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Report to Secretary, Department of Defense; by Fred J. Shafer, Director, Logistics and Communications Div.

Issue Area: Facilities and Material Management: Consolidating or Sharing Supply and Maintenance Systems (709).

Contact: Logistics and Communications Div.

Budget Function: National Defense: Department of Defense - Military (except procurement & contracts) (051).

Organization Concerned: Department of the Army.

Congressional Relevance: House Committee on Armed Services; Senate Committee on Armed Services.

The Army's inventory management system in Korea is part of the direct support system. The purpose of the system is to reduce the large peacetime investment in overseas depot stocks for the support of combat divisions and their support units. The Army has reestablished a 30-day depot safety level of stocks at Camp Carroll which consists of 12,500 items valued at about \$2.5 million. Findings/Conclusions: The data used to identify the items and compute the requirements did not accurately represent the items or quantities that should make up the safety level. This safety-level concept represents, in general, the same one to which the Army Audit and GAO took exception in 1973 and 1974. The rationale for the reestablishment of the depot safety level was questionable, and a reevaluation of the safety level of stocks is needed. The reestablished safety level is not necessarily related to mission-essential items or high-priority needs. Increased stockage has not been the solution to unit "stock-out" problems, and the present program for redistributing stock fund excesses has not been effective. Recommendations: The Secretary of Defense should reevaluate the need for the 30-day safety level, taking into consideration: (1) the downward trend in order-ship time for requisitions; (2) the 90-day order-ship time used by units in Korea to compute requirements; and (3) economic order quantity computations for most stock-fund items, which provide more than 30 days of operating stocks. In addition, he should defer replenishment of safety-level stocks in Korea; cancel related on-order quantities pending reevaluation of the need for these stocks; and provide an improved automated redistribution of unit stock-funded excesses.

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UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS
DIVISION

B-166312

MAY 9 1977

The Honorable
The Secretary of Defense

Dear Mr. Secretary:

In December 1976, we completed an examination of selected aspects of inventory management in Korea. The work was performed at 8th Army Headquarters, 19th Support Brigade's Inventory Management Center, the Camp Carroll Installation Support Activity, the 2d Infantry Division, and selected direct support units (DSUs) in South Korea.

Our review indicates that the Department of the Army should (1) reevaluate its decision to reestablish a 30-day safety level of depot stocks in Korea and (2) improve its method of redistributing stock fund excesses among DSUs in Korea.

The Army's direct support system was introduced in Korea in 1971. The major objective of this system was to reduce the large peacetime investment in overseas depot stocks positioned for the support of combat divisions and their support units. Under this system, DSUs of overseas divisions were to receive supply support directly from supply sources in the continental United States (CONUS). Overseas installation support activity or depot stocks were to be limited to war reserves, items designated for specific operational missions, and a 30-day supply of safety level stocks of mission-essential items that were not included in war reserves.

The 30-day safety level stocks were to fill high-priority requisitions (priorities 1-3) for parts needed to repair mission-essential equipment.

LCD-77-214

REEVALUATION OF SAFETY
LEVEL OF STOCKS NEEDED

The Army has reestablished a 30-day depot safety level of stocks at Camp Carroll which consists of 12,500 items valued at about \$2.5 million, with no valid data to support this level's establishment. Of the \$2.5 million, about \$524,000 could be filled from available in-country excesses and about \$2 million would be requisitioned from CONUS supply sources. At the completion of our examination, there were about \$700,000 worth of these stocks on order from CONUS. In addition to the initial investment of \$2 million needed to fill the safety level requirements, it is estimated that the Army will incur an annual inventory carrying cost of about \$625,000.

The data used to identify the items and compute these requirements, however, did not accurately represent the items and quantities that should make up the safety level approved for reestablishment by the Department of the Army in May 1976. In addition, this safety level concept represents, in general, the same one which the Army Audit and GAO took exception to in 1973 and 1974, because a substantial portion of the items was either nonessential or duplications of war reserve stocks. (See our report B-146828, dated Oct. 1, 1976.)

In 1974, the Department of the Army agreed with the Army Audit and GAO that the 30-day safety level of depot stocks in Korea should be eliminated. The Army issued a directive requiring deletion of current depot safety levels for items in war reserves and cancellation of all requisitions against the safety levels for which lift notices had not been received. The 8th Army advised us that direct support system depot safety levels valued at about \$2.4 million were eliminated, and over 1,500 requisitions valued at \$325,000 were cancelled.

In September 1975, the 8th Army asked the Department of the Army for approval to reestablish this safety level. The rationale used in support of the 8th Army request was that: (1) its high-priority units, such as the 2d Infantry Division, could not maintain their operational readiness objectives due to wide fluctuations and interruptions in the supply pipeline to Korea and (2) it was necessary to supplement shortages in its war reserve stocks.

In May 1976, the Department of the Army approved reestablishment of the 30-day depot safety level in Korea to fill high-priority requisitions for mission-essential items not in war reserves, or for which war reserves did not represent a 30-day supply.

Rationale for reestablishment of depot safety level questionable and not evaluated adequately

The 8th Army requested reestablishment of the 30-day depot safety level of stocks in order to maintain the operational readiness of its high-priority units. We examined the command's own readiness reports for its units and our analysis showed that the DSUs in Korea, including the 2d Infantry Division, were meeting their operational readiness objectives before reestablishment of the 30-day depot safety level stockage.

The 8th Army said that the safety level was needed also because of wide fluctuations and interruptions in the supply pipeline to Korea. However, substantial downward trends in the average order-ship time have been experienced for high-priority requisitions submitted to CONUS supply sources. When the decision was made in 1974 to eliminate the 30-day safety level stocks, the average order-ship time for high-priority requisitions was 52 days. In 1976 when it was reestablished, the average high-priority order-ship time had decreased to 37 days.

The 8th Army further indicated that the 30-day depot safety level was needed to supplement shortages of war reserve stocks. The reestablished level is made up of stock-funded, repair-parts type items. However, there are only 3,130 stock-funded items in the war reserve; of these, 2,500 have war reserves which equal or exceed the 30-day safety level. This leaves only 631 items with war reserve requirements that are eligible for stockage under the 30-day safety level criteria approved by the Department of the Army; these items are only about 5 percent of the 12,500 items that the U.S. 8th Army projected for stockage in the 30-day safety level.

Although the Department of the Army approved the reestablishment of the 30-day safety level in Korea, we could find no evidence that it took the above conditions into consideration. Furthermore, we could find no evidence that it considered any of the following information which we believe should be pertinent to reestablishment of the 30-day safety level in Korea.

Direct support units in Korea are authorized a 15-day safety level of stocks. This is to provide stocks for filling high-priority requisitions when fluctuations are experienced in order-ship time. In computing their normal stockage quantities, DSUs use a 90-day order-ship time which is 21 days more than the average of 69 days overall ship time experienced for fiscal year 1976 for all except back-ordered requisitions. So that in addition to the already provided safety level of 15 days stock, the DSUs have another cushion of 21 days because of this difference between the order-ship time factor used in computation of requirements and the average order-ship time that is experienced.

The operating stock levels for most stock-funded items carried in the DSUs' inventories are computed using the economic order quantity principle. This results in having greater quantities of most stock-funded items on hand than the authorized 30 days' operating and 15 days' safety levels.

Reestablished safety level not related to mission-essential items that experienced high-priority needs

The Department of the Army authorized reestablishment of the 30-day safety level in Korea to the extent that it was needed to fill high-priority requisitions for mission-essential equipment. However, no analysis was made of items most likely to be needed for repairing inoperable mission-essential equipment for which repetitive priority 1-3 requisitions can be submitted to alleviate stock outages. A list of frequent past annual demands compiled by the Department of the Army was the criterion used for selecting items to be included in the 30-day depot safety level stockage in Korea.

Under this criterion, items qualified if 7 to 15 total demands (varied according to item materiel category) were experienced during the past year. Whether the demands were routine or high priority, or for mission-essential or nonessential items, was ignored. Also, the selection criterion specified that once an item qualified for safety level stockage, it needed to experience only 1 or 2 demands annually thereafter to warrant continued stockage. The only items excluded from this selection criterion were war reserve items with at least a 30-day supply, or certain classes of Defense Supply Agency/General Services Administration items restricted from high-priority requisitioning.

Department of the Army officials stated that the use of this criterion was necessary because the Inventory Management Center's computer program (used to identify items qualifying for depot safety level stockage) was not capable of identifying items for which repetitive priority 1-3 requisitions had been submitted during the past year. However, 8th Army officials said this could have been accomplished easily by minor reprogramming. Automated data processing programmers for the system confirmed this. Eighth Army officials also indicated that the use of this Department of the Army frequency of demand criterion would result in stockage of thousands of items in the depot safety level, which would experience no activity due to the likely absence of priority 1-3 requisitions for these items.

Therefore, the proposed safety level will include thousands of items that do not meet the Department of the Army's authorization. Some of these items and/or quantities are very likely to become excess.

Increased stockage not the solution to unit "stock-out" problems

In November 1976, an Army Headquarters team completed a periodic review of direct support units in Korea and concluded that increased stockage was not a solution to unit "stock-out" problems.

The team reported that unit stock-outs were caused by problems at CONUS inventory control points (contract

award delays and production slippage) and not by inadequacies in the supply pipeline. The team also reported that the 90-day order-ship time used by units in Korea to compute stock needs was considerably higher than that being experienced. Furthermore, in addition to the increased stocks provided by the excessive order-ship time, the team pointed out that the use of economic order quantities in computing stock needs for stock-funded items provided more operating stocks than the minimum 30 days authorized.

IMPROVED REDISTRIBUTION OF
STOCK FUND EXCESSES NEEDED

The present program for redistributing stock fund excesses has not been effective.

Direct support units in Korea identified and returned excess stock fund items to the Camp Carroll Army Depot; these items were valued at about \$13 million during fiscal year 1976. Of these, \$6.9 million were serviceable and needed to fill other DSU requirements in Korea. Shipping these items directly to the DSUs would have reduced the Depot's workload and served the DSUs' needs more promptly.

Processing and storage of unit turn-ins have impaired Camp Carroll's capability to upgrade the condition of vital stocks needing only limited restoration such as packaging, rust removal, and painting. About 70 percent of Camp Carroll's receipt and storage efforts were devoted to unit turn-ins which required a longer processing time than receipts from CONUS.

From January to November 1976, stocks requiring restoration increased from about \$1.8 million to about \$7.5 million. Of the \$7.5 million, about \$2.9 million were needed to restore war reserve stocks. Also in this period, open work orders for minor repairs increased from 94 to 453. Our tests showed that some of these work orders were outstanding for up to 3 months.

Direct support units are required to report their excess appropriated fund items to the 8th Army Inventory Management Center and are not supposed to turn in the items until authorized by the Center. On the other hand, the DSUs can return excess stock fund items to Camp Carroll at any

time without prior authorization. The DSUs report their stock fund excesses and shortages quarterly to the Inventory Management Center. The Center matches the excesses and shortages, and subsequently instructs units to redistribute the excesses with an extended value of \$50 or more. In many instances the units cannot comply because they have already returned the excesses to Camp Carroll. Further, the matching process is done manually. At the time of our fieldwork, an average of 30 days lapsed from the reporting of stock excesses and shortages to the Inventory Management Center and its issuance of stock transfer instructions to the reporting units.

In the past, the Inventory Management Center had a completely automated system for redistributing stock-funded excess among DSUs. Under this system, the stock excesses and shortages reported quarterly were matched by the computer, which instantly printed materiel release orders to the reporting units to redistribute their excesses to units with like shortages.

This automated redistribution system was discontinued because the computer program ignored the dollar value of reported excesses, with the result that numerous uneconomical redistribution orders were issued for low dollar value excesses. Also, because the computer program considered stocks due in as on hand, all stock shortages were not identified. In some cases, stocks not on hand were considered to be available for immediate redistribution.

Many excess stock-funded items turned in by DSUs in fiscal year 1976 were in issuable condition and were needed immediately to fill shortages in other units. An effective program for direct distribution of these excesses among DSUs could have resulted in timely and economical filling of units' stock requirements, and also could have substantially reduced Camp Carroll's workload. This redistribution process can be accomplished by utilizing the current supply transportation system, which services all DSUs through 17 dropoff points.

A more timely and effective redistribution of excess stock fund items could have been accomplished by (1) prohibiting DSUs from turning in their stock-funded excesses to Camp Carroll before authorization from the Inventory

Management Center and (2) reinstating an improved automated system at the Inventory Management Center for matching reported on-hand unit excesses with shortages, and immediately printing materiel release orders to redistribute on-hand excesses with an extended value of \$50 or more.

CONCLUSIONS AND RECOMMENDATIONS

The Army did not adequately evaluate the need for the 30-day safety level in Korea and did not restrict stockage to items most likely to affect unit readiness. In our opinion, the reestablishment of the safety level was not justified and it is not needed now.

Additionally, the large volume of unit excess stock fund items turned in to Camp Carroll impairs their capability to perform timely minor repairs on vitally needed stocks. This condition could be substantially alleviated by using available computer facilities to match reported excesses and shortages and to direct redistribution as needed.

Therefore, we recommend that the Secretary of Defense direct the Army to take the following actions:

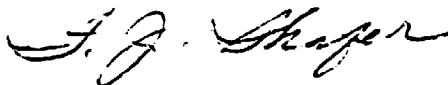
- Reevaluate the need for the 30-day safety level in Korea, taking into consideration (1) the downward trend in order-ship time for requisitions since 1974, (2) the 90-day order-ship time used by DSUs in Korea to compute requirements, which is much longer than actually needed, and (3) economic order quantity computations for most stock fund items, which give the DSUs more than 30 days of operating stocks.
- Defer replenishment of safety level stocks in Korea and cancel related on-order quantities pending reevaluation of the need for these stocks.
- Provide an improved automated redistribution of unit stock-funded excesses with an extended value of \$50 to fill like unit shortages. Also, direct the units to turn in stock-funded excesses only upon receipt of authorization from the Inventory Management Center.

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

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

We would appreciate being advised of actions taken on the matters discussed in this letter.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "F. J. Shafer".

F. J. Shafer
Director