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Improved Inventory Management Could Provide Substantial Economies For The Army

Department of the Army

In view of inflation's impact on the cost of U.S. military operations and the impending huge budget deficit, the Department of the Army should take advantage of all opportunities to reduce costs without impairing military missions.

This report shows that savings of tens of millions of dollars annually are possible through improved management of inventories in the possession of Army installations and combat divisions.

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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS
DIVISION

B-146828

The Honorable
The Secretary of Defense

Dear Mr. Secretary:

This is our report entitled "Improved Inventory Management Could Provide Substantial Economies For The Army."

Prior GAO and Army reviews revealed significant problems in the management of installation and division inventories. We made this review to see if those problems had been corrected and whether additional opportunities exist for improvement in the management of these inventories.

We want to direct your attention to the fact that this report contains recommendations to you which are set forth on pages 23 to 25. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement of actions he has taken on our recommendations to the House and Senate Committees on Government Operations not later than 60 days after the date of the report, and 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 Senate and House Committees on Government Operations, Appropriations, and Armed Services; and the Secretary of the Army.

Sincerely yours,

R. G. Rothwell

for F.J. Shafer
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY OF DEFENSE

IMPROVED INVENTORY MANAGEMENT COULD PROVIDE SUBSTANTIAL ECONOMIES FOR THE ARMY
Department of the Army

D I G E S T

Army installations and combat divisions in the continental United States stock and manage over $200 million worth of inventories. Prior GAO and Army Audit Agency reviews revealed management problems of these inventories which adversely affected supply responsiveness and economy.

Previously disclosed problems still existed at the five installations and four divisions audited. Also, additional opportunities for significant improvements existed. For example, GAO found that:

--Invalid past demands were used to compute stock requirements. (See ch. 2.)

--Stock excesses were not identified and canceled or redistributed in a timely manner. (See ch. 3.)

--Inoperative, economically repairable parts were not promptly turned in by using units in exchange for replacement parts. (See ch. 4.)

--Acceptable levels of stock record accuracy were not achieved or sustained. (See ch. 5.)

As a result of the above problems, GAO estimated that Army installations and divisions in the continental United States are overrequisitioning and holding in excess of local needs tens of millions of dollars worth of stock yearly which are needed elsewhere to fill Army-wide requirements.

These problems continue to exist primarily because of inadequacies in computerized logistics systems and because prescribed policies and procedures are either not being observed or are inadequate.

GAO believes that the Army's procedures and controls did not

--insure that only past valid recurring demands were used in computing requirements;

--permit timely identification and cancellation of unneeded onorder stocks and redistribution of excess onhand stocks needed elsewhere to fill Army-wide requirements;

--insure the prompt recovery, repair, and reissue of inoperative parts; and

--provide adequately for the reporting of physical inventory results to higher commands so they could insure that acceptable levels of inventory accuracy were being maintained.

Therefore, GAO is recommending to the Secretary of Defense that he instruct the Army to take a series of actions GAO considers necessary to correct the conditions described in this report. (See pp. 23 to 25.)

Contents

ABBREVIATIONS

ADP	Automated Data Processing
BASOPS	Base Operating Information System
CONUS	continental United States
CS3	Combat Service Support System
DLOGS	Division Logistics System
GAO	General Accounting Office
SAILS	Standard Army Intermediate Level Systems

CHAPTER 1

INTRODUCTION

The 36 major Army installations and 7 combat divisions in the continental United States (CONUS) stock and manage over $200 million worth of stock-funded inventories (secondary equipment, repair parts, and consumables). Army policy governing the management of these inventories is primarily set forth in AR 710-2.

When ordering materiel, Army using units are supposed to show by notation on the materiel order whether the materiel is needed for recurring or nonrecurring purposes. Orders for materiel needed to fill a unit's newly established or increased initial equipment allowances, as well as orders for materiel needed for one-time maintenance rebuild projects, are supposed to be assigned nonrecurring demand codes. Conversely, orders for materiel needed to replenish depleted stocks used repetitively in normal day-to-day operations and orders for materiel needed to regularly replace equipment parts which become inoperative through use are supposed to be assigned recurring demand codes.

Division and installation requisitioning objectives and supply reorder levels for stocked items are recomputed on a cyclical basis ranging from monthly to yearly, depending on the dollar value of past annual demands. Item requisitioning objectives are the maximum quantity of item assets authorized to be on hand and on order at any given time to sustain supply support operations for a fixed period of months. Item reorder levels are predetermined asset positions at which a stock replenishment order is processed and forwarded to higher supply echelons. In recomputing item stock requirements and replenishment levels, an updated average monthly demand factor based on recurring demands for the preceding 12 months is used.

When materiel orders are processed through the automated division or installation logistics systems, the type, quantity, and value of the demands are recorded. An automated demand history is maintained for each ordered item showing the accumulated number, quantity, and value of recurring and nonrecurring demands for the past year. If after being processed through division or installation logistic systems the materiel orders are rejected or canceled by the ordering unit or higher supply echelons, the related demands are supposed to be removed from the division and installation automated accumulated demand histories so that they won't be included in requirement computations. Similarly, past recurring demands of units no longer supported by the division or installation are to be removed.

Army installations and divisions are required to cancel onorder stocks for items when the net asset positions (on-order plus onhand quantities, minus quantities due-out to customers) of the items exceed their requisitioning objectives (maximum quantity of stocks on hand and on order needed to sustain operations for a fixed period, normally ranging from 60 to 90 days for divisions and from 90 days to 1 year for installations). Also, installations and divisions are required to report to wholesale inventory managers and return to designated wholesale supply depots onhand stocks of intensively managed items which exceed the requisitioning objective plus any predetermined war reserve. Intensively managed items are items so designated by wholesale inventory managers because of their mission essentiality or critical supply system shortage. Each quarter wholesale inventory managers submit listings of their intensively managed items to installations for their use in identifying and returning to the wholesale supply system excess stocks of these items.

For other than intensively managed items, installations and divisions are supposed to report onhand stocks in excess of authorized retention limits to wholesale inventory managers who, in turn, depending on the Army-wide asset position of the reported item, instruct them to either return the excess quantities to a designated wholesale depot or take disposal action. For installations the authorized retention limit is a quantity of stock equal to the requisitioning objective plus the war reserve plus an additional 1 year's expected usage quantity. This results in installations' retaining stocks generally equal to 2 or more years of supply. For divisions the item stock retention limit is a quantity of stock equal to twice the requisitioning objective plus the war reserve. This generally results in retention of item stocks equal to 6 or more months of supply.

To hold inventory investments to a minimum and to preclude critical shortages of needed parts, the Army supply system relies on the prompt recovery, repair, and reuse of economically repairable parts which become inoperative through use. Before issuing economically repairable equipment parts, installation and division supply activities are supposed to obtain from their customers either evidence that the inoperative parts being replaced have been turned in or written certification that such parts will be turned in when the replacement parts are received and installed. Installation supply activities are supposed to maintain a due-in suspense file to account for inoperative parts owed by their customers in exchange for previously issued replacement parts.

According to Army policy, an acceptable level of inventory record accuracy for division stocks is achieved when

no more than 10 percent of the item stock records contain errors of more than $10 and when the ratio of gross dollar physical inventory gain and loss adjustments made to stock records is not more than 20 percent of the book value of the materiel inventoried. To achieve and maintain these levels of inventory record accuracy, division stocks are to be physically inventoried twice a year and item stock record balances are to be promptly adjusted to agree with the physical count quantities. Physical inventory loss adjustments of $200 or more are to be investigated in sufficient depth to permit identification and correction of problems contributing to recurring errors.

To accomplish the above policy, Army installations and divisions in CONUS are equipped with computerized supply management systems. At the start of our review, the CONUS installations had a standard system known as the Base Operating Information System (BASOPS). This system is scheduled to be replaced by a standard Army worldwide intermediate level system known as the Standard Army Intermediate Level System (SAILS). At the time of our review, the prototype SAILS had been in operation at Fort Carson for about 1 year. The majority of Army divisions are equipped with a standard system known as the Division Logistics System (DLOGS). Army divisions at Fort Hood are equipped with the Combat Service Support System (CS3).

CHAPTER 2

NEED TO IMPROVE VALIDITY OF RECURRING MATERIEL DEMAND DATA USED IN DETERMINING REQUIREMENTS

Existing procedures and controls at the installation and division supply levels did not provide reasonable assurance that only valid past recurring materiel demands of using units were used in determining stock replenishment needs. Orders for materiel to fill a one-time or nonrecurring need were frequently assigned an erroneous recurring materiel demand code by the ordering units. Automated logistic systems at the division and installation levels erroneously converted nonrecurring materiel demands to recurring in some cases and did not remove from requirement computation data bases prior recurring materiel demands related to orders for materiel subsequently canceled or rejected or for units no longer supported. Also, stocks issued at the division and installation supply levels to fill nonrecurring unit demands significantly influenced recurring demands shown on requisitions submitted to the wholesale level and used in the determination of their requirements.

As a result of the above-mentioned problems, we estimate that divisions and installations overrequisitioned and unnecessarily obligated funds for tens of millions of dollars worth of materiel annually. This resulted in corresponding overprocurements at the wholesale level and maldistribution of stocks.

IMPACT OF AUTOMATED LOGISTIC PROGRAM PROBLEMS ON INVALID RECURRING DEMAND ACCUMULATION

Automated histories of past recurring demands used to compute installation stock requirements included a substantial accumulation of invalid demands. This occurred because the then standard BASOPS installation system and its scheduled successor, SAILS, did not provide for removal of past recurring demands related to materiel orders subsequently canceled or rejected and to materiel orders for units no longer supported by the installations from accumulated demand histories used as data bases in requirement computations. Also, DLOGS erroneously converted nonrecurring demand coded orders from supported units to recurring.

Automated installation system problems

As part of a 1973 Department of Defense-wide review of the validity of aged unfilled orders for materiel, we advised the Army that its CONUS installation stock requirements had been

overstated by an estimated $50 million during a quarterly base period because of the failure of BASOPS to remove from requirements past recurring demands related to aged unfilled materiel orders canceled as a result of periodic validation checks. Subsequently, we were told that this problem would be corrected. Also, we were told that SAILS, which was scheduled to replace BASOPS as the standard installation supply system, did provide for the removal of subject demands from requirement computation data bases.

We found, however, that this was a continuing problem with BASOPS, and a problem inherent in SAILS. In addition to continuing the problem of not removing past materiel demands related to canceled orders, the BASOPS system did not provide for the removal of past recurring demands associated with unfilled materiel orders subsequently rejected at the wholesale supply level because of known or suspected errors in quantity of materiel ordered or funding authorization cited. Similarly, past demands of units no longer supported by installation supply were not removed.

Our tests at two installations equipped with BASOPS--Forts Bragg and Riley--and one equipped with SAILS--Fort Carson--revealed that past recurring demands related to approximately 2,300 unfilled orders canceled as a result of a quarterly validation check were not removed from the data bases used to compute requirements. As a result, the stock requirements at these installations were overstated by an estimated $1.5 million during one quarterly period alone.

We did not attempt to determine the dollar magnitude of overstated requirements resulting from the inclusion of invalid past demands related to rejected unfilled orders or of orders from units no longer supported in historical data bases used in requirement computations. However, we believe they were considerable. Statistics compiled by wholesale inventory managers indicated that approximately 18 percent of all orders passed to them by the BASOPS-equipped installations were rejected.

Also, at Fort Riley the number of materiel orders received monthly from supported units decreased by about 50 percent when a number of these units was placed on direct supply support and therefore ordered their materiel directly from the wholesale system bypassing installation supply. As a result, their past recurring demands were no longer applicable to future installation stock replenishment needs and should have been removed from the BASOPS demand data base.

The above conditions, which resulted in overstated installation stock requirements, are illustrated by the

following examples. The example relative to BASOPS problems is an actual situation arrived at by detailed analysis of automated demand histories, transaction registers, and requirement studies. The example relative to the SAILS problem was arrived at by simulated computer entries involving the processing of a materiel order and related cancellation action. We developed the simulated conditions in close cooperation with Army SAILS computer and supply specialists at Fort Carson.

At Fort Riley, BASOPS automatically recomputed a requisitioning objective of 37 for a "Warning Installation Kit" (FSN 2590-050-8821). This was based on 62 supposedly valid recurring demands that occurred during the preceding 12 months. However, 37 of these demands were invalid for the following reasons and should have been removed from the requirement computation data bases. Of the 37 demands:

--4 demands were related to materiel orders passed to and rejected by the wholesale system because of suspected errors in ordered quantities and cited funding authorizations.

--1 demand was related to a using unit's materiel order which was canceled by installation supply as a result of a periodic validation check.

--32 demands were related to materiel orders of using units no longer supported by the installation.

The inclusion of the 37 invalid demands resulted in overstated requirements of 15 units valued at $403.

At Fort Carson we submitted two simulated high-priority orders, coded recurring demands, to installation supply for 34,900 guide springs (FSN 1005-017-9541). Based on this input, SAILS automatically recomputed a requisitioning objective of 13,541 units, an increase of 13,516. The recurring demand quantity was recorded in the SAILS automated demand history file and, because the installation did not have sufficient stocks to fill the orders, they were passed to the wholesale inventory manager. The wholesale supply system did not have sufficient stocks, so they were backordered. As a part of a quarterly Army-wide verification of the continuing validity of aged unfilled orders, after the orders had remained unfilled for more than 30 days the wholesale manager asked the installation to verify the continuing need for the ordered materiel. In response, the ordering unit submitted a cancellation request which was processed through SAILS and forwarded to the wholesale manager. Subsequently, the wholesale manager sent a confirmed cancellation notice to the

installation which processed it through SAILS to cancel the orders. This should have removed the recurring demand quantity of 34,900 units from the SAILS automated demand history and requirement computation data bases and should have resulted in a recomputed requisitioning objective of 25 units. Instead, a recomputed objective of 13,374 units was established, a reduction of only 167 units. As a result, installation stock requirements were overstated by 13,349 units in this simulated transaction.

The failure of SAILS to eliminate the 34,900 recurring demands related to the canceled orders was confirmed by SAILS Automated Data Processing (ADP) and supply specialists at Fort Carson. They said the 167-unit reductions in the requisitioning objective was attributable to a computerized demand trending program routine. In demand trending, the requisitioning objective changes even though the accumulated past recurring demands remain constant. This is due to changing the weight variables assigned to the monthly demand periods for the past year.

Division logistic system problem

The 82d Airborne and First Infantry Divisions were equipped with DLOGS. This system contributed to the problem of invalid demand accumulation and overstated requirements at the installation level by erroneously changing the demand codes on materiel orders submitted by supported units from nonrecurring to recurring. This occurred when high-priority orders from supported units could not be filled at the division supply level and were passed to the installation or wholesale level. This condition and its impact is illustrated by the following example.

A unit of the 82d Airborne Division submitted a nonrecurring demand coded order for 10 door kits to its division supply activity. This order was processed through DLOGS and recorded properly as a nonrecurring demand in the demand history file. The order could not be filled at the division, so DLOGS automatically reformatted the order and erroneously assigned it a recurring demand code. Then it was passed to installation supply which recorded a recurring demand of 10 in its demand history file. Subsequently, this invalid recurring demand was used in a recomputation of installation stock needs and resulted in overstated requirements valued at $781.10.

We did not attempt to determine the dollar magnitude of this problem on installation stock requirements; however, I believe it was substantial. Statistics compiled by the Ar indicated that 30 to 40 percent of unit orders submitted

DLOG-equipped divisions for items normally stocked had to be passed to the installation for supply action.

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We informed Army Computer System Command technicians responsible for the design and maintenance of the automated installation and division logistic systems of the above problems, and they confirmed their existence. However, corrective action had not been taken by the completion of our review.

IMPACT OF SUPPLY DISCIPLINE PROBLEMS ON INVALID RECURRING DEMAND ACCUMULATION

At Forts Bragg and Riley, orders submitted to installation supply for materiel to fill one-time or nonrecurring needs were frequently coded recurring by the ordering units. This occurred even though the ordering units were familiar with the prescribed procedures for demand coding.

We tested 273 orders for materiel valued at $544,000 and found that 18 percent of the orders and 17 percent of the ordered materiel value were erroneously coded as recurring. We did not attempt to assess the total dollar magnitude this invalid demand accumulation and overstated stock requirements had at the installation level; however, we believe it was significant. The installation supply activities at Forts Bragg and Riley recorded $64 million worth of recurring demands in 1 year. This compares to nonrecurring demands of only $1.9 million recorded by these activities during the same period.

Of even greater potential magnitude is the fact that all Army installations in CONUS recorded recurring demands for materiel valued at $814 million and nonrecurring demands for materiel valued at $13.8 million during this same period. If the results of our tests at Forts Bragg and Riley are representative of conditions at the other installations, it appears that about $140 million of the recurring demands should have been recorded as nonrecurring. Due to the number of installations and quantities of items stocked, it is impracticable to determine the effect this would have on requirements computations, procurements, and stockage of inventory; however, it would no doubt be substantial.

CHAPTER 3

NEED TO IMPROVE POLICY AND PRACTICES FOR IDENTIFYING AND CANCELING OR REDISTRIBUTING STOCK EXCESSES

Millions of dollars worth of materiel that was excess to local needs and could have been used to fill Army-wide requirements was retained by installations and divisions because their procedures did not provide for timely and complete identification and cancellation of onorder or redistribution of onhand excess quantities of materiel.

PROCEDURES FOR IDENTIFYING AND CONTROLLING EXCESSES

The vast majority of items stocked at installations are subject to automated excess identification and reporting controls. A limited number of items, known as manager-controlled items, are subjected to manual controls. The selection of items for application of manual excess controls is made by installation inventory managers, and should normally be limited to frequently demanded mission-essential items.

At installations equipped with BASOPS, nonmanager-controlled items are subjected to automated periodic reviews for the purpose of identifying and reporting excess onorder and onhand stocks to wholesale inventory managers. These automated excess reviews are performed on an item-by-item basis, and their frequency varies by item from monthly to yearly, depending on the annual dollar demand for the item--the higher the dollar demands, the more frequent the excess reviews. For manager-controlled items, manual excess stock determinations and reporting are done manually on an exception basis whenever deemed necessary by the installation inventory managers.

Under SAILS, automated excess onorder quantity determinations are made for both manager- and nonmanager-controlled items on a daily item-by-item basis whenever an item experiences a transaction that affects its inventory balance. Cancellation action for identified excess onorder stocks is initiated automatically. Onhand stock excesses are automatically identified on a monthly basis for both manager- and nonmanager-controlled items. Nonmanager-controlled onhand excesses are reported automatically to the appropriate wholesale manager. Manager-controlled item onhand excesses are referred to the installation managers, who decide whether all, some, or none of the onhand excesses will be reported to the wholesale manager.

INSTALLATION AND DIVISION PROCEDURES DID NOT PROVIDE FOR TIMELY AND COMPLETE IDENTIFICATION OF STOCK EXCESSES

We estimate that opportunities to cancel or redistribute millions of dollars worth of stock excesses were not acted on because automated and manual procedures in effect at installations and divisions did not provide for timely and complete identification of stock excesses.

Installation excessing problems in BASOPS

Contrary to Army policy, BASOPS did not provide for identification and cancellation of unneeded onorder stocks or redistribution of onhand stocks which were excess to installation requisitioning objectives and critically needed elsewhere. Instead it provided only for identification and cancellation or redistribution of onhand and onorder stocks in excess of authorized retention limits. According to the Army's annual dollar stratification of installation stock-funded inventories, its installations were holding $11.3 million worth of onhand and onorder stocks in excess of their current needs. Similar statistics were not available for appropriation-funded secondary items. However, because of the larger dollar investment in these inventories, we believe that the installations' authorized retention stocks for these items were even greater than for the stock-funded items.

After we brought this to the attention of the Army's Computer Systems Command, BASOPS was reprogramed to provide for identification and cancellation or redistribution of onorder and onhand (if in critical short supply elsewhere) stocks in excess of installation requisitioning objectives. However, the full cost-saving potential afforded by this action was reduced by another BASOPS program change. This change provided for identification and cancellation or redistribution of unneeded stocks, but it also provided for an increase in the volume of manager-controlled items not subjected to automated periodic excess reviews. In making the program change, the computer scanned the demand history of all items subject to automated excess reviews and those items whose onorder and onhand stocks exceeded needs dictated by past usage were converted to manager-controlled items. This action increased the volume of manager-controlled items to such an extent that the manager-controller items at Fort Riley increased from 407 to 1,006 items, or 147 percent.

Because of the necessity of manually reviewing manager-controlled items for excess on an infrequent exception basis, the larger the volume the less likely the timely identification and control of excesses of these items. Furthermore, stocks of items not subject to automated excessing were still

being excessed by installation managers only if they exceeded item retention limits. Thus, the effect of the latter change was to counteract the full cost-saving potential of the original change.

At Forts Hood and Carson, installation managers had not performed manual item excess reviews for periods of 6 or more months due to the large volume of manager-controlled items. We reviewed 522 of these items and identified onhand and onorder excesses (exceeding requisitioning objectives) valued at $591,000. Of this amount, $128,000 was on order and $300,000 of the excess onhand stocks were needed by the wholesale system to fill critical Army-wide requirements. In addition, at Fort Carson we identified $300,000 worth of onhand stocks in excess of authorized retention limits which were also needed at the wholesale level to fill Army-wide requirements. After we brought these matters to the attention of officials at Forts Hood and Carson, we were told that immediate action would be taken to cancel or redistribute the $728,000 worth of excess onhand and onorder stocks. However, this was not accomplished by the completion of our review.

Installation excessing problems in SAILS

To determine whether SAILS provided more timely and complete identification and cancellation or reporting of stock excesses than BASOPS, we made a limited evaluation of that system at Fort Carson. SAILS' identification of excesses is more timely, but it is not as complete or as accurate. Although SAILS provides for weekly identification of onorder quantities exceeding the requisitioning objective and monthly identification of excesses above retention levels, like BASOPS before it was amended, it does not provide (as required by Army policy) for identification and reporting to wholesale inventory managers onhand stocks exceeding requisitioning objectives and in critical short supply Army-wide. For only 39 items we identified $300,000 worth of onhand stocks exceeding installation requisitioning objectives that were urgently needed by the wholesale system to fill Army-wide requirements.

In addition, SAILS did not consider an item's total asset position in the monthly determinations of onhand stocks exceeding authorized retention limits. This system does not consider onorder stocks due in from the wholesale system. Instead only onhand stocks and onorder stocks due out to customers are considered. Following is an example of the impact of this situation.

--As a result of a monthly SAILS automated excess on hand review, Fort Carson identified and reported to the wholesale manager 145 excess onhand pneumatic

tires, costing $51.79 each, in ready-for-issue condition. These tires were urgently needed by the wholesale system to fill Army-wide requirements as evidenced by the fact that they were included on the latest listings of wholesale level intensively managed items furnished to Fort Carson by wholesale managers. The total stock position for this item was as follows.

Requisitioning objective	Onhand ready-for-issue stock	Onorder stock	Total stock	Stock due out
0	418	265	683	273

In determining the onhand excess quantity of 145 items, the SAILS computer program subtracted the 273 tires due out to customers from the 418 on hand. The 265 tires due in should have been subtracted from the 273 due out and the remaining 8 due out subtracted from the 418 on hand, resulting in a reportable excess onhand quantity of 410 tires instead of 145 tires. Thus 265 excess onhand tires valued at about $13,724 were not identified or reported to the wholesale system where they were needed immediately to fill Army-wide requirements.

We were told by Fort Carson SAILS ADP specialists that the above situation was not due to faulty computer program logic. Instead they said the SAILS monthly excess on hand program routine was designed to exclude onorder stocks on the assumption that onorder quantities causing an item's net asset position (onhand plus due-in minus due-out) to exceed its requisitioning objective would be canceled by the SAILS weekly onorder excess program routine. This is a false assumption. The SAILS weekly onorder excess program will not attempt to cancel excess onorder quantities if advice of pending shipment has been received from the wholesaler. This is frequently the case. For example a limited spot check of 1 day's transactions at Fort Carson revealed 17 instances in which excess onorder quantities were not canceled because of pending shipment advice from the wholesaler.

Division excessing problems

Division supply activities equipped with DLOGS have procedures and automated capability for monthly identification of items whose net asset positions (onhand plus onorder minus due-outs) exceed either their requisitioning objectives or retention limits. Local policies and manual procedures of the DLOGS-equipped division supply activities provided for monthly cancellations of onorder stocks exceeding requisitioning objectives. However, there was no provision for

reporting either locally or to inventory control points and redistributing onhand stocks exceeding requisitioning objectives even if these stocks could be used to fill critical local or Army-wide requirements.

The three divisional supply activities of the 82d Airborne had stocks in excess of item requisitioning objectives worth $107,000 according to their latest monthly DLOGS excess listing. Since these onhand stocks did not exceed authorized retention limits, they were not reported or redistributed. Of these onhand stocks, $38,000 worth could have been used immediately to fill critical local or Army-wide requirements. For example, the installation supply activity at Fort Bragg was holding an 8-month-old unfilled high priority order from an activity of the 82d Airborne Division for one unit of an item (FSN 2520-176-3333). In the meantime, one of the divisional supply activities had 47 onhand units of items in excess of its current stockage needs.

The division supply activity was not aware of the existence of local or Army-wide requirements for the $38,000 worth of onhand excess stocks because (1) there was no local interchange of information showing stock excesses and shortages between division supply activities and installation supply and (2) the quarterly listings of wholesale level intensively managed items furnished to installations to aid them in identifying and expediting the return of urgently needed excesses were not made available to divisions.

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Unlike DLOG-equipped division supply activities, those relatively few equipped with CS3 did not have automated capability or procedures for periodic, systematic identification of stock excesses. However, information showing stocks exceeding authorized retention limits could be retrieved from the CS3 system on an as needed basis. The CS3-equipped division supply activities told us they took excessing actions only on an infrequent basis, usually in conjunction with annual wall-to-wall physical inventories.

At our request, the division supply activities of the 1st Cavalry and 2d Armored Divisions located at Fort Hood retrieved stock excess information from their CS3 systems. This showed there was about $2.1 million worth of stock on hand or on order in excess of retention limits. Our tests indicated that the average age of these excesses was about 4 months. These division supply activities agreed to research the $2.1 million worth of stock excesses and to redistribute those needed to fill local or Army-wide requirements. However, this action had not been initiated at the completion of our audit.

CHAPTER 4

IMPROVEMENTS NEEDED TO INSURE PROMPT TURN-IN AND REPAIR OF INOPERATIVE, ECONOMICALLY REPAIRABLE PARTS

Adequate procedures and controls did not exist at the installation or division supply levels to insure that Army units promptly turned in inoperative, but economically repairable, parts when they received replacement parts. As a result, stocks needed to fill local or Army-wide requirements were erroneously disposed of as scrap or repaired locally and held in excess of needs. Also, Army units took advantage of the lack of controls to obtain unauthorized stocks.

Army installations will lose complete visibility and control over the recovery of tens of millions of dollars worth of economically repairable parts when they convert from BASOPS to SAILS unless provision is made for perpetuating accountability for economically repairable parts due in from customers in exchange for previously issued replacement parts.

PRESCRIBED POLICY AND IMPLEMENTING PROCEDURES

To hold inventory investments to a minimum and to preclude critical shortages of needed parts, the Army supply system relies on the prompt recovery, repair, and reuse of economically repairable parts which become inoperative through use. When an equipment part is first introduced into the supply system, a decision is made on the basis of dollar value, essentiality, and repairability as to whether it is more economical to repair and reuse or dispose of the part when it becomes inoperative. If it is decided that the part is economically repairable, this information, together with the designated repair level capability (local division or installation level or national depot level), is published in Army supply and maintenance records. This information is also communicated Army-wide to all supply levels so that appropriate controls can be established to insure that economically repairable parts are promptly turned in to the proper repair source when they become inoperative.

Before issuing economically repairable equipment parts, installation and division supply activities are supposed to obtain either evidence from their customers that the inoperative parts being replaced have been turned in (identification of turn-in document number) or a written

certification that (1) such parts will be turned in when the replacement parts are received and installed, (2) turn-ins are not required because requested parts are for initial needs rather than replacements, or (3) required turn-ins are being accounted for as a loss which is being investigated. Installation supply activities are required to maintain a due-in suspense file to account for outstanding inoperative parts owed by their customers in exchange for previously issued replacement parts.

At the installation supply level BASOPS automatically identifies and records issues and turn-ins of economically repairable parts and produces a monthly listing by responsible units (BASOPS recoverable item control listing) of the number, value, and age of outstanding inoperative parts due in to installation supply in exchange for previously issued replacements. This listing is furnished monthly to installation supply managers. They are supposed to follow up with the responsible units to insure that the inoperative parts are turned in as soon as possible so that they can be repaired locally or at the depot level and returned to the supply system for reissue. At the division supply level the automated logistic systems do not provide for identification of inoperative, economically repairable parts due in from units in exchange for previously issued replacement parts.

COMPUTER PROGRAM PROBLEMS AND INADEQUATE SUPPLY DISCIPLINE PRECLUDE PROMPT RECOVERY AND REPAIR OF ECONOMICALLY REPAIRABLE PARTS

According to their latest monthly BASOPS computer listings of outstanding inoperative parts due in, the four audited installation supply activities had not received, for periods of up to 16 months, approximately $14 million worth of inoperative repairable parts due in from units. We were unable to determine the number, value, and age of inoperative repairable parts due in to the five division supply activities audited because of the lack of automated or manual records. However, we believe that the number and value of such due-ins were substantial. At one of the smaller division supply activities, we tested replacement issues made to supported units during a 5-day period. Exchange inoperative repairable items worth $40,000 had not been turned in by these units for periods of up to 1 month.

At three of the four installations audited, the monthly computerized listings of outstanding due-ins of inoperative parts was not being utilized because of numerous BASOPS computer program problems. These problems included but were not limited to (1) inability to cross reference the units'

equipment parts turn-in documents to related documents for the replacements parts issued to that unit and (2) recording the latest date of a replacement issue as the date for all outstanding inoperative quantities of like parts due in regardless of whether they were related to the latest issue.

The installation supply activity at Fort Bragg was the only activity that made a conscientious effort to utilize the monthly control listing. This was a costly and, in many instances, futile effort. In a 1-year period this activity spent an estimated 18 man-years of effort to research and correct the monthly listings in an attempt to isolate and obtain recovery of inoperative repairable parts due in from supported units in exchange for previously issued replacements.

In addition to not using the BASOPS monthly automated listing to monitor and control the turn-ins of inoperative parts, three of four installations audited frequently did not require proof of inoperative parts turn-ins or later turn-in certifications before issuing replacement parts. All of the audited division supply activities frequently failed to require evidence of turn-ins or later turn-in certifications. Likewise, none of these activities had an effective automated or manual system to insure that later turn-in certifications were honored by the responsible units.

As a result of the absence of an effective system at the installation and division supply levels for monitoring and controlling the turn-ins of inoperative parts, using units disposed of inoperative, but economically repairable, parts which could have been repaired in a short time and reissued to fill supply system shortages. Also, inoperative parts which were supposed to be turned in to the installation or depot level for repair and subsequent redistribution to fill needs were repaired by the using units and held as bench stocks in excess of needs. In addition, the using units took advantage of the lack of controls to obtain unauthorized stocks. For example:

--The 79th Transportation Supply Battalion, located at Fort Eustis, ordered three amphibious cargo vehicle valves costing $402 from its direct support unit, the 558th Marine Supply Branch. The ordered valves were needed as replacements for valves which had become inoperative through use. The 79th was not aware that the inoperative valves were economically repairable at the installation level and sent them to property disposal. The direct support unit did not have the ordered valves in stock and therefore referred the order to installation supply. It was also out of

stock and passed the order to the wholesale supply system. Neither of these supply activities required the ordering unit to furnish proof of turn-in of the inoperative parts being replaced or of other disposition. It took about 6 weeks for the order for replacement valves to be filled from new procurement stocks, whereas the disposed of inoperative valves could have been repaired in 1 day and reissued by installation maintenance.

--The 782d Maintenance Battalion, a direct support unit of the 82d Airborne Division located at Fort Bragg, filled an order for a hose repair kit costing $1,050 on the basis of a written certification by the ordering unit that the inoperative kit would be turned in as soon as the replacement was received. No followup was made by the direct support unit to insure that the ordering activity honored its certification. Our investigation revealed that the ordered kit was not needed as a replacement and that therefore no inoperative kit was available for turn-in at the time of the certification. The ordering unit was unable to explain its need for the ordered kit or the basis for its certification that the inoperative kit being replaced would be turned in.

--At Fort Eustis two inoperative UHI helicopter dampners valued at $238 had not been turned into installation supply by the using unit in exchange for replacement parts issued 60 days previously, according to the then latest monthly BASOPS computerized control listing. The installation manager did not monitor or use the monthly listing as a followup device and was therefore not aware that the inoperative parts had not been turned in. These helicopter dampners had been identified by the wholesale supply level for intensified management because of equipment essentiality and supply system criticality. Installation supply was supposed to insure that inoperative quantities of this part were evacuated promptly to the designated wholesale depot for expeditious repair and redistribution to fill urgent needs. Instead of turning in the inoperative dampners in exchange for the replacements, the ordering unit repaired and held them as excess unauthorized bench stocks.

--At Fort Hood a direct support unit of the First Calvary Division filled a replacement order for three sight assemblies valued at $170 without requiring the ordering unit to provide proof that the inoperative parts had been turned in or certification that

they would be turned in later. The ordering unit repaired the inoperative parts and retained them as bench stock, although not authorized to do so. The repaired sight assemblies being held as excess unit bench stocks were urgently needed to fill critical supply system shortages. Fort Hood installation supply had unfilled priority orders for 76 of these parts which could not be filled because of an out-of-stock condition. Also, the sight assemblies were designated as automatic return-list items by the wholesale manager. These are items for which there are critical wholesale system shortages and for which installation supply activities have been directed to promptly return local excesses to a designated wholesale depot so that they can be redistributed where most urgently needed.

NEW AUTOMATED SUPPLY SYSTEM WILL PERPETUATE OR AGGRAVATE INSTALLATION PROBLEMS

At the conclusion of our review, Fort Bragg's installation supply activity was converted from BASOPS to SAILS. However, no provision was made for maintaining accountability for inoperative, economically repairable parts due in from using units. As a result, control was lost over the timely turn-ins of $1.6 million of such assets. Unless this problem is corrected in the future conversion of 35 other installations, we estimate that complete visibility and control over the prompt recovery and repair of millions of dollars worth of inoperative, economically repairable parts will be lost.

Problems in accounting for and controlling the timely turn-ins of inoperative, economically repairable parts noted at installations equipped with BASOPS will be perpetuated or aggravated further when the installations convert to SAILS, unless the problems we identified in the SAILS prototype at Fort Carson are corrected.

SAILS is supposed to automatically identify and produce on a daily cycle two control cards for each issue of economically repairable parts made by installation supply. These control cards identify the item, quantity issued, data of issue, and the unit to which the issue was made. One of the control cards is sent to the requesting unit at the time the ordered parts are delivered. The other card is to be maintained in a suspense file by installation supply and used as a followup to insure that the inoperative parts are promptly turned in by the unit that received the replacement parts. The unit is supposed to return its card to installation supply within 15 days with disposition action annotated--inoperative parts turned in, citing turn-in document number;

turn-ins not required because ordered parts were for initial equipment needs, not replacements; or inoperative parts lost and a report of survey initiated to relieve accountability for the loss. Installation supply is supposed to send a written followup inquiry to the unit requesting disposition action if the control cards are not returned within 15 days.

Installation supply personnel at Fort Carson told us that, if the control card was not returned within 30 days, it made a written followup inquiry. If the unit did not respond to this inquiry within another 30 days, the matter was turned over to a property survey board for investigation.

At Fort Carson, because of computer program "blanking" problems involving recoverability codes and dates of issue, SAILS frequently did not produce a set of suspense control cards, and when it did, in most cases the date of issue was not shown. At the start of our evaluation of the SAILS system at Fort Carson, the installation supply activity had suspense control cards for 72 issues of economically repairable parts which were valued at $538,000. Only four of these cards showed the date of issue. However, by reviewing the related issue documents we determined that the 72 issues ranged in age from 45 to 364 days; the average was 205 days. Installation supply personnel said written followup inquiries had been sent to the recipient units requesting turn-in or a statement of the disposition action taken. However, they were unable to furnish copies of these inquiries when we asked for them. Personnel of the units to which these inquiries were supposedly directed told us that, not only had they not received the followup inquiries, they had never received any control cards.

During the 1-month period of our review at Fort Carson, SAILS produced only one set of control cards evidencing an economically repairable parts issue. According to installation supply personnel, issues of many economically repairable parts probably occurred in this period.

CHAPTER 5

NEED TO IMPROVE INVENTORY RECORD ACCURACY AT THE DIVISION LEVEL

Division supply activities did not attempt to identify or correct the underlying causes of serious recurring inventory records errors. As a result, inaccurate inventory records continue to adversely affect supply responsiveness and economy of operation. Physical inventories taken by the divisions and by us indicate that there are hundreds of thousands of dollars worth of unrecorded stocks on hand at any given time which cannot be identified or located when needed to fill the requirements of divisional units.

PRESCRIBED POLICY FOR MAINTAINING AN ACCEPTABLE LEVEL OF INVENTORY RECORD ACCURACY

According to Army policy, an acceptable level of inventory records accuracy for division stocks is achieved when (1) no more than 10 percent of the item stock records contain errors valued at more than $10 and (2) the ratio of gross dollar physical inventory adjustments to stock records is not more than 20 percent of the book value of the inventoried materiel. To achieve and maintain these levels of accuracy, Army policy requires a physical inventory of all division stocks twice yearly and adjustment of the stock record balances to agree with the physical count quantities. Loss adjustments of $200 or more are to be investigated in sufficient detail to permit identification and correction of problems contributing to recurring errors.

Army policy does not require divisions to report their physical inventory results to higher commands. Whether the prescribed inventory record accuracy is being achieved and sustained is not controlled through periodic management reports to higher commands. Therefore, these commands were not aware of and were not evaluating this important aspect of inventory management.

POOR INVENTORY RECORD ACCURACY IS A CONTINUING PROBLEM

At all of the audited divisions acceptable levels of inventory record accuracy were not achieved or sustained despite the accomplishment of required periodic physical inventories and related stock record adjustments. This situation existed because no attempt was made to identify or correct causes of serious recurring errors. As a result of the continuing poor inventory record accuracy, we estimate that

hundreds of thousands of dollars of unrecorded stocks were on hand at any given time which were not available when needed to fill the requirements of divisional units. Conversely, significant amounts of recorded stocks were not physically on hand, which tended to reduce the supply effectiveness and could have affected the units' readiness posture. Details of our findings at each of the three divisions follow.

82d Airborne Division

Three wall-to-wall physical inventories and one special physical inventory of 1,000 items were taken over a 1-year period at about 3 month intervals. These inventories resulted in adjustments totaling about $835,000, of which approximately $537,000 represented locating previously unrecorded stocks. During this 1-year period, 160 physical inventory loss adjustments--each totaling $200 or more--were made to the stock records. None of these were investigated in sufficient depth to identify or correct the underlying causes. Also, 361 physical inventory gain adjustments totaling $200 or more each were made to stock records. These were not investigated because Army policy does not require investigation of gain adjustments.

The last wall-to-wall physical inventory, taken 3 months before our audit, revealed an overall stock record error rate of 16 percent and a gross dollar adjustment ratio of 39 percent. We physically inventoried 50 items with a recorded value of $12,231 which had been inventoried 3 months earlier and found an error rate and a gross dollar adjustment ratio of 48 percent. Of the 50 items, 24 had major errors; 16 of these involved unrecorded assets valued at $1,487 of which $630 worth were needed to satisfy unfilled orders from divisional units.

Our causative analysis of the major stock record errors in our test indicated that receipt processing problems were a frequent contributory factor. We found a number of instances in which materiel receipts ranging from 20 to 90 days old had not been recorded in the division stock records. The standard receipt processing time is 4 days. Also, a significant quarterly upward trend in the division's physical inventory gain adjustments over the past year was further indication of serious receipt processing problems. This receipt processing problem could have been pinpointed and corrected much earlier if both gain and loss adjustments had been thoroughly investigated.

1st Infantry Division

Two wall-to-wall physical inventories taken over a 1-year period resulted in stock record adjustments totaling approximately $1 million, of which $564,000 involved the location of previously unrecorded assets. The ratio of the dollar gross adjustments to the book value of materiel inventoried was 60 percent.

Our physical inventory of 50 items with a recorded value of $19,333 disclosed a record error rate of 52 percent and a gross dollar adjustment ratio of 108 percent. Of the 26 items for which we found major errors, 25 had been counted by the division during its most recent physical inventory, which was completed 15 days before our inventory. As a result of our physical inventory, 14 of these 25 items had gains causing the adjusted asset positions to exceed their requisitioning objectives. For example, one item with a unit price of $1,797 had seven units, valued at about $12,500, on order in excess of current needs.

Our tests and analysis of physical inventory adjustments made by the division disclosed that primary contributing factors to continuing inventory record inaccuracies were delays in and failure to record receipts of materiel (a receipt over 60 days old was unrecorded) and inaccurate physical counts (items were erroneously counted as each instead of as hundreds and quantities marked on containers and quantities taken from stock status records were falsely listed as physical inventory counts).

2d Armored Division

A wall-to-wall physical inventory taken 3 months before our audit resulted in stock records being adjusted for 96 percent of the items inventoried. Also, the book value of these items was adjusted by about 100 percent. As a result of this physical inventory, sufficient unrecorded assets were found to initiate cancellation action on 12,000 outstanding orders for materiel.

We physically inventoried 50 of the items the division had inventoried 3 months earlier. This revealed that 44 percent of the items still had major stock record errors. The value of the gross dollar gain and loss adjustments required to bring the stock records into agreement with our physical counts equaled 141 percent of the book value of the items inventoried.

After learning of the continuing poor inventory record accuracy revealed by our followup physical inventory test, the 2d Armored Division initiated another wall-to-wall physical inventory at about the time we completed our audit.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

Automated and manual procedures and controls in effect at Army installations and divisions did not

--provide assurance that only valid past recurring materiel demands of using units were used in determining stock requirement,

--provide for timely and complete identification and cancellation or redistribution of onorder and onhand stock excesses, and

--insure that Army using units promptly turned in for repair economically repairable parts in exchange for replacements.

Also, acceptable levels of inventory record accuracy were not achieved or sustained by divisions because they were not required to report physical inventory results to higher commands. Therefore, these commands were not aware of the results and failed to take the action necessary to insist that their subcommands identify and correct the underlying repetitive causes of serious inventory record errors.

As a result of the above conditions, we estimate that Army installations and divisions in CONUS overrequisitioned and held in excess of local needs tens of millions of dollars worth of stocks yearly which were needed elsewhere to fill Army-wide requirements.

RECOMMENDATIONS

We recommend that the Secretary of Defense direct the Department of the Army on a priority basis to modify existing programs to do the following:

--Remove past recurring demands related to orders for (1) materiel subsequently canceled or rejected or (2) units no longer supported from accumulated demand histories and requirement computation data bases. (See p. 4.)

--Remove the division automated capability to erroneously change the demand codes on materiel orders from nonrecurring to recurring when the order cannot be filled at the division level. (See pp. 7 and 8.)

--Require installations and divisions to verify the accuracy of recurring demand codes assigned to materiel orders by supported units. (See pp. 9 to 13.)

--Identify monthly items with a net asset position (on hand plus on order, minus due outs) exceeding their requisitioning objectives and report those stocks exceeding requisitioning objectives for items intensively managed due to critical supply systems' shortages at the wholesale level. (See p. 13.)

--For divisions equipped with the CS3, provide capability for monthly identification of onhand and onorder assets causing an item's net asset position to exceed its requisitioning objective. (See pp. 14 to 18.)

--Identify replacement issues of economically repairable parts as well as the ages and quantities of inoperative parts due in from using units in exchange for those replacements. (See p. 18.)

--Provide continuing accountability for inoperative parts owed by using units when installations convert from BASOPS to SAILS. (See pp. 7 and 8.)

--Distribute quarterly listings of wholesale level intensively managed items to divisions and require divisions to report and return onhand stocks of these items in excess of requisitioning objectives to the wholesale manager (See pp. 12 and 13.)

--Limit the number of items an installation may reserve for manual excess review and prohibit installations from reserving for manual excess reviews those items designated for intensive management at the wholesale level. (See pp. 10 and 11.)

--Provide for a central interchange of information on materiel excesses and requirements between installation supply activities and collocated divisions. Also, require local redistribution of these excesses where appropriate. (See pp. 12 and 13.)

--Insure that installation and division supply activities adhere to the prescribed procedures for accounting and controlling the timely turn-in of inoperative, economically repairable parts. Require a report of survey for inoperative parts valued at $200 or more which are not turned in within 1 month of the replacement issue date. Also, require independent validation of certifications by using units that inoperative

parts cannot be turned in at time of replacement but will be turned in later. (See ch. 4.)

--Require divisions to report the results of both periodic physical inventories and followup causative investigations of inventory record errors to higher command levels. Also, require divisions to investigate both physical inventory gain and loss adjustments of $200 or more in sufficient depth to identify and correct underlying causes of repetitive errors. (See ch. 5.)

CHAPTER 7

SCOPE OF REVIEW

We examined into Army policy and implementing procedures and controls at Army installations and divisions in CONUS for computing stock requirements, for identifying and canceling or redistributing stock excesses, for recovering and repairing economically repairable equipment parts that had become inoperative through use, and for sustaining an acceptable level of inventory record accuracy.

Our field work was performed primarily at the following installations and divisions.

Installations

Fort Bragg, Fayetteville, North Carolina
Fort Hood, Killen, Texas
Fort Eustis, Newport News, Virginia
Fort Riley, Junction City, Kansas
Fort Carson, Colorado Springs, Colorado

Divisions

82d Airborne Division, Fort Bragg, North Carolina
1st Infantry Division, Fort Riley, Kansas
2d Armored Division, Fort Hood, Texas
1st Cavalry Division, Fort Hood, Texas

In addition, work was performed at Army Computer System Command Headquarters in Washington, D.C., and Computer Systems Command Support Groups located at Fort Eustis, Virginia (BASOPS); Fort Monroe, Virginia (DLOGS); and Presidio of San Francisco (SAILS).

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