

108233

REPORT BY THE U.S.

General Accounting Office

Millions Of Dollars Can Be Saved By Improved Management Of Aircraft Carrier Inventories

The Navy can save over \$100 million in future procurement and repair cost on aviation parts for support of aircraft carriers. This can be accomplished together with an increase in supply readiness by improving policies and procedures for establishing and maintaining optimum stock levels on aircraft carriers for support of assigned aircraft.



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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS
DIVISION

B-133118

The Honorable Harold Brown
The Secretary of Defense

Dear Mr. Secretary:

This report shows that the Navy can save over \$100 million in future procurement and repair costs on aviation parts for support of aircraft carriers. This can be accomplished, together with a concomitant increase in supply readiness, by improving policies and procedures for establishing and maintaining optimum stock levels on aircraft carriers for support of assigned aircraft.

Chapters 2, 3, and 4 of this report contain a number of recommendations to the Secretary of the Navy. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report, and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Director, Office of Management and Budget; the Chairmen, Senate Committee on Governmental Affairs, House Committee on Government Operations, and the Senate and House Committees on Appropriations and Armed Services; and the Secretary of the Navy.

Sincerely yours,

A handwritten signature in cursive script, reading "R. W. Gutmann".

R. W. Gutmann
Director



D I G E S T

During a recent 2-year period, Atlantic and Pacific Fleet aircraft carriers reported inventory excesses and shortages averaging \$154 million and \$216 million, respectively. GAO found that these conditions were caused by:

- Lack of adequate management controls and supply discipline to prevent overordering. (See pp. 5 and 6.)
- Untimely and inaccurate updating of inventory records. (See p. 6.)
- Failure to promptly cancel or redistribute excess stocks. (See pp. 8 and 12.)
- Failure to order needed stocks on a timely and accurate basis. (See p. 14.)
- Untimely and inaccurate updating of inventory allowances in response to changes in usage. (See p. 18.)
- Inadequate funding controls and visibility over aircraft carrier inventories at higher management levels. (See p. 23.)

For example:

- Carrier supply personnel were ordering replacements for items already in excess supply without first checking on-hand and on-order quantities in relation to authorized allowances. (See p. 6.)
- Carrier inventory record accuracy rates were no higher than 64 percent and as low as 12 percent in some cases. Aboard one carrier there were sufficient assets on hand but not reflected on inventory

records to fill 40 percent of requisitions for critically needed items. (See pp. 6, 7, and 14.)

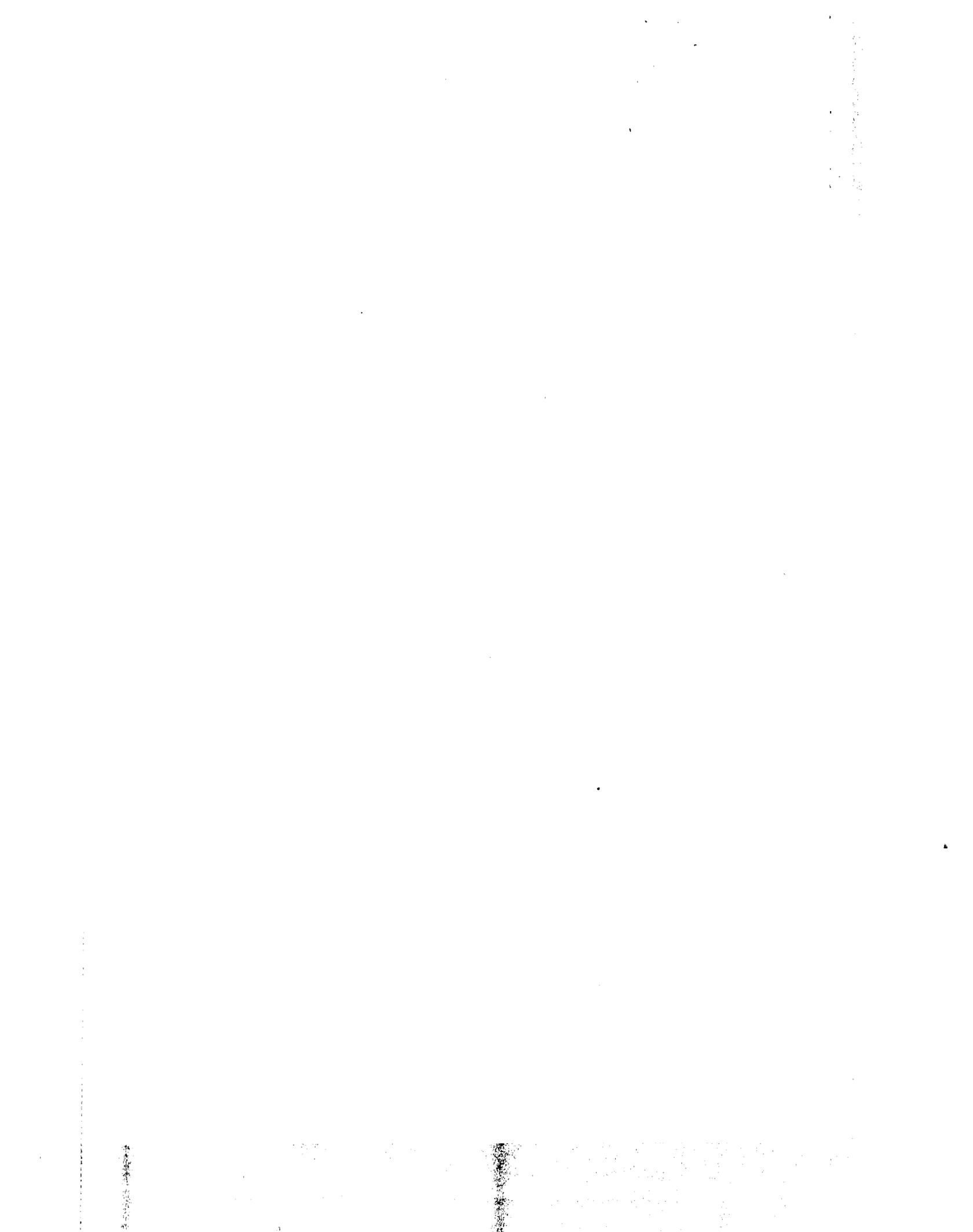
- Inventory dollar shortages reported by aircraft carriers and used as a basis for obtaining additional procurement funds were overstated by 33 percent. (See p. 13.)
- Stock excesses averaging about \$62 million were retained on board some carriers for 2 or more years, of which about \$27 million were needed but not available to fill valid inventory shortages of other carriers or shore-based activities. (See p. 12.)
- Despite the large excesses on board aircraft carriers, none of the carriers was able to meet the 85 percent supply fill rate standard during periods of operational deployment. (See p. 14.)
- Aircraft carrier inventory allowances for aviation items were overstated because they were based on usage data as much as 8 years old in some instances. (See pp. 18 and 19.)

The Navy can save an estimated \$114.8 million on future procurement and repair of aviation parts for aircraft carriers over an 18-month period. Also, the large inventory excesses and shortages continuously experienced aboard carriers can be substantially lessened. This can be accomplished, together with a concomitant increase in supply responsiveness, by:

- Improving shipboard management to insure (1) more stringent requisitioning controls, (2) more timely and accurate updating of inventory records, and (3) more timely cancellation or redistribution of excess stocks. Savings? \$88.4 million. (See ch. 2.)
- More timely and accurate updating of carrier inventory allowances in response to changes in usage. Savings? \$26.4 million. (See ch. 3.)

--Improving controls and visibility over aircraft carrier inventories at higher management levels. Savings? Undeterminable.
(See ch. 4.)

The Navy and Department of Defense agreed with GAO's findings and corrective actions. Also, corrective actions already taken by the Navy will result in procurement and repair cost savings totaling \$65.8 million. Additional procurement and repair cost savings estimated at \$49 million should result from the corrective actions currently being taken by the Navy. (See ch. 5.)



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ABBREVIATIONS

ASO Aviation Supply Office
CLAMP Closed Loop Aeronautical Management Program
DOD Department of Defense
GAO General Accounting Office

CHAPTER 1

INTRODUCTION

The Navy's 12 attack aircraft carriers were authorized stock inventories valued at \$857 million in December 1977. In theory, this authority represents the materiel needed to sustain uninterrupted mission operations for 90 days under wartime conditions. Because of limited resupply capability at sea, carriers must rely heavily on these inventories while on station.

Carriers operate on deployment cycles that average about 18 months, and include a period of about 6 to 7 months in which the carrier is on station. About 11 to 12 months is divided between restricted availability in the shipyard and type training in preparation for the next onstation period.

NATURE AND SOURCE OF AIRCRAFT CARRIER INVENTORIES

For supply management purposes, each aircraft carrier has two separate inventories, one for the aviation community and one for the ship. Allowance lists are the basic authority and blueprint for the range and quantity of items to be stocked in each inventory. Each list is tailored to the needs of each carrier based on such information as estimated maintenance requirements, supply usage, maintenance action histories, and firsthand experience by carrier and type command supply personnel. New and/or unidentified requirements are added to inventories through new or increased allowance lists and through the demand based supply system.

The Aviation Consolidated Allowance List provides the basic aviation inventory. In December 1977, the total authorized aviation inventories for the Navy's 12 carriers was \$771 million or 90 percent of the total authorized inventory. Aviation inventories for new carriers are initially based on inventory allowances aboard carriers with similar aircraft in their deckloads (ranges from 87 to 90 aircraft). They are supposed to be revised at the end of each deployment cycle, or about every 18 months, to make adjustments for changes in supply usage and aircraft in the deckload. The Aviation Supply Office (ASO) constructs and maintains the aviation allowance lists.

The Coordinated Shipboard Allowance List provides the basic inventory of ship supplies and repair parts. In December 1977, the authorized total shipboard inventories for the Navy's 12 aircraft carriers was \$86 million or 10 percent of

the total authorized inventory. Shipboard inventory allowances are revised only during major ship overhaul about every 5 years. The Ship Parts Control Center constructs and maintains shipboard allowance lists.

AIRCRAFT CARRIER INVENTORY FUNDING

For funding purposes, supplies and repair parts are classified as either Navy Stock Account or Appropriated Purchase Account items. Consumable Navy stock account items are purchased by aircraft carriers from the wholesale stock fund with fleet funds. In December 1977, the Navy's 12 carriers were authorized \$138 million in stock-funded materiel.

Appropriated Purchase Account items, which are reparable, are managed on a fixed-allowance basis. These are issued to the customer free of charge by wholesale inventory managers. Allowance changes are subject to approval by wholesale inventory managers. Although aircraft carriers have substantial intermediate maintenance capability, appropriation-funded items cannot always be repaired aboard ship. In such instances, the carrier is required to turn the unserviceable items into the wholesale supply system at the time the replacement item is requisitioned. In December 1977, the Navy's 12 carriers were authorized to stock \$719 million in appropriation-funded stocks. In fiscal year 1978, ASO was authorized to spend \$373 million of appropriation funds to replenish worn-out spares and an additional \$37 million of appropriation funds for initial provisioning.

SUPPLY MANAGEMENT POLICY AND GUIDANCE

The basic Navy policy for supply requirements determination, supply distribution, and control of shipboard stock levels is dictated by the Chief of Naval Operations in OPNAVINST 4441.12A, August 9, 1973, and OPNAVINST 4400.9, August 24, 1973. The Chief of Naval Materiel and his subordinate commands are responsible for providing the Navy activities with the direction needed to implement the supply management policy.

SHIPBOARD SUPPLY MANAGEMENT

Basic policies and procedures for use in the management of shipboard inventories are prescribed by the two fleet carrier type commands. They have published Commander Naval Air Force Atlantic (COMNAVAIRLANT) Instruction 4440.11C

February 4, 1977, and Commander Naval Air Force Pacific (COMNAVAIRPAC) Instruction 4440.14A, July 28, 1976, to guide shipboard supply management personnel.

The basic tool for aircraft carrier supply management is the Shipboard Uniform Automated Data Processing System--End Use. The system is intended to provide supply personnel with accurate and timely information needed to support shipboard customers and to effectively manage shipboard inventories. The system is capable of doing such functions as

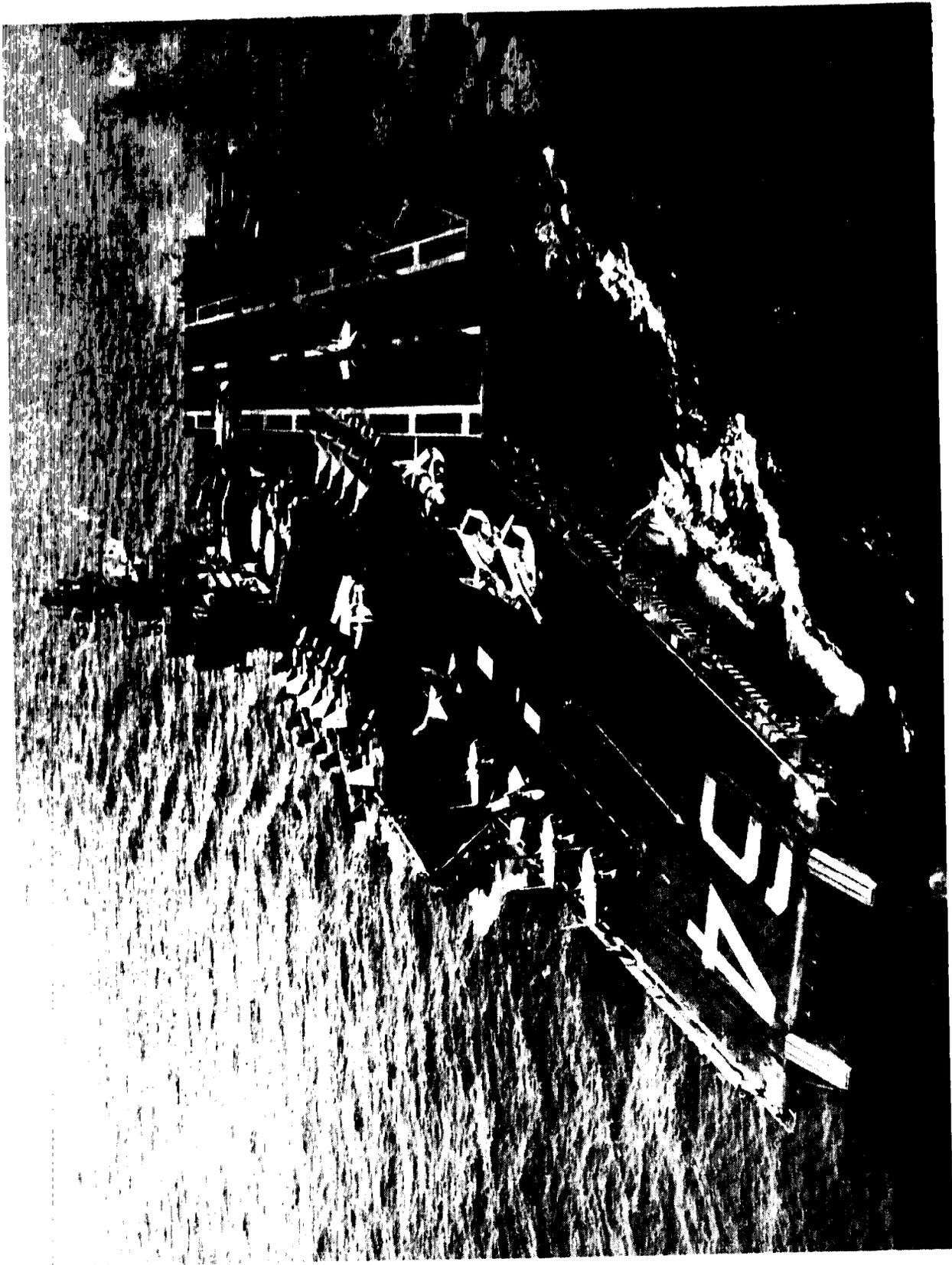
- maintaining a master record file with 24-month transaction history for every line item in the inventory;
- periodically recomputing stocking levels for demand based items;
- providing up-to-date listings showing such data as allowances, on-hand quantities, and locations for all shipboard stock; and
- providing periodic reports for guiding management action.

The Naval Supply Systems Command Publication 518 provides detailed instructions for operating Shipboard Uniform Automated Data Processing System--End Use.

Management of excesses

Excess materials are generated within the carrier's supply system for various reasons, such as, overordering, revisions to allowances, and inventory gains. Regulations of both the Atlantic and Pacific Fleet require that all excesses on order be cancelled immediately after they are identified as excesses. These regulations state that not more than 2 percent of the appropriation-funded items on board carriers will have excess on-order stocks.

The regulations also state that appropriation-funded excesses will be offloaded within 30 days after they are identified. Effective supply management dictates that excesses be redistributed among the users to satisfy their deficiencies.



Courtesy · U.S. Navy
ONE OF FIVE AIRCRAFT CARRIERS AUDITED--USS CONSTELLATION ON DEPLOYMENT IN WESTERN PACIFIC

CHAPTER 2

NEED TO IMPROVE SUPPLY MANAGEMENT

ABOARD AIRCRAFT CARRIERS

The large inventory excesses and shortages continuously experienced by aircraft carriers can be substantially reduced and an estimated \$88.4 million can be saved. A part of this savings (see p. 12), \$27.4 million, can be obtained by using excesses aboard some carriers to satisfy shortages of like items aboard other carriers or shore-based aviation units. The remaining \$61 million potential future savings (see p. 14) can be achieved by basing requests for funds on more accurately determined shortages of aviation reparable items. This can be accomplished, together with a concomitant increase in supply responsiveness, by improved shipboard supply management.

IMPROVEMENTS IN SHIPBOARD MANAGEMENT NEEDED TO REDUCE EXCESSES

Over a 2-year period ending December 31, 1977, Atlantic and Pacific Fleet aircraft carriers have periodically reported to their Fleet commands stock excesses averaging \$154 million of which \$138.7 million represented appropriation-funded aviation reparable items. The continuing large buildup of stock excesses aboard carriers can be minimized by more (1) stringent requisitioning controls, (2) timely and accurate updates of inventory records, and (3) timely identification and cancellation or redistribution of excess stocks.

More stringent requisitioning controls needed

One of the primary causes of carrier-based excesses is lack of adequate management controls and supply discipline to prevent ordering excessive amounts of material. A 1975 Navy audit of Atlantic Fleet carriers revealed that 72 percent of the excess on-order stocks reported were for fixed allowance or nondemand based items. Navy auditors concluded that a primary contributing source of carrier-based excess inventories was receipt of materiel requisitioned in excess of requirements.

For 2 years, ending December 31, 1977, the Atlantic and Pacific Fleet carriers reported monthly to their Fleet commands on-order stock excesses averaging \$46 million, or 24 percent of the total value of stock on order. Our

analysis revealed that 87 percent of the excesses were related to fixed allowance appropriation-funded aviation reparables, and therefore, were the result of excessive ordering and not fluctuations in demand.

From the monthly excess on-order listings of 4 carriers, we selected 124 items with outstanding orders for materiel in excess of requirements. In most instances, the overordering involved a one-for-one replacement of appropriation-funded aviation reparables. When an inoperable reparable item cannot be repaired by the carrier's maintenance activity, it is sent to a shore-based repair point and a replacement ordered. We found that the carriers were ordering replacements for items already in excess supply without first checking on-hand and on-order quantities in relation to fixed allowances, thus perpetuating excesses.

More timely and accurate updating
of inventory records needed

Another primary cause of carrier-based excesses is untimely and inaccurate updating of inventory records. Aircraft carriers are required to achieve and maintain from 85-percent to 100-percent stock record accuracy depending on the materiel category. Complete and sample physical inventories taken during fiscal years 1976 and 1977 by the five audited carriers revealed item stock record error rates ranging from 21 to 32 percent and gross physical inventory dollar adjustment ratios (ratio of physical inventory dollar adjustments made to stock records to value of materiel physically inventoried) ranging from 61 to 88 percent.

Carriers do not have a standard for gross physical inventory dollar adjustment ratios. However, the Navy Supply Systems Command recognizes this as an important benchmark in measuring record accuracy and has established a 3-percent standard.

GAO's physical inventory tests of stock record accuracy for over 500 items, including 310 items with either reported on-hand and on-order excesses or shortages aboard five carriers revealed item error rates ranging from 48 to 88 percent. Also, these physical inventory tests revealed that dollar excesses and shortages reported by carriers had validity rates of only 45 percent and 67 percent, respectively.

CLAMP (Closed Loop Aeronautical Management Program) items aboard aircraft carriers, are supposed to receive the greatest degree of shipboard control because of their high cost and criticality. The carrier commands have established

a minimum inventory record accuracy standard of 95 percent for these items. GAO's physical inventories of 140 CLAMP items aboard the USS KENNEDY revealed 50 items with stock record errors, for an accuracy rate of 64 percent. Allowance quantities for the 50 items were overstated by \$62,076, and on-hand quantities were understated by \$116,217.

As a result of a 1978 wall-to-wall physical inventory taken aboard the USS KENNEDY, \$7 million in appropriation-funded aviation items, including 478 CLAMP items, were written off the inventory records as unaccounted-for losses. In a number of instances, we found that quantities of items dropped from inventory record balances as unaccounted-for losses were being repaired by the carrier's maintenance activity. For example, one unit of a CLAMP item valued at \$61,710 was written off as an unaccounted-for loss because the inventory records showed one unit on hand which could not be located. We found this unit plus two additional units awaiting repair in the carrier's maintenance shop. Thus, an inventory gain of two units should have been recorded instead of a loss of one unit resulting in an inventory understatement of \$185,130.

In addition, aboard the USS CONSTELLATION, inventory records for aviation items (mostly CLAMP) were arbitrarily and erroneously adjusted in August 1977 to reflect inventory allowances \$3.4 million higher than authorized. This was done to arbitrarily reduce reported on-hand stock excesses.

We found that the majority of physical inventory dollar adjustments made to stock records by the five carriers during fiscal years 1976-77 represented inventory gains, indicating a substantial receipt-processing problem. For example, the USS MIDWAY experienced gross physical inventory stock record adjustments of \$22 million, of which \$16 million represented inventory gains. Similarly, the USS KENNEDY experienced \$17.5 million of gross physical inventory adjustments, of which \$16 million represented gains.

Our analysis of physical inventory gains and receipt processing practices aboard the five audited carriers revealed that materiel receipts were either frequently not recorded or recording was delayed up to 167 days. We could find no written carrier command standards for processing receipts. However, DOD has established a standard of 5 days, which is generally observed by the military services. Because of substantial delays in processing materiel receipts and loss of receipt documents, the five carriers we reviewed administratively wrote off, i.e., removed from due-in records and destroyed, outstanding orders for materiel which were still on hand 45 to 120 days after receipt of shipment notice.

For example, 18 percent of the outstanding orders of the USS MIDWAY were administratively written off over a 10-month period. The carriers assumed the ordered materiel had either been lost in shipment or received but not posted to the stock records.

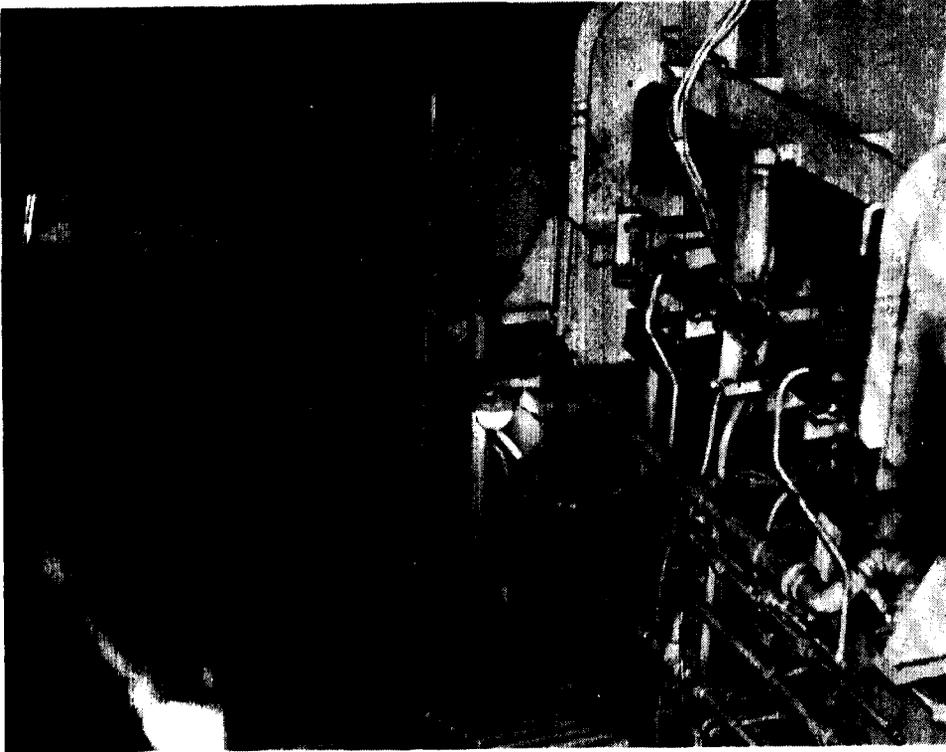
The primary factors contributing to either failure or delays in recording materiel receipts aboard the carriers were (1) lack of or inadequate receipt-in-process visibility and standards to insure materiel receipts are properly accounted for and recorded in a timely manner and (2) keypunching problems (shortages of keypunch personnel and equipment).

At the onset of this review, we were advised by the carrier command officials that the computerized inventory data bases aboard carriers were no more than 60 percent accurate due to unreliable and oversaturated second generation computer equipment installed aboard carriers in 1971. According to these officials, this condition could be substantially alleviated by replacing the existing equipment with third generation equipment which is scheduled for the early 1980s. We do not agree with the command officials' assessment that the installation of new computer equipment will substantially alleviate existing inventory record accuracy problems. As mentioned above, our tests show that the inaccurate inventory data bases were caused to a great extent by inadequate management controls and supply discipline.

More timely cancellation or redistribution of excess stocks needed

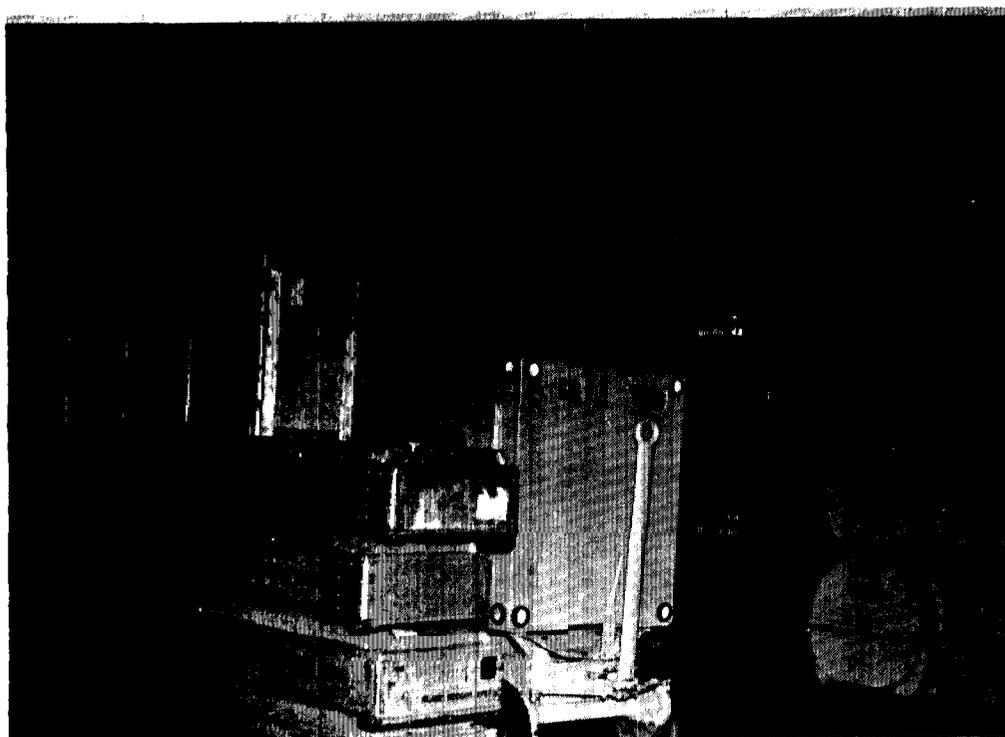
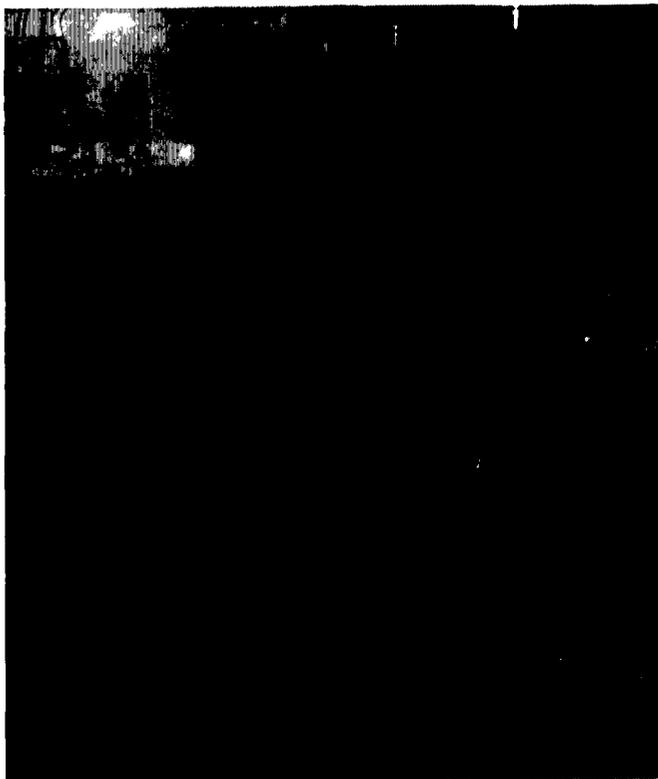
A more timely cancellation or redistribution of carrier-based stock excesses is needed to avoid prolonged retention and ultimate disposal of millions of dollars worth of inventories not available when needed to fill shortages elsewhere.

The Atlantic and Pacific Fleet carrier commands have established standards and requirements to be observed by aircraft carriers in controlling the buildup and retention of stock excesses. They are required to compare recorded on-hand and on-order quantities to their fixed allowances monthly and report any excesses in either category to their fleet commander. Both fleet commands stipulate that not more than 2 percent of the appropriation-funded aviation items on board carriers will have excess on-order stocks. Also, both fleet commands limit excess on-order quantities for stock-funded items to 8 percent or less of the total stock on order. Additionally, both fleet commands require



Courtesy - U.S. Navy

REPLENISHMENT AT SEA AND MATERIEL RECEIPT PROCESSING ABOARD USS AMERICA ON DEPLOYMENT IN MEDITERRANEAN



Courtesy - U.S. Navy

MATERIEL BIN AND BULK STORAGE LOCATIONS ABOARD USS AMERICA

that, if on-order excesses for appropriation-funded items exceed the 2-percent standard, carriers analyze the top 20 excess on-order items (Atlantic Fleet) and the 50 top excess on-order items (Pacific Fleet), and report to the carrier commands the underlying causes and actions being taken to prevent a recurrence.

Pacific Fleet carriers on-hand stock excesses are limited to 5 percent or less of the total authorized inventory value for stock-funded items. Also, no more than 4 percent of the number of appropriation-funded aviation items can be in an excess status. There are no standards for limiting the buildup of on-hand stock excesses aboard Atlantic Fleet carriers.

The excess on-order stocks are supposed to be systematically identified and promptly canceled by Atlantic and Pacific Fleet carriers. Additionally, these carriers are required to offload excess on-hand stocks of appropriation-funded aviation items within 30 days after identification, during periods of homeport availability between overseas operational deployments. Excess on-hand stock-funded items are supposed to be completely offloaded annually.

For the 2-year period ending December 31, 1977, aircraft carriers periodically reported to their fleet commands on-hand and on-order excesses ranging from \$98.6 million to \$133.9 million and from \$24.1 million to \$73.5 million, respectively. As a percent of total stock on hand, the reported on-hand excesses ranged from 18 percent to 25 percent. The reported on-order excesses as a percent of the total value of stock on order ranged from 12 percent to 37 percent.

As illustrated below, the on-order excesses for appropriation-funded aviation items reported over the 2-year period by four of the carriers reviewed exceeded the 2-percent standard imposed by the fleet commands. Notwithstanding this, these carrier commands did not analyze or report, as required, to the fleet commands the causes of the on-order excesses for the top 20 items (Atlantic Fleet) or top 50 items (Pacific Fleet) and did not take corrective actions needed to prevent a recurrence.

Ratio of Reported On-Order Excesses To 2-Percent Standard

(1) Aircraft carrier	(2) Average stock objective		(3) Average on- order stocks		(4) Average excess on-order		(5) Ratio (%)
	No. of items	Value (millions)	No. of items	Value (millions)	No. of items	Value (millions)	No. of items (Col. 4 + Col. 2)
NIMITZ	4,828	\$54.3	1,720	\$25.9	518	\$6.9	10.7
MIDWAY	3,478	32.7	1,149	10.3	378	2.4	10.8
KENNEDY	7,182	74.7	1,566	17.0	552	5.6	7.6
AMERICA	6,707	68.4	990	12.3	208	2.3	3.1

Our tests aboard the five carriers showed that cancellation is attempted on only about 13 percent of excess on-order items. No attempt is made to cancel excess on-order stock for which notice of pending shipment or notice that order cannot be filled until supply system is replenished from new procurements has been received. We found that these carriers were unsuccessful in approximately 67 percent of their cancellation attempts.

In addition, aircraft carriers are not promptly offloading stock excesses as required. For example, our analysis of the extent and duration of on-hand excesses for 25 items on board the Pacific Fleet carrier, the USS MIDWAY, showed excesses equal to 108 years of supply. Furthermore, 48 percent of the excesses had been on board a year or more.

Based on the average on-hand and on-order excesses for aviation reparable items (\$138.7 million) periodically reported by the carriers over the 2-year period and the results of our tests of the (1) validity of the on-hand and on-order dollar excesses reported by the five carriers reviewed (see p. 6) and (2) supply system requirements for stock excesses retained on these carriers, we estimate that the Navy's fleet of aircraft carriers continue to retain stock excesses averaging \$62.4 million for indefinite periods of 2 or more years. Forty-four percent, or \$27.4 million of these excesses are needed to fill inventory shortages of other carriers or shore-based activities.

Regarding the \$27.4 million figure estimated above, we randomly selected 157 items with excess on-hand stocks valued at about \$4.1 million from the five audited carriers. The inventory managers for these items had buy or repair requirements valued at \$1.8 million for the selected item excesses, or 44 percent of the selected dollar excess.

The importance of controlling the buildup of stock excesses on board carriers and promptly offloading excesses needed elsewhere is highlighted by the fact that, in fiscal year 1976, the Navy disposed of \$437 million of excess aviation items, of which an estimated \$197 million or 45 percent was generated by aircraft carriers. This estimate is based on the ratio of aviation item dollar excesses turned in to the supply system by aircraft carriers to the total dollar value of aviation item excesses turned in by all sources.

IMPROVEMENTS IN SHIPBOARD MANAGEMENT NEEDED TO REDUCE DEFICIENCIES

For the 2-year period ending December 31, 1977, Atlantic and Pacific Fleet aircraft carriers have periodically reported to their fleet command officials inventory shortages of appropriation-funded aviation items averaging \$216 million. As a percentage of inventory objectives, these shortages averaged 34 percent. The large inventory shortages continuously experienced by aircraft carriers can be substantially reduced by (1) improved reliability of computerized inventory data bases and (2) improved requisitioning controls.

Need for improved reliability of computerized inventory data base

The Navy asked the Congress for \$474 million in appropriated funds for fiscal year 1978 to buy aviation reparable items needed to fill inventory shortages of aircraft carriers and shore-based aviation units. Of this amount, \$410 million, or 86 percent, was appropriated and funded for the purchase of aviation reparable items. We were advised by fleet command and carrier supply officials that the large inventory shortages reported by aircraft carriers were vastly overstated because of inaccurate records and excessive allowances. As discussed on page 6, our physical inventory tests aboard five aircraft carriers revealed that reported inventory dollar shortages were overstated by 33 percent.

Our tests revealed that the primary causes of inventory record inaccuracies contributing to overstated inventory shortages were the same as the causes contributing to overstated inventory excesses. Namely, the frequent failure of carrier supply personnel to (1) take into account inoperable aviation reparable items in the repair cycle when taking physical inventories, resulting in erroneous physical inventory loss adjustments and (2) record or record promptly materiel receipts. See pages 7 to 8 for details and examples of these problems.

In reviewing these inaccurate inventory records, we found an adverse impact on operational readiness. For example, physical inventory sampling aboard the USS AMERICA of all items with high-priority requisitions outstanding from September 29 through October 20, 1977, showed that, in 40 percent of the instances, there were sufficient assets on hand but were not reflected on inventory records to fill requisitions causing nonoperational readiness status of aircraft.

Based on the above information, we estimate that over an 18-month cycle, the large inventory shortages reported by carriers can be substantially reduced and future savings of \$61 million achieved. In this respect, the \$216 million worth of average inventory shortages reported by carriers were overstated by 33 percent, or \$71 million. Approximately 86 percent of this amount, or \$61 million, was funded for procurement. Procurements made with fiscal year 1978 funds based on the overstated shortages of aviation reparable items represent sunk costs. These procurements may be used to satisfy future needs or if not used in this manner, they will eventually become excess. However, if the reported conditions are not corrected, the shortages will continue to be overstated. Furthermore, if the need for funds continues to be based on such overstated shortages, it will continue to be inflated to a similar degree.

Need for improved requisitioning controls

Additional tests done aboard the aircraft carriers showed that the primary causes of inventory shortages were improper demand coding of requisitions and infrequent reorder reviews for appropriation-funded aviation reparable items. According to Navy standards, aircraft carriers are supposed to be able to fill at least 85 percent of the requisitions received from their tenanted aviation units for appropriation-funded aviation items authorized for stockage.

But, according to supply effectiveness statistics reported by aircraft carriers for a 1-year period ending June 1977, none of the Navy's carriers were able to meet the 85-percent supply fill rate standard during periods of operational deployment. For example, the USS KENNEDY, which consistently reported large stock excesses and shortages, during a 6-month deployment could fill on the average only 45 percent of its customer requisitions for aviation reparable items.

Carrier requisitions for initial allowances of appropriation-funded reparable or increases in allowances are supposed to be coded nonrecurring so that the inventory manager will know that the reparable requisitioned are to fill initial allowances and, therefore, no turn-ins of inoperable reparable are required to obtain the item. If a carrier requisition for an appropriation-funded reparable is coded recurring, the inventory manager assumes the reparable is needed as a replacement and is not supposed to honor the requisition unless evidence of turn-in of an inoperable unit is furnished. Our tests aboard the carriers showed that requisitions to fill valid allowances for appropriation-funded reparable were frequently miscoded as recurring and, in many instances, rejected by the inventory manager.

Aircraft carriers are required to perform reorder reviews every 2 weeks for all appropriation-funded reparable deficiencies to insure timely identification and submission of followup requisitions for deficiencies created by rejection of previous requisitions at the manager level. Tests aboard USS AMERICA showed that valid inventory shortages for 21 appropriation-funded reparable had existed for approximately 9 months. The continuing prolonged duration of these deficiencies was identified by a reorder review performed in August 1977. Aboard the USS CONSTELLATION, tests showed that inventory shortages for 20 appropriation-funded reparable had existed for an average of 7.4 months. Supply officials felt that reorder reviews were not necessary because they would be a needless exercise in view of gross inaccuracies in the inventory data base.

RECOMMENDATIONS

Improvements are needed in supply management aboard aircraft carriers to avoid substantial unnecessary future inventory investments and to increase supply readiness. Accordingly, we recommend that the Secretary of the Navy take the following corrective actions:

- Establish a reasonable standard for processing of materiel receipts aboard carriers and a feedback system at the fleet carrier type commands for monitoring effectiveness of carriers in meeting this standard. Also, establish a system aboard carriers for maintaining complete visibility over receipts in process to insure timely storing and recording of materiel receipts.

- Require aircraft carrier commanders, as a part of their physical inventory programs, to perform causative research of significant inventory record inaccuracies to identify and resolve underlying recurring system problems. Also, aircraft carrier commanders should (a) include the results of their causative research and corrective actions being taken in their periodic reports of inventory record accuracy to the fleet carrier type commands, (b) establish as an additional benchmark for measuring and monitoring inventory record accuracy a gross physical inventory dollar adjustment ratio (ratio of gross dollar adjustments made to value of materiel physically inventoried), and (c) account for reparable's repair cycle before processing physical inventory loss adjustments.
- Direct fleet carrier type commands and higher management levels to give priority attention to alleviating data keypunching problems aboard aircraft carriers.
- Establish the necessary controls aboard carriers to prevent requisitioning of appropriation-funded reparable replacements for items already in excess supply.
- Require aircraft carrier commanders to comply with fleet carrier type commands' standards and requirements for limiting the buildup of and promptly off-loading stock excesses.
- Direct fleet carrier type commands and higher management levels to emphasize to their aircraft carrier commanders the importance of properly assigning a nonrecurring demand code to requisitions for initial allowances and increases in allowances of appropriation-funded reparable's. Also, that aircraft carrier commanders be required to use requisitions with preprinted nonrecurring demand codes to order allowances of appropriation-funded reparable's.
- Require aircraft carrier commanders to perform monthly or more frequent reorder reviews of appropriation-funded reparable deficiencies to permit the timely identification and resolution of prolonged shortages impacting on readiness.

--Have the Carrier Fleet Computer Assistance Groups revise carrier automated programs for periodically identifying excess on-order items to include items with excess on-order quantities for which shipping advice has been received and items with backordered excess quantities. Aircraft carrier commanders should also establish, as a control for preventing receipt of excess stocks during periods of inport availability, a system for matching excess on-order listings with materiel receipts at carrier loading docks.

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The Navy concurred with each of the above recommendations. (See app. I.)

CHAPTER 3

NEED FOR MORE TIMELY AND ACCURATE

UPDATING OF INVENTORY ALLOWANCES

The Navy can reduce future investments in aviation reparable replacement parts for aircraft carriers by an estimated \$26.4 million and at the same time improve supply readiness. This can be done by more timely and accurate updating of initial inventory allowances in response to changes in usage.

INITIAL DETERMINATION AND UPDATING OF INVENTORY ALLOWANCES

Aircraft carriers are supposed to be provided with sufficient allowances of appropriation-funded aviation reparable replacement parts for assigned aircraft to sustain 90 days of combat flying during a 6-month deployment operation. When a new aircraft is received by the Navy, the Navy's Aviation Supply Office prepares an initial outfitting list of the range and depth of replacement parts needed to sustain 90 days of combat flying.

The initial outfitting list is based on technical estimates of expected equipment part failures. If there is little or no likelihood of expected failure of a particular part, but it is deemed vital to the aircraft's operation, minimum replacement units will be included in the initial outfitting list for insurance purposes.

Aircraft initial outfitting lists are supposed to be periodically updated by ASO based on the latest fleetwide usage experience. Updated lists are based on such factors as planned and actual aircraft flying hours, number of repairs, maintenance cycles, repair turnaround time, and repair part attrition.

The inventory allowances of aviation replacement parts provided to an aircraft carrier depends on the initial outfitting list for assigned aircraft. Subsequently, these inventory allowances are to be updated periodically by ASO, based on either (1) parts usage experienced by the aircraft carrier during the prior deployment (if no change in aircraft) or (2) fleetwide usage experienced for a particular aircraft (if new aircraft are to be assigned to the carrier before the next deployment). The Navy policy requires that a review and revision be made of the inventory allowances of replacement

parts provided to aircraft carriers before each carrier deployment. This is to assure that the allowance will be responsive to changes in usage experienced by a carrier during its prior deployment.

NEED FOR IMPROVED UPDATING
OF AVIATION PARTS ALLOWANCES

A 1975 Navy audit of Atlantic Fleet carriers revealed that reported inventory excesses based on inventory allowances were considerably understated when viewed in light of actual usage. The Navy auditors found that as much as 81 percent of the inventories on two carriers were excess to needs based on historical usage. The auditors felt that this condition existed because the inventory allowances of carriers were not being updated often enough to reflect current usage experience. Some carriers had not had their inventory allowances adjusted to reflect current usage for as much as 3 years, whereas Navy policy requires that this be done before each extended deployment, or about every 18 months.

At the onset of our review, Atlantic Fleet carrier command supply officials said that the 1975 Navy audit grossly exaggerated the excess stock on board carriers. These officials stated that the Navy auditors considered usage as only those issues made by the carrier's supply department to replace reparable items that could not be repaired aboard the ship. According to these officials, the Navy auditors did not consider the turnover of items repaired within the carrier's intermediate maintenance shops. This type of usage was not reflected by the carrier's master inventory files from which the auditors extracted supply usage data.

Our tests of carrier inventory allowances which considered both supply and maintenance usage, showed that based on actual usage, carrier inventory allowances for aviation replacement parts are substantially overstated. This condition is caused by untimely and inaccurate updating of carrier inventory allowances. Carriers had not had their inventory allowances updated for 2 or more years, and the aircraft initial outfitting lists on which these updates were based were several years old.

For example, the USS AMERICA received an updated inventory allowance in November 1976 (more than 2 years since last allowance update). We found that the aircraft initial outfitting list replacement rates for 60 percent of the parts included in the AMERICA's updated inventory allowance had not been updated in some cases for as much as 8 years.

Our comparison of all updated inventory allowances received by the USS AMERICA with supply and maintenance usage experienced during its last deployment revealed a \$22 million gross overstatement. In arriving at the \$22 million gross overstatement, we allowed insurance quantities if no supply usage or maintenance actions were revealed by past deployment history.

The \$22 million gross overstatement is ultraconservative because we accepted as valid the updated allowances to the extent that they agreed with prior supply usage and unfactored maintenance actions. For the purpose of this comparison, it would have been appropriate to factor the maintenance actions to reflect the fact that the number of parts needed to support maintenance replacement actions is considerably less than the total number of replacement actions because of the repair turnaround times and maintenance cycles involved. We were unable to factor the actions because of extensive delays and failure on the part of ASO in providing us with all the data elements needed. For the same reasons, we were unable to determine the true extent of the gross understatement of allowances in order to arrive at a net figure.

In addition, we tested the validity of updated inventory allowances received by the USS AMERICA for 1,778 items with unit prices of \$500 or more. The updated allowances received for these items were based on outdated aircraft initial outfitting lists. A few months later (2 to 4 months), ASO updated the aircraft initial outfitting lists for these items based on current fleetwide usage data that was available before the November 1976 inventory allowance update.

Based on the updated aircraft part replacement estimates (we tested these estimates to insure that maintenance actions were properly factored), we recomputed the inventory allowances of the USS AMERICA for the 1,778 aviation parts and found that the previously revised allowances for these parts were overstated by \$6.3 million and understated by \$4.1 million. This represents a net overstatement of \$2.2 million or 35 percent of the gross overstatement. Applying this percentage to the \$22 million gross overstatement shown by the previously mentioned test results in a net overstatement of \$7.7 million. These overstated and understated inventory allowances received by the USS AMERICA are illustrated by the following examples:

--Despite the fact that the USS AMERICA had experienced no need for an F-14 aircraft replacement part costing \$18,360 during its last deployment period, the updated inventory allowance provided this carrier in November 1976 included 17 units of this item. The need for 17 units was premised on F-14 aircraft initial outfitting replacement part estimates which had not been updated in 2-1/2 years. A succeeding update of initial outfitting part replacement estimates for the F-14 aircraft in March 1977 revealed no fleetwide replacement needs for the subject aircraft part. Thus, the USS AMERICA's updated inventory allowance for this aircraft part was overstated by 17 units valued at \$312,120.

--The updated parts allowances received by the USS AMERICA in November 1976 included one unit valued at \$1,190 for an F-14 aircraft replacement part. The need for one unit was based on F-14 aircraft replacement part estimates which were almost 3 years old. During its last deployment, the USS AMERICA experienced an allowance need for 15 units of this part. Thus, the carrier's updated allowance for this part was understated by 14 units totaling \$16,660.

In addition to the above analyses of the reasonableness of updated inventory allowances provided the USS AMERICA, we studied usage over a 2-year period by the aircraft carrier CONSTELLATION for aviation reparable replacement parts that had been carried in stock for 2 or more years. This study showed that the CONSTELLATION had experienced no need over a 2-year period for aviation part allowances valued at about \$5 million.

From the above tests, we estimate that each of the Navy's aircraft carriers is authorized a minimum of \$5 million of aviation replacement parts in excess of needs. As mentioned on page 12, our tests showed that 44 percent of the dollar value of carrier-based stock excesses can be used to satisfy current procurement and rework requirements at the wholesale level. Therefore, we conclude that over an 18-month period the Navy can reduce future inventory investments and repair costs by \$26.4 million (12 carriers x \$5 million x 44 percent) by more timely and accurate updating of carrier inventory allowances and by more prompt return to the wholesale supply system of stock excesses generated by inventory allowance updates.

RECOMMENDATIONS

More timely and accurate updating of aircraft carrier inventory allowances are needed to avoid substantial unnecessary future investments in inventories and to improve supply readiness. We therefore recommend that the Secretary of the Navy:

- Emphasize to ASO the need for compliance with Navy policy requiring that carrier-based inventory allowances be updated before each extended deployment and be based on either the latest reported fleetwide usage or usage experienced by the carriers during their last deployments, as appropriate.
- Require aircraft carrier commanders to use their computer retrieval capabilities to identify and report to ASO upon completion of deployment the number and value of fixed allowance appropriation-funded reparable parts experiencing no usage for the past 2 years. Also, require ASO to delete those items from updated inventory allowances except to the extent needed in minimal quantities for insurance purposes.
- Require aircraft carrier commanders to use their computerized capabilities to compute demand-based requisitioning objectives for fixed allowance items for obtaining authorization for increases or decreases in allowances.

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The Navy agreed with each of the above recommendations.
(See app. I.)

CHAPTER 4

NEED FOR IMPROVED CONTROLS AND

VISIBILITY AT HIGHER MANAGEMENT LEVELS

There is a continuing need for tighter controls and increased visibility at higher management levels to reduce the buildup and prolonged retention of large inventory excesses aboard aircraft carriers. A 1975 Navy audit disclosed that the Atlantic Fleet carrier command did not have an effective system for monitoring and controlling carrier-based stock excesses. As a result, millions of dollars of inventories excess to the needs of the carriers on which they were stored were not available when needed to fill inventory shortages of other carriers or of shore-based aviation units.

BUILDUP AND PROLONGED RETENTION OF EXCESSES A CONTINUING PROBLEM

In 1975, the Naval Audit Service reported that inventories aboard Atlantic Fleet carriers substantially exceeded requirements and that the carriers were not promptly off-loading millions of dollars of excess stocks needed to fill shortages on other carriers. The Navy auditors attributed the buildup of excesses aboard Atlantic Fleet carriers to overordering of appropriated-funded aviation reparable items. They concluded that the buildup and prolonged retention of stock excesses aboard carriers contributed significantly to the hundreds of millions of excess aviation materiel disposed of during fiscal years 1972-74.

The buildup and prolonged retention of large inventory excesses aboard Atlantic Fleet carriers, and to a lesser extent Pacific Fleet carriers, is a continuing problem. For the 2-year period ending December 31, 1977, Atlantic and Pacific Fleet aircraft carriers periodically reported to their Fleet commands on-hand and on-order stock excesses averaging \$108 million and \$46 million, respectively. The on-hand excesses averaged 23 percent of total inventory on hand and the on-order excesses averaged 24 percent of the materiel on order. The Atlantic Fleet carriers accounted for 61 percent of the average reported dollar on-hand excesses and 57 percent of the on-order dollar excesses.

The Atlantic Fleet carrier command and higher management levels did not act on the findings and recommendations of the 1975 Navy audit report because it was felt that the

stock excesses reported by the aircraft carriers were vastly overstated because of the carriers unreliable automated data system. Moreover, the vast majority of the dollar excesses reported were related to appropriated-funded aviation items which do not affect the fleet supply funds because they are issued free to the fleet.

NEED TO IMPROVE VISIBILITY AND TIGHTEN CONTROLS

Although it should have been obvious to the Atlantic and Pacific Fleet carrier commands that one of the primary causes of the continuous buildup of large stock excesses aboard aircraft carriers was overordering by carrier supply personnel, no apparent concern was expressed or actions taken to correct this condition. As pointed out on page 6, the inventory management analyses reports submitted monthly to the Fleet carrier commands showed that 87 percent of on-order excesses averaging \$46 million for a 2-year period were related to fixed allowance appropriation-funded items and therefore excess due to overordering and not because of normal fluctuations in demand.

Although the Fleet carrier commands require aircraft carriers to systematically identify and promptly cancel or offload stock excesses, they have no effective system for monitoring and insuring compliance. The carriers are not required to report their performance in canceling or off-loading on-hand and on-order stock excesses.

Aircraft carriers attempted cancellation on only about 13 percent of excess on-order items. We also estimate that the Navy's fleet of aircraft carriers retained on board for indefinite periods of 2 or more years stock excesses averaging \$62.4 million of which \$27.4 million could have been used to fill inventory shortages of other carriers or shore-based aviation units. (See p. 12.) For example, our comparison of the stock excesses and shortages existing as of April 30, 1977, aboard the USS AMERICA and USS NIMITZ showed the two carriers had stock excesses valued at \$2.4 million which could have been redistributed directly to each other to satisfy shortages. These carriers were homeported in Norfolk, Virginia, concurrently during the period February 1977 to August 1977.

As mentioned on page 11, aircraft carriers are not complying with fleet command requirements stating that when more than 2 percent of the appropriation-funded items authorized for stockage have on-order stocks in excess to fixed allowances,

that the carriers analyze the top 20 excess on-order items (Atlantic Fleet) and top 50 excess on-order items (Pacific Fleet), and report to the carrier commanders the underlying causes and corrective actions being taken. Despite the large on-order dollar excesses continuously reported by the carriers which almost always exceeded the 2-percent standard, and the failure to furnish the required analyses, the fleet carrier commanders had not taken followup action to determine why carriers were not complying with this requirement.

Moreover, the 2-percent excess on-order standard for appropriation-funded items is unrealistic and not an effective yardstick for measuring effectiveness of carrier performance in controlling on-order excesses. For example, the USS KENNEDY reported an average excess on-order record count of 7.6 percent for appropriation-funded stocks over a 2-year period. However, the average ratio of dollar on-order excesses to dollar value of materiel on order was 33 percent. Additionally, unlike the Pacific Fleet carrier command, the Atlantic Fleet carrier command had not established maximum limits of the stock carriers may have aboard.

Pacific Fleet carriers are doing a better job of controlling on-hand stock excesses than the Atlantic Fleet carriers. From December 1975 to December 1977, the Pacific Fleet was able to reduce its percentage of on-hand stock in excess from about 32 percent to 12 percent, while the Atlantic Fleet percentage increased from 19 to 27 percent.

The Pacific Fleet carriers' better performance is attributable to the fleet command's 1975 change in its excess offload policy. This policy requires Pacific Fleet carriers to immediately offload all appropriation-funded aviation items after returning from operational deployments. These offloaded items are warehoused ashore and physically inventoried. Subsequently, the offloaded items which are excess to updated inventory allowances are promptly turned into the nearest wholesale stock point.

Atlantic Fleet carriers are not required to offload appropriation-funded aviation items immediately on return from an operational deployment. However, after receiving updated inventory allowances they are required to promptly offload all stocks that are excess to the updated requirements. The Atlantic Fleet carriers frequently do not comply with this requirement. For example, the USS AMERICA reported excesses valued at \$16.9 million in November 1976, immediately after receiving a revised inventory allowance. The USS AMERICA deployed on its operational tour approximately 1 year later with \$11.7 million of the previously reported stock excesses still on board.

There are not enough incentives for aircraft carriers to control the buildup of appropriation-funded stock excesses. The Fleet carrier commands have not expressed to the carriers any concern about their frequent and substantial overordering of appropriation-funded items. It seems apparent that this attitude is fostered by the fact that the overordering of these items has no effect on carrier fleet supply funds since they are purchased by the wholesale inventory manager with appropriated funds and issued free to the carriers.

The continuous buildup and prolonged retention of appropriation-funded aviation item excesses aboard aircraft carriers could be greatly reduced by establishing funding controls and limitations at the carrier command level over appropriation-funded items.

RECOMMENDATIONS

Fleet carrier commands and higher management levels do not have an effective system for monitoring and controlling carrier-based stock excesses. Thus, there is a continuous buildup and prolonged retention of millions of dollars of stock excesses aboard carriers which are not available when needed to fill shortages elsewhere and are ultimately disposed of.

We recommend that the Secretary of the Navy take the following corrective actions:

- Establish funding controls and limitations at the fleet command level over issues of appropriation-funded items.
- Establish an automated system at the fleet command level for identifying and directing immediate off-loading and redistribution of excesses on board one carrier needed to satisfy shortages of other carriers during periods of concurrent inport availability.
- Establish a system and standards at the fleet command level for monitoring and measuring the performance of aircraft carriers in canceling and offloading excesses.
- Direct the Atlantic Fleet carrier command to adopt the Pacific Fleet command's procedure for insuring prompt and maximum offloads of excesses.

--Establish realistic standards for monitoring and controlling on-hand and on-order excesses. Standards should be a percentage of total on-order value or on-hand inventories, as appropriate.

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The Navy concurred with each of the above recommendations. (See app. I.)

CHAPTER 5

AGENCY COMMENTS AND OUR EVALUATION

On August 8 and 16, 1978, we met with cognizant Navy and DOD officials to obtain their views on our findings and recommendations. The Navy and DOD agreed fully with our recommendations and findings, but not with our projected future procurement cost savings. (See app. I.)

The Navy representatives provided us with documentation showing that actions already taken in response to our findings and recommendations have resulted in procurement and repair cost savings totaling \$65.8 million. The Navy's ASO used a portion of the aviation item stock excesses recently reported by aircraft carriers to offset current system aviation asset requirements by \$47.3 million, before the reappropriation of fiscal year 1979 funds and the preparation of the initial fiscal year 1980 budget request. Additionally, the Navy reduced its final budget submission estimate by \$18.5 million to allow for aviation item stock excesses recently reported by carriers which will be redistributed and used to satisfy fiscal years 1979-80 procurement and repair requirements.

The Navy representatives felt that the projected future procurement cost savings cited in our preliminary report were overstated because in their opinion we had not given sufficient consideration to the extent to which (1) sunken investment costs are related to the overstated fixed allowances of aviation parts supplied to aircraft carriers and (2) aviation repairable parts overordered by aircraft carriers are filled from repair schedules, versus new procurements. After careful consideration, we feel that the Navy's position on this matter is reasonable and have reduced our initial projection of future cost savings by approximately \$110 million.

The corrective actions already taken or in process by the Navy will result in future procurement and repair cost savings totaling \$114.8 million.

CHAPTER 6

SCOPE OF REVIEW

We examined the Navy's aircraft carrier supply support system and reviewed the Navy's policies, procedures, and practices in providing initial supply support and subsequent maintenance and replenishment of appropriation-funded aviation inventories for aircraft carriers. Our review was limited to these items since they represented 93 percent of the total aviation support inventories. We tested the procedures and practices of selected activities to an appropriate extent. We also observed supply practices aboard five carriers, three were deployed (one permanently) and two were in various phases of restricted availabilities. We believe these five carriers are representative because they were in various parts of the time phase within the operational cycle. In addition to the one permanently deployed, one was in the early part of deployment, one in the middle to later stages of deployment, one had just returned from deployment, and one was preparing for deployment.

Our fieldwork included:

Naval Supply Systems Command
Washington, D.C.

Inventory Control Activities
Aviation Supply Office, Philadelphia, Pa.

Naval Operating Commands
Commander, Naval Air Force, Atlantic, Norfolk, Va.
Commander, Naval Air Force, Pacific, San Diego, Ca.

Ships:

USS AMERICA, Mediterranean
USS KENNEDY, Norfolk, Virginia
USS NIMITZ, Norfolk, Virginia
USS CONSTELLATION, Western Pacific
USS MIDWAY, Western Pacific

COPYDEPARTMENT OF THE NAVY RESPONSETO GAO REPORT RECOMMENDATIONS

(OSD CASE #4945)

a. GAO Report Chapter 2.

(1) GAO: Aircraft carrier Commands establish a reasonable standard for processing of material receipts aboard carriers and a feedback system for monitoring effectiveness of carriers in meeting this standard. Aircraft carriers be directed to establish a system for maintaining complete visibility over receipts in process to insure timely storing and recording of material receipts.

DON Position: Concur. Navy directives already provide detailed policy and procedures on receipt processing aboard ship. The effectiveness of the receipt processing function is evaluated during annual supply inspections and assist visits. COMNAVAIRLANT INST 4430.1 and COMNAVAIRPAC-INST 4440.14 are being updated to include uniform standards for processing material receipts including specific reporting requirements. These standards will be the same as those currently in effect ashore. Air Type Commander procedures currently in effect and listed above provide visibility over receipts in process. Other procedures to ensure timely storing and recording of material receipts include the preparation of pre-punched receipt take-up cards when requisitions are prepared. These pre-punched cards are ready for processing as soon as the material is received/stowed. Also, "pre-receiving" procedures are utilized by ship's personnel operating out of pierside Butler huts in order to speed up the total material receipt process. Such procedures include segregation and assignment of storeroom location and use of modular drawer storage cabinets/drawers. Additionally, an automated receipt processing system for large ships is under development within Navy.

(2) GAO: Aircraft carriers be directed as a part of their physical inventory program to perform causative research of significant inventory record inaccuracies in order to identify and resolve underlying recurring system problems. Also, that aircraft carriers be directed to include the results of their causative research and corrective actions being taken in their commands. Also, that carrier commands establish as

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an additional benchmark for measuring and monitoring inventory record accuracy a gross physical inventory dollar adjustment ratio (ratio of gross dollar adjustments made to value of material physically inventoried). Also, that aircraft carriers as a part of their physical inventory programs be directed to account for repairables in their intermediate maintenance activity's repair cycle prior to processing physical inventory loss adjustments.

DON Position: Concur. Navy directives on afloat inventory management (COMNAVAIRLANTINST 4440.11 and COMNAVAV-AIRPACINST 4440.14) will be updated to incorporate the GAO recommendations. These directives now include specific and detailed guidance on physical inventory procedures and standards. The complementing Navy directives on repairables management, COMNAVAIRLANTINST 4790.17 and COMNAVAIRPACINST 4440.16 currently require that all aviation repairable material not physically installed in aircraft be carried on the accountable records as on-hand quantity, regardless of physical condition or actual material location. Explicitly mentioned is the quantity in supply department storerooms, in the rotatable pools, due from organizational activities, awaiting induction into the intermediate repair cycle, actually undergoing intermediate repair or awaiting maintenance, and in supply screening/shipping awaiting retrograde.

(3) GAO: Aircraft carrier commands and higher management levels be directed to give priority attention to alleviating data keypunching problems aboard aircraft carriers.

DON Position: Concur. The following initiatives have been taken:

- a) The "dual route" system has been implemented. This system provides for transmission of data pattern messages containing MILSTRIP supply status to the nearest shore AUTODIN terminal where they are received as punched cards, and, therefore, save approximately 12,000 local keypunch documents per month.
- b) Use of magnetic encoded Treasury checks that make keypunching of check values unnecessary. This eliminates approximately 9,000 keypunch operations per month, per carrier.
- c) Carrier commands are minimizing non-essential use of computer facilities which will reduce the keypunching volume.

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(4) GAO: Establish the necessary controls aboard carriers to prevent requisitioning of appropriation-funded repairable replacements for items already in excess supply.

DON Position: Concur. Navy directives on repairables management, COMNAVAIRLANINST 4790.16, COMNAVAIR-PACINST 4440.16, currently require these controls. These directives are also explicit regarding fixed allowance policy and prohibit carriers from having on-hand and on-order any quantity in excess of the fixed allowance. These directives will be re-emphasized and enforced. In addition, application programs used in the computerized system preclude replenishment for items in an excess on-hand or on-order condition.

(5) GAO: Aircraft carriers be directed to comply with carrier fleet command standards and requirements for limiting the buildup of and promptly offloading stock excesses.

DON Position: Concur. Reported excesses are monitored through reviews/analyses of monthly inventory management reports submitted by each carrier; corrective action on significant discrepancies identified is directed by letter/message. Stock excesses are reviewed during annual supply inspections, which include the on-site analysis of the top 50 excesses existing at the time of the inspection; significant discrepancies require monthly reporting of corrective action until satisfactorily completed. Existing directives on afloat inventory management, COMNAVAIRLANINST 4440.11 and COMNAVAIRPAC 4440.14, require offloading of excess repairable items within 30 days after identification as excess to allowance. These directives will be re-emphasized and enforced.

(6) GAO: Aircraft carrier commands and higher management levels emphasize to the carrier fleets the importance of properly assigning a non-recurring demand code to requisitions for initial allowances and increases in allowances of appropriation funded repairables. Also, that the carrier commands and higher management levels require carriers to use requisitions with preprinted non-recurring demand codes to order allowances of appropriation-funded repairables.

DON Position: Concur. Existing instructions (including the directive on fixed allowances NAVSUPINST 4440.160) require that requisitions for allowance increases

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utilize initial outfitting, non-recurring demand coding. Correct demand coding was additionally emphasized by NAVSUPNOTE 4440 of 7 APR 78. Concur with the intent of using preprinted requisitions which is to ensure that initial outfittings are considered as non-recurring demands. However, pre-printed requisitions are not compatible with aircraft carrier data processing programs which automatically produce punched card requisitions. Action will be taken to incorporate correct assignment of demand codes into the aircraft carrier data processing programs.

(7) GAO: Carrier commands direct the carrier fleets to perform monthly or more frequent reorder reviews of appropriation funded repairable deficiencies to permit the timely identification and resolution of prolonged shortages impacting on readiness.

DON Position: Concur. Navy directives on afloat inventory management, COMNAVAIRLANTINST 4440.11 and COMNAVAIRPACINST 4440.14, require reorder reviews to be conducted a minimum of every 10-14 days during normal operations. Identification and resolution of deficiencies is also facilitated by review/analyses of monthly inventory management reports by the ship's Supply Officer and the air Type Commander.

(8) GAO: Carrier Fleet Computer Assistance Group be directed to revise carrier automated programs for periodically identifying excess on-order items to include items with excess on-order quantities for which shipping advice received and items with back-ordered excess quantities. Also, carriers be directed to establish as a control for preventing receipt of excess stocks during periods of inport availability a system for matching excess on-order listings with material receipts at carrier loading docks.

DON Position: Concur. The Shipboard Inventory Management Analysis Report (SIMAR) program presently identifies excess both by money value and line item count. Further, another existing program, Excess Stock Due Cancellation Request, generates cancellation request documents. A management tool to match excess on-order listings with material receipts is available and will be used. However, manual research on interchangeability/substitutability, physical verification of stock position and open order file review/clearing are actions which must take place prior to offloading of stock receipts identified as potential excesses.

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b. GAO Report Chapter 3

(1) GAO: More timely and accurate updating of aircraft carrier inventory allowances are needed to avoid substantial unnecessary future investments in inventories and to improve supply readiness. Accordingly, we are recommending that the Navy be directed to emphasize to the Aviation Supply Office and direct compliance with Navy policy requiring that carrier-based inventory allowances be updated prior to each extended deployment based on either the latest reported fleet-wide usage or usage experienced by the carriers during their last deployments, as appropriate.

DON Position: Concur. Individual carrier allowance (AVCALs) are updated before each deployment. The Navy policy as stated in OPNAVINST 4441.12A is that AVCALs will be reviewed and revised incident to regular overhaul/restricted availability schedules or prior to each carrier deployment as a minimum. This requirement is being met. This process should not be confused with the separate and distinct process of updating initial outfitting lists. (IOLs), the primary inputs into AVCALs. It is factual that in the past there were longer lapses between IOL updates than appropriate because of resource constraints. Commencing in FY 78, ASO is updating IOLs applicable to carrier aircraft annually.

(2) GAO: We are recommending further that aircraft carriers be directed to utilize their computer retrieval capabilities to identify and report to the Aviation Supply Office upon completion of deployment the number and value of fixed allowance appropriation funded repairable parts experiencing no usage for the prior 2 years. Also, that the Aviation Supply Office be directed to delete these items from updated inventory allowances except to the extent needed in minimal quantities for insurance purposes.

DON Position: Concur. This is presently being done. However, due to shipboard data processing constraints the process is accomplished centrally by ASO utilizing carrier demand tapes. The ASO action is being accomplished by means of a constraint program which is part of the AVCAL process. This program constraints the allowance to one unit for every item appearing in an IOL which had no usage during the previous deployment. The one unit is retained for insurance purposes since all items in the IOL are maintenance significant.

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(3) GAO: Also, we are recommending that aircraft carriers be directed to utilize their computerized capabilities to compute demand-based requisitioning objectives for fixed allowance items as a basis for obtaining authorization for increases or decreases in allowances.

DON Position: Concur. Navy directives on afloat inventory management, COMNAVAIRLANTINST 4440.14 and COMNAVAIR-PACINST 4440.14 series, currently require that the level setting/demand processing program be run commencing with the first month during the pre-deployment workup cycle that demand is representative and every month thereafter through the deployment. For repairables, carriers are directed by these instructions to run the special fixed allowance management review program monthly. This program produces a listing of candidates qualifying for allowance changes. Carriers then review this listing in conjunction with aviation 3-M reports and, if appropriate, submit allowance change requests for both range and depth changes to ASO.

c. GAO Chapter 4

(1) GAO: Study feasibility of establishing funding controls and limitations at aircraft carrier fleet commands over issues of appropriation funded items, similar to those that exist for stock-funded items.

DON Position: Concur. The Navy is in the process of studying the issue. This study plan was approved on 3 May 1978 and a final report presentation to the Chief of Naval Operations is scheduled for 28 September 1978.

(2) GAO: Establish an automated system at aircraft carrier fleet commands for identifying and directing immediate offloading and redistribution of excesses on board one carrier needed to satisfy shortages of other carriers during periods of concurrent inport availability.

DON Position: Concur. This capability already exists within aircraft carrier automated programs. It was used by COMNAVAIRLANT during June 1978 to re-position USS SARATOGA excess material onto USS JOHN F KENNEDY to satisfy existing deficiencies.

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(3) GAO: Establish a system and standards at aircraft carrier fleet commands for monitoring and measuring performance of aircraft carriers in cancelling and offloading excesses.

DON Position: Concur. Existing Navy directives covering afloat inventory management, COMNAVAIRLANTINST 4440.11 and COMNAVAIRPACINST 4440.14, provide detailed guidance on excess stock on-hand and due. Guidance includes standards for determining excesses and timeframes allowed to offload identified excesses. Air Type Commanders utilize identical standards in analysis of monthly inventory management reports. Carriers not within standards are directed to submit a plan of action and milestones for corrective action, including a review of the top excess line items.

(4) GAO: Study feasibility of Atlantic Fleet carrier commands adopting Pacific Fleet Command's procedure for ensuring prompt and maximum offload of excesses.

DON Position: Concur. This enhancement was planned for implementation during 1976. Prior resource constraints have now been alleviated and COMNAVAIRLANT will commence operations with the USS FORRESTAL in the last quarter of CY 1978.

(5) GAO: Establish realistic standards for monitoring and controlling on-hand and on-order excesses. Standards should be a percentage of total on-order value or on-hand inventories, as appropriate, and not as a percentage of record count.

DON Position: Concur. Navy will expand standards for excess stock on-hand and excess stock dues in afloat inventory management directives to include a percentage of total monetary value.

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