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Report to the Chairman, Legislation and National Security Subcommittee, Committee on Government Operations, House of Representatives

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HOUSEHOLD GOODS

Competition Among Commercial Movers Serving DOD Can Be Improved

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GAO

United States
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National Security and
International Affairs Division

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February 12, 1990

The Honorable John Conyers, Jr.
Chairman, Legislation and National
Security Subcommittee
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

This report responds to a request by the former Subcommittee Chairman that we review the practices and procedures of the Department of Defense in procuring commercial household goods shipping services for personnel being transferred at government expense between duty stations within the United States.

Unless you publicly announce its contents earlier, we plan no further distribution of this report for 30 days. At that time, we will send copies to the Secretaries of Defense, the Army, the Navy, and the Air Force; the Chairmen, House and Senate Committees on Armed Services and on Appropriations; the Director, Office of Management and Budget; and to other interested parties.

This report was prepared under the direction of Richard Davis, Director, Army Issues, who may be reached at (202) 275-4141 if you or your staff have any questions. GAO staff members who made major contributions to this report are listed in appendix IV.

Sincerely yours,

Frank C. Conahan
Assistant Comptroller General

Executive Summary

Purpose

The Department of Defense spends over $400 million dollars a year to ship and store the household goods of its members authorized to make a transfer or to relocate within the 48 contiguous United States. The money is paid to commercial household goods carriers and their agents located throughout the United States.

The former Chairman of the Legislation and National Security Subcommittee, House Committee on Government Operations, asked GAO to study the methods the Department used to solicit rates from moving companies and to select the companies it used. GAO was also asked to examine the Department's effectiveness in managing temporary storage required in conjunction with shipments of personal effects.

Background

A military member or civilian employee of the Department of Defense who is ordered to make a permanent change-of-station or other approved move is entitled to ship and/or store, at government expense, an authorized amount of household goods and personal effects. The Army's Military Traffic Management Command, on behalf of the entire Department of Defense, is responsible for soliciting rates from commercial moving companies for the packing, transportation, and storage of such goods and for providing traffic management guidance to the local personal property shipping offices that arrange for the moves.

Rates are offered the Department of Defense under a two-step or two-phase bidding system. In the first phase, each carrier submits a specific, or qualifying, bid—stated as a percentage of a fixed baseline—for any or all of the more than 7,000 routes for which the Department asks for rates. The percentage can be at, above, or below the baseline.

In the second bidding step, which is commonly called the "me-too" phase, each carrier is given a chance to see what the other carriers bid and is permitted to match any lower bid. The carriers' final bids, called "rates," are ranked in a low-to-high order and given to the local shipping office officials for distribution of shipments. When more than one carrier qualified to serve a location has offered the same low rate, the officials are required to distribute the shipments as equally as possible to each such carrier without regard to which carrier submitted the low rate first. When there are more shipments than the low rate carriers can handle, the officials are required to move up the rate ladder to the next rate level and distribute the traffic as equally as possible to all such qualified carriers at that level.

Results in Brief

The Department of Defense's two-phase system for obtaining rates for moving household goods is not truly competitive. Carriers that bid the lowest rates initially are not rewarded, so there is no incentive to provide the lowest rate initially. Knowing that they will have the opportunity to meet the lowest rate offered and to eventually share equally in any traffic generated, most carriers make no effort to bid competitively during the initial bidding phase. Instead, most carriers merely bid a qualifying rate—often the same rate for every route they intend to serve—and then rebid, as necessary, at lower levels during the second phase. The result is that there is often little difference between many carriers' rates, and carriers that make the effort to initially submit the lowest rates are not given any greater reward than those that simply wait to meet whatever other rates are offered.

To obtain a larger share of Department of Defense household goods shipments, many carriers have established, on paper, subsidiary companies. Providing an equal share of the traffic to such "paper" companies makes the current system inequitable to the other low bidders.

GAO believes that a change is needed in the Department of Defense's bidding system to encourage carriers to offer their lowest rates during the initial bidding phase and then reward those with the best offers. GAO concludes that replacing the current two-phase bidding process with a one-phase system, whereby all carriers have equal incentive to bid the lowest possible rates and those offering the lowest rates are rewarded with all the traffic they can handle on the route for which they are the low bidders, would probably provide the carriers the most incentive to offer their lowest rates initially. If the Department of Defense determines that such a bidding system would not provide it the moving capability needed or would result in an unacceptable quality of service, it could modify the two-phase system so that the carrier offering the lowest rate during the first phase is allocated a greater share of the traffic than any other carrier simply meeting the low rate.

With respect to storage, the Department of Defense lacks data on the total actual cost and incidence of temporary storage. Estimates suggest that the overall figure is in excess of $100 million a year. At 9 of the 10 local shipping offices that GAO visited, goods were stored for over 50 percent of the shipments. Although the need for some storage will always exist, storage costs could be reduced by making greater use of storage at origin, which is generally less costly than storage at destination. In addition, reducing the incidence of storage should be possible

through better coordination and communication among the shipping offices, the carriers, the receiving offices, and the military members.

Principal Findings

Carriers That Set the Low Rates Are Not Rewarded

GAO found that carriers typically offered their initial bids at or above the baseline and then surveyed the competition to decide which rates to lower. Few carriers made any attempt to initially establish below baseline rates. Only 49 of the 487 carriers bidding on the traffic for over 7,000 routes during the May 1988 6-month rate cycle initially bid below the baseline, and only 3 of these 49 carriers made more than a few such below baseline bids.

Most carriers rebid and lowered their initially bid rates. Nevertheless, the carriers that initially established the lower rates that others subsequently met received no greater reward than the carriers that simply waited until the second phase to meet the rates. Whatever incentive any carrier has for initially bidding low is eliminated when the Department of Defense gives every other carrier the opportunity to meet the low rate and to share equally in the traffic on that route.

Other Bidding Systems Have Worked for Other Government Moves

The Department of Defense at one time employed a two-phase bidding concept similar to the current interstate bidding system to obtain rates for its international moves. Without reference to any baseline, carriers bid an initial rate for each route they intended to serve and were then allowed to "me-too" the low carrier's rate and to share equally in the available business. In 1976 GAO reviewed that system and concluded that introducing more competition by rewarding the initial low rate carrier would reduce rates, thereby resulting in savings in transportation costs. GAO's position was supported by the fact that rates on a test route were reduced by an average of 19 percent.

The General Services Administration, which obtains household goods rates for civilian government agencies, uses a single phase bidding system in which carriers bid against a carrier-adjusted baseline. Nearly all the bids the General Services Administration receives are below the baseline and are dispersed at many different rate levels.

GAO recognizes that the Department of Defense's domestic household goods market is different from its international markets and those of the civilian agencies in terms of carrier investment, numbers of carriers, types of carriers, carrier capabilities, and numbers of shipments. Nevertheless, the experiences of the Department of Defense with its international bidding system and the General Services Administration suggest that when no "me-tooing" is permitted or the original low bidders are rewarded, competition is enhanced.

Storage-in-Transit Program Can Be Improved

Goods were generally stored in transit because members were not in positions to receive their personal effects at their new duty stations when deliveries were attempted. Often, members had not found adequate and/or affordable housing; receiving units had not been able to find members to arrange for delivery; or shipments had arrived at destination before the personnel.

Storage costs could be reduced by using storage at origin instead of at destination because storage at origin is generally chargeable at discounted or lower long-term storage rates. Also, reducing the incidence and/or the cost of storage should be possible through better coordination and communication among shipping activities, members, carriers, and receiving activities. Such coordination includes ensuring that the shipping/receiving offices know when the members can take possession of their goods at destination, the members give the shipping/receiving offices addresses where they can be located when the household goods are expected to be delivered, and all parties know when carriers are planning to deliver the goods.

Recommendations

GAO recommends that the Secretary of Defense direct the Commander of the Military Traffic Management Command to replace or modify the current two-phase bidding process so that all carriers have incentive to initially bid the lowest possible rates and the lowest bidder is rewarded for offering the lowest rate. GAO is also making other recommendations to the Secretary of Defense designed to improve the management of storage-in-transit.

Agency Comments

As requested, GAO did not obtain official agency comments on this report. However, it discussed the report with agency and moving industry officials.

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Abbreviations

DOD	Department of Defense
GAO	General Accounting Office
GSA	General Services Administration
MTMC	Military Traffic Management Command

Introduction

Under the applicable federal travel regulations, a military member or civilian employee of the Department of Defense (DOD) ordered to make a permanent-change-of-station move is entitled to move, at government expense, an authorized amount of household goods and personal effects. The entitlement includes the actual transportation and any necessary associated services, such as packing, unpacking, and temporary storage.

Worldwide, DOD spends over a billion dollars a year to move the household goods and personal effects of its military and civilian personnel. Domestically, it spends over $400 million a year for household goods moves. The money is paid to commercial household goods carriers and their agents located throughout the United States.

The Army's Military Traffic Management Command (MTMC) provides the technical direction, supervision, and evaluation of the traffic management aspects of the DOD personal property shipment and storage program worldwide. Some of its more important responsibilities include approving carriers for participation in the household goods shipping program; soliciting the commercial carrier industry for shipping rates; negotiating, analyzing, assessing, and accepting rates; establishing standards for measuring and evaluating carrier performance; prescribing rules for allocating shipments among competing carriers; and collecting, analyzing, maintaining, and disseminating data required for effective program management.

The overall goal of the DOD household goods moving program is to provide quality and responsive moving and storage service to its personnel. In promoting that goal, DOD's policy is to procure services only from responsible carriers, storage firms, and contractors. Carriers, their agents, storage firms, and contractors must have appropriate authority to provide the required services, evidence of the ability to provide satisfactory service, evidence of satisfactory equipment and facilities, and evidence of appropriate financial resources to perform.

DOD's Interstate Program

In fiscal year 1988, DOD made about 228,000 domestic shipments, most in interstate service, involving more than one billion pounds of household goods. The cost of moving these shipments was approximately $321 million. Table 1.1 breaks this data down by branch of service.

Table 1.1: Fiscal Year 1988 DOD Interstate Household Goods Data

Branch of service	Shipments (thousands)	Weight (millions of pounds)	Cost (millions)
Army	78	342	$101
Navy	63	284	83
Air Force	69	343	112
Marine Corps	17	80	24
Other DOD	1	4	1
Total	**228**	**1,053**	**$321**

In addition to the $321 million, DOD estimated it spent another $109 million for temporary storage and other household goods-related services for interstate shipments.

The day-to-day management of individual interstate shipments is done by DOD shipping offices. There are 152 shipping offices in the contiguous United States and 5 in Alaska. Within their designated areas, the shipping offices approve carriers for service, procure the necessary shipping and storage services, allocate the shipments among competing carriers, determine and evaluate carrier performance, take punitive action against carriers whose performance does not measure up to acceptable standards, and provide MTMC with shipment and performance information needed to carry out its functions.

DOD procures most of the necessary moving and storage services from commercial carriers who are held accountable for movement from origin to destination. It uses two types of carriers: (1) moving van companies, which are motor common carriers issued certificates by the Interstate Commerce Commission and (2) household goods freight forwarders, which are surface common carriers permitted by the Interstate Commerce Commission to assemble and consolidate shipments of household goods and other personal effects and use motor, rail, or water carriers to transport them. The moving van companies and freight forwarders are represented throughout the country by agents who are usually independent contractors operating under agreement with the carriers to handle the packing, loading, storing, unloading, and unpacking of the goods, wherever needed.

Objectives, Scope, and Methodology

The former Chairman of the Legislation and National Security Subcommittee, House Committee on Government Operations, requested that we review DOD's program for the interstate movement of military members' household goods. He said that he was concerned about the

level of competition among carriers in establishing the prices to charge DOD and about the equity in the manner in which DOD distributes shipments among the competitors. He asked us to study the methods and procedures DOD used to solicit rates from moving companies and to select the companies it used.

He also asked us to ascertain the cost of storage for the DOD household goods and personal effects program, the extent to which DOD personal effects shipments are stored, and reasons for any unusually high incidence of storage.

To obtain information about the household goods industry and how it interacts with DOD in the transportation of interstate shipments, we interviewed officials of 25 companies—some moving van carriers, some forwarders, and a few agents. (These companies are listed in appendix I.) Because many of these companies also control other companies participating in the DOD program, the interviews provided us with opinions and comments from a total of 96 of the 590 DOD-approved carriers in the May 1988 interstate program. On the basis of fiscal year 1987 shipment data, we estimate that these companies received about half of the DOD interstate shipment revenues. We also used information provided to us by other carriers.

We met with and solicited comments from officials of various household goods carrier associations and rate bureaus, including the American Movers Conference, an association of household goods carriers; the Household Goods Forwarders Association of America, an association of household goods freight forwarders; the Household Goods Carriers' Bureau, a household goods carrier rate and tariff publishing bureau; and the Alaska Movers Association, an association of carriers involved in the Alaskan DOD shipment market. We also used information provided to us by other carrier associations.

We met with officials of the Office of the Assistant Secretary of Defense (Production & Logistics), MTMC, the Army, the Navy, the Air Force, the Marine Corps, and 10 DOD shipping offices representing each branch of service to discuss DOD's interstate household goods program (including DOD's storage procedures) and DOD's interaction with the household goods industry. (The shipping offices are listed in appendix II.)

To obtain information with which to compare DOD's program with that of civilian agencies of the federal government, we met with the household goods program manager of the General Services Administration in

Overland Park, Kansas. We also used information provided by the Interstate Commerce Commission in Washington, D.C., to obtain an understanding of the regulatory aspects of the household goods carrier industry.

To give us a snapshot of carrier rate-filing patterns and the rates on each route in the DOD interstate household goods program, we analyzed all the rates filed with MTMC during the May 1988 rate cycle. Although rates for shipments to and from Alaska and for the Coast Guard are included in the interstate program, we concentrated our review on the rates for DOD shipments within the contiguous United States. We selected 30 routes for detailed analysis and supplemented this sample with an analysis of selected rates for the November 1988 and May 1989 rate cycles.

Our work was done from September 1988 to September 1989 in accordance with generally accepted government auditing standards. As requested, we did not obtain official agency comments on this report. However, we discussed its contents with agency and moving officials.

Two-Phase Bidding System Is Not Truly Competitive

Under DOD's two-phase bidding system, carriers that bid the lowest rates initially are not rewarded, so there is no incentive to provide the lowest rate initially. Knowing that they will have the opportunity to meet the lowest rate offered and to eventually share equally in any traffic generated, most carriers make no effort to bid competitively during the initial bidding phase. Instead, most carriers merely bid a qualifying rate—often the same rate for every route they intend to serve—and then rebid, as necessary, at lower levels during the second phase of the bidding cycle. We believe that a change is needed in DOD's bidding system to encourage carriers to offer their lowest rates during the initial bidding phase and then reward those with the best offers.

The Bidding and Traffic Allocation Process

Twice each year MTMC solicits rates from the commercial moving industry to meet the DOD household goods shipping requirements over more than 7,000 routes. A route consists of one origin shipping office—typically including a large geographical area surrounding it—to one destination state or the District of Columbia. There are 152 DOD shipping offices in the contiguous United States and 49 destinations, resulting in 7,448 separate routes in the contiguous United States. The volume of traffic intended for a route is not known ahead of time, but history has shown that some routes may generate more than 500 shipments over the life of the 6-month contract, while other routes may generate none.

Bidding is done in two steps. Initially, or in the first step or phase, which is commonly called the "increase/decrease" phase, each carrier submits a specific or qualifying bid—stated as a percentage of a fixed baseline—for each route it intends to serve. Once these bids are accepted, they are made public for review by all bidders. Then in the second step or phase, which is commonly called the "me-too" phase, carriers are permitted to change any rate they had offered to match that of a lower bidder.

The carriers' final bids, called "rates," are ranked in a low-to-high order and given to the local shipping office officials for distribution of shipments. Where more than one carrier qualified to serve that location has offered the same low rate, the officials are required to distribute the shipments as equally as possible to each such carrier without regard to which carrier submitted the low rate first. The carrier that initially submitted the low bid is not entitled to any greater reward than another carrier that met the low rate during the "me-too" bidding phase. When there are more shipments than the low rate carriers can handle, the officials are required to move up the rate ladder to the next rate level and

distribute the traffic as equally as possible to all such qualified carriers at that level.

The baseline on which carriers file their rates has remained at the same level since the summer 1984 rate cycle. According to MTMC, the baseline is intended as a point of reference and is not intended to influence the setting of rates.

An extract of the baseline table is shown in table 2.1. For example, on a 5,000-pound shipment moving from Hyattsville, Maryland (a locality in the Cameron Station, Virginia, origin rate area), to San Antonio, Texas (a locality in the Texas destination rate area), a distance of 1,548 miles, the baseline rate is $44.90 per hundred pounds.

Table 2.1: Extract From MTMC's Interstate Baseline Rate Table

Rates in dollars per hundred pounds

	Weight (pounds)						
Mileage bracket	**500 to 999**	**1,000 to 1,999**	**2,000 to 3,999**	**4,000 to 7,999**	**8,000 to 11,999**	**12,000 to 15,999**	**16,000 to 99,999**
1,401-1,450	$77.90	$57.60	$49.45	$42.80	$37.25	$36.35	$35.80
1,451-1,500	78.80	58.75	50.60	43.80	38.05	37.45	36.65
1,501-1,550	79.65	59.50	51.85	**44.90**	39.05	37.90	37.40
1,551-1,600	80.30	60.15	52.75	45.80	39.95	38.45	37.80
1,601-1,650	80.95	60.95	53.80	46.90	40.90	39.35	38.55

If a carrier had bid 70 percent of the baseline on this route, its applicable rate—the price DOD would have been charged to move this shipment—would have been $31.43 per hundred pounds ($44.90 times 70 percent). If a carrier had bid 120 percent of the baseline, the price would have been $53.88 ($44.90 times 120 percent).

Because rates are set based on an assumption of full competition, MTMC does not ask for cost data, and consequently it makes no attempt to determine whether any carrier's bid covers its cost of providing the service. Carriers are free to offer rates as low as they wish under statutory authority contained in the Interstate Commerce Act. A portion of that act provides that a common carrier

"may transport property for the United States Government...without charge or at reduced rates; except that any rates for the transportation of household goods for the United States Government shall not be predatory."[1]

The maximum rate a carrier can bid is one offered to the general public and listed in the carrier's tariff filed with the Interstate Commerce Commission. Carriers must certify to MTMC that their rates will not result in DOD's paying higher charges than those available to it under the carriers' tariffs.

Rates must remain fixed and available to DOD for at least the first 1-1/2 months of the contract, after which time they may be unilaterally canceled by the carrier offering them. There are four such cancellation periods during the 6-month contract.

Few Carriers Bid Below Baseline Rates During Initial Phase

To assess how carriers bid their rates for DOD traffic, we analyzed all the carriers' rates bid during the first and second phases of the May 1988 6-month bidding cycle. We found that few of the carriers initially bid any rate below the baseline MTMC had given them to formulate their bids. Most carriers typically offered all their initial bids at or above the baseline—which MTMC had kept fixed since 1984 and was set only to serve as a bench mark for filing rates.

In the May 1988 bidding cycle, 503 carriers offered DOD one or more rates to move interstate shipments. All told, the carriers offered 1,045,897 separate rates. For our analysis, we concentrated on motor van service rates—rates for the movement of household goods in a motor van from origin residence to destination residence—and eliminated the container service rates—rates for the movement of household goods in containers because very little traffic moved at those rates. We also eliminated all rates to and from Alaska because shipments to and from Alaska often move in part over water and rates for shipments from the Coast Guard shipping offices because Coast Guard shipments are not managed by DOD. This left us with 539,424 rates, 487 carriers, and 7,448 routes.

We found that only 49 of the 487 carriers bidding during the May 1988 6-month bidding cycle bid below baseline rates and only 3 of those carriers bid more than a few such rates. It was a common practice of most

[1]49 U.S.C. 10721(b). According to an Interstate Commerce Commission official, the Commission has not suspended any rate because it was determined to be "predatory."

carriers—about 83 percent of them—to bid a single rate, at or above the baseline, across-the-board for every route on which they bid during this phase. Although the specific rate varied among carriers, most—or about 58 percent of these carriers—bid a rate equal to the baseline for every route on which they submitted a bid during the initial bidding phase. Others bid a single rate above the baseline, in some cases as high as 200 percent of the baseline.

We believe that the two-phase bidding system offered no incentive to initially bid anything other than a baseline or an above-baseline rate. Prior to 1984, MTMC allowed the carriers to file rates based on the carriers' collective rate-making bureaus' baseline rate levels. The bureaus maintained that those levels were reasonable and reflected the carriers' cost of providing service for DOD. For the May 1984 rate cycle, MTMC precluded the filing of rates based on collective rate-making and substituted its own baseline at the same 1983 level as was contained in the collectively made baseline rate schedule. It has never changed that baseline, arguing that carriers have the right to bid any level they care to, whether at, above, or below that baseline.

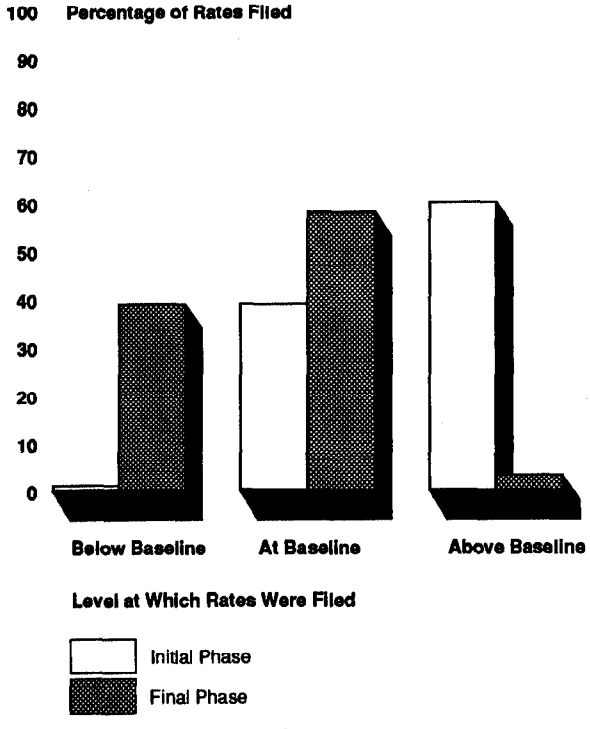
Most Carriers Rebid Rates During the Second Phase

In the second phase, 39 percent of the rates were bid below the baseline, yet the carriers that initially established the rates that others met received no greater reward than the carriers that simply waited until the second phase to meet the rates. Whatever incentive any carrier bidding the initial low rate had was eliminated when DOD gave every other carrier the opportunity to meet the low rate and to share equally in the traffic on that route.

About 78 percent of the 487 carriers rebid one or more of their rates during the second phase of bidding. About 73 percent of the 539,424 rates were rebid. The result of the rebidding was that the average level of all the rates available to DOD dropped and the percentage of rates below the baseline increased.

After the initial filing period, 18 percent of the rates were at the low rate level. After the "me-too" phase, more than 76 percent were at the low rate level. The average of all the rates available to DOD after the "me-too" phase was 90 percent of the baseline compared to 118 percent after the initial phase. As shown in figure 2.1, the percentage of rates below the baseline increased from less than 1 percent after the initial bidding phase to 39 percent after the "me-too" phase. The changes in percentages of rates at and above the baseline are also shown.

Figure 2.1: Comparison of Initial Phase and Final Rates Filed During the May 1988 Household Goods Bidding Cycle



Source: Our analysis of MTMC data.

The numbers of rates bid by rate level during the initial bidding phase and the number available to DOD after the "me-too" phase for the May 1988 bidding cycle are shown in table 2.2.

Table 2.2: Number of Initial and Final Rates by Rate Level Bid During the May 1988 Bidding Cycle

Rate (percent of baseline)	During the initial bidding phase		After the "me-too" phase	
	Number of rates	Percent of total	Number of rates	Percent of total
40-49	1	0	6	0
50-59	472	0.09	9,371	1.74
60-64	312	0.06	14,000	2.60
65	637	0.12	21,718	4.03
66-69	33	0.01	1,089	0.20
70-74	86	0.02	3,698	0.69
75	2,274	0.42	138,726	25.72
76-79	48	0.01	1,319	0.24
80-89	548	0.10	8,719	1.62
90-99	266	0.05	12,969	2.40
100[a]	210,915	39.10	310,985	57.65
101-109	28,390	5.26	1,927	0.36
110-119	27,921	5.18	2,447	0.45
120	89,003	16.50	4,771	0.88
121-129	48,566	9.00	4,918	0.91
130-139	65,428	12.13	1,924	0.36
140-149	9,079	1.68	155	0.03
150-159	32,779	6.08	472	0.09
160-169	6,133	1.14	18	0
170-179	0	0	0	0
180-189	24	0	19	0
190-199	0	0	0	0
200	16,509	3.06	173	0.03
Total	**539,424**	**100.00[b]**	**539,424**	**100.00**

[a]This is the baseline.

[b]Percentages may not total 100 percent because of rounding.

Rates for Most Routes Were Bunched at One Level

On a majority of the 7,448 routes for which MTMC asked for rates, once the carriers had the opportunity to rebid their rates they met the low rate bid during the initial bidding phase by the low rate carrier. Consequently, nearly all the rates for most routes were bunched at one level. And because DOD offered every carrier meeting the low rate on a route the opportunity to share equally in any traffic moving on that route, the carrier initially offering the lowest rate did not benefit any more than every other carrier meeting its low rate. Because of the lack of any reward, carriers had no incentive to bid the low rate initially.

At 13 of the 152 DOD shipping offices, we found that after the "me-too" bidding phase all the carriers' rates were at the low rate levels. At 74 more offices, at least 90 percent of the carriers' rates were at the low rate levels. And at 10 more offices, at least 80 percent of the carriers' rates were at the low rate levels. The average for the 152 offices was 83 percent of the rates at the low rate level. The data for all 152 DOD shipping offices during the May 1988 rate cycle are shown in appendix III.

For most routes, there was insufficient traffic to allocate to each carrier filing a low rate and, consequently, no guarantee that the initial low bidder would receive any traffic even though that carrier's low bid caused the rate for all traffic on that route to be as low as it was. On a route where there were 30 shipments during the contract period and 40 carriers meeting the low rate on that route, the carrier initially filing the low rate, if selected, could end up with only 1/30th of the traffic that moved.

"Paper" Companies Often Created to Increase Market Shares

Because of the opportunity to "me-too" other carriers' rates and to share equally in all the available traffic, many carriers have set up subsidiary or subsidiary-like companies to get additional shares of DOD traffic. These created companies are usually nothing more than "paper" companies that operate with the parent companies' existing resources and bid the same rates as their parent companies. Their presence distorts the allocation of traffic among the bidders that provide DOD its physical hauling capability, yet they neither enlarge the capability available to DOD nor add to the bidding competition.

Many carriers said that the sole function of the "paper" companies was to gain a larger share of the traffic on a given route. For example, if 10 carriers bidding the same rate served a particular installation, each carrier would be in a position to get 10 percent of any traffic generated. If 1 of the 10 established another company, a "paper" company, and bid the same rate, the number of carriers available to share the traffic would be increased to 11, and the parent and its "paper" company would be able to get 2/11ths of the traffic, or roughly 18 percent. This has often led to a distorted allocation of traffic between carriers with "paper" companies and those without them.

At the carriers we visited, an individual or a committee within the company was responsible for establishing and filing the rates of both the parent and its "paper" companies. Generally, we found that the rates

for the "paper" companies were the same as the parent company's rates. Also, the "paper" companies generally used the physical hauling equipment of their parent companies and thus added nothing to DOD's hauling capability.

There are no limits on the number of "paper" companies a company can establish to serve DOD as long as each new company obtains DOD approval and reaches agreement with an agent to represent it at the places it intends to offer service. Some carriers, particularly the smaller van carriers and forwarders, have told us that finding an agent can be a problem because MTMC maintains a rule limiting the number of carriers an agent may represent. An agent may represent no more than four DOD-approved carriers, no more than two of which can be forwarders. Whereas those numbers may have been adequate when carriers did not have "paper" companies, the proliferation of "paper" companies by the larger van carriers, which tend to keep the existing agents for their own carriers, has meant that the smaller carriers sometimes cannot find enough agents to enter or increase their presence in many markets.

Our review indicated that nearly every large moving van carrier we visited or spoke with had set up one or more such companies—for example, two companies had each set up eight such subsidiaries. Data on 30 of the larger companies providing household goods moving service to DOD and the numbers and types of carriers they control, according to the May 1988 MTMC records, are shown in table 2.3.

Table 2.3: Principal Carriers and Other Carriers Under Their Control

Principal carrier	Number of other carriers		Percentage of total revenues earned by the controlled carriers[a]
	Forwarders	Van lines	
Affiliated Transportation Systems, Inc.	1	0	31
Albert Moving & Storage	8	0	60
Allied Van Lines, Inc.	8	0	59
American Movers	2	0	60
American Red Ball Transit Company, Inc.	2	0	50
Andrews Van Lines, Inc.	1	1	48
Atlas Van Lines, Inc.	3	0	37
Bekins Van Lines Company	1	0	44
Burnham Service Company, Inc.	1	0	31
Cartwright Van Lines, Inc.	4	2	50
Coleman American Moving Services, Inc.	1	1	51
Continental Van Lines, Inc.	1	0	37
Global Van Lines, Inc.	2	3	59
Interstate Van Lines, Inc.	1	4	65
Mayflower Transit, Inc.	3	0	66
National Van Lines, Inc.	7	2	70
North American Van Lines, Inc.	4	0	63
Pacific Van & Storage Company, Inc.	1	0	45
Paul Arpin Van Lines, Inc.	4	1	64
Paramount Movers, Inc.	3	0	50
Security Van Lines, Inc.	3	3	59
Sherwood Van Lines, Inc.	1	0	1
Starck Van Lines, Inc.	2	1	68
Stevens Van Lines, Inc.	1	2	61
Suddath Van Lines, Inc.	2	0	45
Towne Services Household Goods Transportation Company, Inc.	1	1	59
Towne Van Lines, Inc.	1	1	44
United Van Lines, Inc.	7	0	60
Von der Ahe Van Lines, Inc.	1	2	43
Wheaton Van Lines, Inc.	3	0	40
Total	**80**	**24**	
Average			**55**

[a]Based on fiscal year 1987 DOD revenue data.

Other Bidding Systems Have Worked for Other Government Moves

At one time DOD used a two-phase bidding concept to obtain rates for its international moves. This concept was similar to the one it now uses for interstate moves. However, in 1976, DOD modified the two-phase international bidding system to reward the carrier that offered the low rate first with a guaranteed percentage of traffic on the given route.

The General Services Administration (GSA), which obtains household goods rates for civilian government agencies, uses a single-phase bidding system in which carriers bid against a carrier-adjusted baseline. Nearly all the bids GSA receives are below the baseline and dispersed at many different rate levels.

Incentive Is Present in DOD's International Household Goods Program

DOD at one time employed a two-phase bidding concept similar to the interstate bidding system to obtain rates for its international moves. Without reference to any baseline, carriers bid an initial rate for each route they intended to serve and were then allowed to "me-too" the low carrier's rate and to share equally in the available business.

In reviewing that system, we concluded in our 1976 report that introducing more competition into the rate-setting process would reduce rates, thereby resulting in savings in transportation costs. Our conclusion was supported by the fact that rates on a test route were reduced by an average of 19 percent when the "me-too" concept was modified.[2] Responding to that report, DOD modified its rate-setting procedure. The carrier offering the lowest rate in the initial bidding cycle was guaranteed a specific percentage of any tonnage generated. The residual tonnage was then made available equally to all other carriers who agreed to meet the low rate. Although the "me-too" phase was not entirely abolished, its impact was substantially reduced. Incentive in the form of guaranteed tonnage was introduced into the rate process.

[2]Adoption of a Single Method of Shipping Household Goods Overseas—Pros and Cons (GAO/LCD/76-225, May 6, 1976).

Competition in the DOD international market differs from that in the domestic market in part because international carriers have less investment in the physical resources needed to move goods overseas. These bidders are forwarders that arrange for the moves and use other carriers' equipment. They do not provide the actual equipment themselves. In the domestic market, most carriers are motor carriers, and many have made significant investments in equipment. Nevertheless, the experiences of DOD suggest that when the original low bidders are rewarded, competition is enhanced.

The General Services Administration Uses a Modified Single-Phase System for Civilian Moves

GSA uses a single-phase bidding system in which carriers bid against a carrier-adjusted baseline. It gets a wider disparity of rates, nearly all below the baseline, than does DOD under its two-phase system.

Like carriers under the DOD bidding system, carriers under the GSA bidding system bid rates as a percentage of a baseline. However, the baseline is a carrier-set baseline, and rates apply on an area-to-area basis, with an area consisting of one or more states.

After carriers submit their rates to GSA, it reviews the rates on selected routes and asks each carrier to review its filing, without having the ability to see what others have bid. If they desire, carriers may rebid rates at some lower level. GSA officials said that they have the right to (1) accept any offer without further negotiation, (2) reject any unreasonable offer without negotiation, or (3) conduct such negotiation as it deems proper.

In 1988, GSA instituted a practice of returning some rates to carriers saying that they were "unreasonably high" or that they "would more than likely not be in your best interests in attracting Government business." The GSA officials believe that they have a responsibility to negotiate a certain number of rates. This philosophy differs from that of DOD in that MTMC does not select any rates for special negotiation.

Under GSA's contracts, carriers may adjust their rates downward on three dates during the rate cycle: July 1, October 1, and January 1. The contract with the carriers also permits them to charge a peak season (May 15 to September 30) surcharge on rates, often 10 percent. Sometimes the contract also allows an increase related to insurance. In 1988, the allowed increase for each rate was 4 percent.

For every route, we found there are 20 or more rate levels available to move a civilian agency interstate shipment. On a comparable DOD shipment, there are often only a few rate levels. For example, on shipments from central Indiana to Virginia, where both bidding systems had about 90 carriers making bids, GSA's bidding system for the summer 1989 season produced 28 different rate levels, whereas DOD's system produced only 3.

There are differences between the two systems. The biggest is that the carriers can adjust the baseline under the GSA system but cannot under the DOD system. GSA requires carriers to hold their rates for 1 year, whereas DOD has a 6-month rate cycle. Even so, GSA has been able to obtain many different rate levels—most well below the baseline. The fact that GSA has been able to get many bidders at many different rate levels raises questions about the value of MTMC's system, which allows "me-tooing" and does not reward the initial low bidder.

Military Versus Commercial Rates

Moving industry officials argue that military rates are far lower than those offered to commercial customers. They cite this point to support their position that the two-phase bidding system provides adequate competition.

We believe that because of differences in military and commercial business, a comparison of commercial and military rates is not valid. For example, no commercial shipper makes as many shipments as the military in such diverse shipping patterns. Also, commercial shippers typically offer preferred customers discounts, which are normally not disclosed.

We have been unable to find data that would allow us to independently verify what rates commercial shippers are actually paying. Under today's regulatory environment, rates do not have to be made public, and no carrier we met would come forward and show us the precise rates it was charging its largest commercial customers. Sometimes, carriers operate as common carriers and list in their tariffs the level of discounts they offer commercial customers. The customers are not revealed because the shipper account codes shown with the discounts are kept secret between the carrier and the account holder. Sometimes, carriers operate as contract carriers, and the levels of discounts provided the shippers are also kept secret. A recent Traffic Management magazine survey of van line shippers showed that a majority of the shippers surveyed moved household goods shipments under moving van contracts.

The respondents received an average shipment discount of 32 percent off the published rates, with some receiving discounts as high as 50 percent.

Although most carrier officials we interviewed said that the military rates were extremely low in comparison to the commercial tariff rates, when we asked them what percentage of their commercial shipments were moving at these tariff rates, the response was usually "few" or "none." When we asked to see the actual rates they charged their commercial customers, all declined our request. We therefore have no basis on which to compare military and actual commercial rates.

Military and Industry Views

MTMC has stated that the primary purpose of the two-step system is to allow every carrier the opportunity to offer DOD the lowest possible rates and to allow DOD the opportunity to enlarge its pool of household goods carriers at low rates. In its interstate rate solicitation, it says that the first, or initial, filing period

"provides carriers maximum flexibility to establish the specific, compensatory rates at which they desire to move personal property shipments from any origin...."

The second filing period

"provides carriers with the opportunity to precisely adjust their rates downward to (equal) the lower rates of other carriers established during the I/D [first-phase] filing period."

There are pro and con views on the necessity for a two-phase bidding system. On one hand, some carriers have told us that it is only during the period after the initial rates are bid that the carriers' agents can look at the competition and assist the carriers in deciding which rates to match and which ones to lower from the initial bidding levels. If carriers were not given the opportunity to meet the low rates, they say, many of their agents would not be able to stay in business and, without agents, carriers could not provide DOD with the capability it needs.

On the other hand, other carriers say that MTMC's two-phase bidding system is basically anticompetitive, or if not anticompetitive, at least unnecessary. They point out that MTMC's continued use of the two-phase bidding system—when coupled with DOD's traffic allocation procedures under which carriers bidding the same rates have the opportunity to share equally in traffic on a given route—does not provide them with an

incentive to offer their lowest rates during the initial bidding period or reward them for bidding low rates. They said that a one-phase system under which a carrier having the lowest rate would be offered all the traffic it could handle, with only the residual traffic offered to the other carriers, would be more advantageous to them and to DOD.

The basic problem, this group said, is that for a carrier to make a profit at low rates, it must have volume. Volume could come from bidding low rates on certain targeted, typically high volume routes and having the right to that traffic. Under MTMC's current procedures, they said, there are no assurances that such volume can be acquired because MTMC gives all other carriers the opportunity to meet the lowest rates during the second phase of the bidding system.

On the other side of the issue, many in the industry—including the larger van carriers—told us that they strongly objected to a one-phase bidding system. No "winner-take-all" system, they said, would be advantageous to DOD or the industry. First, they said that the group of carriers advocating the one-phase system has only limited capability to serve DOD. If DOD were to turn over much of the traffic to these carriers, it would soon see that its needs would not be met. Moreover, they questioned whether this group would provide the same level of service that they provided DOD.

They also said that such a system would have a devastating effect on agents—the people providing the local packing and warehousing services—and, consequently, on DOD. Agents are often located in areas that depend heavily on military traffic for their livelihoods. If a single carrier were to lock up all the traffic at one military installation, such agents could be forced out of business. The loss of this capability, including their storage warehouses, they said, would be catastrophic for DOD. They said that if carriers were not given the opportunity to review the industry's first set of rates and then decide on which ones to meet, DOD would be left with a small group of carriers and agents that would not be able to serve all of DOD. They believe the result would be that, in order for DOD to find the additional hauling and agent capacity—assuming that it was still around—DOD would have to pay much higher rates than it is currently paying.

These carriers also said that the bidding system needs to be viewed in conjunction with the baseline. The same baseline has been used to solicit rates since 1984. MTMC's failure to adjust the baseline, we were told by many carriers, has caused military household goods shipment rates to

fall to what they argue are unprofitable levels. The rates have become so low, they said, that many carriers can no longer offer DOD service comparable to that offered their commercial customers who are paying higher rates. Moreover, they believed that DOD will soon find its traditional moving capability in short supply.

MTMC advised us that it is concerned about the loss of moving capability and the possibility of increased rates, but thus far, it has not seen an argument compelling enough to adjust the baseline. According to MTMC, the fixed baseline is useful because it provides a simplified method for soliciting rates; it allows for uniformity in stating rates; and it does not have to be adjusted after each solicitation because the carriers can effectively adjust the baseline each time they bid new rates. Nothing compels them, MTMC said, to bid rates that are not compensatory. We agree with MTMC.

In response to this, the carriers said that MTMC fails to understand that they cannot adjust their rates the way MTMC thinks they can. They noted that the Consumer Price Index had increased by at least 27 percent since 1983 but that MTMC had not adjusted the baseline. They said that they found that the baseline was acting as a real barrier to bidding compensatory rates, or any rate above the baseline. Their experience was that rates above the baseline had usually not resulted in receipt of any traffic at most shipping offices. Moreover, they said that they feared possible Department of Justice antitrust investigations should they bid rates above the baseline. Although Justice has been looking at the interstate rates for several years, these carriers offered no rationale why Justice would necessarily want to review all rates bid above the baseline, and we have not found any either.

Regarding the low rate level, many carriers showed us summary data indicating that the military rates were extremely low, ranging from 24 to 60 percent below published commercial rates. They said that most of the cost burden resulting from such low rates was falling on the carriers' local agents and the owner-operators, who are finding that military traffic is no longer attractive to them during the peak summer shipping season when DOD has the greatest shipping needs. MTMC, they said, has placed unacceptable economic pressures on the industry to the extent that many carrier agents and owner-operators are deciding to withdraw their commitment of resources to the military.

These carriers would like to see MTMC adjust the baseline to reflect the commercial rate baseline, the Consumer Price Index, or some other indicator. Increases to the carriers' commercial rate baseline are authorized by the Interstate Commerce Commission based on industry cost studies. Were similar adjustments made to the DOD baseline, the carriers said, DOD would still receive discounts but from a higher and fairer level.

MTMC disagrees with this argument. It has consistently taken the position that the carriers still have the ability to adjust their rates every 6 months when they rebid their rates. We agree with MTMC's position that carriers have the prerogative to bid any rate they believe is warranted. Moreover, we are not convinced that changes in the bidding system would hurt the industry or result in decreased service. The industry is made up of many different types and sizes of carriers and many agents. We believe that there is ample opportunity to allow the marketplace to work and still maintain adequate capability for DOD.

Conclusions

DOD's two-phase system for obtaining rates for moving household goods is not truly competitive in that it limits the incentive carriers have to initially offer low rates. While the second phase of this system has generally brought down the initial rates of many carriers, a better method would be to encourage carriers to offer their low rates first and then reward those with the best offers.

A one-phase bidding system, whereby all carriers have equal incentive to bid the lowest possible rates and those offering the lowest rates are rewarded with all the traffic they can handle on the route for which they are the low bidders, would probably provide the carriers the most incentive to offer their lowest rates initially. If DOD determines that such a bidding system would not provide it the moving capability it needed or would result in an unacceptable quality of service, it could modify the two-phase bidding system so that the carrier offering the lowest rate during the first phase is allocated a greater share of the traffic than any other carrier simply meeting the low rate.

There is no way to predict with any certainty the impact that eliminating the second phase of the two-phase system or modifying the system would have on the rates offered to DOD. On some routes, those with relatively low volumes of shipments, the rates might increase. But, on the higher volume routes, we would expect that the marketplace, often involving more than 50 carriers, would produce lower rate levels.

Recommendation

We recommend that the Secretary of Defense direct the Commander of MTMC to replace or modify the current two-phase bidding process so that all carriers have incentive to initially bid the lowest possible rates and the lowest bidder is rewarded for offering the lowest rate.

Opportunities to Reduce Storage Costs

The Department of Defense has no overall data showing how much the Department has spent on temporary storage, how many shipments have gone into storage, or how often shipments have been stored prior to delivery. The Military Traffic Management Command, however, estimates that in fiscal year 1988 the Department of Defense spent about $114 million to temporarily store household goods and unaccompanied baggage when members moved to new permanent duty stations. This storage is referred to as "storage-in-transit."

Goods were generally stored in transit because members were not in positions to receive their personal effects at their new duty stations when deliveries were attempted. Often, members had not found adequate and/or affordable housing; receiving units had not been able to contact members to arrange for delivery; or shipments had arrived at destination before the personnel.

Storage costs could be reduced by using storage at origin instead of at destination because storage at origin is generally chargeable at discounted or lower long-term storage rates. Also, reducing the incidence and/or the cost of storage should be possible through better coordination and communication among shipping activities, members, carriers, and receiving activities.

Storage-in-Transit Entitlements and Management Responsibilities

When moving to new permanent duty stations, military members are entitled to temporarily store their household goods or unaccompanied baggage at government expense. This basic entitlement lasts for 90 days from the date the goods are placed into storage. It can be extended by the authorizing transportation officer for up to two additional 90-day periods if requested by the member because of conditions beyond the member's control. Any subsequent extension must be approved by a major command-level official or as otherwise dictated by the member's branch of service.

Reasons for extending storage beyond the basic 90-day period include serious illness of the member, serious illness or death of a member's dependent, impending assignment to government quarters, directed temporary duty after arrival at the new duty station, the nonavailability of suitable civilian housing or incomplete residence construction, and acts of God.

MTMC establishes storage-in-transit policy by issuing and revising the DOD Personal Property Traffic Management Regulation, which is approved

by the military services. MTMC field office personnel make management assistance visits to each DOD shipping office and provide written reports to MTMC headquarters. Over the last 3 years, storage-in-transit has been a special agenda item for these visits.

Most management of storage-in-transit occurs at the installation level. According to the DOD Personal Property Traffic Management Regulation, an installation transportation officer may use storage-in-transit when necessary to meet a member's requirements. However, the transportation officer is to make every effort to prevent the unnecessary use of storage-in-transit by maintaining a close liaison with installation personnel assignment officers and housing officers. To aid in limiting storage-in-transit, the destination transportation officer is expected to establish a file for inbound personnel. This file includes advanced documentation received from the origin transportation officer and other member information such as telephone numbers, temporary address, and name and address of a local contact. This file can then be used to facilitate the delivery of household goods rather than putting them in storage-in-transit.

Once household goods have been placed in storage-in-transit, installation transportation office personnel monitor the member's storage entitlement. Transportation office personnel advise the member of when this entitlement is about to expire and what is required to extend it. Installation transportation office personnel also advise carrier agents that member storage entitlements are about to expire.

Carrier Charges for Storage-in-Transit Services

Carriers' charges for storage-in-transit are based on five elements: (1) a charge per hundred pounds for the first day of storage, (2) a charge per hundred pounds for each additional storage day, (3) a charge for insurance, (4) a charge per hundred pounds for warehousing, and (5) a charge per hundred pounds for delivery from the warehouse. For example, the applicable charges for a 5,000-pound shipment stored in northern Virginia during the May 1988 rate cycle for 5 days would be $618.45 ($50.50 for the first day of storage, $3.50 for each additional day of storage, $6.45 for insurance, $105.00 for warehousing, and $442.50 for delivery from the warehouse to the member's residence).

MTMC initially established the storage-in-transit rates through negotiations with the carrier industry, using as a basis rates published in the 1985 Household Goods Carriers' Bureau's military rate tender. These rates are established geographically, according to where the household

goods are stored. Since the rates were first established, MTMC has revised the rates once, based on the estimated September 30, 1987, Consumer Price Index. Rates for storage-in-transit at destination are not subject to the percentage discounts or premiums that carriers bid for the transportation discussed in chapter 2.

Summary Data on Cost and Extent of Storage-in-Transit Is Lacking

Although MTMC has estimated the cost of storage-in-transit, neither MTMC nor the military services compile data on the actual cost of storage-in-transit, the number or percentage of shipments going into storage-in-transit, or the amount of time shipments are in storage-in-transit. Much of the data is available only at the installation level and then only on a shipment-by-shipment basis.

For fiscal year 1988, MTMC estimated the cost of storage-in-transit to be about $113.8 million: $78.5 million for about 130,000 domestic household goods shipments, $25.6 million for about 112,000 international household goods shipments, and $9.7 million for about 107,000 unaccompanied baggage shipments. These estimates are based on a formula developed by MTMC, which estimated the number of shipments in storage-in-transit, the median time in storage-in-transit, the average weight per shipment, and the average storage-in-transit rate. Because of the many estimates, a MTMC official questioned the reasonableness of the storage-in-transit estimate.

The only actual cumulative storage-in-transit cost data we obtained from MTMC was generated for us from individual shipment documentation the Navy provided to MTMC. This data, which is not used by MTMC and is based on shipment pickup dates, showed that for fiscal year 1988 storage-in-transit cost the Navy about $20.4 million for about 33,000 domestic household goods shipments.

Each of the 10 shipping or receiving offices we visited maintained individual household goods shipment records including storage-in-transit data associated with each shipment. These records included the date each shipment had gone into and come out of storage. In addition, the offices maintained logs listing the storage-in-transit shipments and the dates they had gone into storage.

Some of the shipping or receiving offices also generated work load reports, which stated the number of shipments processed and the number of shipments that had gone into storage-in-transit. On the basis of these work load reports and other data, we found that for 9 of the

10 offices we visited, over 50 percent of the personal property shipments they received—either household goods or household goods and unaccompanied baggage—had gone into storage-in-transit. At the other office, about 45 percent of the domestic household goods shipments it received had gone into storage-in-transit.

At 9 of the 10 offices we visited, the only records we found concerning the length of time shipments had been in storage-in-transit were those showing the date a shipment had gone into storage and the date the shipment had come out of storage. These records showed that shipments had been stored for as little as a few days to over 270 days. The other office had done a study on how long shipments were in storage-in-transit, and its data showed that the longest time a shipment had been in storage at that installation was 7 months, and typically the shipments were in storage between 21 and 30 days.

Major Reasons for Storage-in-Transit

Goods were generally stored in transit because members were not in positions to receive their personal effects at their new duty stations when deliveries were attempted. Often, members had not found adequate and/or affordable housing; receiving units had not been able to find members to arrange for delivery; or shipments had arrived at destination before the personnel.

Lack of Housing

One major reason that household goods are placed into storage-in-transit is the lack of available and/or affordable housing. For example, according to a shipping office official at Cameron Station, Virginia, in over 50 percent of the cases in which shipments go into storage-in-transit, members do not have housing. Most of the installations covered by the offices we visited did not have available on-base housing. Most installations had waiting lists for on-base housing of at least several months, the length depending in part on the member's rank. According to a shipping office official at the Naval Supply Center, San Diego, California, members of the installation must wait for 18 months to 4 years for on-base housing.

Similar problems exist concerning off-base housing. At most of the installations we visited, adequate and/or affordable off-base housing is not available. According to an Army personal property official at the Pentagon, housing problems at Ft. Ord, California, had resulted in the extension of DOD storage-in-transit entitlements beyond 180 days with no definite limit.

Locating Members Is Difficult

Goods are often stored in transit because installation transportation office personnel have difficulty locating military members when their household goods are ready for delivery. The problems are that there is only a limited amount of time available to locate the members, and members (1) have not arrived at their new duty stations, (2) have arrived at their new duty stations but have not contacted the installation transportation offices, or (3) have arrived at their new duty stations but are unavailable to receive the goods. If members or their designated representatives cannot be located, their household goods will be put into storage-in-transit. According to an official at one installation, over 50 percent of household goods shipments arrived there before members had reported to the base locator.

According to MTMC's rate solicitations for household goods, once a carrier's representative advises an installation transportation office that a member's household goods are ready to be delivered, delivery of the goods must begin within 2 hours for domestic shipments—when the distance between pickup and delivery is 200 miles or more—and within 3 hours for international shipments. Otherwise, DOD will be charged $17 for each additional hour for nondelivery plus hourly charges for vehicle drivers and helpers. This nondelivery, or waiting time, is calculated at the discretion of the carrier's representative. Generally, it is less costly to pay for waiting time up to 8 hours than to put goods into storage. However, if transportation office personnel cannot locate military members within a few hours to begin delivery of household goods, the goods will usually be put into storage-in-transit.

According to the DOD Personal Property Traffic Management Regulation, members are to contact the responsible destination installation transportation officer immediately upon arrival and provide contact addresses and telephone numbers where they can be reached to arrange delivery. However, we found that members had not always reported to the transportation officer upon arrival because they believed that their goods would not be delivered until the required delivery date, which had been established prior to the time of pickup. Therefore, they believed that they did not need to contact the transportation officer until the required delivery date.

Deliveries of household goods are based on required delivery dates established by the shipping offices in discussions with members before their goods are moved. However, unless computations of required delivery dates include other than actual transit times, such as leave, the required delivery dates may be unrealistic.

Members may report to their new duty stations but be unavailable to receive their household goods for several reasons: members may be on travel, on temporary duty, aboard ship, or on duty for extended periods of time.

Also, members may change their minds as to when they will report to their duty stations or fail to include some leave time in their required delivery date calculations.

Members may be granted latitude in reporting to their new duty stations; orders may state that they must report to their new duty stations within a given month. According to personnel at two installations we visited, members sometimes believed that required delivery dates were the actual dates that their household goods would be delivered. Therefore, members often did not report to their new stations before the required delivery dates. The installation transportation office personnel said that this misunderstanding might have resulted from improper counseling at the origin transportation office.

Carriers Are Not Penalized for Early Delivery Even If It Causes Storage-in-Transit

In some cases, carriers themselves contribute to storage-in-transit. One factor DOD uses to measure carriers' performance is how well the carriers meet the agreed-upon required delivery dates. Carriers failing to meet these dates may be suspended, or their performance scores lowered. Yet carriers who deliver shipments early and create the need for storage are not penalized.

The incentive for storage rests mostly with the carriers' agents. Most of the storage revenue is kept by the destination agents, and the possibility of additional revenues from military traffic is used by the carriers as an inducement to have agents represent them at shipment destinations.

Cost and Incidence of Storage Can Be Reduced

Storage at origin, when it can be determined that some storage will be needed, is more cost-effective than storage at destination because it is chargeable at discounted or lower long-term storage rates. Reducing the incidence and/or the cost of storage should be possible through better coordination and communication among shipping activities, members, carriers, and receiving activities. Such coordination includes ensuring that the shipping/receiving offices know when the members can take possession of their goods at destination, the members give the shipping/

receiving offices addresses where they can be located when the household goods are expected to be delivered, and all parties know when carriers are planning to deliver the goods.

Use of Storage at Origin

The Joint Federal Travel Regulations provide that nontemporary storage and storage-in-transit at origin may be used to store members' household goods when it is in the best interest of the government to do so. However, we found that in some cases involving lack of housing, temporary duty assignments, and duty at sea, storage-in-transit at destination was used instead of storage at origin.

For example, the Navy personal property transportation regulation entitles members to nontemporary storage when they are ordered to new permanent duty stations within the United States and their orders indicate a scarcity of available or adequate civilian housing at their new duty stations. At the two Navy installations we visited, civilian housing is scarce, yet many members' household goods shipments are in destination storage-in-transit.

In addition, officials at several receiving offices we visited stated that storage costs could be reduced if members used storage-in-transit at origin while they are on temporary duty assignments or assigned to duty at sea.

Finally, many shipments are being taken from nontemporary storage at origin and placed into storage-in-transit at destination. According to one carrier we met with, about 40 percent of shipments coming out of nontemporary storage go into storage-in-transit at destination. Several carriers advised us that shipments should not come out of nontemporary storage until members provide actual delivery addresses. If the shipments had remained at origin, the costs could have been reduced. In addition, according to several carriers, it is beneficial to the member not to have goods moved from one warehouse to another because the goods can be damaged during each move.

Nontemporary storage is generally less costly than storage-in-transit at destination. For example, a 10,000-pound household goods shipment stored in the Washington, D.C., area (shipment origin) at nontemporary storage rates would cost about $1,200 for 180 days. Storing the same shipment would cost about $1,730 for 180 days at storage-in-transit destination rates in San Diego, California. Adding 10 percent to the storage-in-transit cost for carrier liability insurance, which is not charged for

nontemporary storage, results in about $1,900 in storage-in-transit costs, or almost 60 percent more than the nontemporary storage costs.

Storage-in-transit at origin is also less costly than storage-in-transit at destination because origin storage rates are subject to the percentage discounts carriers bid for the line-haul rates and destination storage rates are not. The differences can be as much as 50 percent or more in some instances.

Better Coordination

As we noted above, members do not always report to the transportation officer upon arrival because they believe that their goods will not be delivered until the required delivery date. Also, unless the computation of the required delivery date includes time other than actual transit time, such as leave, the required delivery date may be unrealistic. And carriers who deliver shipments early and create the need for storage are not penalized.

Considering these matters, good coordination and communication among shipping activities, members, carriers, and receiving activities is important if storage management is to be effective. This coordination includes ensuring that the shipping/receiving offices know when the members can take possession of their goods at destination, the members give the shipping/receiving offices addresses where they can be located when the household goods are expected to be delivered, and all parties know when carriers are planning to deliver the goods.

Conclusions

Storage-in-transit cannot be totally eliminated, but the cost, and possibly the incidence, can be reduced. To accomplish these reductions, DOD should select the type of storage that is most advantageous to the member and DOD, and shipping activities, members, carriers, and receiving activities should more closely coordinate their efforts.

Recommendations

We recommend that the Secretary of Defense direct the military services to take the following actions:

- Use nontemporary storage and storage-in-transit at origin to the extent possible, rather than the more costly storage-in-transit at destination.
- Take steps to ensure better coordination and communication among DOD shipping/receiving offices, carriers, and military members in the delivery of household goods.

Companies Visited by GAO

A Olympic Forwarder, Inc.	Lynnwood, Washington
A.D. McMullen, Inc.	North Dartmouth, Massachusetts
Air Van Lines International, Inc.	Bellevue, Washington
Alberti Van & Storage Company, Inc.	Gaithersburg, Maryland
Allied Van Lines, Inc.	Naperville, Illinois
American Ensign Van Service, Inc.	Long Beach, California
American Red Ball Transit Company, Inc.	Indianapolis, Indiana
Crowder Transfer and Storage	Alexandria, Virginia
Culver Moving & Storage	San Antonio, Texas
Door-to-Door Moving & Storage	St. Louis, Missouri
Global Van Lines, Inc.	Orange, California
Interstate Van Lines, Inc.	Springfield, Virginia
Mayflower Transit, Inc.	Indianapolis, Indiana
National Van Lines, Inc.	Broadview, Illinois
New-Bell Storage Corporation	Norfolk, Virginia
North American Van Lines, Inc.	Ft. Wayne, Indiana
Pan American Van Lines, Inc.	Long Beach, California
Paul Arpin Van Lines, Inc.	East Greenwich, Rhode Island
RFC World Wide	San Antonio, Texas
Sherwood Van Lines, Inc.	San Antonio, Texas
Stevens Van Lines, Inc.	Saginaw, Michigan
Suelzer Van Lines	Ft. Wayne, Indiana
Towne Van Lines, Inc.	San Antonio, Texas
United Van Lines, Inc.	Fenton, Missouri
Wheaton Van Lines, Inc.	Indianapolis, Indiana

DOD Shipping Offices Visited by GAO

Army Offices	Joint Personal Property Shipping Office-Washington, Cameron Station, Alexandria, Virginia Fort Hood, Texas Fort George G. Meade, Maryland Fort Benjamin Harrison, Indiana
Navy Offices	Naval Supply Center-San Diego, California Naval Training Station-Great Lakes, Illinois
Air Force Offices	Joint Personal Property Shipping Office-San Antonio, Texas Scott Air Force Base, Illinois
Marine Corps Offices	Marine Corps Air Station-El Toro, California Camp Pendleton, California

Shipping Offices' Carrier, Rate, and Work Load Data

In table III.1, we list data covering the routes from the 152 DOD shipping offices in the contiguous United States for the May 1988 rate cycle. A "route" covers all traffic offered to industry from a single shipping office to all points in one destination state or the District of Columbia. Thus, from each shipping point there are 49 routes.

In presenting figures, we have averaged the numbers of carriers offering rates and the low rate from each DOD shipping office. Therefore, in Fort McClellan's case, we have averaged the numbers of carriers offering rates from Fort McClellan's office to each of the 49 destinations to which it ships. For all of its destinations, an average of 58 carriers submitted rates.

Our column "Average low rate from shipping office" represents the average low rate, stated as a percentage of MTMC's baseline rate, for all destinations from Fort McClellan, in this case, 82 percent. Our next column indicates the percentage of carriers' rates at the low rate level for all of Fort McClellan's destinations. In this case, 60 percent of all the carriers' rates were at the low rate level. Column 4 represents the average number of interstate shipments per day from Fort McClellan to all 49 of its shipment destinations, and column 5 represents the average number of interstate shipments per day from Fort McClellan to its destination with the highest volume of shipments.

Table III.1: Comparison of DOD Shipping Offices' Data

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Alabama					
Fort McClellan	58	82	60	3.8	0.6
Fort Rucker	92	69	65	7.0	1.1
Maxwell Air Force Base	62	99	96	7.7	1.3
Redstone Arsenal	62	100	100	2.8	0.4
Arizona					
Davis-Monthan Air Force Base	65	98	93	2.9	0.6
Fort Huachuca	50	100	97	4.1	0.4
Marine Corps Air Station, Yuma	20	100	100	1.7	0.4
Williams Air Force Base	70	70	67	7.1	1.0
Arkansas					
Eaker Air Force Base	36	100	99	1.4	0.2
Fort Chaffee	45	100	99	0.9	0.1
Little Rock Air Force Base	92	90	91	3.4	0.4
California					
Beale Air Force Base	60	100	99	3.4	0.4
Castle Air Force Base	55	65	52	2.4	0.4
Edwards Air Force Base	32	100	96	1.5	0.2
Fort Ord	156	66	54	12.2	1.5
George Air Force Base	49	100	99	1.1	0.2
Marine Corps Air-Ground Combat Center, Twentynine Palms	38	100	100	2.1	0.3
Marine Corps Air Station, El Toro	139	65	42	10.6	1.1
Marine Corps Base, Camp Pendleton	87	65	49	8.1	1.1
Marine Corps Logistics Base, Barstow	47	100	99	0.7	0.1
McClellan Air Force Base	90	66	50	5.2	0.8
Naval Air Facility, El Centro	6	100	84	0.0	0.0
Naval Air Station, Lemoore	65	100	99	1.4	0.2
Naval Construction Battalion Center, Port Hueneme	46	83	74	1.6	0.2
Naval Supply Center, Oakland	206	66	52	13.1	1.3
Naval Supply Center, San Diego	148	65	49	19.0	2.9
Naval Weapons Center, China Lake	6	100	84	0.3	0.1
Norton Air Force Base	95	91	84	5.0	0.6
Sharpe Army Depot, Lathrop	50	75	47	0.3	0.0
Vandenberg Air Force Base	75	73	52	2.1	0.2

(continued)

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Colorado					
Joint Personal Property Shipping Office-Colorado Springs	124	70	63	14.4	1.6
Lowry Air Force Base	123	71	68	7.2	1.0
Connecticut					
Naval Submarine Base, New London	62	76	80	4.8	0.5
Delaware					
Dover Air Force Base	55	70	60	3.6	0.5
Florida					
Eglin Air Force Base	106	96	96	4.5	0.5
Homestead Air Force Base	75	82	66	3.5	0.6
MacDill Air Force Base	134	70	59	3.8	0.4
Naval Air Station, Key West	23	100	100	0.6	0.1
Naval Supply Center, Pensacola	132	95	94	8.2	1.7
Naval Supply Center, Jacksonville	122	71	70	9.5	1.3
Naval Training Station, Orlando	89	70	56	5.4	1.1
Patrick Air Force Base	51	100	97	2.8	0.2
Tyndall Air Force Base	50	94	92	2.6	0.3
Georgia					
Fort Benning	80	100	97	9.3	1.3
Fort Gordon	70	76	67	5.0	0.5
Fort McPherson	110	100	97	5.7	0.7
Fort Stewart	70	70	61	7.6	0.9
Marine Corps Logistics Base, Albany	30	100	89	1.1	0.2
Moody Air Force Base	19	100	98	1.4	0.2
Naval Supply Corps Schools, Athens	31	100	96	0.4	0.1
Robins Air Force Base	67	100	94	2.6	0.2
Idaho					
Mountain Home Air Force Base	27	100	96	2.2	0.4
Naval Administrative Unit, Idaho Falls	18	100	94	1.9	0.6
Illinois					
Chanute Air Force Base	31	100	86	3.6	0.4
Charles Melvin Price Support Center, Granite City	102	73	72	4.2	0.5
Naval Training Station, Great Lakes	136	73	68	13.7	3.0
Rock Island Arsenal, Rock Island	52	100	96	1.7	0.2
Scott Air Force Base	98	100	97	6.1	0.8

(continued)

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Indiana					
Fort Benjamin Harrison	80	100	98	4.4	0.4
Grissom Air Force Base	50	100	98	2.1	0.3
Naval Weapons Support Center, Crane	61	100	99	1.1	0.2
Kansas					
Fort Leavenworth	108	73	35	8.8	1.0
Fort Riley	72	100	99	6.3	0.7
McConnell Air Force Base	64	100	99	1.9	0.3
Kentucky					
Fort Campbell	117	100	99	10.3	1.1
Fort Knox	103	83	69	7.4	0.9
Lexington-Blue Grass Army Depot, Lexington	77	100	96	1.6	0.2
Louisiana					
Barksdale Air Force Base	67	100	99	3.5	0.5
England Air Force Base	23	100	99	1.7	0.2
Fort Polk	76	100	99	4.7	0.7
Naval Support Activity, New Orleans	82	100	97	4.7	0.8
Maine					
Loring Air Force Base	36	99	92	1.5	0.2
Naval Air Station, Brunswick	59	71	58	2.3	0.3
Maryland					
Aberdeen Proving Ground	97	82	59	2.5	0.4
Fort Detrick	38	100	93	1.4	0.2
Fort George Meade	102	82	61	6.0	0.8
Naval Air Station, Patuxent River	21	100	95	1.8	0.3
U.S. Naval Academy, Annapolis	30	99	96	1.1	0.2
Massachusetts					
Hanscom Air Force Base	103	71	50	7.2	0.8
Michigan					
K. I. Sawyer Air Force Base	59	74	76	1.9	0.3
Selfridge Air National Guard Base	101	74	70	5.8	0.9
Wurtsmith Air Force Base	55	74	70	1.6	0.3
Minnesota					
Fort Snelling	88	73	62	3.3	0.6
Mississippi					
Columbus Air Force Base	42	100	97	4.0	0.7
Keesler Air Force Base	150	99	96	6.8	0.9
Naval Air Station, Meridian	49	100	99	1.7	0.3

(continued)

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Missouri					
Fort Leonard Wood	78	100	99	3.9	0.4
Whiteman Air Force Base	36	100	99	1.4	0.1
Montana					
Malmstrom Air Force Base	53	100	99	2.4	0.2
Nebraska					
Offutt Air Force Base	109	100	97	8.8	1.1
Nevada					
Naval Air Station, Fallon	30	100	100	0.5	0.2
Nellis Air Force Base	67	100	98	4.8	0.6
Sierra Army Depot, Reno	32	100	100	0.7	0.2
New Hampshire					
Pease Air Force Base	56	100	99	3.7	0.5
New Jersey					
Joint Personal Property Shipping Office-New Jersey, Fort Dix	121	71	50	7.7	0.9
New Mexico					
Cannon Air Force Base	51	100	99	1.6	0.2
Holloman Air Force Base	46	100	98	3.1	0.4
Kirtland Air Force Base	57	100	93	3.8	0.5
White Sands Missile Range	29	100	100	1.2	0.3
New York					
Fort Drum	53	100	100	1.2	0.2
Fort Hamilton	116	71	39	4.7	0.6
Griffiss Air Force Base	56	100	99	2.6	0.2
Naval Administrative Unit, Scotia	51	100	98	3.7	0.7
Plattsburgh Air Force Base	33	100	90	2.0	0.3
Seneca Army Depot, Romulus	52	97	88	2.8	0.4
U.S. Military Academy, West Point	80	99	92	2.2	0.5
North Carolina					
Marine Corps Base, Camp Lejeune	112	71	70	10.1	1.9
Fort Bragg	144	97	89	19.9	2.3
Marine Corps Air Station, Cherry Point	73	67	62	3.9	0.6
Seymour Johnson Air Force Base	70	98	95	3.4	0.4
North Dakota					
Grand Forks Air Force Base	48	100	100	3.1	0.4
Minot Air Force Base	46	100	100	3.3	0.3

(continued)

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Ohio					
Naval Finance Center, Cleveland	84	100	98	2.9	0.4
Wright-Patterson Air Force Base	160	74	74	7.7	1.1
Oklahoma					
Altus Air Force Base	32	100	96	1.8	0.3
Fort Sill	103	76	89	8.9	1.1
McAlester Army Ammunition Plant, McAlester	19	100	95	0.8	0.1
Tinker Air Force Base	71	81	70	4.1	0.5
Vance Air Force Base	19	100	90	1.5	0.2
Pennsylvania					
Carlisle Barracks	67	90	76	5.5	0.7
Charles E. Kelley Support Facility, Oakdale	62	100	99	4.3	0.5
Naval Station, Philadelphia	77	81	63	7.8	3.0
Tobyhanna Army Depot, Tobyhanna	30	100	96	0.6	0.1
Rhode Island					
Naval Education and Training Center, Newport	86	69	57	7.8	1.2
South Carolina					
Fort Jackson	80	100	99	3.9	0.6
Marine Corps Air Station, Beaufort	40	100	97	3.2	0.6
Myrtle Beach Air Force Base	31	100	90	1.7	0.2
Naval Supply Center, Charleston	134	76	59	12.6	2.1
Shaw Air Force Base	47	100	99	3.0	0.3
South Dakota					
Ellsworth Air Force Base	46	100	94	2.3	0.3
Tennessee					
Naval Air Station, Memphis	85	100	98	5.2	1.0
Texas					
Bergstrom Air Force Base	71	69	58	3.6	0.5
Carswell Air Force Base	113	70	54	4.9	0.9
Dyess Air Force Base	41	100	100	2.3	0.3
Fort Bliss	119	68	55	9.6	0.8
Fort Hood	92	68	51	13.1	1.3
Goodfellow Air Force Base	45	82	68	1.9	0.2
Joint Personal Property Shipping Office-San Antonio	150	66	46	22.4	3.1
Naval Air Station, Corpus Christi	64	65	42	5.6	1.4
Red River Army Depot, Texarkana	34	100	100	1.5	0.2
Reese Air Force Base	32	100	100	1.8	0.3
Sheppard Air Force Base	41	100	92	2.2	0.3

(continued)

Shipping office	Average number of carriers	Average low rate from shipping office	Percentage of carriers' rates at low rate level	Average number of shipments per day to	
				All destinations	Highest volume destination
Utah					
Hill Air Force Base	84	100	95	4.2	0.7
Virginia					
Consolidated Personal Property Shipping Office-Langley Air Force Base	71	100	98	8.9	0.8
Consolidated Personal Property Shipping Office-Norfolk	113	70	67	22.9	3.1
Fort Lee	73	96	89	5.1	0.6
Joint Personal Property Shipping Office-Washington, D.C., Cameron Station	187	67	24	41.1	7.1
Washington					
Fairchild Air Force Base	70	100	98	2.5	0.5
Joint Personal Property Shipping Office-Fort Lewis	189	67	55	15.7	2.5
Naval Air Station, Whidbey Island, Oak Harbor	78	100	98	3.1	1.0
Naval Supply Center, Puget Sound, Bremerton	135	69	65	6.0	1.6
Wyoming					
F.E. Warren Air Force Base	41	100	97	2.3	0.5
Average	**72**	**89**	**83**	**4.9**	**0.7**

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