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Report to the Secretary of Defense

January 1995

DEFENSE SUPPLY

Inventories Contain Nonessential And Excessive Insurance Stocks

GAO/NSIAD-95-1

GAO

United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-258425

January 20, 1995

The Honorable William J. Perry
The Secretary of Defense

Dear Mr. Secretary:

The Department of Defense (DOD) stocks hundreds of millions of dollars of what it calls insurance items to ensure that the operational capability of a weapon system is not compromised. These items are mission essential spare parts and supplies that are not expected to fail through normal usage. They include aircraft parts such as doors, rudders, and ejection seats. DOD regulations state that only one replacement unit of an item may be stocked for insurance purposes.

We reviewed the Navy's and the Defense Logistics Agency's (DLA) management of insurance items. Our objectives were to determine if insurance stocks were limited to (1) mission essential parts and (2) one replacement unit as required by DOD regulations.

Background

DOD inventory control points are responsible for managing insurance items. We performed our review at the Aviation Supply Office (ASO), one of two Navy inventory control points, and the Defense Industrial Supply Center (DISC), one of six DLA inventory control points. As of March 1994, ASO managed insurance inventories valued at $193 million and, as of April 1994, DISC managed insurance inventories valued at $3 million.

Spare parts and other supplies normally are designated as insurance items during the initial provisioning process. Initial provisioning is designed to provide parts until there is a requisitioning history from which relatively accurate forecasts of future demands can be made. Typically, these parts support a weapon system during the first 2 years of operation. At ASO, contractors or manufacturers recommend which parts should be stocked for insurance purposes, ASO reviews these recommendations, and the Naval Air Systems Command approves the recommendations if it agrees with the contractor and ASO. DISC classifies items on the basis of submissions by the using military service during the initial provisioning process.

Results in Brief

ASO and DISC stock millions of dollars of unnecessary insurance items. Most are not mission essential and frequently are stocked in quantities greater than one unit. ASO records show that only about 10 percent of the insurance items are mission essential. We questioned the managers of a sample of these items, and they stated that about 22 percent are mission essential. Similarly, DISC records indicate that only about 42 percent of their insurance items are mission essential. We also questioned DISC managers, but none had responded to the questionnaire at the time our fieldwork was completed. Furthermore, contrary to DOD regulations, both ASO and DISC stock about one half of the insurance items in quantities greater than one unit.

The unnecessary inventories occurred because ASO and DISC do not periodically review insurance items to ensure that they are mission essential and stocked in appropriate quantities. It costs DOD millions of dollars each year to manage and maintain these unnecessary inventories.

Most Insurance Items Are Not Mission Essential

We analyzed ASO and DISC records to identify insurance items and determine if they were properly classified. We found that most of the items were not mission essential and, therefore, should not have been classified as insurance items. Table 1 summarizes the results of our analysis.

Table 1: Analysis of Insurance Items on ASO and DISC Records

	ASO			DISC		
Item classification	**Number**	**Percent**	**Cost**	**Number**	**Percent**	**Cost**
Fully justified as insurance item	1,042	10.5	$65,917,000	1,410	42.3	$1,694,000
Not mission essential, should not be insurance item	8,118	81.7	109,466,000	325	9.7	222,000
Insurance item justification was not determined	777	7.8	17,749,000	1,600	48.0	841,000
Total	**9,937**	**100.0**	**$193,132,000**	**3,335**	**100.0**	**$2,757,000**

Because only a small percentage of the insurance items were fully justified in the inventory control point records, we asked item managers to verify the classification of the insurance items. We randomly sampled 329 ASO items and 110 DISC items and sent questionnaires to item managers asking them to validate the records. According to the ASO item managers surveyed, 51 percent of the items were not mission essential. Table 2 summarizes the sample results.

Table 2: Summary of Sample Results From ASO Item Managers

Item classification	Number	Percent
Fully justified as insurance item	73	22
Not mission essential, should not be insurance item	169	51
Insurance item justification could not be determined	42	13
Questions not answered	45	14
Total	**329**	**100**

We did not make a similar analysis for DISC because none of the item managers had responded to the questionnaire at the time our fieldwork was completed.

Essentiality Is Not Validated

Significant numbers of nonessential parts and supplies continue to be stocked as insurance items because ASO and DISC do not have the internal controls to periodically review insurance items to identify those that are unneeded because they do not meet essentiality criteria. As noted in tables 1 and 2, only 10.5 percent of ASO's insurance items were mission essential according to ASO records and only 22 percent were mission essential according to item manager responses to our questionnaire. At DISC, 42.3 percent were mission essential according to its records.

ASO assigns mission essentiality codes on the basis of reports from end users on how the failure of a part affects mission capability. These codes range from one where item failure results in minor mission impact to one where item failure results in loss of a primary mission capability. DISC assigns essentiality codes, called weapon system indicator codes, on the basis of data provided by the using military service.

Neither ASO nor DISC systematically reviews insurance items to validate the essentiality codes. ASO does require an annual review to ensure that the data elements used to prevent automatic purchases of insurance items are correctly loaded in the computer. However, this review does not verify that insurance items are mission essential. DISC does not require a review of insurance item essentiality.

The absence of essentiality reviews contributed significantly to the low percentage of mission essential items identified in our review. In addition to the 22 percent ASO item managers said were mission essential, they indicated that 51 percent of the insurance items were not mission essential and that they either could not or did not determine essentiality for the remaining 27 percent. The following examples illustrate the error conditions identified.

ASO stocks three skin assembly units used on the AV-8B aircraft as insurance items. These units, which are valued at a total of $158,927, have a nonessential coding in ASO's records. In responding to our questionnaire, the item manager agreed with the coding in the record and indicated that the units were not mission essential. These assemblies have been in the Navy supply system since the weapon system was provisioned in 1986.

In another case, ASO stocks 12 manual control levers used on the F/A-18 aircraft as insurance items. These levers, which are valued at a total of $997,020, have been in the supply system since 1983. Again, the item manager indicated that the lever, although categorized as an insurance item in the records, was not mission essential.

Excessive Quantities Are Stocked

Although DOD Material Management Regulation 4140.1-R, dated January 1993, states that only one replacement unit of an item may be stocked for insurance purposes, we found that ASO and DISC stocked many of the insurance items in quantities greater than one unit. This condition was true for both mission essential items and nonessential items. At ASO, 4,997 insurance items, valued at $126 million, or 50 percent, of the 9,937 insurance items were stocked in quantities greater than one unit. Of the 1,042 mission essential items included in these totals, 510 items had excessive quantities valued at $49 million. At DISC, 1,602, or 48 percent, of the 3,335 insurance items were stocked in quantities greater than one unit, including 784 of 1,410 mission essential items.

The reasons for the excessive quantities are similar to the reasons that nonessential items are stocked as insurance items. That is, much of the excessive buildup occurred during the initial provisioning process. DOD downsizing and weapon system obsolescence and retirement also contributed to the stock buildup. However, neither ASO nor DISC has established the internal controls to periodically review insurance items to ensure that quantities are kept at the allowable stock level of one unit.

An additional factor contributing to the excessive quantities is the inventory control points' stock retention policies. ASO and DISC have computer programs to identify and recommend excess stock for disposal. ASO programs search for stocks in excess of retention levels and are run for all stocked items, not just insurance items. However, irrespective of retention levels, the programs will not recommend disposal action on quantities that fall below a floor of five units at ASO. The DISC programs identify disposal prospects on a selective basis and have not been run for insurance items.

The computer programs have not been effective in reducing excess insurance stocks at ASO for two major reasons. First, contrary to DOD regulations, ASO has established retention levels for many insurance items that exceed the allowed stockage quantity of one unit. Second, the requirement that any disposal recommendation leave an on-hand quantity of five units precludes reducing the stockage level to one unit. As a result, only 330 of the 4,997 insurance items that we found to be overstocked were identified as such by ASO's computer program.

The following examples illustrate the overstockage conditions identified. ASO stocks 20 aircraft seat structures used on the A-7 aircraft as insurance items. These structures, which are valued at a total of $2,559,586, have been in the supply system since 1979. In responding to our questionnaire, the item manager indicated that 14 of these units were removed from aircraft as a result of design changes and were unserviceable. The remaining six units were serviceable but exceeded the allowed insurance stock level of one unit.

In another case, ASO stocks two electrical equipment racks used on the E-2C aircraft as insurance items. These racks, which are valued at a total of $687,480, exceed the allowed insurance stock level of one unit but will not be reviewed for potential disposal because the quantity falls below ASO's on-hand stockage floor of five units. The item manager agreed that the racks were in an excess position but would not recommend this item for disposal because of the on-hand stockage floor.

Holding Costs Are High

In addition to unneeded procurement costs, DOD incurs large costs to manage and maintain excess inventories, particularly items with low demand or years of supply on hand. DOD expresses these holding costs as a percentage of the value of on-hand inventory. Holding costs include investment cost, or the cost of having funds tied up in inventory; storage costs; and obsolescence costs. The holding cost rate varies by inventory control point and averages 22 percent at ASO and 18 percent at DISC.

In commenting on our draft report, DOD stated that the holding cost rates we used may be correct before a purchase decision is made, but once material is in inventory the risk of obsolescence is represented as a sunk cost and the opportunity to spend the funds on an alternative investment has been foregone. DOD also stated that the holding cost rates that should have been applied for material in stock is at least an order of magnitude less than the rates used in the report.

DOD did not give an alternative percentage or amount and DOD's accounting systems are not designed to capture actual holding costs. In commenting on another report (GAO/NSIAD-94-110, June 29, 1994), DOD agreed that unnecessarily large inventories increase holding costs and acknowledged that holding cost rates that only cover storage costs may not be appropriate. For example, reducing inventories by quantities sufficient to close warehouses would result in savings that exceed storage costs.

While it is difficult to precisely determine the costs to manage and maintain nonessential and excessive insurance stocks, our review and DOD's comments indicate that these costs would be millions of dollars a year.

Recommendations

We recommend that the Secretary of Defense direct the Secretary of the Navy and the Director, Defense Logistics Agency, to (1) periodically review insurance items to ensure that they are mission essential and stocked in allowable quantities and (2) dispose of existing nonessential and excess insurance stock.

We further recommend that the Secretary of the Navy direct the Commanding Officer, ASO, to set the retention level for insurance items at one unit and change the disposal computer program so that the on-hand stockage floor for these items also is one unit.

Agency Comments and Our Evaluation

DOD generally agreed with the thrust of our recommendations but did not agree with most of our report findings (see app. I). We have evaluated DOD's comments and continue to believe that our basic position is sound; that is, the insurance inventories contain nonessential and excessive stocks. Our comments on some of DOD's specific statements are at the end of appendix I.

With regard to our recommendations, DOD stated that it would issue a memorandum by June 30, 1995, (1) reemphasizing the need to review insurance requirements prior to stock replenishment and (2) directing the disposal of nonessential stocks. DOD also stated that the Navy will direct ASO to reduce insurance stocks where the stockage is not in compliance with DOD regulations.

The promised actions will be helpful, but they do not go far enough. Because insurance items are not expected to fail, most will not be reviewed if DOD only reviews those in need of stock replenishment. We believe that DOD should review all insurance items periodically to identify nonessential and excessive stocks. Over one half of the ASO insurance items have been in the supply system more than 10 years, and 87 percent have been in the supply system more than 5 years. Since then, requirements may have changed due to DOD downsizing and weapon system modification, obsolescence, or retirement. Unneeded insurance stocks tie up warehouse space and increase managerial burdens.

Scope and Methodology

To determine the adequacy of internal controls in the management of insurance items, we reviewed DOD, Navy, and DLA procedures; interviewed agency officials; and analyzed ASO and DISC computer files that contained insurance item data as of March and April 1994. ASO files included the master data file and disposal file. DISC files included the combined file (similar to a master data file) and contract file.

By reviewing the files, we identified all insurance items managed by ASO and DISC. We then analyzed these items to determine which were classified as mission essential and which were stocked in quantities greater than one unit. We did not assess the reliability of these files. However, to validate insurance item data, we randomly sampled items that were not essential or exceeded authorized stock levels. The sample included 329 items from ASO files and 110 items from DISC files.

We sent a questionnaire to the ASO and DISC item managers responsible for the sampled items. We asked the managers to validate and update the file information, provide opinions on the essentiality of the items and causes of excess stock buildups, and define the extent that excess stock was disposable. Using this data from the ASO managers, we projected the results to the universe from which the sample items were drawn at a 95-percent confidence interval. None of the DISC item managers had responded to the questionnaire at the time our fieldwork was completed.

We performed our review between February and September 1994 in accordance with generally accepted government auditing standards.

The head of a federal agency is required by 31 U.S.C. 720 to submit a written statement on actions taken on our recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Reform and Oversight not later than 60 days after the date of the report. A written statement also must be sent to the Senate and House 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 appropriate congressional committees; the Director, Office of Management and Budget; the Secretary of the Navy; and the Director, Defense Logistics Agency.

Please contact me at (202) 512-5140 if you have any questions. The major contributors to this report are listed in appendix II.

Sincerely yours,

Mark E. Gebicke

Mark E. Gebicke
Director, Military Operations
and Capabilities Issues

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

OFFICE OF THE UNDER SECRETARY OF DEFENSE

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WASHINGTON DC 20301-3000

ACQUISITION AND TECHNOLOGY

(L/MDM)

2 8 NOV 1994

Mr. Henry L. Hinton, Jr.
Assistant Comptroller General
National Security and International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Hinton:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "DEFENSE SUPPLY: Inventories Contain Nonessential and Excessive Insurance Stocks," dated September 29, 1994 (GAO Code 703037), OSD Case 9793. The DoD partially concurs with the report.

Although the DoD generally agrees with the thrust of the GAO recommendations, the Department does not agree with most of the draft report findings. The GAO made several incorrect interpretations of DoD policies and procedures, resulting in flawed analysis and improper conclusions. For example, the report does not accurately (1) quantify the percentage of insurance items which are mission essential, (2) describe the DoD policy for reviewing mission essentiality determinations for insurance items, and (3) distinguish between policies governing the acquisition of insurance items versus the retention of insurance stocks.

See comments 1 to 4.

In addition, the draft report grossly overstates the holding costs for stock retention. The holding cost rates the GAO used were derived from economic order quantity policy. That policy includes provision for opportunity and obsolescence costs. Such costs, however, should not be applied against stocks that are already procured.

See comment 5.

The GAO issued the draft report for comment without first having the benefit of an exit conference dialog between the DoD and GAO audit staff. It is likely that such a meeting would have surfaced many of the underlying problems identified and provided an earlier opportunity to resolve factual errors and misinterpretations reflected in the draft report.

See comment 6.

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The detailed DoD comments on the draft GAO report findings and recommendations are provided in the enclosure. The DoD appreciates the opportunity to comment on the draft report.

Sincerely,

James R. Klugh

James R. Klugh
Deputy Under Secretary of Defense
(Logistics)

Enclosure

GAO DRAFT REPORT - DATED SEPTEMBER 29, 1994
(GAO CODE 703037) OSD CASE 9793

"DEFENSE SUPPLY: INVENTORIES CONTAIN NONESSENTIAL AND EXCESSIVE INSURANCE STOCKS"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

- **FINDING A: The DoD Inventory System.** The GAO reported that DoD inventory control points are responsible for managing insurance items. The GAO performed the review at the Aviation Supply Office (ASO), one of two Navy inventory control points, and the Defense Industrial Supply Center (DISC), one of six Defense Logistics Agency (DLA) inventory control points. The GAO noted that, as of March 1994, the ASO managed insurance inventories valued at $193 million and, as of April 1994, the DISC managed insurance inventories valued at $3 million.

  The GAO reported that spare parts and other supplies normally are designated as insurance items during the initial provisioning process. The GAO explained that initial provisioning is designed to provide parts until there is a requisitioning history from which relatively accurate forecasts of future demands can be made. The GAO noted that, typically, those parts support a weapon system during the first two years of operation. The GAO determined that, at the ASO, contractors or manufacturers recommend which parts should be stocked for insurance purposes, the ASO reviews the recommendations, and the Naval Air Systems Command approves the recommendations if it agrees with the contractor and the ASO. The GAO also noted that the DISC classifies items on the basis of submissions by the using Military Service during the initial provisioning process. (p. 2/GAO Draft Report)

  Now on p. 1.

  DoD RESPONSE: Concur.

- **FINDING B: Most Insurance Items Are Not Mission Essential.** The GAO analyzed ASO and DISC records to identify insurance items and determine if they were properly classified. The GAO concluded that most of the items were not mission essential and, therefore, should not have been classified as insurance items. The GAO summarized the results of its analysis in Table 1 of the draft report (page 4).

  Now on p. 2.

Enclosure

The GAO reported that, because only a small percentage of the insurance items were fully justified in the inventory control point records, item managers were asked to verify the classification of the insurance items. The GAO randomly sampled 329 ASO items and 110 DISC items and sent questionnaires to item managers asking them to validate the records. According to the GAO, the ASO item managers surveyed reported 51 percent of the items were not mission essential. The GAO summarized the sample results in Table 2 of the draft report (page 5). (pp. 4-5/GAO Draft Report)

Now on pp. 2-3.

DoD RESPONSE: Nonconcur. Contrary to the report finding, most insurance items are mission essential. The determination of an item's mission essentiality is a technical decision made by engineers based on whether the absence of a component item renders a weapon system or end item inoperable. The GAO erroneously relied upon the wrong data element to perform its analysis, resulting in incorrect findings and conclusions.

See comment 1.

Engineers assign source code "PB" to designate an insurance item when an analysis indicates that an item's failure would degrade the operation of the weapon system, and the predicted failure rate is so low that item stockage would not otherwise be warranted. The determinations for new systems are generally based on a Failure Mode Effects and Criticality Analysis. Mission Essentiality Codes are also assigned based on engineering data, but DoD policy does not require assignment of mission essentiality codes to justify source codes for insurance items. Nevertheless, when mission essentiality codes are assigned, the assignment should indicate that the items are essential.

The GAO used the wrong data element when attempting to validate the mission essentiality for insurance items at the ASO. Rather than using the Mission Essentiality Codes, which are based on engineering data, the GAO used Item Management Essentiality Codes, which are supply management codes based on demand data. While the latter codes provide some indication of mission essentiality for items with demand history, by definition, insurance items are not predicted to fail and few have any demand history. Not surprisingly, only a small percentage of insurance items are assigned this latter code.

According to the draft, the GAO found that the overwhelming majority of insurance items at the DISC were essential. Of the insurance items that the GAO was able to determine the mission essentiality, only about nine percent were not essential, according to the GAO. For its analysis, the GAO used Weapon System Identification Codes, which are derived from Mission Essentiality Codes assigned by the Military Services' engineers. The GAO was unable to determine the

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mission essentiality of nearly half the items at the DISC because no codes were assigned. The DoD policy does not require the codes to be assigned.

See comment 2.

At both the ASO and the DISC, the GAO incorrectly sent questionnaires to item managers in an attempt to validate the coding. The questionnaires should have been sent instead to the engineers--the personnel who make the determination of mission essentiality. Item managers manage inventory and do not possess the engineering qualifications to make mission essentiality determinations. Compounding the problem at the ASO, the GAO attempted to validate the wrong data element. For DISC items, mission essentiality determinations must be made by the Service which has engineering cognizance of the parent weapon system. That is why the GAO received no responses to the questionnaires at the DISC.

See comment 3.

Examples cited in the report intended to illustrate nonessential insurance items actually illustrate the opposite. For example, the AV-8B skin assembly units and F/A-18 manual control handles that the GAO indicated are coded as not essential based on the supply management codes are, in fact, essential. The skin of an aircraft and the handles used in an emergency to crank down an aircraft's landing gear would not normally be expected to wear out, and, therefore, may not be considered essential to an item manager. However, those items are subject to accidental damage and are mission essential because the aircraft cannot fly with a hole in its skin or with the handle broken.

- **FINDING C: Essentiality Is Not Validated.** The GAO reported that significant numbers of nonessential parts and supplies continue to be stocked as insurance items because the ASO and the DISC do not have the internal controls to periodically review insurance items to identify those that are unneeded because they do not meet essentiality criteria. As noted by the GAO in tables 1 and 2 of the draft report, only 10.5 percent of the ASO insurance items were mission essential according to the ASO records, and only 22 percent were mission essential according to item manager responses to the GAO questionnaire. The GAO pointed out that, at the DISC, records indicated 42 percent were mission essential. The GAO reported that the ASO assigns mission essentiality codes on the basis of reports from end users on how the failure of a part affects mission capability. According to the GAO, those codes range from one where item failure results in minor mission impact to one where item failure results in loss of a primary mission capability. The GAO noted that the DISC assigns essentiality codes, called weapon system indicator codes, on the basis of data provided by the using Military Service.

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The GAO added that neither the ASO, nor the DISC, systematically reviews insurance items to validate the essentiality codes. The GAO noted that the ASO does require an annual review to ensure that the data elements used to prevent automatic purchases of insurance items are correctly loaded in the computer. The GAO pointed out, however, that review does not verify that insurance items are mission essential. The GAO also noted that the DISC does not require a review of insurance item essentiality.

The GAO determined that the absence of essentiality reviews contributed significantly to the low percentage of mission essential items identified in the review. The GAO noted that, in addition to the 22 percent the ASO item managers said were mission essential, the managers indicated that 51 percent of the insurance items were not mission essential, and that they either could not or did not determine essentiality for the remaining 27 percent. The GAO provided examples to illustrate the error conditions identified. (pp. 5-7/GAO Draft Report)

Now on pp. 3-4.

DoD RESPONSE: Nonconcur. The report did not correctly describe current DoD policy for periodic review of insurance items, nor evaluate Component compliance. The DoD Regulation 4140.1-R requires that the classification of insurance items be reviewed upon stock replenishment, which can be more or less frequently than a year. The GAO apparently mistakenly applied DoD policy for retail stocks, which requires annual reviews of insurance items, to wholesale stocks. Item managers do not annually conduct essentiality reviews.

As discussed in the DoD response to finding B, the GAO findings and conclusions indicating that a low percentage of insurance items are essential is based on analysis of incorrect data. The lack of credible data undermines the GAO case that more frequent essentiality reviews are necessary. In addition to using the wrong data element to evaluate mission essentiality, it also appears that the GAO used the results of questionnaires to item managers to validate the wrong data.

The DoD also does not agree that more frequent review of essentiality data would not be warranted or cost effective. Essentiality determinations are made when a weapon system or end item is initially provisioned and when redesigns occur. If redesigns do not occur, there is little reason to expect that the initial determination would change during subsequent reviews. That is because the costs of retaining an insurance item in stock are often less than the cost of disposal. The process for conducting reviews would be labor intensive and costly because it would entail engineering

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reviews. On the other hand, of all the items that the DoD manages, eliminating insurance items potentially offers the least benefit since they are stocked in such small quantities. The objectives the GAO seeks to achieve are more economically achieved through the DoD pre-buy review policy.

- FINDING D: Excessive Quantities Are Stocked. The GAO reported that the ASO and the DISC stocked many of the insurance items in quantities greater than one unit--for both mission essential items and nonessential items. The GAO further reported that, at the ASO, 4,997 insurance items--valued at $126 million, representing 50 percent of the 9,937 insurance items--were stocked in quantities greater than one unit. Likewise, the GAO noted that, of the 1,042 mission essential items included, 510 items had excessive quantities valued at $49 million. The GAO noted that at the DISC, 1,602--48 percent, of the 3,335 insurance items--were stocked in quantities greater than one unit, including 784 of 1,310 mission essential items.

  The GAO reported that the reasons for the excessive quantities are similar to the reasons why nonessential items are stocked as insurance items. The GAO explained that much of the excessive buildup occurred during the initial provisioning process. The GAO noted that the DoD downsizing, as well as weapon system obsolescence and retirement, also contributed to the stock buildup. The GAO further noted, however, that neither the ASO, nor the DISC, has established the internal controls to periodically review insurance items to ensure that quantities are kept at the allowable stock level of one unit.

  The GAO concluded that an additional factor contributing to the excessive quantities is the stock retention policies of the inventory control points. The GAO noted that the ASO and the DISC have computer programs to identify and recommend excess stock for disposal. The GAO pointed out that the ASO programs search for stocks in excess of retention levels and are run for all stocked items, not just insurance items. The GAO found, however, irrespective of retention levels, the programs will not recommend disposal action on quantities that fall below a floor of five units at the ASO. The GAO also pointed out that the DISC programs identify disposal prospects on a selective basis and have not been run for insurance items.

  The GAO concluded that the computer programs have not been effective in reducing excess insurance stocks at the ASO for two major reasons: (1) contrary to DoD regulations, the ASO has established retention levels for many insurance items that exceed the allowed stockage quantity of one unit; and (2) the requirement that any disposal recommendation leave

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an on-hand quantity of five units precludes reducing the stockage level to one unit. The GAO explained that, as a result, only 330 of the 4,997 insurance items that it found to be overstocked were identified as such by the ASO computer program. The GAO provided examples to illustrate the overstockage conditions identified. (pp. 7-9/GAO Draft Report)

Now on pp. 4-5.

DoD RESPONSE: Partially concur. The DoD Regulation 4140.1-R establishes a maximum acquisition requirement of one minimum replacement unit for insurance items. That limit is the maximum quantity that can be procured for insurance items. The regulation establishes criteria for retention stocks, but not specific quantity limits. Therefore, the report is incorrect in stating that, contrary to DoD regulations, retention levels for many insurance items exceed the allowed stockage quantity of one unit. There are many reasons why retention quantities exceed the allowed acquisition quantity, including items removed from end items as part of force structure reductions and the fact that the current acquisition limit was only issued last year. The Department does agree that the implementation of the retention policy should be examined to ensure quantities are not excessive.

See comment 4.

- **FINDING E**: **Holding Costs Are High**. The GAO reported that in addition to unneeded procurement costs, the DoD incurs large costs to maintain inventories, particularly items with low demand or years of supply on hand. The GAO noted that the DoD expresses those holding costs as a percentage of the value of on-hand inventory. The GAO noted that holding costs include investment cost, or the cost of having funds tied up in inventory; storage costs; and obsolescence costs. The GAO pointed out that the holding cost rate varies by inventory control point, and averages 22 percent at the ASO, and 18 percent at the DISC.

The GAO applied those rates to the value of nonessential and excessive stocks to estimate the holding costs. The GAO concluded that, on the basis of the data in the ASO records, the holding costs would amount to $39 million, or 22 percent, of $177 million in not mission essential and excessive stocks. The GAO pointed out, however, that on the basis of the estimates of the item managers, the holding costs would amount to $30 million. The GAO also pointed out that, similarly, on the basis of the data in the DISC records, the holding costs would amount to $463,000, or 18 percent, of the $2.6 million in not mission essential and excessive stocks. (p. 10/GAO Draft Report)

Now on pp. 5-6.

See comment 5.

DoD RESPONSE: Nonconcur. The holding costs cited in the report are grossly overstated. The actual holding cost rate

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that should have been applied for material in stock is at least an order of magnitude less than rates used in the report. The rates used in the report may be correct for determining holding cost before a purchase decision is made. Economic order quantity policy includes an obsolescence cost component and opportunity cost component, which are relevant prior to procurement of stock. Once the material is in the inventory, the risk of obsolescence is represented as a sunk cost. The risk has already been assumed and the opportunity to spend the funds on an alternative investment has been forgone. There is little market for the items that the Department buys as insurance items, and the cost of disposing of those stocks exceeds the revenue generated from their disposal.

* * * * *

RECOMMENDATIONS

- RECOMMENDATION 1: The GAO recommended that the Secretary of Defense direct the Secretary of the Navy and the Director, DLA, to periodically review insurance items to ensure that they are mission essential and stocked in allowable quantities. (p. 11/GAO Draft Report)

Now on p. 6.

  DoD RESPONSE: Partially concur. The DoD Regulation 4140.1-R already requires all DoD Components to review insurance requirements prior to stock replenishment. The DoD agrees, however, that reemphasis of the policy may be desirable. By June 30, 1995, the DoD will issue a memorandum reemphasizing the requirement.

- RECOMMENDATION 2: The GAO recommended that the Secretary of Defense direct the Secretary of the Navy and the Director, DLA, to dispose of existing nonessential and excess insurance stock. (p. 11/GAO Draft Report)

Now on p. 6.

  DoD RESPONSE: Partially concur. Although the DoD disagrees with much of the GAO underlying analysis, the DoD does agree that disposal of nonessential stocks should be done where those stocks are determined not to be in compliance with the current policy. Accordingly, by June 30, 1995, the DoD will issue a memorandum directing that such disposal occur.

- RECOMMENDATION 3: The GAO recommended that the Secretary of the Navy direct the Commanding Officer, ASO, to set the retention level for insurance items at one unit and change the disposal computer program so that the on-hand stockage

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Now on p. 6.

floor for those items also is one unit. (p. 11/GAO Draft Report)

__DoD RESPONSE__: Partially concur. Although the DoD disagrees with much of the GAO underlying analysis, the DoD agrees with the thrust of the GAO recommendation. Accordingly, by June 30, 1995, the Secretary of the Navy will direct the ASO to reduce its stockage of insurance items where the stockage is not in compliance with DoD Regulation 4140.1-R.

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The following are GAO's comments on the Department of Defense's (DOD) letter dated November 28, 1994.

GAO Comments

1. The item mission essentiality codes we used in our analysis are assigned to items to indicate their level of impact on the mission of applicable equipment in the event stocks are depleted. The military essentiality codes DOD said we should have used are assigned to indicate the military importance of a part in relation to a higher component, equipment, or weapon. Both sets of codes should provide the same indication of mission essentiality and be based on input from technical personnel. We analyzed the item mission essentiality codes because the Aviation Supply Office's (ASO) records showed these codes for 92 percent of the insurance items. We could not analyze the military essentiality codes because these codes were not shown on the records ASO provided us for over 99 percent of the insurance items. After receiving our draft report, DOD asked the Navy to determine the distribution of military essentiality codes. This analysis showed that 58 percent of the ASO insurance items were assigned a mission essential code, less than 1 percent were assigned a not mission essential code, and the remaining 41 percent were blank and not assigned a code. The Navy agreed that insurance items that are not coded as mission essential must be validated.

2. Although engineers may make essentiality determinations, we opted to send the questionnaire to the managers that have overall responsibility for the items. In making this decision, we consulted with ASO officials and asked them to review the questionnaire. We made their suggested changes and pretested the questionnaire with item managers before it was finalized. At no time in the process did ASO officials indicate that the questionnaire should be sent to engineers rather than item managers. Furthermore, we did not ask the item managers to refrain from consulting with engineers, equipment specialists, end users, or others with greater technical knowledge in preparing the responses. In fact, the responses indicated that such consultations did take place in some cases.

3. We did receive responses to our questionnaire. In July 1994 we asked the Defense Industrial Supply Center (DISC) to complete the questionnaire for 110 insurance items, but DISC did not respond to the request by the time our fieldwork was completed. However, in October 1994, after receiving our draft report, the Defense Logistics Agency (DLA) provided responses for 64 of the 110 items managed by DISC. The responses indicated that 14 percent of the insurance items were mission essential, 43 percent were

not mission essential, and the item managers did not know if the items were mission essential for the remaining 43 percent. Also, the responses indicated that 57 percent of the insurance items were stocked in quantities that exceeded the authorized level of one unit.

4. At least two sections of the cited regulation state that one unit of an item may be stocked for insurance purposes. For example, page 3-3 states that essential items with no forecast of failure may be stocked as insurance items in quantities not to exceed one replacement unit.

5. We have modified the report to address DOD's comments on holding costs.

6. At the completion of our fieldwork, we furnished ASO and DISC with written summaries of our findings and potential recommendations. We held an exit conference with ASO officials and gave them the opportunity to comment on the summary. We gave DISC officials the same opportunity, but they did not provide any comments. All of these actions were taken before the draft report was submitted to DOD for formal review and comment. In addition, prior to the ASO exit conference and the DISC exit conference offer, we had numerous discussions with ASO and DISC officials during the course of the review.

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