
BY THE U.S. GENERAL ACCOUNTING OFFICE
Report To The Secretary Of Defense

Eliminating Marine Corps Logistics Overlap Saves Millions; Further Savings Possible

GAO followed up on its 1975 report recommending the Marine Corps reduce the scope of its logistics activities. While GAO found the corps has eliminated some overlap in its logistics functions, further reductions are possible through greater reliance on other Defense integrated logistics managers.

Costs should be reduced without impairing the Marine Corps' mission.



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B-198852

The Honorable Harold Brown
The Secretary of Defense

Dear Mr. Secretary:

This report presents our evaluation of DOD's actions in response to our recommendations, contained in an earlier report, to reduce Marine Corps involvement in logistics management.

This report contains further recommendations to you on page 26. 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, House and Senate Committees on Appropriations and on Armed Services, the House Committee on Government Operations, and the Senate Committee on Governmental Affairs; the Secretaries of the Army and Navy; and the Director, Office of Management and Budget.

Sincerely yours,


R. W. Gutmann
Director





D I G E S T

GAO reported in 1975 that the Marine Corps' logistics system either duplicated or performed certain logistics functions similar to those being carried out by other Department of Defense (DOD) activities. Substantial reductions in the Marine Corps' logistics system were possible through greater reliance on other DOD logistics activities and the General Services Administration (GSA). (See p. 2.)

To achieve these reductions, GAO recommended that the Secretary of Defense require that:

- Marine Corps operating forces receive supply support from other DOD integrated managers and GSA. (See p. 2.)
- Ammunition be subject to DOD-wide management. (See p. 5.)
- Equipment be overhauled by the cognizant military service. (See p. 6.)
- War reserve materiel be stored by appropriate DOD activities. (See p. 18.)
- All principal items of equipment be purchased and provisioned by the military service which uses the items the most. (See p. 22.)

In response to these recommendations, the corps eliminated some of the logistics overlap by discontinuing duplicate management of 157,000 items previously assigned to DOD activities and GSA for overall management, and it no longer stocks these items in wholesale quantities for peacetime operating use.

Currently, the Marine Corps manages only 6,100 active and 31,200 inactive or infrequently used supply support items assigned to it for management, and it has closed two small storage activities.

In addition, DOD designated the Secretary of the Army as single logistics manager for all conventional ammunition. DOD also transferred a small workload of corps equipment to other services for depot maintenance. (See pp. 5 and 7.) These changes have saved an estimated \$65 million, and recurring savings are estimated at \$2.9 million annually.

However, GAO found that other needed changes involving increased corps reliance on other DOD activities have not been made. Specifically, GAO believes the Defense Logistics Agency (DLA) could provide supply support for the 34,000 consumable items still managed by the corps for about \$7.5 million less and provide better support. Further, other services could provide support for about 800 remaining items requiring active management.

Similarly, duplication in maintenance effort and facilities could be reduced by scheduling selected items of equipment into depots which could do the most cost-effective overhaul work on combined service requirements, and other services could purchase and provision more of the corps' equipment at lower costs. In addition, further reductions in warehouse storage operations are possible through shifting corps consumable item stocks to DLA depots and corps war reserve stocks to appropriate integrated manager depots. (See pp. 11, 12, 16, and 18.)

These changes have not been made largely because of Marine Corps concern that the changes would affect its ability to perform its mission. However, past experience shows that DLA and other services can provide service equal to or better than the corps now gets in-house. (See pp. 11 and 14.)

GAO recommends that, unless the corps can demonstrate that its mission will be adversely affected, the Secretary of Defense require these additional changes to further reduce Marine Corps logistics activities:

- Transfer consumable item management to DLA and management of the remaining supply support items to others who are responsible for similar items. (See p. 26.)
- Reduce duplication of maintenance effort and facilities by shifting selected items of equipment into service depots which can do the most cost-effective overhaul work on combined service requirements considering all significant elements of cost. If it is necessary to retain technical competence in support of readiness, Marine Corps personnel can assist with work in other service maintenance depots. (See p. 26.)
- Store war reserve materiel at appropriate integrated managers' depots and consumable items at DLA warehouses. (See p. 26.)
- Transfer procurement and provisioning of corps principal equipment items to other services if consumables are transferred to DLA. (See p. 26.)

AGENCY COMMENTS

DOD stated that it is nearing a decision on the entire aspect of consumable item management for all the military services and that it will consider all four of the GAO recommendations in light of that decision.



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ABBREVIATIONS

DLA	Defense Logistics Agency
DOD	Department of Defense
GAO	General Accounting Office
GSA	General Services Administration
ICP	inventory control point
JLCs	Joint Logistics Commanders
MISMO	Maintenance Interservice Support Management Office
OSD	Office of the Secretary of Defense



CHAPTER 1

INTRODUCTION

The Marine Corps operates its own central supply and depot maintenance system, which employs about 5,900 people at an annual cost of approximately \$112 million. The corps manages only 38,700 items--37,300 supply support items and 1,400 equipment items--about 1 percent of the 3.8 million items used by the Department of Defense (DOD).

MISSION OF MARINE CORPS LOGISTICS SYSTEM

The mission of the Marine Corps' logistics system is to purchase, distribute, and manage those items necessary for equipping, maintaining, and operating the active forces, support establishments, and the Marine Corps Reserve. Three basic components make up the logistics system: Headquarters, U.S. Marine Corps, and both an in-stores and out-of-stores functional element. Headquarters provides concepts, policies, and guidance; the in-stores element distributes stock; and the out-of-stores, or retail element, is the user or direct support element. The in-stores element includes assets and related management functions under central inventory control point (ICP) financial accountability and/or control. The in-stores structure consists of one ICP, located at the Marine Corps Logistics Base, Albany, Georgia; and two remote storage depots, one at the Albany base and one at the Marine Corps Logistics Base, Barstow, California. Both logistics bases have depot complexes which receive, store, and issue supplies and overhaul equipment. The corps contends that central control of its wholesale supply and depot maintenance operations is necessary to maintain combat readiness.

DOD POLICY ON LOGISTICS SUPPORT

DOD policy seeks to eliminate unnecessary duplication in management and logistics support of materiel used by more than one service and to use common logistics support systems as much as possible. Constraints on DOD resources call for maximum efficiency; elimination of unnecessary duplication; and common use of systems, facilities, functions, and inventories whenever possible.

In recent years, DOD has succeeded in improving management and interservice support of materiel through standardization and automation of supply support systems. The trend

toward common logistics support systems began with coordinated purchase and interservice supply support and continued under the single-manager concept, which uses integrated management to supply all military requirements for assigned commodities. Later, DOD established a unified supply and services activity--the Defense Logistics Agency (DLA). The Office of the Secretary of Defense (OSD) has also improved logistics support and readiness by assigning all reparable items and all consumable items not managed by DLA to an individual service for single, integrated management.

PRIOR REVIEWS

In the past, both we and DOD officials have questioned the need for the Marine Corps to continue managing many items in its supply system that have been assigned to integrated managers, particularly DLA. In a 1970 report, 1/ we recommended eliminating items from corps management which its units could order directly from integrated managers. We also pointed out in a 1973 report 2/ that each service, including the corps, was overemphasizing the development of its own maintenance capability rather than trying to use existing facilities of other services. We cited the corps' over-haul operations as an example.

In our 1975 report, 3/ we again noted that the Marine Corps duplicated or performed logistics functions similar to those accomplished by other DOD activities. Areas of overlap included supply support, management of ammunition, and operation of storage and maintenance depots. Accordingly, we recommended that the corps substantially reduce its logistical system in these areas through greater reliance on other DOD integrated managers and GSA. In commenting on this report, the Assistant Secretary of Defense, Installations and Logistics, said that DOD had reviewed Marine Corps supply management and that the corps had proposed actions to reduce its involvement in supply management along lines we recommended.

1/"Savings Attainable By Eliminating Duplicate Stocks In the U.S. Marine Corps" (B-146828, Nov. 10, 1970).

2/"Potential For Greater Consolidation of the Maintenance Workload In the Military Services" (B-178376, July 6, 1973).

3/"Marine Corps Logistics System Could Be Drastically Reduced by Greater Reliance on Integrated Managers" (LCD-74-434, Jan. 15, 1975).

SCOPE OF REVIEW

We evaluated DOD efforts taken in response to our prior report recommendations to reduce Marine Corps involvement in logistics management. We reviewed policies, procedures, and practices relating to DOD logistical systems and interviewed Marine Corps officials and personnel directly involved in logistical functions. We did this work primarily at Marine Corps headquarters and the Marine Corps Logistics Base, Albany, Georgia. We also held brief discussions with, and obtained limited information from, Department of Army logistics officials at both the U.S. Army Missile Command, Redstone Arsenal, Alabama, and the Depot System Command, Chambersburg, Pennsylvania.

CHAPTER 2

IMPROVEMENTS IN MARINE CORPS

LOGISTICS SYSTEM

The Marine Corps has eliminated some overlap with other DOD components in supply support, ammunition management, and operation of storage and maintenance depots. These changes have been in keeping with DOD policy to eliminate unnecessary duplication in military logistics support, have been cost effective, and have not impaired mission capability. Personnel involved in the wholesale supply and maintenance system have declined from about 6,800 in 1975 to about 5,900 in 1979--a reduction of about 900--as a result of these and other changes. As discussed in chapter 3, additional changes in the Marine Corps' logistical system could further improve efficiency.

The following table shows Marine Corps personnel in the major functions of the central logistics system at the time of our 1975 report and this followup review. The table also shows the estimated annual operating costs of these functions.

Marine Corps Personnel in the
Central Logistics System
and Annual Operating Costs

	Fiscal year 1975 (note a)	Fiscal year 1979 (note b)	Increase or decrease (-)	Estimated annual operating costs (millions)
ICP activities:				
Supply operations--item management, war reserve and provisioning stock management, readiness evaluation	316	224	-92	\$ 3.1
Technical operations--technical support and cataloging services	296	199	-97	3.5
Provisioning for principal items of equipment	120	95	-25	1.6
Procurement of supply and service requirements	63	55	- 8	1.2
Other ICP activities	<u>0</u>	<u>79</u>	<u>79</u>	<u>1.0</u>
Total ICP activities	795	652	-143	10.4
Operating supply depots	1,399	1,048	-351	22.8
Depot maintenance activities	1,570	1,666	96	46.3
Administrative, base maintenance, data processing, other supporting services, and miscellaneous	<u>3,038</u>	<u>2,548</u>	<u>-490</u>	<u>32.0</u>
Total	<u>6,802</u>	<u>5,914</u>	<u>-888</u>	<u>\$111.5</u>

a/Includes personnel at ICP in Philadelphia, Pa., and logistics bases at Albany, Ga., and Barstow, Calif. (Numbers approximate).

b/Includes personnel at ICP and logistics bases at Albany, Ga., and Barstow, Calif. (Numbers approximate).

SUPPLY SUPPORT ITEMS

At the time of our 1975 report, the Marine Corps was managing and stocking items that had been assigned to other DOD components and GSA for integrated management. To eliminate the inventory control function of the corps' ICP and the supply support storage function of its four depots, which duplicated similar functions carried out by other services, we recommended that Marine Corps operating forces receive supply support from other DOD integrated managers and GSA.

Previously, the corps was managing about 216,000 active supply support items, including about 157,000, or 73 percent, which had already been assigned to other DOD supply activities and GSA for single management support of all the military services. Duplicate items the corps had been managing included clothing, repair parts, and construction materiel. Following our 1975 report, the corps discontinued duplicate management of the items assigned to other DOD activities and GSA for integrated management. Currently, it manages only 6,100 active supply support items and 31,200 inactive or infrequently used items.

The corps' depots no longer stock wholesale quantities of items for peacetime operating use that are assigned to others for management. Currently, about 15,500 items are stocked at Albany and 21,900 are at Barstow for general issue. Marine Corps operating forces now requisition operating stocks directly from the integrated managers. The corps also closed two of its four depots.

The corps saved \$65 million through inventory reduction, \$1.1 million annually through reduction or reassignment of 100 civilian and military inventory control personnel, and \$1 million annually through reductions in transportation and operating supplies. Also, reducing the number of items stored in the Albany and Barstow depots made possible cut-backs in warehouse personnel at these locations from about 1,400 to 1,050, a reduction of about 350 people.

Closing the two small depots at Camp Lejeune, North Carolina, and Camp Pendleton, California, also allowed reduction or reassignment of 80 people, at an annual savings of \$800,000, and freed 447,000 square feet of warehouse space for reallocation.

AMMUNITION MANAGEMENT

The Marine Corps formerly purchased virtually all its ground ammunition through the Army, and the Navy provided aircraft ammunition and stored most of the corps' ground

ammunition. In our 1975 report, we recommended that ammunition be centrally managed by DOD because the corps was already depending on two other DOD components to meet some of its ammunition logistical requirements. Central management would permit consolidation of logistical functions carried out by each military service and would require less management from Marine Corps headquarters. DOD replied that it had begun a review of the potential for further centralization of ammunition management and would advise us of its decision concerning our recommendation.

Subsequently, on November 26, 1975, DOD designated the Secretary of the Army as single manager for conventional ammunition and thus integrated military ammunition logistics. Under this concept, the corps has several ammunition management responsibilities: determining requirements; distributing stock; designating storage sites; and budgeting, controlling, and accounting for ground ammunition. Seventeen military and civilian personnel at corps headquarters perform ammunition functions. Under DOD procedure, the corps requisitions its ground ammunition through the Army, which stores the bulk of the corps' ammunition; the corps does not store wholesale stocks of ammunition at its two depots. The Navy still computes requirements for the corps' aircraft ammunition and supplies it to the corps.

DEPOT MAINTENANCE OPERATIONS

Depot maintenance activities at Albany and Barstow are the most costly expenditures at these installations. In fiscal year 1978, the corps spent about \$46 million for depot maintenance--\$24 million at Barstow and \$22 million at Albany. About 1,660, or 28 percent, of the approximately 5,900 people employed at the two bases work in depot maintenance. The total depot maintenance force has increased from 1,570 in 1975 to about 1,660 in 1978 due to increased Marine Corps depot maintenance workload.

Our 1975 report found that the two facilities were overhauling only limited quantities of some kinds of equipment and some of the same items the Army was overhauling. We pointed out that other military services could handle the corps' comparatively small overhaul workload and do it on a more efficient, assembly-line basis. Accordingly, we recommended transfer of Marine Corps overhaul functions to the other services, a move that would also eliminate the need for the Barstow and Albany depots.

Interservice maintenance study

DOD did not carry out our recommendation because it was making a DOD-wide study to determine the potential for increasing interservice depot maintenance on commonly used items, thereby minimizing duplication and avoiding future investment costs for maintenance facilities. This study covered a wide range of commodities, including vehicles, missiles, electronics, and aeronautical materiel. DOD essentially completed this study by February 1978, and on the basis of study findings, reported that it was able to increase the DOD interservice maintenance workload by about \$51 million annually. Included in this amount was a \$438,000 shift in Marine Corps workload to other services and a \$2.8 million shift in workload from other services to the Marine Corps.

In addition, DOD reported that it would avoid spending about \$15.4 million for depot level maintenance support equipment, training, and software for maintenance of new equipment coming into the inventory. About \$1.2 million of this amount was Marine Corps cost avoidance. For example, DOD estimated it would save about \$600,000 over a 5-year period as a result of assigning the Albany depot, interservice maintenance responsibility for the new SB-3614 telephone switchboard to be used by the corps and the Army.

DOD's plans were to continue monitoring existing items to ensure interservice maintenance whenever possible but to concentrate resources on new equipment entering the inventory. DOD saw greater opportunity for minimizing duplication and avoiding costs with new equipment than with equipment already in use with its inherent sunk costs. Although the DOD study also identified a \$14 million annual Marine Corps workload, with potential for interservice maintenance, it did not shift the workload to other services as discussed in chapter 3.

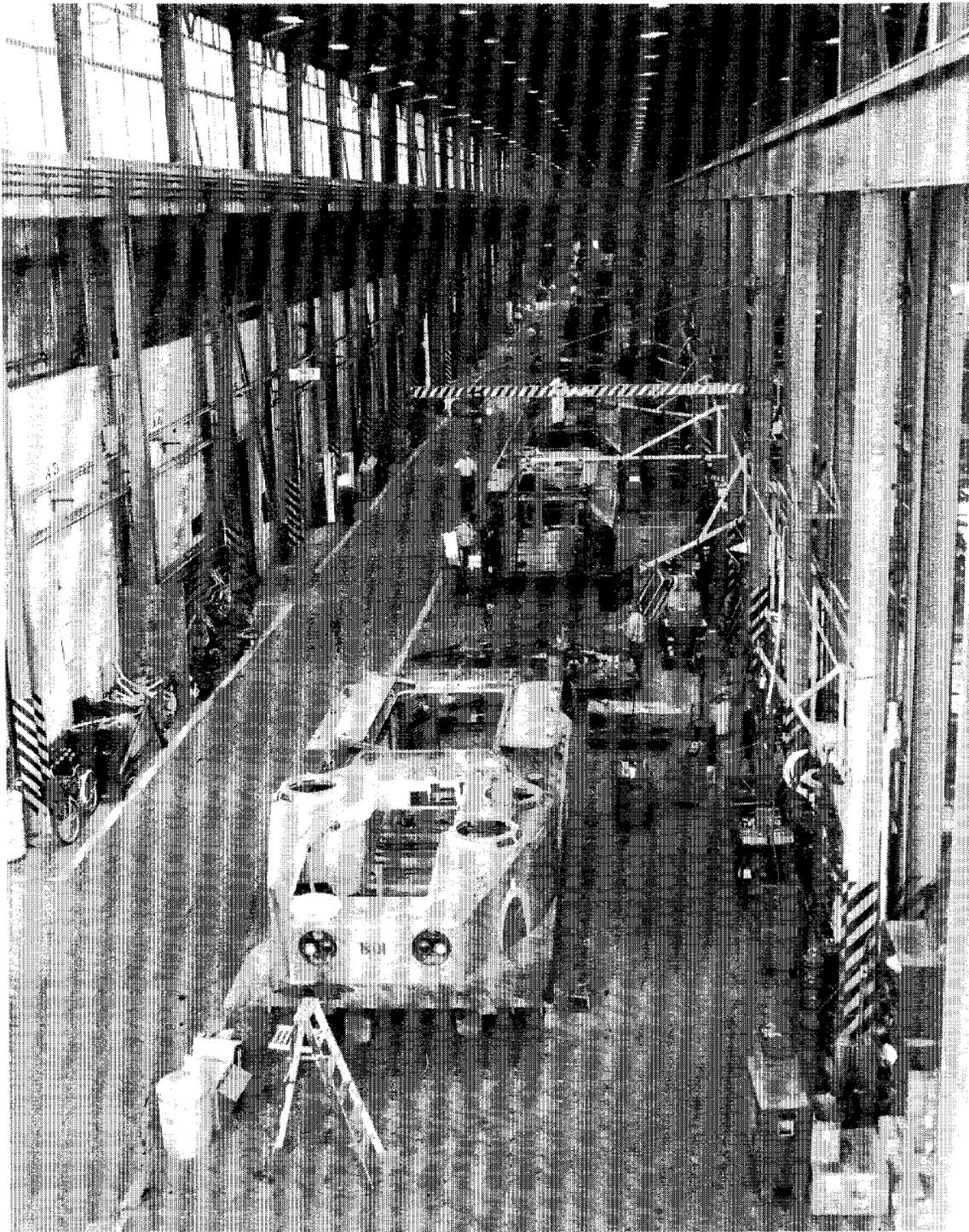
Although the interservice studies resulted in increasing interservice maintenance, further improvements are needed in this area. (See p. 14.)

Depot consolidation study

DOD did another study bearing on our recommendation that other military services overhaul the Marine Corps' equipment. It undertook a comprehensive survey of all DOD maintenance depots to identify potential consolidations of depot maintenance workloads within and among the military services. As part of the review, the DOD study group analyzed workloads

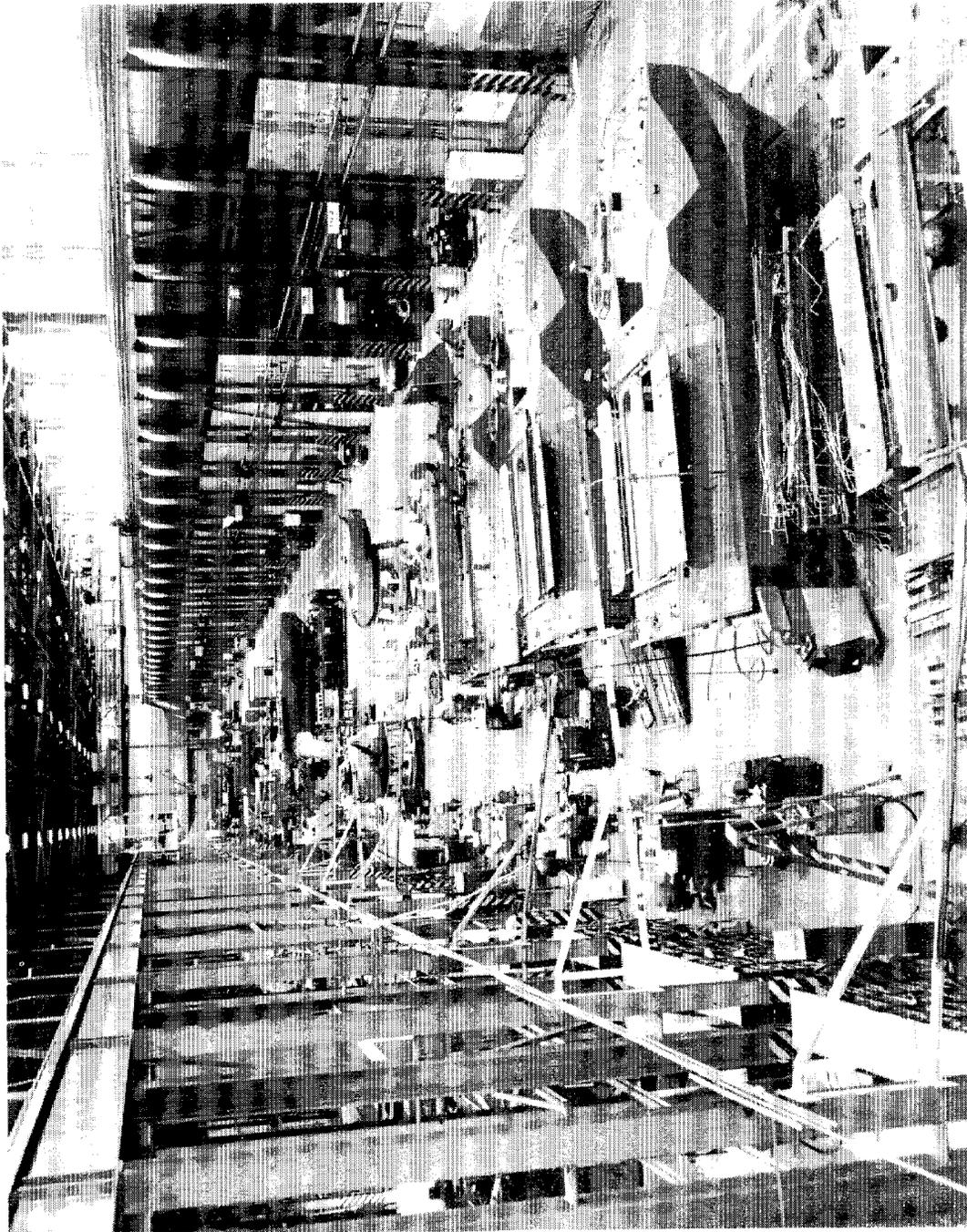
and capacities at six similar depots, including two Marine Corps depots and four Army depots--Anniston, Letterkenny, Red River, and Tooele. One feasible alternative identified by the study called for closing all Albany and Barstow depot maintenance functions except maintenance support of equipment in storage. The other functions were to be distributed among the four Army depots, which had enough gross capacity to absorb the Marine Corps' workload.

Although this alternative was feasible, the study group concluded that it offered no significant benefit of any kind. Economic analysis indicated an annual cost impact ranging from savings of \$265,000 to an increase of \$499,000, depending on where overhauled equipment would be stored. In addition, the alternative would have required realigning Army depot shops and moving Marine Corps depot test equipment to the Army depots. Overall, use of Army depots would have improved as a result of the transfer but not sufficiently to recommend implementation of the alternative.



AMPHIBIOUS ASSAULT VEHICLE REBUILD, MARINE CORPS LOGISTICS BASE, ALBANY, GA.

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CHAPTER 3

FURTHER IMPROVEMENTS NEEDED

IN MARINE CORPS LOGISTICS SYSTEM

Although the changes discussed in chapter 2 are commendable, other recommended changes in Marine Corps logistics management have yet to be accomplished, largely because of corps concern that the changes will adversely affect its ability to perform its mission as a force-in-readiness.

SUPPLY SUPPORT ITEMS

After it began relying on integrated managers for supply support in 1975, the Marine Corps significantly reduced the number of items it managed and stocked. But further reductions could be accomplished by transferring the 34,000 remaining consumable items managed by the corps to DLA for management. DLA could manage these items at less cost and provide better service. DLA already manages 1.9 million consumables, or 50 percent of all items used by DOD, including about 203,000 used by the Marine Corps.

Although Marine Corps officials indicated support for the integrated management concept, they objected to the proposed transfer of all consumable items and have responded through channels to that effect. Their main reservation is the possible adverse effect on Marine Corps readiness.

On the basis of past experience, however, readiness should not be adversely affected if DLA manages these items because DLA's supply performance has been better than the corps' performance. For example, we noted that in 1979 DLA's supply effectiveness exceeded Marine Corps effectiveness by 15 percent. Also, over the years, DOD has found that DLA provides better supply support of consumables.

DOD has also found that, when proposals were made in the past to increase management assignments to DLA, the services frequently expressed concern that supply support and operational readiness would be less under DLA than under service management. But these concerns have been unfounded because DLA has consistently achieved better than 90 percent supply effectiveness in its management of consumables, and DLA supply effectiveness has continually exceeded that of the Marine Corps and other military services by 10 to 15 percent.

The following table shows supply effectiveness achieved during the last 3 years by the Marine Corps and DLA and the average supply effectiveness for DOD.

<u>Organization</u>	Supply effectiveness percentage by fiscal year		
	<u>1977</u>	<u>1978</u>	<u>1979</u>
Marine Corps	60	66	77
DLA	93	92	92
DOD average	87	87	88

Corps officials said it was not appropriate to compare corps and DLA supply effectiveness because of differences in types of items each manages. They said most of the items the corps manages are applicable to weapon systems which are more difficult to manage than DLA items.

Although there are some differences in types of items managed, both DLA and the corps manage the repetitive demand, consumable items with computers. Furthermore, DOD believes that DLA's effectiveness exceeds that of the Marine Corps and other services by too wide a margin to be completely attributed to the nature of the items. Regardless of the differences, however, DLA's support of weapon systems has been excellent. The services have identified about 183,000 weapon system items which require special management attention by DLA, and DLA has achieved a 97 percent in-the-bin availability on these items, which includes items for aircraft, tanks, and missiles.

In addition to providing better support, DLA should provide the support at less cost. A 1978 DOD study concluded that DOD could save about \$317 million over a 5-year period and get better support service if the remaining 1.4 million consumable items still managed by the military services, including most of the 34,000 managed by the Marine Corps, were transferred to DLA. According to a DOD cost-benefit study, the savings would accrue from reduced personnel and annual operational costs; about \$7.5 million would be applicable to the Marine Corps. On the basis of potential savings and DLA's demonstrated effectiveness, OSD has proposed that all remaining consumable items managed by the military services be transferred to DLA as well.

On the basis of what they considered questionable estimated savings and the possible effect on readiness, the other military services have also objected to the proposed transfer.

As a result, OSD has requested that the Defense Audit Service do another study on the proposed transfer. OSD was awaiting the audit report, which was due at the end of March 1980, before deciding on the matter. The results of the study had not been received at the time of this writing. However, according to a DOD representative, if the Defense Audit Service findings support the study recommendations, DOD may transfer additional consumables to DLA because of the potential savings. On this subject, the "Report of the Committee on Appropriations" (H. Rept. 96-450, Sept. 20, 1979,) concerning the Department of Defense Appropriation Bill for 1980 stated that,

"The Committee believes that the Defense Audit Study should be the last feasibility/cost study of this matter. If the auditors substantiate the original study assumptions and identify significant cost savings, the Committee expects the Department of Defense to submit the outline of an implementation plan in conjunction with the Committee review of the fiscal year 1981 request."

Should DOD assign DLA responsibility for managing the consumable items, only about 5,200 items--3,800 reparable supply support items and 1,400 equipment items--would remain under Marine Corps management. This inventory would include about 800 active items, which generally require day-to-day management effort, and about 4,400 considered inactive items, which require little management effort. Other services also use about 500 of the 800 active items and thus could manage them for the corps.

If the proposed transfer of consumable items to DLA takes place, DOD should transfer management of the remaining 5,200 items in the corps' inventory to other services. To ensure that corps equipment meets readiness requirements, its existing weapon and equipment systems support management organization could maintain supply liaison with the integrated managers of other services on corps materiel needs.

AMMUNITION MANAGEMENT

As noted in chapter 2, DOD has established a central manager for conventional ammunition in the military departments, as we recommended in our 1975 report. Despite much progress since the Secretary of the Army was designated single manager for conventional ammunition in DOD, the central manager needs more control and a stronger position. We discussed the need for further changes in our November 26, 1979, report to the Congress, "Centralized Ammunition Management--A Goal Not Yet Realized" (LCD-80-1). The

report explained deficiencies in the current system of ammunition management and identified managerial and organizational changes needed to fully carry out our prior recommendations.

DEPOT MAINTENANCE OPERATIONS

As noted in our 1975 report, other military services could overhaul Marine Corps equipment. Our followup found that other services still were capable of overhauling corps equipment. However, DOD allows the Marine Corps to overhaul most of its own equipment to retain technical competence in support of readiness, although a DOD study found that other military services are capable of maintaining this equipment for the corps.

Potential interservice workload not assigned to single maintenance source

DOD's depot maintenance interservice study found that an annual Marine Corps maintenance workload estimated at \$14.4 million could be shifted to other services. However, DOD decided to shift only \$438,000 of the workload and did not shift the remaining \$14 million of this workload even though the other services generally had larger workloads of the same items and could have done the additional work. Marine Corps equipment not recommended for interservice maintenance is as follows:

<u>Equipment</u>	<u>Annual direct labor hours</u>	<u>Annual amount</u> (millions)
Vehicles	268,553	\$ 9.9
Small arms	60,882	2.3
Radio sets/switchboards	<u>47,394</u>	<u>1.8</u>
Total	<u>376,829</u>	<u>\$14.0</u>

DOD decided that the corps would overhaul its own equipment to retain technical competence in support of readiness.

We noted, however, that DOD's decision did not follow recommendations of the interservice study groups, which had recommended that the Army be designated as the interservice overhaul and repair activity. The study groups based their recommendations on the rationale that the Army already served

as design, procurement, and support activity for the equipment and was the predominant user and overhaul agency. The study groups determined that the Army had the capacity and capability to absorb the Marine Corps' overhaul requirements with little or no impact on Army facilities and personnel.

To cite one example of study findings, the group which reviewed the M-110 self-propelled howitzer, used and maintained by both the Army and Marine Corps, concluded that the Army should overhaul the weapon for both services. The Army's overhaul requirement for the 5-year period considered was 208, the Marines' requirement was 50. The study group found the Army could absorb the small Marine Corps overhaul requirement with little or no impact on Army facilities and personnel; it already functioned as design, procurement, and support agency for the vehicle. Accordingly, the group recommended assigning overhaul of this vehicle to the Army.

The Marine Corps study group representative disagreed with the group recommendation and filed the following dissenting position.

"In order to support the contingency missions assigned to the Marine Corps, it is considered essential that the Marine Corps retain a depot rebuild capability and hands-on technology for self-propelled artillery which are organic to its field artillery groups."

Furthermore, the Marine Corps said that it could not

"* * * accept total displacement of repair/overhaul of any given commodity grouping of equipment. To do so would inhibit the Corps capability to react to urgent or emergency requirements. These requirements are unexpected, but habitually a part of the Marine Corps mission that has become commonplace. Furthermore, it would be in conflict with DOD guidance which charges the services with retaining and upgrading their technology capability and competence necessary in carrying out its assigned mission. The depots at Albany/Barstow must retain the rebuild capability, requisite skills, and corresponding workloads which will insure they retain the capability and facilities necessary to support the internal Marine Corps requirements * * *."

In summary, the corps stated that

"* * * By retaining the rebuild responsibility for its self-propelled artillery, the Marine Corps retains the capability to provide "in-house" support

considered critical to the needs of its field artillery groups. It also provides the Commandant of the Marine Corps the capability to respond immediately to a wide range of work requirements in support of combat forces which is essential in insuring a force in readiness; both in meeting contingency plans and during mobilization. While the Marine Corps stands ready to cooperate to the maximum extent possible in achieving increased interservicing, it cannot consent to totally eliminating an organic capability essential to support of its operating forces."

If one service disputes a study group recommendation, the Maintenance Interservice Support Management Offices (MISMOs) in each service, which are jointly responsible for DOD's interservice maintenance program, decide which service or services will overhaul the item. Although there was no evidence that the MISMOs or DOD attempted to determine whether corps readiness would be degraded by transferring maintenance responsibility to other services, Marine Corps officials told us that the MISMOs subsequently upheld the Marine Corps position on the M-110 and other items which the corps still maintains. Currently, both Marine Corps and Army depots overhaul the M-110.

Duplicate maintenance capabilities
not needed to support readiness

While we understand the corps' need for readiness, we do not believe it is essential that the Marine Corps maintain depot maintenance facilities which duplicate those facilities of another service to ensure that Marine Corps readiness requirements will be met in the event of a contingency. Duplication is neither practical nor economical because, as shown previously, other services have the capability to support the Marine Corps' requirements, a capability which exceeds Marine Corps capabilities in some instances. The Marine Corps' overhaul requirements could be combined with requirements of other services for the same items, and DOD could schedule the combined requirements in larger, more economical lots at any appropriate depot.

Moreover, about 77 percent of Marine Corps depot maintenance personnel are civilians who, in event of a contingency, would likely remain at the permanent depot facilities and not deploy outside the continental United States to support Marine Corps forces. Such civilian employees could work at any service depot where the combined service workload justifies their use. If necessary to retain technical competence in support of readiness, corps military personnel,

which comprise 23 percent of the corps' depot maintenance force, could be assigned to the applicable service depot to overhaul combined service requirements.

Inadequate evaluation of
proposed maintenance assignment

The depot interservice maintenance studies to determine which service depots would be assigned overhaul responsibility for individual common items considered comparative costs of facilities, equipment, and training in evaluating overhaul costs. However, the studies did not include other key costs, such as labor, materiel, transportation, and overhead. Thus, the resulting depot maintenance assignments made after the studies were not based on which service depots could repair the common items for the least cost or in the shortest period of time. Marine Corps officials stated that two primary factors determined the maintenance assignments of items already in use: which depots were already maintaining the item and which depots had technical capability and capacity to perform the maintenance. Investment costs for new facilities and personnel training costs also played an important role; item repair cost did not. Assignments for new items also did not consider all costs.

DOD essentially has assigned responsibility for items already in use, and we understand that most assignments went to the services or depots already repairing the items because they had facilities and equipment in place to overhaul them. However, as discussed in chapter 2, DOD is concentrating its interservice maintenance efforts on new equipment and will avoid spending about \$15.4 million through interservice maintenance of new equipment. DOD will continue to assign repair responsibility for items coming into use, and when it does, should assign maintenance responsibilities to the individual depot(s) which can accomplish combined military service requirements in the most cost-effective manner. Further, the assignments should consider both comparative overhaul times and all significant elements of cost, including labor, materiel, transportation, and overhead.

Although DOD's interservice depot maintenance studies were a step in the right direction, they did not go far enough in determining interservice maintenance responsibilities. The studies did not consider all significant elements of cost, did not determine which depots could do the most effective overhaul work, and assigned items to the corps for maintenance although better alternatives were available.

Regulations authorize continued
use of duplicate maintenance facilities

DOD's regulations further undermine its attempts to increase interservice maintenance. The regulations authorize the services to develop or retain organic depot maintenance capabilities and capacities on mission-essential items. Also, Joint Logistics Commanders' (JLCs') policy provides that depot maintenance interservice decisions will assure tradeoffs at the service level on the basis of each service's operational involvement in the commodity undergoing study. In addition, the MISMOs and the interservice study groups were committed to assuring a balanced workload and to retaining mission and technical competency within each service.

These factors tend to perpetuate reliance by each service on its own facilities for depot maintenance. By arguing that items are mission-essential, the Marine Corps continues to justify and receive approval for retaining sufficient depot maintenance capability to accomplish nearly all its depot maintenance operations. In fiscal year 1978, the Marine Corps spent \$46 million for maintaining corps equipment in its own depots but only \$1.2 million for maintenance of corps equipment by other service depots.

OTHER LOGISTICS FUNCTIONS

Besides depot maintenance, the Marine Corps has other redundant logistics functions. These include stocking war reserve materiel and operating warehouses.

War reserve materiel

War reserve materiel stock is that part of total materiel assets kept on hand for use at the beginning of an operation, such as commencement of hostilities, until replenishment can be effected and sustained support can be provided. Active forces hold part of the corps' war reserve materiel, referred to as "mount out," which the units take into combat. To the extent possible, a 60-day supply is positioned with the active forces as mount out. The Marine Corps' stores system centrally manages the remainder.

As explained in our 1975 report, the corps stocks most of its war reserve materiel not held by active forces at the Albany and Barstow depots. About 95 percent of the materiel consists of low-cost, nonreparable items expensed when issued; most of the items are common to many military depots. Given the nature of the items, we recommended that other appropriate DOD activities store Marine Corps war reserve materiel and thus eliminate the

need for two corps storage sites. However, DOD did not adopt the recommendation.

To maintain the readiness required to react in accord with its assigned contingency missions, DOD said that the Marine Corps had to have adequate control over its war reserve materiel.

Current status

Marine Corps war reserve materiel storage status essentially has remained unchanged. War reserves still include approximately 48,000 items, about 95 percent of which are still lower cost consumable items that are expensed when issued. Moreover, the corps continues to stock items managed by other integrated managers; about 82 percent of its war reserve are in this category. The following table breaks down the composition of the corps' war reserve:

<u>Type of items</u>	<u>No. of items managed by</u>			<u>Approximate inventory value (note a)</u> (millions)
	<u>Marines</u>	<u>Others</u>	<u>Total</u>	
Consumable	6,202	39,810	46,012	\$ 85
Reparable	2,005	121	2,126	17
Equipment	445	9	454	135
Total	<u>8,652</u>	<u>39,940</u>	<u>48,592</u>	<u>\$237</u>

a/Value of inventory in the two depots.

War reserve materiel stored at the two depots includes some 60-day mount out stock being held at the request of unit commanders due to lack of storage space at the units, materiel for cadre and reserve units, provisioned parts, resupply materiel, and certain residual materiel.

Basis for holding war reserves

According to corps officials, its holdings in war reserve stocks comply with DOD directives and are based on the following rationale:

- War reserves are programed and budgeted to support large division or wing teams for a specified number of months. The supply tail for such reserves must be force-oriented rather than commodity-oriented because the corps does not mount out entire division/wing teams but only smaller tailored forces to meet specific threats.

--Not all war reserve stocks are held in the stores system. Some are held by fleet marine force units in mount out, some are prepositioned aboard amphibious shipping, and some classes are prepositioned overseas. To maintain the flexibility required to vary these stocks as conditions change, residual war reserve materiel must be retained in the stores system.

--The corps' readiness mission requires short-term reaction and thus supply flexibility.

Available storage space

Adequate storage space is available elsewhere in DOD depots to store the war reserve materiel now held at the two corps depots. A 1978 DOD study of the entire DOD materiel distribution system found excess storage capacity for logistics support. Later, another DOD-sponsored group analyzed DOD's wholesale distribution system and also found excess storage capacity in the wholesale distribution system. Marine Corps officials agreed that other DOD storage facilities had more than enough capacity to store all Marine Corps items, but they believed storage of Marine Corps war reserve materiel at other facilities could reduce readiness.

However, we question whether readiness would suffer. As noted on page 12, DLA, which manages about 1.9 million consumable items, has generally provided better supply support than other DOD activities. Other military services should also be able to provide as good, if not better, supply support as is available through the Marine Corps system.

Warehousing operations

The corps currently spends about \$24 million annually in direct costs to operate two depot facilities having a combined storage capacity of about 3.7 million net square feet. About 2.9 million square feet, or 78 percent of the total, were occupied in May 1979, including about 1.6 million square feet of available space being used for vehicle storage to reduce vehicle care-in-storage costs. About 1,050 personnel were involved in operating the depots.

As stated in chapter 2, our 1975 report recommended eliminating the supply and storage function at all four Marine Corps depots. Although the corps subsequently closed two small depots and reduced personnel at the remaining two depots by 25 percent, it could further reduce warehouse operations by taking the following actions:

--If DOD assigns corps consumable items to DLA, as proposed, corps depots would not need to maintain wholesale stocks of these consumables, which would be stocked by and requisitioned from DLA.

--If the appropriate DOD integrated managers stored war reserve materiel at their depots, space now used for this purpose at Albany and Barstow would not be needed. The corps already obtains 39,940 of its 48,592 war reserve line items (82 percent) from other integrated managers. These include 39,810 consumable items, such as nuts, bolts, and spark plugs, which would require little storage space at other depots.

--Vehicles now stored at corps depots could be stored at depots of the appropriate integrated managers.

Need for less costly storage alternatives

The corps believes that it must store the war reserve materiel, supply support items, and vehicles at Marine Corps depots to retain flexibility required for short-term reaction to meet its readiness mission. We understand the Marine Corps' preference for storing its war reserve and other materiel at corps depots instead of other DOD depots. However, this is a costly preference because the cost of operating corps depots is higher than the average cost of operating all DOD depots.

The 1978 DOD study of the entire DOD materiel distribution system obtained costs and workload data on all 34 depots. Our analysis of this data disclosed that the average cost of operating the two Marine Corps supply depots was much higher than the average cost of operating all 34 depots when comparing total supply depot operating costs and annual workloads (that is, number of items shipped and weight of materiel shipped). The average cost of shipping each item from the Marine Corps depots was \$91 an item compared to an average cost of \$21 an item for all 34 depots--a \$70 difference. Similarly, the average cost of shipping each 100 pounds of materiel from Marine Corps depots was \$24 compared to \$17 for all 34 depots--a \$7 difference.

A key reason for the cost differences was higher Marine Corps overhead costs. DOD's study showed that Marine Corps supply overhead costs were about 43 percent of total supply depot operating costs, while the average overhead costs for all 34 depots was 29 percent, or 14 percent higher than the average for all depots.

The table below shows a comparison of the average costs of operating the 2 Marine Corps depots and all 34 depots.

	Annual operating costs (millions)	Annual workload			
		Line items		Hundreds of lbs. shipped	
		Amount	Cost per unit	Amount	Cost per unit
	(millions)	(millions)		(millions)	
Marine Corps depots	\$ 28.6	.3	\$91	1.7	\$24
All DOD depots	570.2	27.0	21	33.7	17

In view of the significant costs involved in maintaining the two corps depots, and because other depots have the capacity to store corps materiel and the ability to provide as good or better service at lower cost, we feel other less costly storage alternatives should be considered. Transferring responsibility for storing Marine Corps vehicles, consumable items, and war reserve materiel to other DOD components would be a feasible alternative. Further reductions in the corps' warehouse operations through increased reliance on other DOD storage activities should reduce the Marine Corps' warehouse operating costs and result in savings similar to the savings realized as a result of prior reductions.

PRINCIPAL EQUIPMENT ITEMS

As noted in our 1975 report, procurement and provisioning of principal equipment items are two areas of corps overlap with other DOD logistical systems. Other military services had purchased 417 of the 648 weapons and major equipment items used by the corps. In addition, the corps had gone through the provisioning process to determine, and obtain, those quantities of spare parts needed to support the new principal equipment items, even though another service had previously performed the provisioning process for the same items. For example, during one 3-year period, 72 of 118 of the new principal items introduced into, and provisioned by, the corps were also used by other services which had provisioned the items. The other services also had the capability to purchase and provision the remaining items used by the corps. To reduce duplication, we recommended that all principal items required by the corps be purchased and provisioned by the military service which used them the most.

DOD did not agree with our recommendation. In its April 21, 1975, letter commenting on our report, DOD argued that the corps should retain its limited procurement and provisioning functions. It said more than two-thirds of the Marine Corps' principal items were already purchased by other services in accordance with DOD instructions. On the majority of these items, the corps submits requirements to the other procuring service which has to assume complete responsibility for the remainder of the procurement. Also, the corps contracts directly with procurement sources for a small number of principal items used only by the corps.

Concerning provisioning, DOD said the corps already uses substantial portions of other services' provisioning efforts. Moreover, DOD pointed out that provisioning was but one step in the integrated logistics support planning process for acquiring principal items. The total process also involves maintenance plans and their associated technical manuals; personnel requirements, including operator and maintenance training; and transportability/transportation. According to DOD, the Marine Corps, by performing the limited provisioning effort, ensures that integration of the various logistics efforts will satisfy all mission requirements of its unique operating environment.

Our followup showed that the corps still purchases and provisions principal end-items. But, the corps has reduced its provisioning personnel about 21 percent and buys only a limited number of the principal end-items it uses, largely items not used by other services.

About 60 people are involved in acquiring principal end-items, although they are also responsible for all management decisions affecting corps weapon and equipment system items, including determination of requirements, acquisition, re-build, configuration management, phaseout, logistics support planning, budget preparation, and others. The corps has procurement responsibility for about 170 of 940 principal items, or 18 percent, it uses (that is, largely items used only by the corps). Corps officials believe no real duplication of effort exists because only one service purchases each item.

Also, the corps has reduced ICP provisioning personnel from 120 to 95--a 21-percent reduction--and only 3 people at corps headquarters are now involved in provisioning. In fiscal year 1978, the ICP provisioning operating cost was \$1.6 million.

Marine Corps headquarters and ICP officials maintained that it was imperative that the corps retain its limited provisioning role and not turn it over to other services as we had recommended. Their rationale was that because its mission, organization, maintenance and supply concepts, and capability differ from those of the other services, the corps requires different provisioning procedures. As a force in readiness, the corps must be able to deploy forces of different sizes and configurations to respond to a variety of circumstances. It tailors force composition to meet individual mission threats. In contrast, Army operating and support units deploy in conventional military unit sizes, and therefore, provisioning ranges and quantities for the two services are different. Moreover, according to corps personnel, 30-percent of the items the Marine Corps provisions are not used by other services. If the corps did not provision these items, other services would have to add people to handle the increased provisioning workload. Consequently, in the corps' opinion, transferring the provisioning function would produce no overall cost savings.

Army Missile Command representatives, who provision some of the same items used by the corps, confirmed that sufficient differences currently exist between Army and Marine forces, and that as a result, separate provisioning would be needed because of the differences. However, if given additional personnel and money, they indicated that they could provision missile items for the Marine Corps. The amount of resources needed would depend on two key factors: item configuration and maintenance concept. They said they would not require additional personnel and funding if there were only minor differences in item configuration and maintenance concept. Because major differences exist now, however, they said they would need additional funds and people to provision for the Marine Corps.

In view of the proposed transfer of consumables to DLA, however, DOD may want to reconsider its prior decision that the corps should purchase and provision principal items. The proposed transfer would eliminate the need for the corps to buy consumable items and reduce the number of items remaining for active Marine Corps management to only 800 items, including about 400 principal items. Therefore, DOD might explore alternatives, which might be more cost-effective, such as transferring the corps' principal item procurement and provisioning responsibilities to other services which have these capabilities. Corps personnel could assist the other services as necessary to ensure readiness is not reduced.

CHAPTER 4

CONCLUSIONS, RECOMMENDATIONS, AND

AGENCY COMMENTS

CONCLUSIONS

DOD and the Marine Corps have successfully reduced Marine Corps involvement in logistics without impairing mission capability. However, additional changes in management of supply support, depot maintenance, warehouse operations, and principal end-items would further reduce Marine Corps logistics efforts, be cost effective, and not impair readiness.

Supply support items

The corps could obtain supply support from other services for the 38,700 items of all types it manages. DLA could manage the 34,000 corps-managed consumable items at less cost and provide better support, and other managers could handle the relatively few remaining reparable and equipment items, thereby eliminating the need for some Marine Corps ICP personnel. The ICP could use current weapon and equipment systems support management personnel to maintain liaison with item managers in other services and thus help ensure equipment readiness.

Depot maintenance operations

DOD's interservice depot maintenance studies were a step in the right direction but did not go far enough in determining interservice maintenance responsibilities. For example, the studies did not consider all elements of cost and did not determine which depot could do the most cost-effective overhaul work. Instead, most items assigned to the corps were assigned to allow the corps to retain technical competence to support its readiness requirements, although other service depots generally could have overhauled the Marine Corps' equipment together with their own equipment.

Other logistics functions

Reduction in the corps warehouse storage operations and costs is also possible through transfer of materiel now stored in corps depots to other, more appropriate depots. Until needed, war reserve materiel managed by others should be stored at their depots. The Marine Corps will not need to stock consumables if DOD assigns management responsibility for these items to DLA.

Purchase of principal items

Other services could purchase and provision end-items for the corps. DOD should explore other provisioning alternatives which might be less costly and not reduce readiness. If DOD transfers consumable items to DLA, further reducing corps logistics responsibilities, DOD should also consider transferring the corps' remaining limited procurement and provisioning functions to other services to relieve the corps of the functions. Corps personnel could assist the other services as necessary to ensure readiness is not reduced.

Impact on readiness

The corps thinks readiness will suffer if it relies more on other services for supply and maintenance support. But in fact, other services often provide as good or better service, and to the extent possible, the corps should rely on its support unless it can demonstrate that accomplishment of its mission will be degraded.

RECOMMENDATIONS

We recommend that the Secretary of Defense consider changes in Marine Corps logistics activities to:

- Provide better and less costly supply support service by transferring management of corps consumable items to DLA and management of remaining reparable and equipment items to other integrated managers who are responsible for similar items.
- Reduce duplication of maintenance effort and facilities by shifting selected items of equipment into service depots which can do the most cost-effective overhaul work on combined service requirements considering all significant elements of cost. DOD can assign Marine Corps military personnel to overhaul Marine Corps items of equipment, if necessary, to retain corps technical competence in support of readiness.
- Reduce warehouse storage operations by storing vehicles and war reserve materiel at appropriate integrated managers' depots and consumable items at DLA warehouses.
- Further reduce costs of purchasing and provisioning principal end-items by transferring these functions to other services if consumables are transferred to DLA.

AGENCY COMMENTS

DOD stated that it is nearing a decision on the entire aspect of consumable item management for all the military services and that it will consider all four GAO recommendations in light of that decision.

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