirements.
- Erroneous workload priorities had been assigned to some items.
- Production control, productivity of direct labor, and the quality assurance program needed improvement.
- An effective equipment maintenance program was needed.
- Packaging and preservation needed to be evaluated.

Because of the substantial investment in the component rework program--more than \$2.3 billion invested and over \$200 million predicted annually for rework--and the low supply effectiveness obtained, we believe that the Navy should make a comprehensive review of the program. This review should include all the functions required to support the program--procurement, rework, funding, and control over assets--at the various activities involved and should identify the extent that funding limitations hinder component supply effectiveness.

Adequacy of weapon systems

During the Southeast Asia conflict, significant materiel and personnel training problems were experienced with the 5"/54-gun system. The problems that surfaced can be attributed to insufficient weapons testing in the secondary mission of the gun. The 5"/54 gun is a dual-purpose gun system to be used in antiair and antisurface warfare; however, the gun was developed primarily to provide ships

with an anti-air warfare capability against air attacks similar to those experienced during World War II. The 5"/54-gun system was developed between 1946 and 1952 and was installed on Navy ships starting in 1952.

The gun was used in Southeast Asia in the anti-surface mode for sustained shore bombardment at a pace dramatically more intensive than that during many years of peacetime training exercises. Continual firings at this pace--equivalent to hundreds of years of peacetime training-exercise experience--surfaced many materiel and personnel problems, most of which the Navy had not anticipated.

Navy officials stated that many of the gun's failures in Southeast Asia were directly attributable to personnel performance--inadequate preventive maintenance programs and committing errors because of inexperience in operating and maintaining the gun. At one time as many as 66 contractor and Navy technical representatives were with the 7th Fleet to assist in maintaining and repairing the gun.

Although the Navy identified the problems and acted to correct them, the lessons learned are valuable and should be considered in future testing and evaluation of weapon systems.

CHAPTER 4

BUDGETING AND FUNDING

The total Navy budget has been increasing, but the budget for the daily expenses--operations and maintenance (O&M)--of running the Navy has remained about the same while prices have been increasing. It has been possible to operate with the available O&M funds, because the size of the Navy fleet has been reduced and expenditures for overhaul, repair, and maintenance of ships, aircraft, and shore facilities continue to be deferred.

OVERALL BUDGET

Navy appropriations increased 28 percent--from \$18.1 billion to \$23.2 billion--during fiscal years 1969-73. However, the increase was directed toward greater future operational capability; i.e., acquiring new ships and aircraft. The Chief of Naval Operations made the following statement on the fiscal year 1973 budget to the Subcommittee on Department of Defense of the House Committee on Appropriations.

"We have to make many choices. These include trade-offs between the present and the future--that is, between spending heavily to provide a greater capability today by keeping more older ships in service, or using more funds to procure new ships and aircraft thereby increasing future capability."

* * * * *

"The budget we are requesting for Navy * * * [continues] to emphasize the future. For the second straight year we are putting an increased proportion of our resources into future capabilities. We are doing more R&D [Research and Development] and are buying more new ships and aircraft in the fleet in the next few years."

* * * * *

"Our FY 1973 budget puts an increased proportion of our resources into the future. Our FBM [fleet ballistic missile] forces are fully supported and

their modernization assured. But in other areas of current capabilities--sea control, projection and overseas presence--we accept substantial increased risks. This is necessary, however, if we are to build toward the naval capabilities that will be required in the late 70's and 80's."

As shown below, 49 percent of the fiscal year 1973 Navy appropriations were for procurement, research, development, test, and evaluation. Although procurement of new equipment has an impact on the capability of the Navy to respond in the future, the O&M funds made available determine the extent and condition of the numbered fleets--including the 7th Fleet. In fiscal year 1973, 25 percent of the Navy appropriations were for O&M.

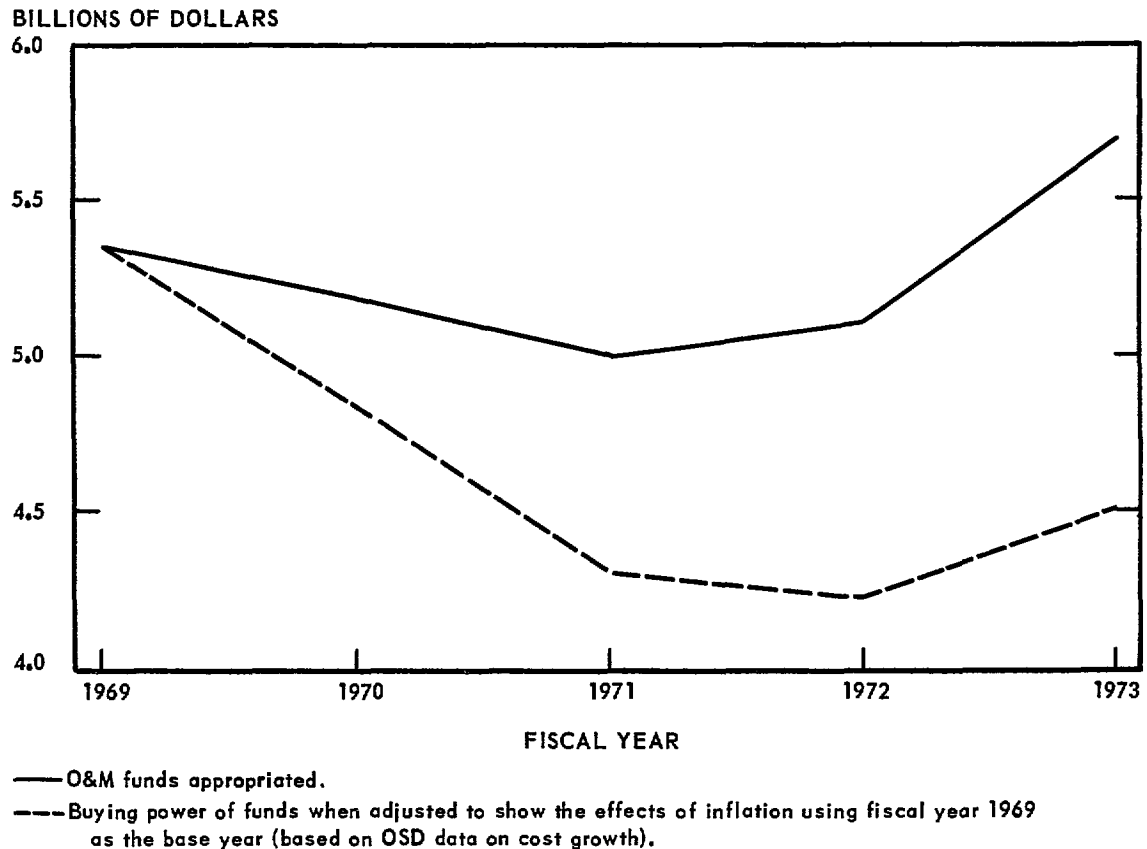
	<u>Amount</u> <u>(billions)</u>	<u>Percent of total</u> <u>appropriation</u>
Procurement of aircraft and missiles	\$3.5	15
Procurement and moderniza- tion of ships	3.0	13
Other procurement	2.3	10
Research, development, test, and evaluation	2.6	11
	\$11.4	49
O&M	5.7	25
Military personnel	5.6	24
Military construction	<u>.5</u>	<u>2</u>
	<u>\$23.2</u>	<u>100</u>

OPERATIONS AND MAINTENANCE

Funds are not allocated to, nor are costs accumulated against, an individual numbered fleet. This precluded our comparing 7th Fleet funding requirements with actual funds allocated. Navy representatives advised us that CINCPACFLT and the Commander-in-Chief, Atlantic Fleet, budgets and allocations were computed on the same basis, except that CINCPACFLT has received a larger increment for Southeast Asia operations than the Commander-in-Chief, Atlantic Fleet. To a larger extent, however, the

effectiveness of logistic support depends on the availability of funds to provide such support systemwide. Our review therefore included overall O&M funding requirements and allocations.

O&M appropriations varied over the 5-year period ended June 30, 1973. When the amounts are adjusted to reflect the effects of inflation, the funding level decreases.



In addition to the inflationary cost increases, Navy representatives advised us that it cost more to operate the newer, more technically advanced ships and aircraft. For example, the complexity and operating cost of the newer destroyers are much greater than for the World War II destroyers.

	<u>World War II destroyer</u>	<u>Newer destroyer</u>	<u>Percent of increase</u>
Number of electronic equipment	375	528	41
Number of different electronic parts stocked on board each ship	11,707	23,657	102
Cost of electronic parts stocked on board	\$127,655	\$1,051,444	820
Average operating cost in fiscal year 1973	\$425,200	\$846,300	99
Average overhaul cost in fiscal year 1973	\$2,400,000	\$3,700,000	54

Other examples of increasing costs are shown in appendix VII.

Faced with these increasing costs the Navy has taken various actions to keep within the budgeted amounts. The size of the Navy fleet has been reduced 37 percent--from 926 ships at the end of fiscal year 1969 to 586 ships at the end of fiscal year 1973. Similarly, the number of aircraft was reduced 21 percent--from 8,513 to 6,737.

Operational requirements--steaming days and flying hours--of the 6th and 7th Fleets were met in fiscal year 1973. However, the operational and training requirements for the other two fleets were not met because of funding limitations. In addition, certain requirements were deferred to the next fiscal year.

We compared the funding requirements computed by the Navy to support the force levels decided upon by the Navy and OSD and found reductions throughout the budget process. We included overhaul, repair, and maintenance funds for ships, aircraft, and shore facilities for which \$1.4 billion was apportioned in fiscal year 1973. Inasmuch as the requirements substantially exceeded available funds, \$700.5 million of required overhauls, repair, and maintenance will be deferred to fiscal year 1974. The Navy's budget requirements and shortfalls as of January 1973 are shown in the following schedule.

Initial budget funding process							Projected actual shortfall carried to FY 1974
Budget requirements	Requests to OSD-OMB	Budget request to the Congress	Appropriation- apportionment	Budget shortfall	Appropriation- apportionment (note a)		
(millions)							
SHIPS:							
Overhauls	\$ 738.4	\$ 506.3	\$ 433.9	\$ 433.9	^c \$304.5	\$ 498.2	^c \$233.4
Repairs	160.8	^b 181.2	183.3	183.3	-	271.0	-
AIRCRAFT:							
Overhaul and maintenance	241.4	225.3	198.3	198.6	42.8	204.8	54.9
Component re-work	242.0	218.0	190.4	193.7	48.3	203.4	32.7
Engine rework	108.5	99.5	91.6	97.8	10.7	104.2	4.5
SHORE FACILITIES:							
Maintenance	460.2	135.3	135.5	135.0	325.2	138.9	^d 375.0
Total	<u>\$1,951.3</u>	<u>\$1,365.6</u>	<u>\$1,233.0</u>	<u>\$1,242.3</u>	<u>731.5</u>	<u>\$1,420.5</u>	<u>\$700.5</u>

^aIncludes initial appropriation requests, Southeast Asia Amendment, reprogramming actions, and a supplemental appropriation request.

^bThe amount was increased to provide repair funds for ships deferred in the ship overhaul program.

^cThe amount of the budget shortfall cannot be identified.

^dExcludes \$23 million applicable to planned closures of facilities.

The projected shortfalls carried to fiscal year 1974 are discussed in more detail below.

Ship overhauls

Due to funding constraints, or because funds are sometimes reprogrammed or reapportioned for other uses, individual ship overhauls have not been fully funded and have been deferred.

Ship overhauls have been limited to the amount the Navy believes is necessary for an adequate overhaul and have not included everything that may be necessary for a thorough overhaul. For example, an aircraft carrier included in our review was overhauled in 1971--when it was 10 years old--at a cost of \$23 million, but \$9.4 million worth of requested overhaul work had been deferred due to the lack of funds, materiel, and man-days at the ship overhaul facility.

Ship overhauls continued to be deferred in fiscal years 1972 and 1973. In addition to funding constraints, deferrals were made because overhaul funds were used for other purposes and actual overhaul costs substantially exceeded Navy estimates.

For example, \$68.4 million from the fiscal year 1972 appropriation and \$11.1 million from the fiscal year 1973 appropriations were used for other purposes. These funds

were used for nonscheduled ship repairs; civilian personnel; repair of facilities in Europe; base operations; increased deployment costs of a construction battalion; and training, medical, and other general personnel support. Supplemental funds were obtained in July 1972 for overhaul of ships in the fiscal year 1973 program. An additional supplemental appropriation of \$23.8 million was requested and received on July 1, 1973.

In a recent review¹ GAO noted that actual ship overhaul costs were 27 percent higher in 1972 than originally estimated. As of March 1973, the fiscal year 1973 ship overhaul costs were about 20 percent higher than the original estimates. The major reasons for the large variance between estimated and actual cost were:

- Not all planned work had been included in the estimates.
- The number of man-days required for overhaul had been underestimated.
- Labor costs in Navy shipyards had been substantially underestimated.

Because of the erroneous estimates and the use of funds for other purposes, the original fiscal year 1972 overhaul schedule of 139 ships--at an estimated cost of \$502.8 million--could not be met and was reduced to 102 ships. Similarly, the original fiscal year 1973 overhaul schedule of 95 ships--at an estimated cost of \$433.9 million--was reduced to 84 ships. Some ships included in each of the fiscal year programs were deactivated and their overhauls canceled.

The cumulative effect of these actions was to defer to fiscal year 1974 a total of 33 ship overhauls at an estimated cost of \$233.4 million.

¹Report to the Committee on Appropriations, House of Representatives, "Management of Ship Overhaul and Repair Program, Fiscal Years 1972 and 1973" (B-133170, June 7, 1973.)

Ship repairs

Ship repair funds are used to pay for repairs at public and private repair activities. The Navy estimates requirements on the basis of past years' experience, known discrepancies, and projected machinery repair cycles. Adjustments are made for changes in force levels and for unique or unusual repairs which were included in past years or which are expected to be included in the budget year. Estimates are based on past actual costs but because of constrained resources in recent years, all repairs have not been performed. Therefore, these projected costs may be understated.

Aircraft overhauls

In addition to reducing the number of aircraft in its inventory, the Navy has reduced the frequency of aircraft overhauls. These actions have reduced the number of aircraft overhauls needed each year. For example, the F-4J was overhauled once every 24 months until January 1973 when the frequency was reduced to once every 30 months.

In spite of the longer maintenance cycle, the number of overhauls deferred to the following fiscal year because of funding constraints has increased each year, as shown below.

1971	186
1972	312
1973	525

The estimated overhaul cost of the 525 aircraft deferred to fiscal year 1974 was \$54.9 million. As of March 31, 1973, about 70 aircraft, including F-4Js, F-8Hs, A-6As, CH-53s, and T-28s, on which overhaul had been deferred were grounded because of their structural condition and lack of funds for overhaul.

Aircraft component rework

Aircraft component rework funds are used to pay for repairing components at depot level. In fiscal year 1973 this program had a shortfall of about 15

percent, or \$32.7 million. When the program is not fully funded, not all components received at depot level can be repaired and a backlog is created. Therefore, the components cannot be promptly returned to the supply system for issue, and the fill rates may be reduced.

Aircraft engine rework

Aircraft engine rework funds are used for repair and overhaul of aircraft engines at depot level. After rework, the engines are returned to the supply system for issue. The Navy estimated that 7,700 engines would require rework in fiscal year 1973. We were told that, since the program was not fully funded, 627 engine reworks, costing an estimated \$4.5 million, would be deferred to fiscal year 1974.

Shore facilities

We reviewed the funding for maintenance of shore facilities because Navy representatives advised us that it was one of the first budget items to be cut when there were funding shortages. Shore facilities consist of buildings, wharfs and docks, utility systems, roads, airfields, land, and railroad trackage. These funds are used for maintenance, repair, and minor construction (not to exceed \$50,000) of the facilities. Although these funding shortfalls are sizable--\$375 million¹ fiscal year 1973 backlog--their impact on Navy operations is not readily measurable. We believe the Navy should critically evaluate its needs on the basis of the current fleet size and fully support those maintenance projects deemed necessary.

¹Excludes \$23 million applicable to planned closures of facilities.

CHAPTER 5

MANPOWER

The Navy has difficulty in providing the quantity and quality of enlisted personnel needed to meet authorized manpower requirements. These problems--skill shortages and the declining experience level of personnel--which are aggravated by the rapid turnover of first-term enlistees and by the Navy's inability to retain key personnel, substantially increase the Navy's training task.

Although the Navy's total enlisted manning remained relatively high--94.4 percent of allowance Navy-wide and 96.5 and 96.9 percent for the Pacific and Atlantic Fleets, respectively--it had acute shortages in certain skills and declining experience levels. This situation exists because the Navy has been unsuccessful in retaining and training manpower in the right proportions to meet all of its billet requirements.

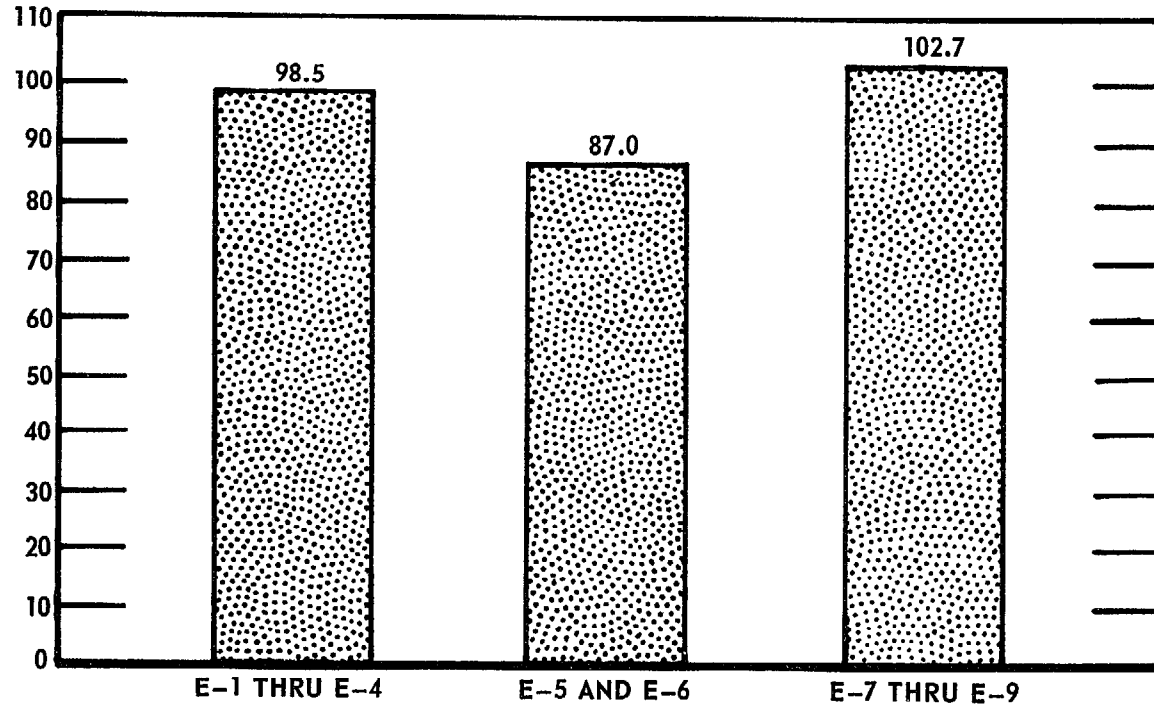
RETENTION

The overall retention of first-term enlisted personnel has increased significantly--from 10 percent in 1970 to 25 percent in the first quarter of 1973. The first-term reenlistments are actually overstated, however, because they are computed on the basis of the number considered by the Navy as eligible for reenlistment as compared with those available for reenlistment. Also, the reenlistment figures include the 6-year enlistees who, as part of their initial enlistment, extend for 2 years to acquire special schooling.

Although the overall retention rate has improved, the problem of retaining certain required skills is serious. The Navy continues to have shortages in the lower supervisory experience levels (grades E-5 and E-6), as shown in the following chart.

Retention is most difficult for (1) those ratings which are less career attractive because of the undesirable working conditions and/or extensive sea duty required and (2) those technical skills within certain ratings which, because of the demand, are very attractive in the civilian sector.

PERCENT OF AUTHORIZED ENLISTED MANNING
ON BOARD AS OF FEBRUARY 28, 1973



Less attractive ratings

Of the 10 ratings reported by CINCPACFLT as having the most critical impact on fleet operations, 5 were considered Navy-wide as less attractive than others because of the long working hours, the unpleasant working conditions, and the extensive sea duty required. The following table illustrates the shortages for these five ratings.

Percent of Enlisted Manning to On Board Strength for Selected Ratings February 28, 1973

<u>Ratings</u>	<u>E-1 through E-4</u>	<u>E-5 through E-6</u>	<u>E-7 through E-9</u>
Machinist mate	103.2	75.2	89.5
Boilerman	89.0	70.0	92.3
Aviation boatswain	69.0	88.7	101.7
Gunner's mate	65.3	82.5	103.6
Interior commu- nications technician	79.9	75.0	104.9

Aviation boatswains on carrier flight decks work under hazardous conditions and for long hours; machinists mates and boilermen operate and maintain ships' propulsion systems in a hot and unpleasant environment. Since it is difficult to do maintenance work on boilers and machinery in operation, boilermen and machinist mates are often required to do maintenance work in port while their shipmates are ashore on liberty. For these ratings few shore-duty jobs are available within their skill categories. Consequently, their duty rotation has been 5 to 6 years at sea and 2 years ashore compared with the normal sea-duty and shore-duty rotation of 3 years at sea and 3 years ashore for other ratings.

Shortages in technical skills

Technical skills are those skills within a rating which require substantial amounts of training and experience to develop technical expertise. Retention of these skilled individuals is difficult because their skills are generally readily adaptable to and in demand in the civilian sector.

Such skills include electronic and communications-oriented technicians.

For example, although the electronic technician rating as of February 1973 was manned at 109.6 percent of the Navy-wide allowance, shortages existed in 14 technical skills within that rating. The shortages were considered significant because only 75 percent or less of the allowance was actually available for assignment throughout the fleets.

IMPACT ON FLEET OPERATIONS

It is difficult to precisely measure the impact that shortages in skilled and experienced personnel are having on equipment maintenance and operations of fleet ships. Some of the impacts cited include:

- Key supervisory personnel were not always available to insure that the necessary maintenance was being identified and effectively accomplished.
- Diagnostic and trouble-shooting capabilities many times were lacking, which could result in significant delays in making repairs and in additional repair because erroneous procedures were followed.
- Maintenance was deferred due to the tempo of operations and personnel shortages, which resulted in more equipment failures and in equipment deterioration.
- Long working hours were required of those on board to make up for shortages, which further perpetuated the retention and personnel shortage problems.

The increased tempo of operations in the 7th Fleet resulted in extended ship deployments--6-month deployments extended to 9 and up to 11 months--and short turnaround times after returning from overseas also contributed to the Navy-wide problem of retaining key personnel.

In November 1972 CINCPACFLT officials summarized their problems as follows:

"While it is impossible to directly measure the effect of personnel shortages on morale and

retention, it is obvious that long and arduous hours, port and starboard watches,¹ curtailed liberty, back to back deployments for many as the result of cross decking to fill urgent requirements, augmentation requirements, extended deployments and short turnarounds for many of our ships, and restrictive leave policies for many of our ratings are taking their toll in both areas."

NAVY'S RETENTION IMPROVEMENT PROGRAM

The Navy uses many programs and methods to enhance reenlistments. For example, the Guard program, which provides for certain reassignment guarantees; the STAR program, which guarantees specific schooling; increased career counseling; variable reenlistment bonuses; improvements in habitability on board ships; and the homeporting of ships in overseas ports.

According to a Navy study, the three most influential factors against choosing the Navy as a career are family separations, lack of personal freedom, and the less than desirable living conditions on board ships.

The Navy has made some improvements in living conditions on board ships. (See app. IX.) One limitation is that certain major modifications, such as those to provide increased privacy in berthing space, can be made only to certain larger ships.

TECHNICAL SERVICES SUPPORT

As aircraft and shipboard equipment has become more sophisticated, it has taxed the capabilities of enlisted personnel to maintain it.

A number of Navy organizations therefore employ technical contractor, civilian, and military personnel who advise, instruct, and train Navy personnel who lack the skills and experience required to maintain equipment.

¹Individual is on watch for 4 hours and off watch for 4 hours; while off watch he may be required to perform such other duties as repairing and maintaining equipment.

They are sent to various shore activities and ships to assist in keeping equipment operational. These services are costly. Navy management of technical services was decentralized, which made an effective analysis of continuing needs and areas for improvements difficult.

The Navy projected 4,230 man-years of technical services, excluding military technicians, at a cost of \$119 million for fiscal year 1973. Further, Navy representatives advised us that the cost for contractor representatives averaged \$30,000 per year and ran as high as \$80,000.

While we were on board selected 7th Fleet ships, Navy representatives stated that technical services support had been most advantageous to them in maintaining equipment and providing on-the-job training to enlisted personnel. Some technical services were provided to 7th Fleet ships as needed and some were provided on a continuing basis. For example, during a 65-day period 32 technical assistance personnel were assigned to 1 aircraft carrier on a temporary basis and 12 technical assistance personnel, consisting of 11 contractor employees and 1 civil service employee, were assigned on a continuing basis.

The Navy advised us that technical services are needed:

- To phase in new equipment.
- To provide expertise on maintaining a complete system, such as a missile fire control system or specific equipment; this expertise is not available within existing Navy skills.
- To compensate for personnel shortages within an existing Navy skill.

Navy representatives could not provide the number of technical-services positions needed for each of the above reasons. They pointed out that management of technical services was not centralized; rather, it involved 7 major commands with at least 19 field activities that provided the services and/or contracted for the services. They said that such information could not be developed on an overall basis.

Because technical services support is to compensate for lack of needed maintenance expertise in the Navy,

justification for the technical services should, in our opinion, identify deficiencies in, or the absence of, specific skills in the Navy. This information should be coordinated with the Chief of Naval Personnel and Chief of Naval Training (1) for their use in continually reviewing and evaluating Navy skills and training and (2) to insure that technical services are not unnecessarily established or continued.

We believe centralized monitoring of technical assistance and coordination with the Chief of Naval Personnel and the Chief of Naval Training would be advantageous to the Navy.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS OR SUGGESTIONS

CONCLUSIONS

The Navy logistic system, through priority resource allocations and extensive efforts on the part of ship and shore personnel, kept the ships of the 7th Fleet at their battle stations in Southeast Asia.

Although the Navy supported, and is continuing to effectively support, 7th Fleet operations, a number of logistic issues adversely affect the efficient and economical accomplishment of the Navy's logistic support tasks.

The extensive tempo of operations of the 7th Fleet had the following prime impacts:

- Priority resource allocations to the 7th Fleet reduced resources available to the other fleets and therefore reduced their operational capabilities.
- Deferred maintenance may require additional funds to return ships to a desired state of readiness.
- Extended ship deployments, frequent redeployments, extended periods on station, and uncertain operating schedules compounded the problem of retaining qualified, experienced personnel.

Although the Navy was successful in promptly returning ships and aircraft of the 7th Fleet to and retaining them at their battle stations, logistic support problems exist in the Navy which continue to reduce supply support effectiveness and, in turn, the operational capabilities of the fleets.

The lack of repair parts and components reduced the capabilities of ships and aircraft to perform all the missions for which they were designed.

Financial resource limitations resulted in (1) reductions in the number of ships and aircraft and the extent of supply support inventories on board ships, (2)

maintenance deferrals, including overhauls and interim maintenance, and (3) a need for more intensive management of available resources and development of statements of impact to demonstrate the effect that resource shortfalls had and will have on fleet operations.

The wide range of equipment on board Navy ships continues to complicate logistic support. To support the varied equipment inventories, the Navy logistic programs emphasize both range and depth of support at various stockage points. If an item does not satisfy the criterion for authorized stockage based on the frequency of customer demands, it may be stocked as an insurance item. The FPSM logistic program at NSD, Subic Bay, is an example of an insurance program.

The impact of these insurance items--that is, low- or non-demand items--on the logistic support system is primarily that funds are used to procure inventories which, because of their random and infrequent actual need, may not be used and eventually may be declared excess.

The management of programs for repairing aircraft components needs to be improved.

The 5"/54 gun experienced significant materiel and personnel training problems in Southeast Asia because it was used in its secondary-designed mission--shore bombardment--at a pace dramatically more intensive than that during many years of peacetime training exercises.

The Navy continues to have personnel shortages in special skills and at the middle-management experience levels. It is difficult to measure how much these shortfalls directly impact on the quality and quantity of maintenance performed.

One of the ways the Navy compensates for skill shortages is through technical engineering services which consume substantial financial resources each year. We found that management and control over these services were decentralized, which made it difficult to analyze them to determine their continuing need and to determine where improvements could be made through increased Navy training.

RECOMMENDATIONS OR SUGGESTIONS

We recommend that the Secretary of Defense insure that the Navy is able to fully inform the Congress of the trade-offs and impacts for each alternative presented on page 46 at a stated level of resource.

Navy comment

The Navy concurs that the Congress should be informed on the impact of the proposed Navy budget allocation on the size and combat readiness of the fleets.

We also recommend that the Secretary of the Navy consider:

- Stocking low- or no-demand items in the United States and using rapid air transportation when items are needed in the Pacific or Atlantic Fleets. Centralized stockage should make such items more accessible to all fleets and should reduce costs by reducing the number of items stocked.

Navy comment

The Navy concurs with the basic objectives inherent in the recommendation. Several interim actions and a number of new policy directives were promulgated in August 1973, which should reduce costs by reducing the number of items stocked at various locations. In addition, the Navy has several research and modeling projects in process to assist in refining supply support policies and to provide more cost-effective support to the fleets.

- Testing the feasibility of directly replenishing authorized stock levels on combatant ships and at advanced bases by air transport in lieu of the normal depot support system. This should reduce amounts of stocks required aboard ships and at advanced bases.

Navy comment

The Navy concurs with the recommendation; however, in view of the current fuel conservation policies and reduction in frequency of the Military Airlift Command flights, this

test will be scheduled when there is reasonable prospect for obtaining conclusive results.

- Giving top management attention to the program for reworking aircraft components, to correct the management problems the Department of Defense, the Navy, and GAO disclosed during recent reviews.

Navy comment

The requirement for program improvement for repairing aircraft components has been recognized. Several improvements (see p. 68) have already been implemented and many others are currently in the development stage. One of these actions involved the formation of a task group which visited all rework facilities to determine what could be done for the component rework program at the rework facility level in an attempt to increase supply effectiveness and decrease the number of not operationally ready aircraft.

- Testing weapon systems intensively for all designed missions to obtain data on the personnel training, maintainability, dependability, and logistic support needs for each mission role.

Navy comment

The Navy concurs with the intent of this recommendation. The Navy will continue to test all systems with the best technical means available within fund constraints. Advancements in instrumentation technology will be used whenever cost effective.

- Improve personnel retention programs by emphasizing the three most common reasons for not making a career of the Navy; that is, family separation, lack of personal freedom, and less than desirable living conditions on board ships.

Navy comment

The Navy concurs with the recommendation and will continue to use every available means to improve the extensive and high-priority programs in progress to retain Navy personnel. Each of three areas mentioned continue to receive the personal attention of the Chief of Naval Operations.

- Centralizing the management of Navy civilian and contractor personnel, so that management could determine whether Navy personnel training should be revised and whether the number of civilian and contractor personnel should be increased or decreased.

Navy comment

The Navy concurs with the intent of this recommendation. The Navy has been aware that a need exists for improved centralized management of technical services support to the Fleet. A special advisory committee has been asked to review and make recommendations concerning the use and provision of Navy technical services personnel. The committee's objectives are to achieve increased coordination with the manpower and training communities, to determine overall technical services requirements and to optimize use of funds and contractor/in-house personnel resources.

MATTERS FOR CONSIDERATION BY THE CONGRESS

During future hearings on the Navy budget, the Congress may wish to consider

- shifting the priority of resource allocations toward the current operational and maintenance needs of the ships, aircraft, and shore activities;
- allocating additional operational and maintenance resources to upgrade the status of the fleets and shore activities; or
- requiring that the size of the fleets and the number of supporting shore activities be reduced to levels which could be supported with available resources.

The Congress also may wish to weigh the trade-offs and impacts that each alternative will have on the size and combat readiness of the fleets in meeting current and potential threats in certain areas of the world as well as on overall U.S. foreign policy.

CHAPTER 7

SCOPE OF REVIEW

We reviewed and evaluated key logistics issues, such as funding and personnel availabilities and their impact on the logistic support to the 7th Fleet. We were particularly interested in those continuing issues which made effective support complex during peak operations, such as those supporting the Vietnam conflict.

We reviewed the logistic-related policies and procedures regarding supply responsiveness; maintenance; funding; personnel; distribution; and transportation. Our review, which was made from October 1972 through May 1973, consisted of a three-phase effort, as follows:

Phase I--October 1972 to January 1973. We did extensive research and auditing at various Navy commands and activities. This phase started with briefings by headquarters commands and activities in Washington, D.C., California, Hawaii, and the Far East.

Phase II--January to May 1973. We made detailed examinations at fixed locations, such as inventory control points, type commands, depots, and repair facilities.

Phase III--February to March 1973. Concurrent with our phase II effort, we boarded selected ships assigned to the 7th Fleet to confirm, through discussion and observation, the impact, if any, that the logistic support issues were having on ship operations.

We visited the following locations:

--Washington, D.C.:

Headquarters, Chief of Naval Operations
Headquarters, Chief of Naval Material
Headquarters, Chief of Naval Personnel

--Mechanicsburg, Pa.:

Ships Parts Control Center
Fleet Material Support Office

- Philadelphia, Pa.:
 - Aviation Supply Office
 - Headquarters, Naval Aviation Engineering Support Units

- Great Lakes, Ill., Electronics Supply Office

- Hawaii:
 - Headquarters, Commander-In-Chief Pacific Fleet
 - Headquarters, Commander Service Forces, Pacific

- San Diego, Calif.:
 - Headquarters, Commander Cruiser Destroyer Force, Pacific
 - Headquarters, Commander Naval Air Force, Pacific
 - Headquarters, Commander Amphibious Force, Pacific

- North Island, Calif.:
 - Naval Air Station
 - Naval Air Rework Facility

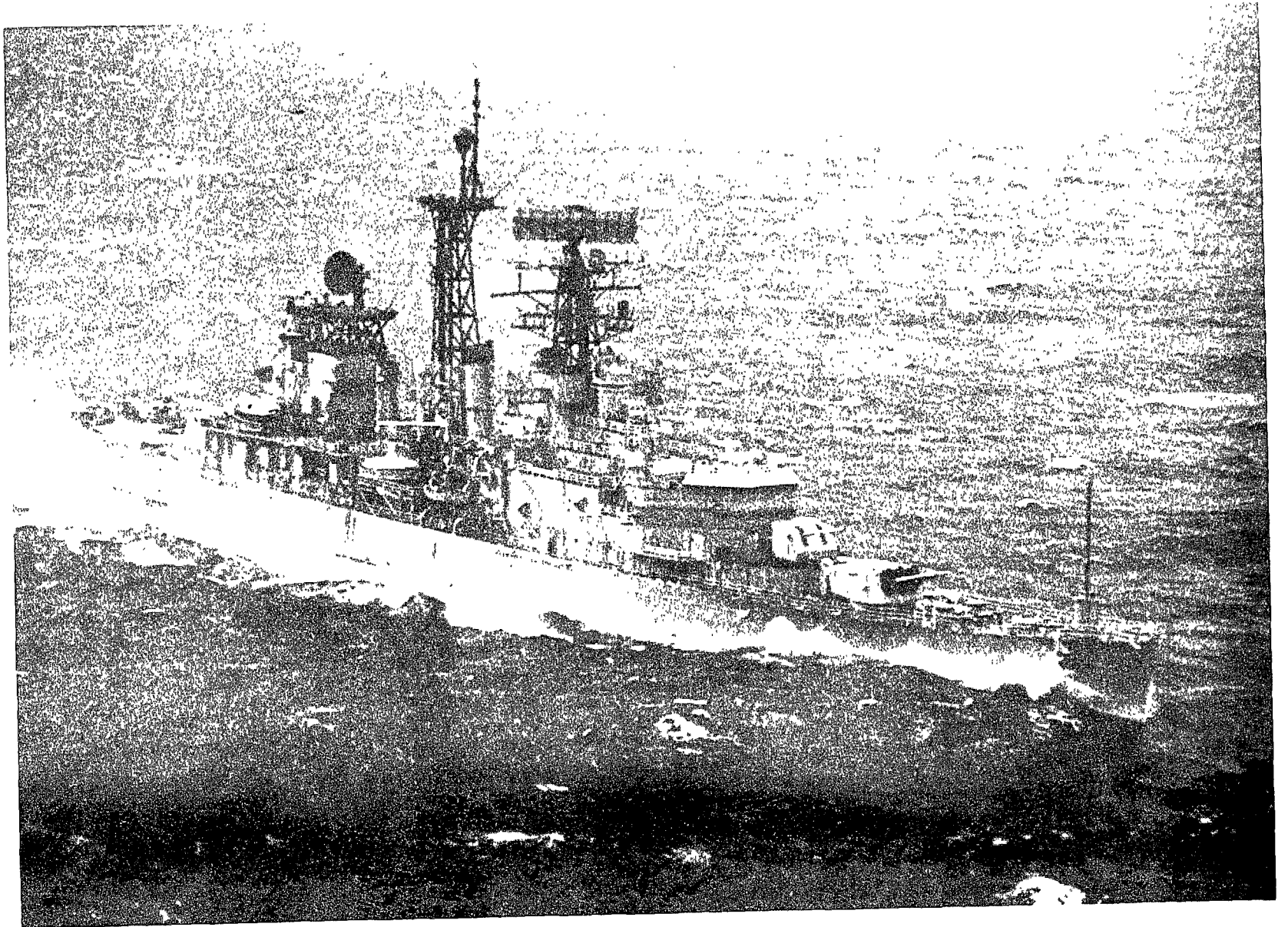
- Alameda, Calif.:
 - Naval Air Station
 - Naval Air Rework Facility

- Concord, Calif., Naval Weapons Station

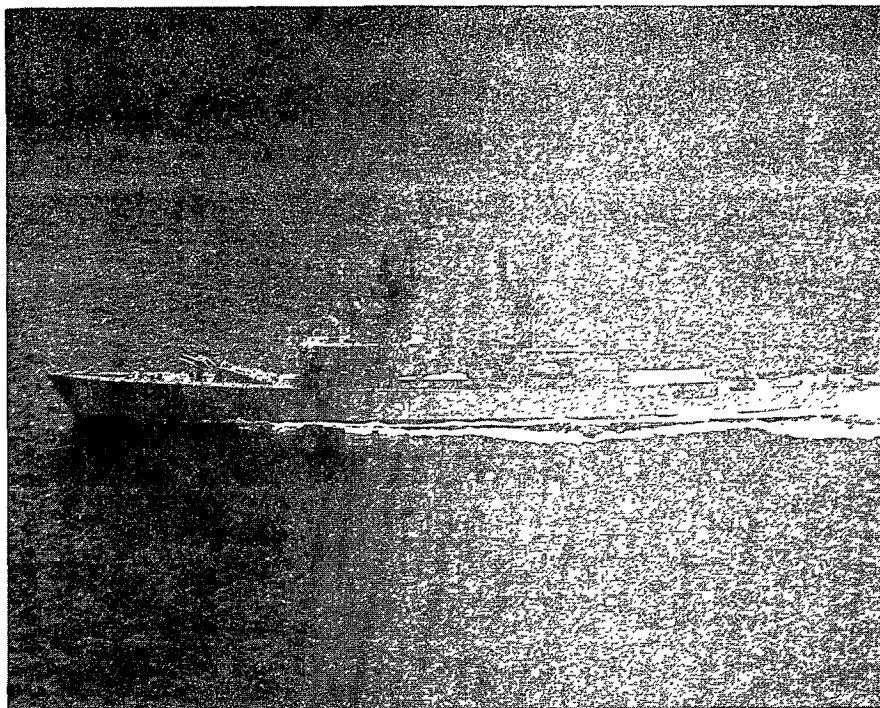
- Oakland, Calif.:
 - Naval Supply Center
 - Western Area Military Transportation Management and Terminal Service

- Subic Bay, Philippines:
 - Naval Air Station, Cubi Point
 - Naval Supply Depot
 - Ship Repair Facility

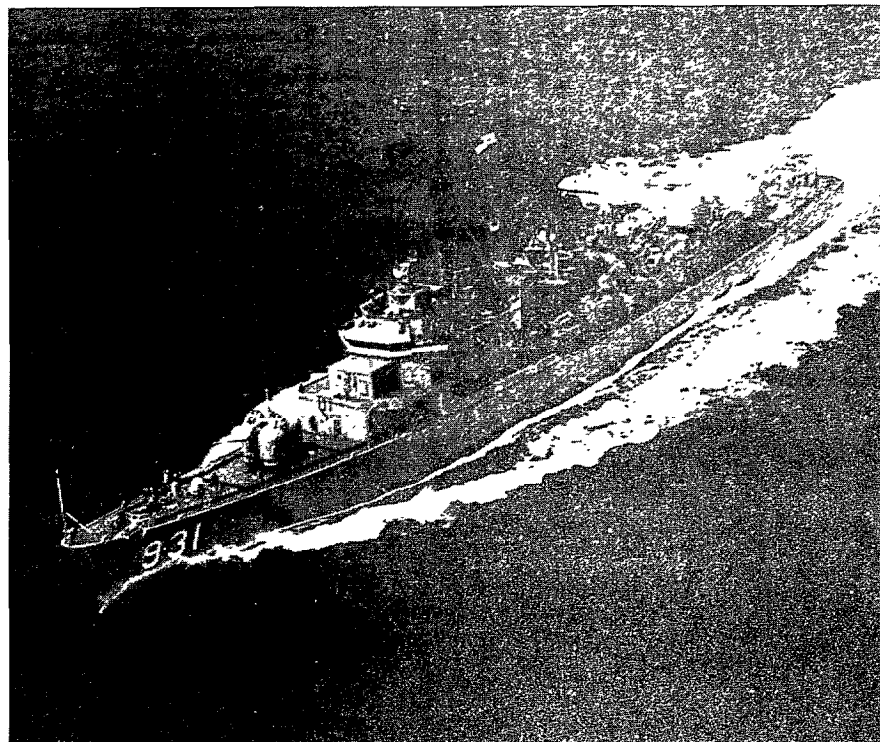
- Yokosuka, Japan:
 - Naval Supply Depot
 - Ship Repair Facility



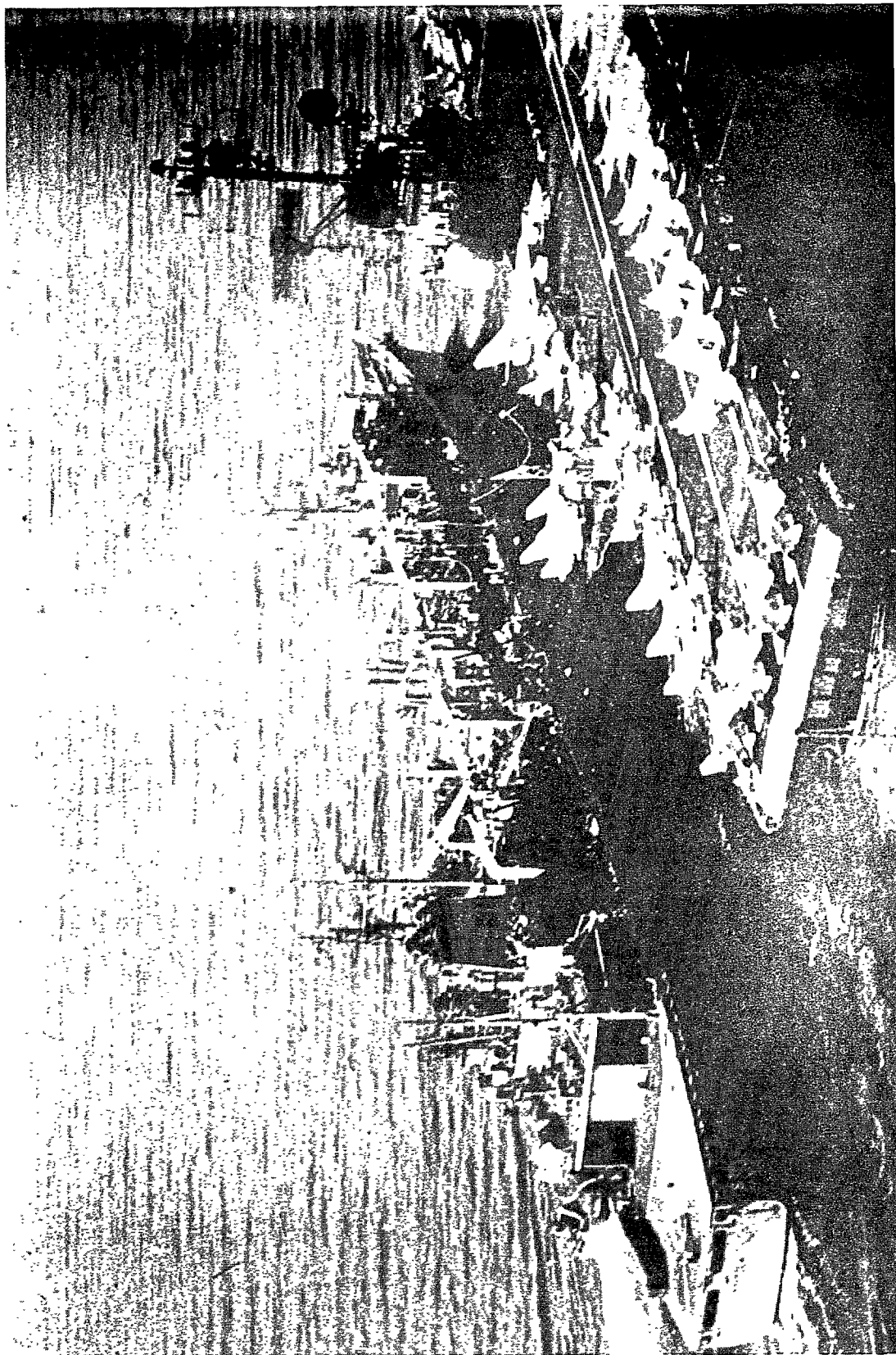
CRUISER-TYPE SHIP, U.S.S. OKLAHOMA CITY (CLG-5), COMSEVENTHFLT FLAG SHIP, LENGTH 610' WIDTH 66.3'



DESTROYER
GUIDED-MISSILE FRIGATE
U.S.S. STERETT (DLG-31)
LENGTH 547' WIDTH 54.8'



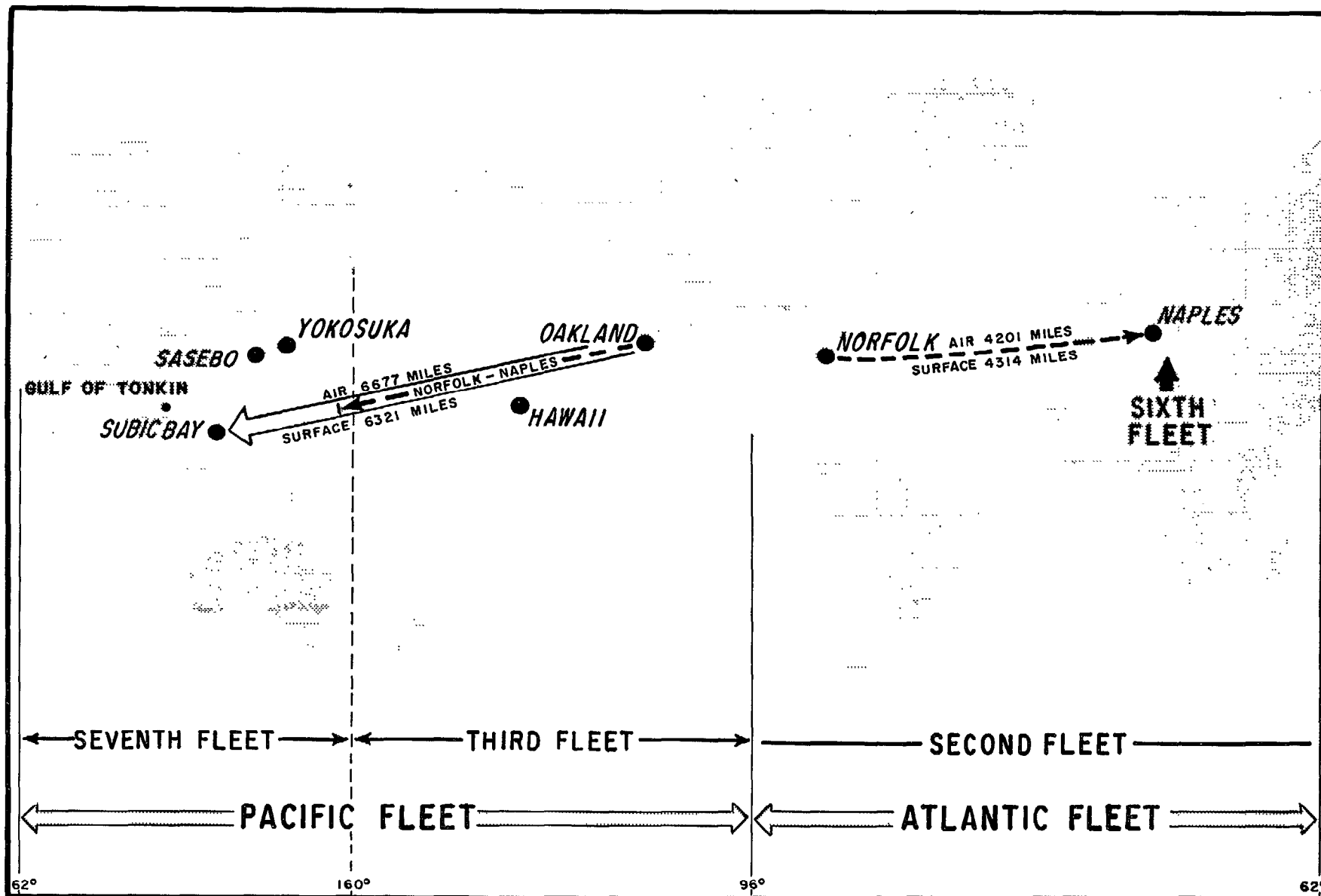
DESTROYER
U.S.S. FORREST SHERMAN (DD-931)
LENGTH 418.4' WIDTH 45.2'



AN AIRCRAFT CARRIER BEING REFUELED BY AN OILER

LOGISTIC SUPPORT DISTANCE RELATIONSHIPS BETWEEN PACIFIC AND ATLANTIC FLEETS

52



AGE OF ACTIVE FLEET AS OF
END OF FISCAL YEAR 1973

Type of ship	End of fiscal year 1973	Graduated age in years				Average age (years)
		0 to 9	10 to 19	20 to 30	30 and over	
Attack carriers	14	2	7	5	-	17.7
Antisubmarine warfare carriers	2	-	-	1	1	29.5
Cruisers	9	-	1	8	-	25.9
Destroyers	128	16	53	59	-	18.9
Destroyer escorts	68	57	8	-	3	5.8
Underway replenishment ships	58	23	14	17	4	15.9
Amphibious warfare ships	65	48	16	1	-	6.6
Fleet ballistic missile submarines	41	24	17	-	-	9.5
Submarines	83	43	23	17	-	11.1
Patrol ships	15	15	-	-	-	4.7
Mine warfare ships	12	-	11	1	-	18.7
Auxiliary ships	<u>91</u>	<u>15</u>	<u>5</u>	<u>50</u>	<u>21</u>	<u>23.8</u>
Total	<u>586</u>	<u>243</u>	<u>155</u>	<u>157</u>	<u>29</u>	<u>14.5</u>

Percentage of ships 10 and over years old--58.2.

Percentage of ships 20 and over years old--31.8.

APPENDIX VI

CHANGES IN ACTIVE FLEET AND AVERAGE AGE OF SHIPS

Fiscal Years 1969-73

<u>Type of ship</u>	<u>End fiscal year 1969</u>	<u>Average age (years)</u>	<u>Addi- tion</u>	<u>Dele- tion</u>	<u>Net increase or decrease (-)</u>	<u>Number in fleet at end fiscal year 1973</u>	<u>Average age (years)</u>
Attack carriers	15	14.5	1	2	-1	14	17.7
Antisubmarine warfare carriers	7	25.0	1	6	-5	2	29.5
Cruisers	13	21.9	-	4	-4	9	25.9
Destroyers	222	18.8	32	126	-94	128	18.9
Destroyer escorts	43	10.9	40	15	25	68	5.8
Underway replenish- ment ships	77	19.0	-	19	-19	58	15.9
Amphibious warfare ships	153	19.2	35	123	-88	65	6.6
Fleet ballistic missile sub- marines	41	5.0	-	-	-	41	9.5
Submarines	101	15.4	24	42	-18	83	11.1
Patrol ships	9	6.1	10	4	6	15	4.6
Mine warfare ships	74	14.1	5	67	-62	12	18.7
Auxiliary ships	168	22.7	24	101	-77	91	23.8
Others	<u>3</u>	<u>17.3</u>	<u>-</u>	<u>3</u>	<u>-3</u>	<u>-</u>	<u>-</u>
Total	<u>926</u>	<u>17.9</u>	<u>172</u>	<u>-512</u>	<u>-340</u>	<u>586</u>	<u>14.5</u>

EXAMPLES OF OTHER-THAN-
INFLATIONARY COST INCREASES

AIRCRAFT

The Navy has three types of fighter aircraft--F-4, F-8, and F-14--in its inventory. The F-8 is the oldest, and the F-14 is the newest. Each of the aircraft is more sophisticated than its predecessor. The costs (for fuel, consumable repair parts, and supplies) to operate a squadron (12 aircraft) has increased annually, as shown below.

<u>Aircraft</u>	<u>Approximate fiscal year 1972 costs</u>	<u>Percent increase over F-8 aircraft</u>
F-8	\$1,030,000	
F-4	1,376,000	34
^a F-14	1,694,000	64

^aEstimated.

SUBMARINES

The cost to operate the older submarines in the fleet averaged \$170,600 in fiscal year 1973 with \$249,800, or 46 percent more, for the newer nuclear submarines. The older submarines are overhauled every 40 months; in fiscal year 1973 the average overhaul cost was \$17 million. When adjusting the cost of the nuclear submarine overhaul to a base comparable to the 30-month operating period between overhauls for the older submarine, the comparative cost is \$12.8 million, or 129 percent more.

CONVERSION OF SHIPS TO BURN DIFFERENT FUEL

Conversion of Navy ships from burning Navy special fuel oil to Navy distillate began in fiscal year 1971 and is to be completed in fiscal year 1975. However, Navy distillate costs more than Navy special fuel oil. Ships converted to burn Navy distillate use about 7 percent more fuel than they previously used. Also, Navy distillate costs about 33 percent (\$1.17) more a barrel than Navy special fuel oil. As

APPENDIX VII

a result, fuel costs for the ships that had been converted increased an estimated \$24 million in fiscal year 1973. We estimate that when the program is completed fuel costs will increase \$21 million annually, a total increase of about \$45 million annually.

Navy representatives said that some immeasurable amount of the increased costs would be offset by reduced maintenance on the ship propulsion system. Other expected benefits are less air pollution, cleaner ships, and increased ship operational readiness.

FPSM LINE ITEMS WITH ZERO DEMANDS
FOR 12-MONTH PERIOD ENDED APRIL 9, 1973

Project number	Project descrip- tion	Total number of line items (note a)	Total value (note a)	Number of line items	Zero demands in 12 months			Value of FPSM quantity (note c)
					On-hand value	Number of line items (note b)	Due-Ins Value	
69010D	F-4B/F-4J-4B AVCAL Support (note d)	3,702	\$1,210,316	1,862	\$ 148,964	98	\$333,024	\$ 487,047
70018D	A-7E AVCAL Support	5,187	1,177,663	1,544	302,261	83	30,575	327,791
72012B	FA-6BAVCAL Support	3,781	2,705,745	1,879	170,971	92	58,348	224,759
68048D	5"/S4 Gun Support System	3,225	871,220	2,214	547,997	111	13,026	518,919
72019	AN/SPS-40/40A Support	363	68,342	155	30,643	15	2,506	28,400
Total		<u>16,258</u>	<u>\$6,033,286</u>	<u>7,654</u>	<u>\$1,200,836</u>	<u>399</u>	<u>\$437,479</u>	<u>\$1,586,916</u>

^aWithin FPSM project.

^bZero-demand items with due-ins.

^cUnit price multiplied by FPSM quantity which experienced zero demands.

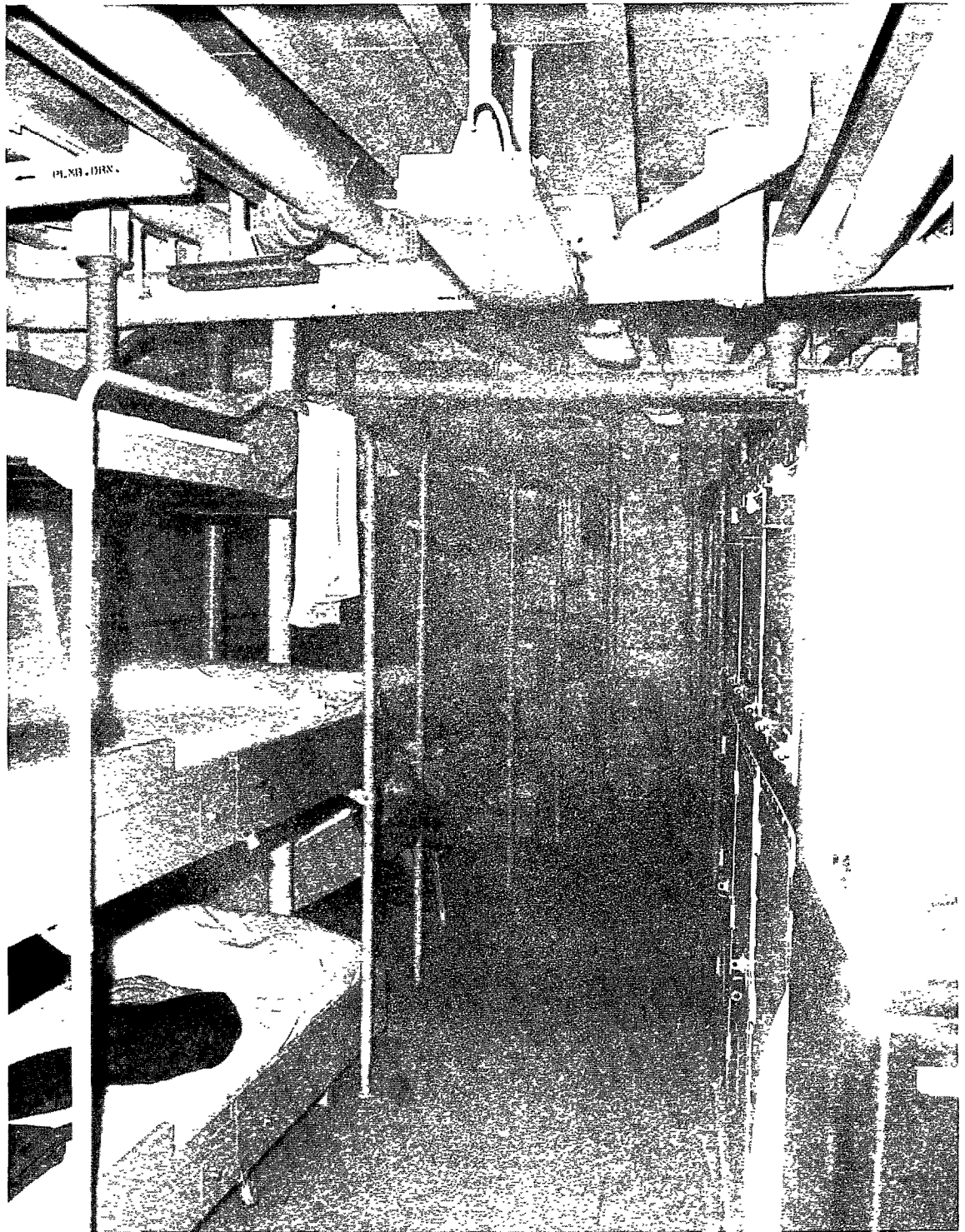
^dAVCAL Aviation consolidated allowance list.

^e918 line items had zero balances.

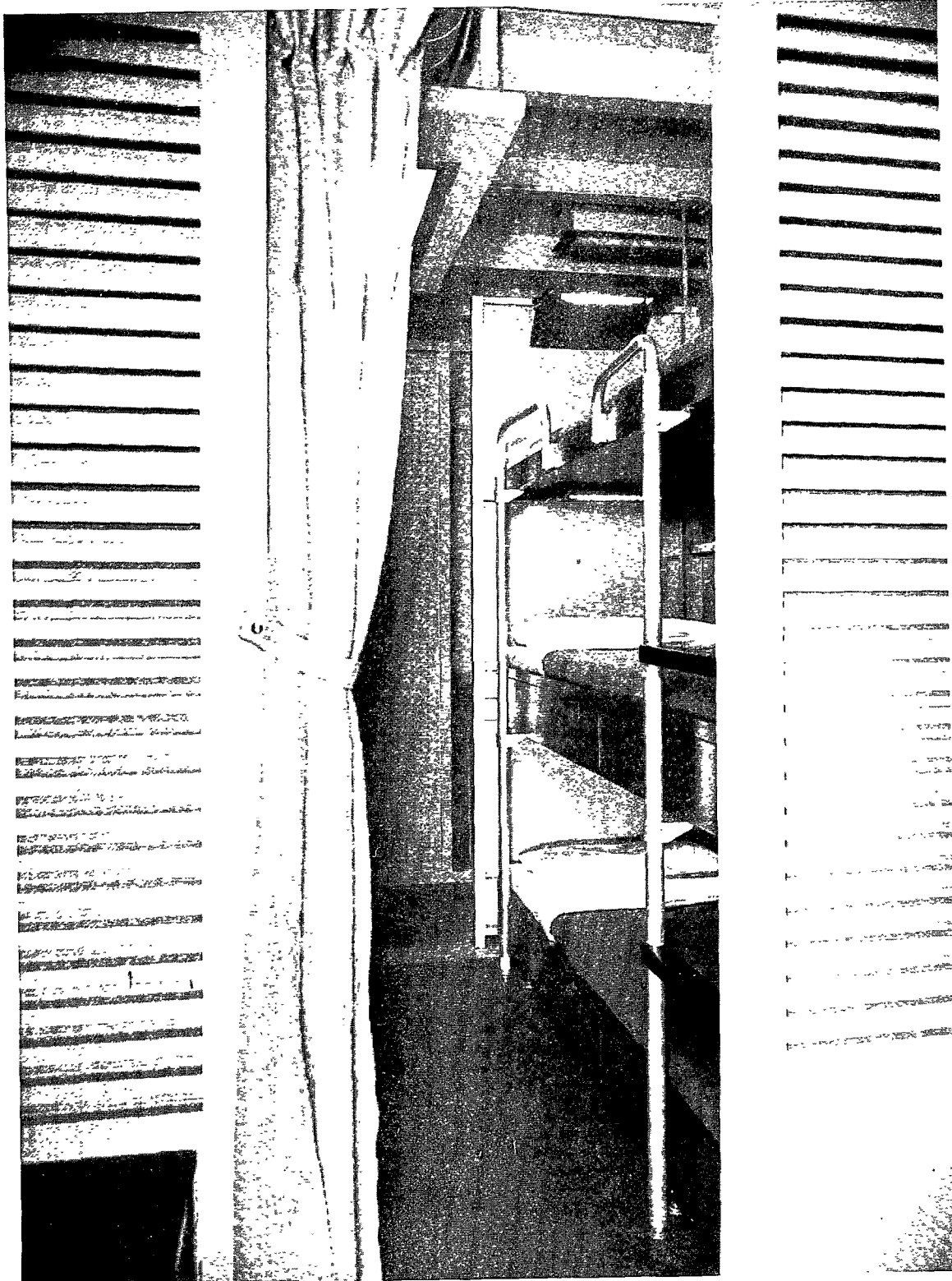
BEST DOCUMENT AVAILABLE



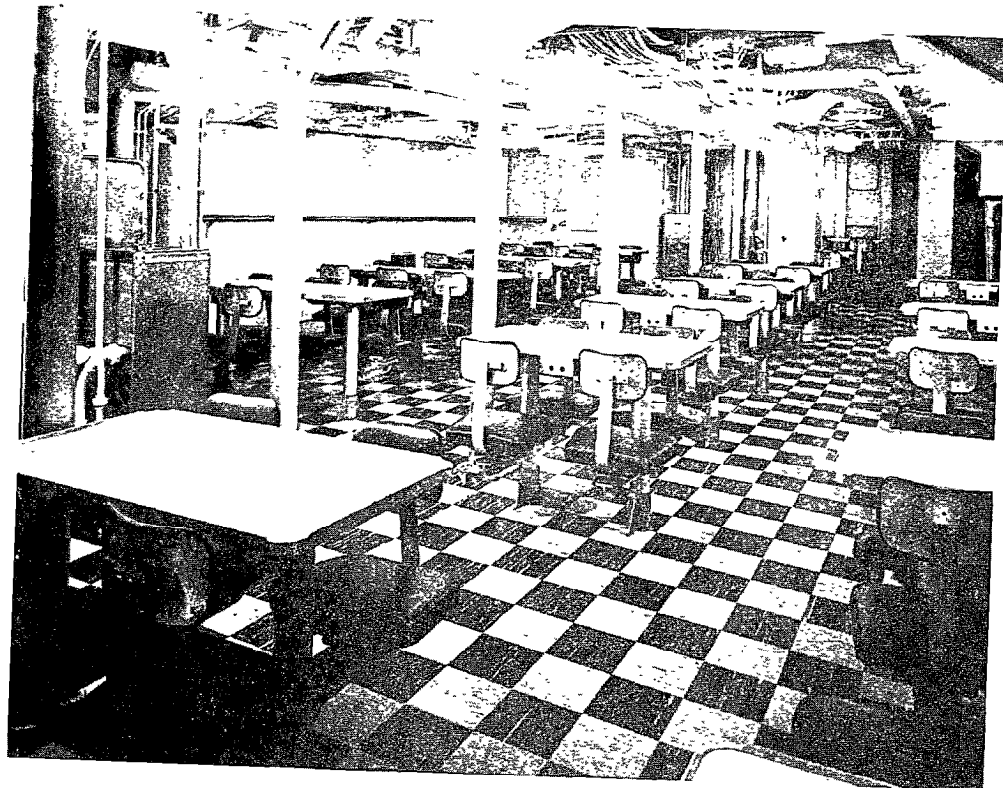
BERTHING AREA ON OLD DESTROYER BEFORE NEWER BUNKS AND LOCKERS



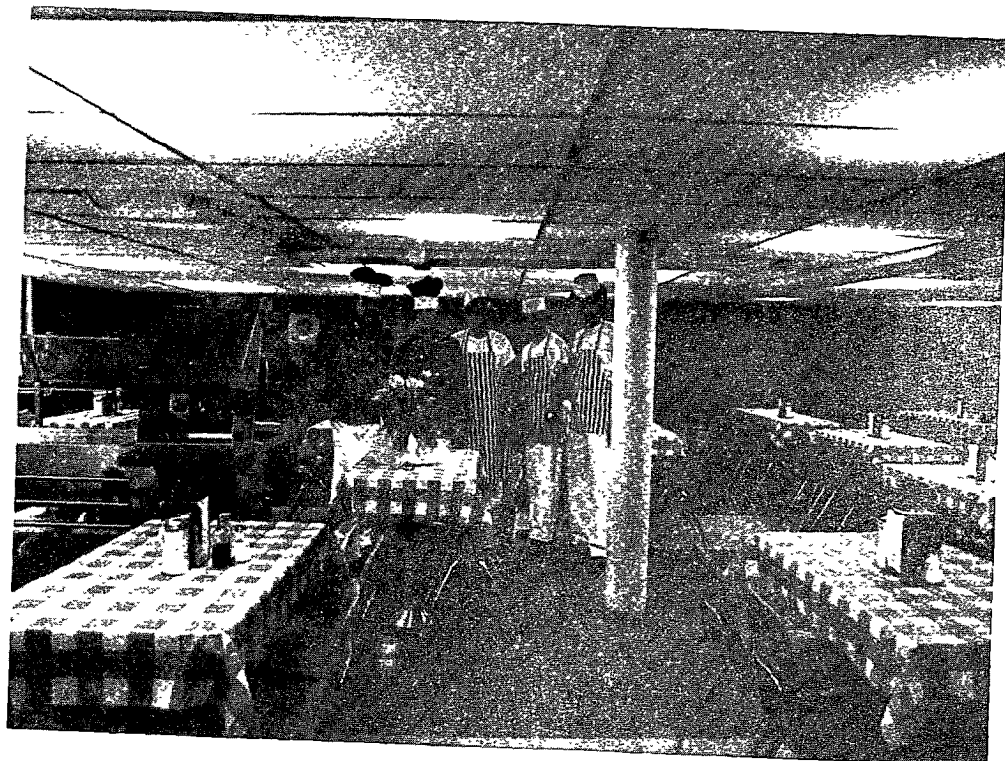
BERTHING AREA ON NEWER DESTROYER



PRIVACY BERTHING OF THE FUTURE--NOT PRACTICAL FOR SMALLER SHIPS

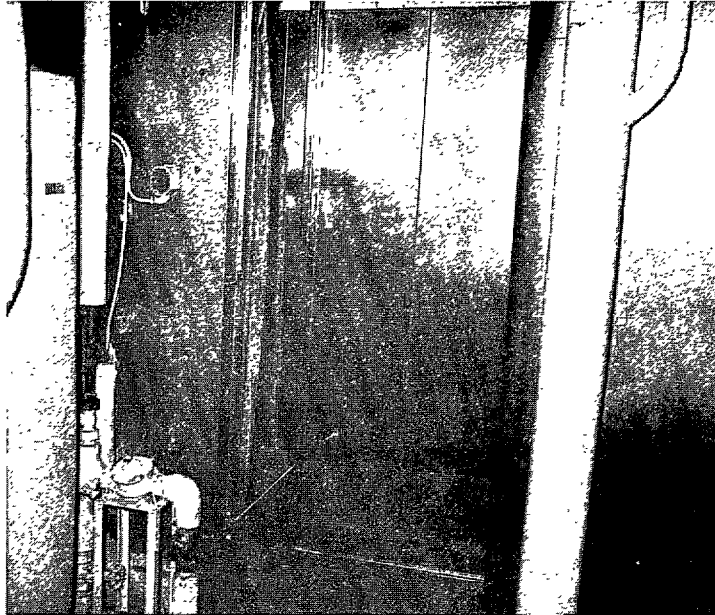


CREWS MESSROOM WITHOUT RENOVATION

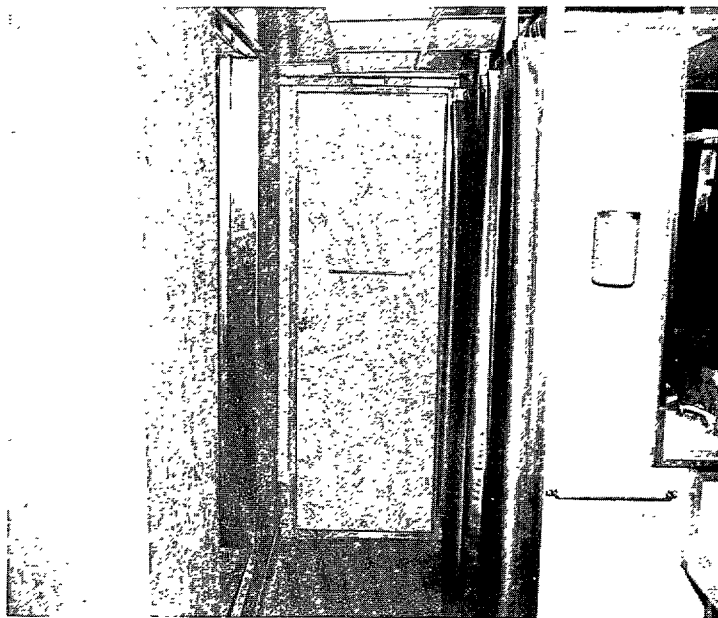


CREWS MESSROOM ON NEWER SHIP

APPENDIX IX



WASHROOM/WATER CLOSET BEFORE RENOVATION



WASHROOM/WATER CLOSET AFTER RENOVATION



DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(FINANCIAL MANAGEMENT)
WASHINGTON, D. C. 20350

19 FEB 1974

Mr. Werner Grosshans
Associate Director
Logistics and Communications
Division
U. S. General Accounting Office
441 G Street, N.W.
Washington, D. C. 20548

Dear Mr. Grosshans:

The Secretary of Defense has asked me to reply to your letter of 3 December 1973 which forwarded your draft report to the Congress on Navy Logistic Support of the 7th Fleet (GAO Code 947014) (OSD Case #3746).

I am enclosing the Department of Navy reply.

Sincerely yours,

A handwritten signature in black ink, appearing to read "R. D. Neesen".

R. D. NESEN
ASSISTANT SECRETARY OF THE NAVY
(FINANCIAL MANAGEMENT)

Department of the Navy Reply

to

GAO Draft Report of 3 December 1973

on

Navy Logistic Support of the 7th Fleet:

Responsiveness - Issues - Constraints

(OSD Case No. 3746)

1. Summary of GAO findings and recommendations.

Through a massive and concerted effort, the Navy was responsive in keeping the ships--carriers and other combatants-- at their battle stations in Southeast Asia. The ships were kept on station by giving them and supporting shore activities priority of resources--financial, materiel, and personnel-- before and during the 7th Fleet deployments. In addition, ship and shore personnel worked around the clock. The extensive operations of the 7th Fleet in Southeast Asia:

- Reduced the amount of resources available to other fleets and therefore reduced their operational capabilities.
- Deferred maintenance, so additional funds may be needed in the future to return ships to a desired state of readiness.
- Compounded the problem of retaining qualified, experienced personnel because of extended deployments, frequent redeployments, extended periods on station, and uncertain operating schedules.

A shortage of repair parts and components reduces the capabilities of ships and aircraft to perform their designed missions.

Some of the reasons for the less than desirable supply support are beyond the complete control of the Navy. Others within the Navy's control are:

- Logistic support programs emphasize depth of support at various stockage points. Therefore, financial resources are used to procure inventories which because of the randomness and infrequency of need for the materiel, may never be used and eventually could be declared excess.

BEST DOCUMENT AVAILABLE

- Programs for repairing aircraft components need major improvements in management.
- Weapons systems should be tested on a continuing basis in all mission modes and at operating tempos which are significantly over and above training tempos.
- Because of the rapid turnover of first-term enlistees and an inability to retain skilled personnel, the Navy needs more personnel with technical expertise and experience. The Navy is analyzing this problem and has several improvement programs underway.
- Decentralized management of contractor and Navy civilian technical personnel who assist Navy military personnel made it difficult to analyze the continuing need for their services.

GAO recommends that the Secretary of the Navy consider:

- Stocking low-or-no-demand items in the United States and using rapid air transportation when items are needed in the Pacific or Atlantic Fleets. Centralized stockage should make such items more accessible to all fleets and should reduce costs by reducing the number of items stocked.
- Using available air transportation and a sample of ships to test the feasibility of replenishing authorized stock levels on combatant ships and at advanced bases. The expected economic trade-off would be the ability to reduce requisitioning objectives aboard ships and at advanced bases.
- Giving top management attention to the program for the rework of aircraft components, to correct the management problems disclosed by the Department of Defense, the Navy, and GAO during recent reviews.
- Testing weapon systems intensively for all designed missions, to obtain data on the personnel training, maintainability, dependability, and logistic support needs for each mission role.
- Improve personnel retention programs by emphasizing the three most common reasons for not making a career of the Navy, that is, family separation, lack of personal freedom, and less than desirable living conditions on board ships.
- Centralizing the management of Navy civilian and contractor personnel, so that management could determine whether Navy personnel/training should be revised and whether the number of civilian and contractor personnel should be increased or decreased.

GAO further recommended that the Secretary of Defense ensure that the Navy is able to fully inform the Congress of the trade-offs and impacts at a stated level of resources for each of the below alternatives which the Congress may wish to consider during future hearings on the Navy's budget.

- Shifting the priority of resource allocation toward the current operational and maintenance needs of the ships, aircraft, and shore activities;
- Allocating additional operational and maintenance resources to upgrade the status of the fleets and shore activities; or
- Requiring that the size of the fleet and the number of supporting shore activities be reduced to levels which could be supported with available resources.

The Congress also may wish to weigh the trade-offs and impacts that each alternative will have on the size and combat readiness of the fleets in meeting current and potential threats in certain areas of the world as well as on overall U. S. foreign policy.

2. Summary of Department of the Navy Position

The Department of the Navy concurs that the Congress should be informed on the impact of the proposed Navy budget allocation on the size and combat readiness of the fleets.

The Department of the Navy concurs with the intent of the recommendations that centralized stockage and rapid air transportation could reduce costs by reducing stocks required. The Department of the Navy position is, and has been, to constantly review stockage to ensure a proper mix of range and depth for fleet support. The actions so taken and the GAO recommendation must be tempered by the support posture required to maintain readiness at advanced locations and by recognition of existing limited air freight resources.

The Department of the Navy concurs with the intent of the recommendation that using available air transportation and a sample of ships to test the feasibility of replenishing authorized stock levels on combatant ships and advanced bases could have an expected potential for savings within the Navy. Because of the current reduction in MAC airlift and fuel conservation policy, this test will be scheduled when there is a reasonable prospect for obtaining conclusive results.

The Department of the Navy concurs with the intent of the recommendation to test weapons systems intensively. The Navy will continue to test all systems with the best technical means available within funded constraints. Advancements in instrumentation technology will be utilized wherever cost effective.

The Department of the Navy concurs with the remaining recommendations not mentioned above. Actions are currently underway or will be initiated to implement the recommendations.

3. Statement

This draft report has been thoroughly reviewed for accuracy of factual data and comment therein. The Department of the Navy finds no inaccuracies of data or substantive errors in the content of the draft report.

Statements concerning the Department of the Navy position on each recommendation follows:

GAO recommends that the Secretary of the Navy consider:

- Stocking low-or-no-demand items in the United States and using rapid air transportation when items are needed in the Pacific or Atlantic Fleets. Centralized stockage should reduce costs by reducing the number of items stocked.

Department of the Navy Position: The GAO report describes the many influencing factors which make the selection and positioning of stocks a difficult task and recommends actions to minimize the depth of low-or-no-demand items and more dependence on rapid air transportation when items are required in forward areas. The Navy concurs in the basic objectives inherent in the GAO findings, conclusions and recommendations. As noted in the GAO report, the Navy has and is taking actions that are in consonance with the GAO recommendations. Several interim actions and a number of new policies were promulgated in OPNAVINST 4441.12A of 9 August 1973, an overall policy directive covering supply support of the operating forces. A more detailed policy document covering the management of repairables was promulgated as OPNAVINST 4400.9 of 24 August 1973. In line with the GAO recommendations these documents provide for:

- A reduced range of items carried in allowance documents for support of ships.
- Prohibition against inclusion of insurance items in both organic and first echelon allowance support, (i.e., one or the other).

APPENDIX X

- Constraints on the depth of initial procurements, with recognition for temporary degradation of support pending development of demand patterns.
- Restriction on depth of stocks for repairable items, with dependence on rapid air transportation, for reducing investment in stock levels and pipeline costs.
- More restrictive criteria and guidance for utilization and management of Fleet Program Support Material (FPSM).

In addition to the actions cited above, the Navy has several research and modeling type projects in process to assist in refining supply support policies to provide more cost effective supply support to the operating forces.

GAO recommends that the Secretary of the Navy consider:

- Using available air transportation and a sample of ships to test the feasibility of replenishing authorized stock levels on combatant ships and at advanced bases. The expected economic trade-off would be the ability to reduce requisitioning objectives aboard ships and at advanced bases.

Department of the Navy Position: The Navy concurs with the GAO recommendation to test the feasibility of replenishing authorized stock levels by obtaining economic trade-offs with a reduction of requisitioning objectives. In view of the current fuel conservation policies and reduction in frequency of MAC channel airlift, this test will be scheduled when there is a reasonable prospect for obtaining conclusive results.

GAO recommends that the Secretary of the Navy consider:

- Giving top management attention to the program for the rework of aircraft components, to correct the management problems disclosed by the Department of Defense, the Navy, and GAO during recent reviews.

Department of the Navy Position:

The requirement for program improvement for the repair of aircraft components has been recognized. Several improvements have already been implemented and many others are currently in the development stage.

The Navy has applied refined managerial procedures on an aviation weapon system basis to purify the system requirements. This has resulted in more accurate rework requirements as well as reducing pipe line and total system asset requirements in many cases. These procedures will be expanded to cover more weapons systems.

In the third quarter of FY-74, the BØ8 scheduling program will be implemented to replace the present program. This will allow automatic scheduling of inputs and provide better program control by providing induction/noninduction feedback on an item basis. Automatic repair information input will be available to the Inter-service Depot Maintenance Interrogation System (ISMIS) allowing more effective use of interservice repair capability.

Level scheduling will be implemented in the third quarter of FY-74. Selected items which have a known high volume/cost annual requirement will be scheduled on an annual basis with quarterly requirement updates. This will allow the rework facilities to produce the items in an orderly programmed manner. Improvements in productivity, quality and rework capability utilization are expected to be realized.

By July 1974, all Rework Activities will have implemented the Weekly Induction Scheduling System (WISS). This will shorten the induction process as well as ensure that inductions are in accordance with the scheduled requirements priorities.

In addition to the above, a special task group headed by RADM Crosby (ASO) and RADM Andrews (REPLANT) was formed in August of 1973 and visited all the Rework Facilities in September and November of 1973. The group was comprised of members from the Naval Supply Systems Command, Aviation Supply Office (ASO), Naval Air Systems Command and the fleet type commanders. The purpose of the group is to determine what can be done for the component rework program at the Rework Facility level to reverse the trend of decreasing supply effectiveness, and increasing not-operational-ready aircraft.

GAO recommends that the Secretary of the Navy consider:

- Testing weapon systems intensively for all designed missions, to obtain data on the personnel training, maintainability, dependability, and logistic support needs for each mission role.

Department of the Navy Position: The Navy concurs with the intent of this recommendation. Currently about one-half the systems undergoing evaluation under the DSARC are Navy systems. Other navy systems, not under the DSARC, will also be tested and evaluated by formal navy processes. Testing continues with use. Failures in use are evaluated for cause and most economic fix. As pointed out by the report, failure is a result of complex factors such as maintenance, tempo of operations, quality of

APPENDIX X

trained personnel, design, and funding, to name just a few. The Navy will continue to test all systems with the best technical means available within funded constraints. Advancements in instrumentation technology will be utilized wherever cost effective. Current programs under evaluation are vibration analysis for machinery and extension of lube oil analysis and other current analysis methods such as temperature, pressure, flow rate, RPM, etc., including establishment of central data banks to facilitate and correlate analyses.

GAO recommends the Secretary of the Navy consider:

- Improve personnel retention programs by emphasizing the three most common reasons for not making a career of the Navy, that is, family separation, lack of personal freedom, and less than desirable living conditions on board ships.

Department of the Navy Position: The Navy concurs with the recommendation and will continue to use every available means to improve the extensive and high priority programs in progress to retain navy personnel. Each of the three areas mentioned will continue to receive the personal attention of the Chief of Naval Operations.

GAO recommends the Secretary of the Navy consider:

- Centralizing the management of Navy civilian and contractor personnel, so that management could determine whether Navy personnel/training should be revised and whether the number of civilian and contractor personnel should be increased or decreased.

Department of the Navy Position: The Navy concurs with the intent of this recommendation. The Navy has been aware that a need exists for improved centralized management of technical services support to the Fleet. As a means to improve the overall management and to facilitate coordination, a special advisory committee has been tasked to review and make recommendations concerning the use and provision of Navy technical services personnel. The committee's objectives are to achieve increased coordination with the manpower and training communities, to determine overall technical services requirements and to optimize utilization of funds and contractor/in-house personnel resources.

GAO recommends that the Secretary of Defense insure that the Navy is able to fully inform the Congress of the trade-offs and impacts at a stated level of resource for each of the below alternatives which the Congress may wish to consider during future hearings on the Navy's budget.

- Shifting the priority of resource allocation toward the current operational and maintenance needs of the ships, aircraft, and shore activities;

- allocating additional operational and maintenance resources to upgrade the status of the fleets and shore activities; or
- requiring that the size of the fleets and the number of supporting shore activities be reduced to levels which could be supported with available resources.

The Congress also may wish to weigh the trade-offs and impacts that each alternative will have on the size and combat readiness of the fleets in meeting current and potential threats in certain areas of the world as well as on overall U.S. foreign policy.

Department of the Navy Position:

The Department of the Navy concurs that the Congress should be informed on the impact of the proposed Navy budget allocation on the size and combat readiness of the fleets in meeting current and potential threats in certain areas of the world as well as on overall U.S. foreign policy. The rationale supporting the FY-73 budget request did include the anticipated impact of that proposed allocation on the Navy's present and future capabilities.

The Navy also concurs that perhaps additional effort should be undertaken to more completely articulate to appropriate Congressional committees the underlying trade-off considerations and rationale which form the basis for broad, long range resource allocation decisions affecting the composition and operational readiness of the fleet both in the near term and in the future. Such trade-off considerations are extremely complex, are being engaged in continually, and are crucial to the formation of a viable overall defense posture. Admittedly, the balance is delicate and the impact on the force structure is large. However, it would not be helpful to Congress to become intricately involved in the trade-offs process considering the precious time available and the massive task it already faces under the existing burdensome budgetary review procedures.

The recent decisions to emphasize long range development and construction of the Navy of the 1980s, somewhat at the expense of short term operating and maintenance considerations, reflect the necessity to overcome, while in a very restrictive fiscal environment, the degradation of the current fleet composition which has occurred over the past several years. In years past, the future was neglected due to pressing contemporary operational needs. As a result, our relative standing with respect to potential adversaries has continually worsened. The Navy is now seeking to reverse that trend and the trade-off considerations involved, under stringent budgetary limitations, dictate sacrifice and attendant risk in short term operational and maintenance posture. The long term implications of this situation are now generally understood by most observers of national and naval policy.

APPENDIX XI

PRINCIPAL OFFICIALS RESPONSIBLE
FOR ACTIVITIES DISCUSSED IN THIS REPORT

	<u>Tenure of office</u>	
	<u>From</u>	<u>To</u>
<u>DEPARTMENT OF DEFENSE</u>		
SECRETARY OF DEFENSE:		
James R. Schlesinger	June 1973	Present
William P. Clements, Jr. (acting)	Apr. 1973	June 1973
Elliot L. Richardson	Jan. 1973	Apr. 1973
Melvin R. Laird	Jan. 1969	Jan. 1973
DEPUTY SECRETARY OF DEFENSE:		
William P. Clements, Jr.	Feb. 1973	Present
Kenneth Rush	Feb. 1972	Jan. 1973
David Packard	Jan. 1969	Feb. 1972
ASSISTANT SECRETARY OF DEFENSE (INSTALLATIONS AND LOGISTICS):		
Arthur I. Mendolia	Apr. 1973	Present
Hugh McCullough (acting)	Jan. 1973	Apr. 1973
Barry J. Shillito	Feb. 1969	Jan. 1973
ASSISTANT SECRETARY OF DEFENSE (MANPOWER AND RESERVE AFFAIRS):		
William K. Brehm	Sept. 1973	Present
Carl W. Clewlow (acting)	June 1973	Aug. 1973
Roger T. Kelley	Feb. 1969	June 1973
COMMANDER IN CHIEF, U.S. PACIFIC COMMAND:		
Noel A. M. Gayler	Sept. 1972	Present
John S. McChain	Jan. 1972	Aug. 1972

APPENDIX XI

Tenure of office		
	<u>From</u>	<u>To</u>

DEPARTMENT OF THE NAVY

SECRETARY OF THE NAVY:

John W. Warner	Apr. 1972	Present
John H. Chafee	Jan. 1969	Apr. 1972

UNDER SECRETARY OF THE NAVY:

J. Wm. Middendorf	Aug. 1973	Present
Frank Sanders	Apr. 1972	Aug. 1973

ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND LOGISTICS):

Jack L. Bowers	June 1973	Present
Charles L. Ill	July 1971	May 1973

ASSISTANT SECRETARY OF THE NAVY
(MANPOWER AND RESERVE AFFAIRS):

Joseph T. McCullen	Sept. 1973	Present
James E. Johnson	June 1971	Sept. 1973

ASSISTANT SECRETARY OF THE NAVY
(FINANCIAL MANAGEMENT):

Robert D. Nesen	May 1972	Present
Vacant	Apr. 1972	May 1972
Frank Sanders	June 1971	Apr. 1972

CHIEF OF NAVAL OPERATIONS:

Adm. Elmo R. Zumwalt, Jr.	July 1970	Present
Adm. Thomas H. Moorer	Aug. 1967	June 1970

COMMANDER IN CHIEF, U.S. PACIFIC
FLEET:

Adm. Maurice F. Weisner	Oct. 1973	Present
Adm. Bernard A. Clarey	Jan. 1972	Sept. 1973

COMMANDER, SEVENTH FLEET:

Vice Adm. George P. Steele	Aug. 1973	Present
Vice Adm. James L. Hollaway	June 1972	July 1973

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