United States General Accounting Office 133423
Report to the Secretary of the Army

GAO

June 1987

ARMY DEPLOYMENT

Better Transportation Planning Is Needed

GAO/NSIAD-87-138

039427

GAO

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

National Security and
International Affairs Division

B-226747

June 18, 1987

The Honorable John O. Marsh, Jr.
The Secretary of the Army

Dear Mr. Secretary:

This report discusses the ability of both Army active and reserve forces to mobilize and move to ports of embarkation within the timeframes prescribed by operation plans. The report focuses on the availability of the required transportation resources and the adequacy of unit and installation plans and preparations to use them.

We made the review because of the Army's increased reliance on the rapid mobilization and deployment of both active and reserve component forces under its Total Force Concept.

This report contains recommendations to you in chapters 2, 3, and 4. The head of a federal agency is required by 31 U.S.C. 720 to submit a written statement on actions taken on these recommendations to the Senate Committee on Governmental Affairs and the House Committee on Government Operations not later than 60 days after the date of the report and the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

Copies of this report are being sent to the House and Senate Committees on Appropriations and Armed Services and the Secretary of Transportation. Copies will also be made available to others upon request.

Sincerely yours,

for Bill W. Thurman

Frank C. Conahan
Assistant Comptroller General

Executive Summary

Purpose

The ability of U.S. forces to change from a peacetime to a wartime moc rapidly—to mobilize and deploy—is vitally important to national security. This transition depends in large part upon the ability of both Army active and reserve forces to move from home stations and mobilization stations to their assigned ports of embarkation within the time frames prescribed by operation plans.

Successful execution of this movement depends, to a large extent, on the availability of the required transportation resources and the adequacy of unit and installation plans and preparations to use them. The Army is heavily dependent on commercial transportation to accomplish these moves due to the distances involved and because many units do not possess the transportation resources needed to move all their equipment and supplies.

Because commercial transportation plays an important role in this process, GAO sought to determine whether

- installations and units had identified how much equipment would be moved by commercial transportation;
- the types and amount of required commercial transportation had been determined and whether such resources were available;
- the units and mobilization stations had planned for outloading the commercial railcars and trucks and had the capability to do so; and
- the required materials and equipment needed for outloading at the mobilization stations had been identified and procured.

Background

Acquiring and maintaining the capability to rapidly mobilize and deploy has taken on added importance since 1973 when the Secretary of Defense announced the Total Force Policy, which provides that reserve component units will deploy with the active components instead of being considered as follow-on replacements to deployed active components.

The U.S. Army Forces Command has designated 51 Army installations in the Continental United States as mobilization stations. These mobilization stations are also the home installations for nearly all major active Army units located in the United States. Movement to and from these mobilization stations involves commercial, as well as military, transportation resources.

The Military Traffic Management Command is responsible for determining if the military's transportation systems can meet mobilization needs. The Department of Transportation is responsible for assessing the availability of national transportation resources and either prioritizing and/or allocating these resources to meet military mobilization and critical civilian needs.

Results in Brief

Mobilization and deployment movement is made more difficult because the Army

- has not identified the type and amount of equipment to be moved by commercial means,
- has not determined whether the required commercial transportation is available, and
- has not assessed and corrected disparities between requirements in mobilization station outloading plans and those in operation plans.

In addition, the Army has overstated its requirements for the materials and equipment (blocking, bracing, and tie-down materials; and rail spanners, tool sets, and end ramps) and warehouse construction needed for outloading at the mobilization stations.

Principal Findings

Commercial Transportation Requirements and Availability

It is questionable whether many Army units can accomplish mobilization movements as planned. The Department of Defense (DOD) has assumed that sufficient commercial transportation resources are available to meet its mobilization needs. However, DOD has relied on comparisons of gross cargo tonnage requirements with gross carrying capacities. Without comparing DOD's commercial transportation requirements with resources available by specific type and number, a judgment of the adequacy of commercial transportation cannot be made.

Disparities between mobilization station outloading plans and capabilities and the levels expected by the Military Traffic Management Command may cause transportation problems during mobilization and deployment. Some mobilization stations plan to use significantly different types and levels of outloading transportation than expected by

the Military Traffic Management Command and may not be physically able to dispatch the volume of traffic required by Army operation plan

Requirements for Transportation-Related Items

The Army overestimated requirements by at least $15.5 million for materials, equipment, and warehouse costs related to mobilization station outloading. After receiving briefings by GAO, the Army changed its planning guidance, reduced funding requirements, and began to reassess its needs for transportation-related equipment. However, it still needs to redistribute these items in accordance with mobilization and deployment needs.

Recommendations

GAO recommends that the Secretary of the Army

- ensure that equipment to be moved to and from the mobilization stations by commercial transportation be identified and reported to those responsible for estimating commercial transportation requirements,
- require each mobilization station commander to assess the specific types and numbers of commercial transportation assets needed to meet the most demanding outload requirements in the operation plans for which the mobilization station is tasked,
- require that disparities between the outloading plans and capabilities of mobilization stations and the outloading requirements estimated by the Military Traffic Management Command be periodically examined to ensure that any such disparities do not have a material impact on outloading, and
- require a reassessment to further refine mobilization station needs for rail outloading material and associated warehouses and reduce planned expenditures for these items by $15.5 million until this reassessment is completed.

Agency Comments and GAO's Evaluation

DOD agreed with GAO's report findings and conclusions, agreed or partially agreed with all of the recommendations, and has initiated or planned actions for addressing many of the matters discussed in the report.

The Department of Transportation agreed with the report recommendations involving the Department and provided additional information to clarify certain of its mobilization and deployment responsibilities.

Contents

Abbreviations

BBPCT	Blocking, Bracing, Packing, Crating, and Tie-Down Materials
BBT	Blocking, Bracing, and Tie-Down Materials
CBS-X	Continuing Balance System - Expanded
COMPASS	Computerized Movement Planning and Status System
CONUS	Continental United States
DOD	Department of Defense
DOT	Department of Transportation
FORSCOM	U.S. Army Forces Command
GAO	U. S. General Accounting Office
MAPS II	Mobility and Analysis Planning System
MTMC	Military Traffic Management Command

Introduction

The U.S strategy of deterrence requires that U.S. forces be able to make a rapid transition from a peacetime to a wartime posture, that is, to mobilize and deploy within stringent time frames. This rapid mobilization and deployment capability includes both the Army active and reserve component (Army National Guard and U.S. Army Reserve) forces and depends in large part on the ability of these forces to move from their home stations and mobilization stations to their assigned aerial and sea ports of embarkation.

Acquiring and maintaining the capability to mobilize and deploy rapidly has taken on added importance since 1973 when the Secretary of Defense announced the Total Force Policy. This policy states that reserve component units will deploy with the active components instead of being considered as follow-on replacements to deployed active components.

The importance of the reserve component's role in the Total Force Policy has increased: in executing contingency plans, many reserve component's units are scheduled to deploy before some of the active units, and some are scheduled to deploy to their assigned theaters as early as 10 days after a mobilization order is given.

The number of soldiers in the reserve component was expected to surpass the 780,800 soldiers in the active Army by fiscal year 1987. By the end of fiscal year 1987, reserve component units will provide more than half of the direct combat and about 69 percent of tactical support unit personnel in the total force. These reservists are assigned to some 3,400 company and detachment-sized units in the National Guard and in 3,200 company and detachment-sized units in the Army Reserve.

Once a mobilization order is given, reserve component units move all of their personnel, equipment, and supplies maintained at their home stations and at other locations to their assigned mobilization stations. Depending on the type of unit, the type and amount of equipment to be moved could vary significantly.

The U.S. Army Forces Command (FORSCOM), a major U.S. Army command, has designated a total of 54 Army installations, 51 of which are located in the Continental United States (CONUS), as mobilization stations. Most Army reserve component units assemble and conduct final preparations for deployment at the mobilization stations before moving to ports of embarkation. These mobilization stations are the home installations for nearly all major active Army units located in CONUS. The

ability of the reserve component units to move from their home stations to their assigned mobilization stations and for all the units to move from mobilization stations within required time frames is essential if U.S. forces are to accomplish the missions outlined in the operation plans.

If these units are to achieve their mobilization movement objectives, they must plan in peacetime how it will be accomplished during mobilization. An integral part of this planning process is ensuring that the necessary transportation, both military and commercial, is available to move the units to and from the mobilization stations.

Department of the Army policy states that commercial transportation will be used to the maximum extent for unit mobilization and deployment. This reduces wear and tear on public highways and military vehicles. Using commercial transportation also minimizes the need for en route support (such as food and rest facilities for drivers, fuel, security, repairs, and traffic control) and reduces maintenance requirements at ports of embarkation.

Army policy generally requires that vehicles suited for highway movement (such as trucks and jeeps) located more than 1 day's traveling distance from their port of embarkation be transported using commercial transportation. Vehicles not suited for highway movement (such as tanks and other tracked vehicles) are not to be driven on highways for more than 75 miles. Since many mobilization stations are located more than 75 miles from their ports of embarkation, the Army is heavily dependent upon commercial transportation to accomplish its moves.

The Secretary of the Army is the Department of Defense's (DOD) single manager for military traffic, land transportation, and common-user ocean terminals. These responsibilities have been delegated to the Military Traffic Management Command (MTMC). The Transportation Engineering Agency, a subordinate command of MTMC, is responsible for assessing military installation transportation systems to determine if they are effectively used and can meet mobilization needs.

The Secretary of Transportation is responsible for determining and identifying the transportation resources available and required to meet all degrees of national emergencies, determining priorities and allocating civil transportation services in a national emergency, and managing available transportation resources in order to meet, to the extent possible, defense and critical civil movement requirements.

Past studies conducted by the Army, the Inspector General, and others have identified critical transportation deficiencies in the Army's active and reserve component's ability to mobilize and deploy. To correct these and other mobilization deficiencies, the Army has allocated millions of dollars to improve the reserve component and active duty forces' capabilities.

Objective, Scope, and Methodology

Our objective was to determine the adequacy of DOD plans and preparations for transporting Army reserve component units from their home stations to mobilization stations and from the mobilization stations[1] to the aerial and sea ports of embarkation.

In conducting our review we evaluated

- DOD's development of commercial transportation requirements for mobilization and its determination of the availability of commercial rail and truck assets with which to meet these needs;
- Army reserve component unit home station and mobilization station plans and preparations for conducting commercial rail and truck outloading operations; and
- FORSCOM programs for procuring, distributing, and storing selected materials and equipment needed to support commercial rail and truck loading operations.

While we evaluated DOD methodology for establishing commercial transportation requirements for movement to and from the mobilization stations, we did not evaluate the validity of those requirements. Also, we did not evaluate the capabilities of ports of embarkation to receive or ship the deploying units to their overseas locations.

The baseline war scenario used for assessing plans and preparations for conducting reserve component units' home station and mobilization station outloading operations was a major European conflict with Soviet forces and their allies. We selected this operation plan because it is the most demanding single operation plan involving active and reserve component forces. In those instances where a mobilization station had a more demanding commercial rail and truck outloading requirement

[1]Our evaluation of movement from the mobilization stations to ports of embarkation included both reserve and active units. No distinction is made between active and reserve units once they reach the mobilization stations.

under another operation plan, we evaluated its outloading plans and preparations against those requirements.

We interviewed officials responsible for identifying and developing commercial transportation requirements and executing plans for outloading from home stations and mobilization stations. In addition, we interviewed officials from the Association of American Railroads, Trailer Train Company, and the American Trucking Association, Inc., to obtain commercial rail and truck information and obtained documentation on their rail and truck inventories and operations.

At our request, MTMC obtained additional railcar inventory data from 16 U.S. railroads owning approximately 90 percent of the national commercial inventory of rail flatcars normally used for transporting military vehicles. Also, the Transportation Engineering Agency provided us with a computerized analysis of the types of military vehicles that could be carried on certain types of rail flatcars. We used this data in our analyses of the national flatcar inventory and the types of material and equipment being purchased by the Army. Similar data for the trucking industry was not available.

We obtained and reviewed reports on various mobilization exercises and command inspections conducted by the Army since January 1, 1984, to identify commercial transportation problems. Also, we reviewed excerpts from an April 1985 Army Mobilization Functional Area Assessment to determine what commercial transportation issues the Army had identified as well as any proposed solutions. Further, we reviewed reports, studies, and exercise results, prepared by the Army Audit Agency, various Army Inspectors General, and internal audit agencies on this subject.

Our review was performed at Headquarters, Department of Army; Headquarters, National Guard Bureau; FORSCOM; MTMC; Transportation Engineering Agency; Department of Transportation (DOT); and at all five Continental United States Armies (Continental Armies).

For each of the five Continental Armies, we selected at least two units that (1) require commercial transportation, (2) are important to at least one contingency plan, and (3) deploy relatively early. In total we selected 19 units, 7 Guard and 12 Reserve. (See app. I.)

Our review also included 20 installations designated as mobilization stations. (See app. II.) These comprise a mix of active and semi-active

installations. Some are state-owned while others are under the control of various Army commands.

Our review was conducted during the period June 1984 to June 1986 in accordance with generally accepted government auditing standards.

Commercial Transportation Needed to Move Units to and From Their Mobilization Stations Has Not Been Fully Identified

Many Army units are dependent upon commercial transportation to move all of their troops, supplies, and equipment to and from their assigned mobilization stations in a timely manner. However, movement data and plans contain significant weaknesses that could adversely affect the units' capabilities to accomplish the moves within the required time frames.

Major weaknesses included cases in which

- units had not identified all the equipment requiring commercial transportation for movement to the mobilization stations,
- the mobilization stations had not determined the commercial transportation needed to move the equipment to ports of embarkation, and
- reserve component units had not developed or tested load plans or requested commercial transportation to accomplish their moves.

Need to Identify Equipment to Be Moved and the Commercial Transportation to Move It

As part of the mobilization planning process, reserve component units are to identify and report equipment that will be moved to the mobilization station. The means for reporting this equipment is the Computerized Movement Planning and Status System (COMPASS) report. This report is used by mobilization stations, major subordinate commands, theater commanders, joint planning communities, and transportation operating agencies to determine and arrange for the transportation needs of the units.

For movement from the mobilization stations, unit movement coordinators, using the input from the reserve component units and active duty units, are responsible for determining the number and type of transportation resources to be used—military or commercial. Once this determination is made, needs for blocking, bracing, packing, crating, and tiedown (BBPCT) material, and other outloading equipment and facilities can be determined and incorporated into installation mobilization plans.

Our review showed that many of the reserve component units had not updated their COMPASS report to reflect what equipment would be moved to mobilization stations and that few mobilization stations had accurately determined the type and amount of commercial transportation that would be needed and when it would be needed to move to the ports of embarkation.

Movement to the Mobilization Stations

Comparison of equipment shown on the COMPASS report with equipment listed on the units' property books for the 19 reserve component units showed numerous discrepancies.

The COMPASS report for the 19 units contained a combined total of 2,231 items of equipment, whereas the combined total of items on the property books was 2,540. The difference of 309 equipment items was the result of 78 items of equipment listed on the COMPASS report that were not listed on the units' property records, and 387 items of equipment listed in the property record books that were not listed on the COMPASS report. Unit officials told us that 161 of the 387 equipment items would be moved by commercial transportation to the mobilization stations. The COMPASS reports therefore do not accurately reflect what commercial transportation is required. Included in the 161 equipment items were 112 designated as being very important to the mission of the units involved, for example, 1 crane, 2 boom extensions for cranes, 3 recovery vehicles (wreckers), 8 forklift trucks, 10 graders, 11 cargo helicopters, and 12 scrapers.

A primary reason for differences between the COMPASS report and the unit property record books was that equipment is received or disposed of by the units during the 1-year time lag between mandatory updates of the COMPASS report. Units are supposed to update their COMPASS reports annually or when changes occur that would increase or decrease the unit's commercial transportation requirement by one or more railcars or semi-trailers. However, some units did not submit the required updates, and other units submitted incorrect updates.

Consequently, the COMPASS report is often outdated when it is produced, and by the time the report is updated again, many other significant changes have already taken place. At 14 of the 19 units we visited, officials said that they do not update the COMPASS report to reflect significant changes between the annual changes.

We also compared the equipment items shown on the COMPASS reports for 122 units with the equipment shown on the Army's Continuing Balance System-Expanded (CBS-X) report, which is the Army's automated inventory listing. There were wide discrepancies. Of the 10,640 equipment items shown on the COMPASS report, 2,659 items were not reflected on the CBS-X report, and of the 10,071 equipment items shown on the CBS-X, 2,090 were not shown on the COMPASS reports.

The wide discrepancies among the three basic sources of information showing unit equipment inventory on hand illustrate the problems in determining the transportation resources needed to move to the mobilization stations from the units' home stations.

Overall, our analysis of COMPASS reports for 3,819 reserve component units showed that 2,675 units needed some form of commercial transportation. However, estimates of the type and number of commercial transportation required had not been developed for 2,073, or 77 percent, of the units needing it.

Movement From the Mobilization Stations

The FORSCOM Mobilization and Deployment Planning System requires mobilization station commanders to ensure that accurate movement requirements for mobilization and deployment are developed and coordinated.

The mobilization station unit movement coordinator is responsible for determining what supplies and equipment each unit expects to move at mobilization and whether it plans to use commercial or military transportation. How a unit outloads depends on what types and amounts of equipment must be moved, distance to the port of embarkation, operation plan requirements, unit movement plans, and the level of commercial rail and truck outloading the installation can support. After these factors are considered and a decision is made on how each unit will move, the unit movement coordinator determines and makes plans to obtain the commercial transportation needed.

Mobilization stations in relatively close proximity to their assigned ports of embarkation rely primarily on military transportation. However, when the travel time between mobilization station and port of embarkation is more than 1 day for vehicles suitable for highway movement or over 75 miles for vehicles and equipment not suitable for highway movement, Army policy and FORSCOM regulations require that commercial transportation be used.

Of the 20 mobilization stations visited, 16 planned to use varying degrees of commercial transportation and 4 planned to reach their ports of embarkation entirely with military transportation. However, only 2 of the 16 mobilization stations had determined and documented when, how much, and what type of commercial transportation would be needed.

Officials cited various reasons as to why commercial transportation requirements had not been determined for the other 14 mobilization stations. Some of the reasons cited were that

- the data used for determining transportation requirements was inaccurate and outdated,
- reserve component units had not responded to requests for the quantity and type of equipment they planned to outload,
- the determination of commercial transportation requirements in advance of mobilization was a useless exercise that had not been done because changes in assigned ports of embarkation were likely to occur, and
- there was confusion about which port of embarkation they should plan for.

Outloading Plans and Capabilities Have Not Been Fully Assessed

Load planning is an important aspect of unit movement planning. Commanders are responsible for identifying the specific items of equipment that are to be loaded on each vehicle and for designating individuals to load the vehicles. Additionally, the Army requires that load plans be tested every 2 years. Our work at the reserve component units showed that 17 of the 18 units which identified a need for commercial transportation had not developed load plans for the commercial vehicles.

At the mobilization stations, we found that mobilization plans addressed outloading in varying degrees of detail. However, we noted that MTMC expectations of mobilization station outloading levels were not being compared with actual outloading plans and that they sometimes differed. Rail track and roadbed conditions at some mobilization stations might not support the level of outloading planned, and plans for distributing materials and equipment needed to support rail outloading operations usually had not been developed.

MTMC Outloading Expectations Sometimes Differ From Actual Mobilization Station Plans

MTMC is the command through which the Secretary of the Army discharges his responsibilities as single manager for military traffic, land transportation, and common-user ocean terminals. MTMC ultimately determines how traffic is to move and the control necessary to ensure responsiveness to shipper requirements.

MTMC computes the tonnage of equipment and supplies and the number of railcars and trucks that mobilization stations are expected to outload

on a time-phased basis during mobilization and deployment. MTMC compares this information to port of embarkation capacity to achieve maximum port use, avoid excessive port congestion, and otherwise regulate mobilization movement.

We found, however, that MTMC does not compare its computations against actual mobilization station outloading plans, and that sometimes they do not agree. For example, at 4 mobilization stations, officials told us they did not plan any rail outloading, but MTMC data showed rail outloading levels for 3 of these installations ranging from 4 to 196 railcars during the first 30 days after mobilization. At one installation, MTMC's computation of the total number of railcars and trucks to be outloaded during the first 30 days after mobilization differed from the installation's outloading plans by 171 trucks (13 percent) and 715 railcars (80 percent).

Adequacy of Rail Lines

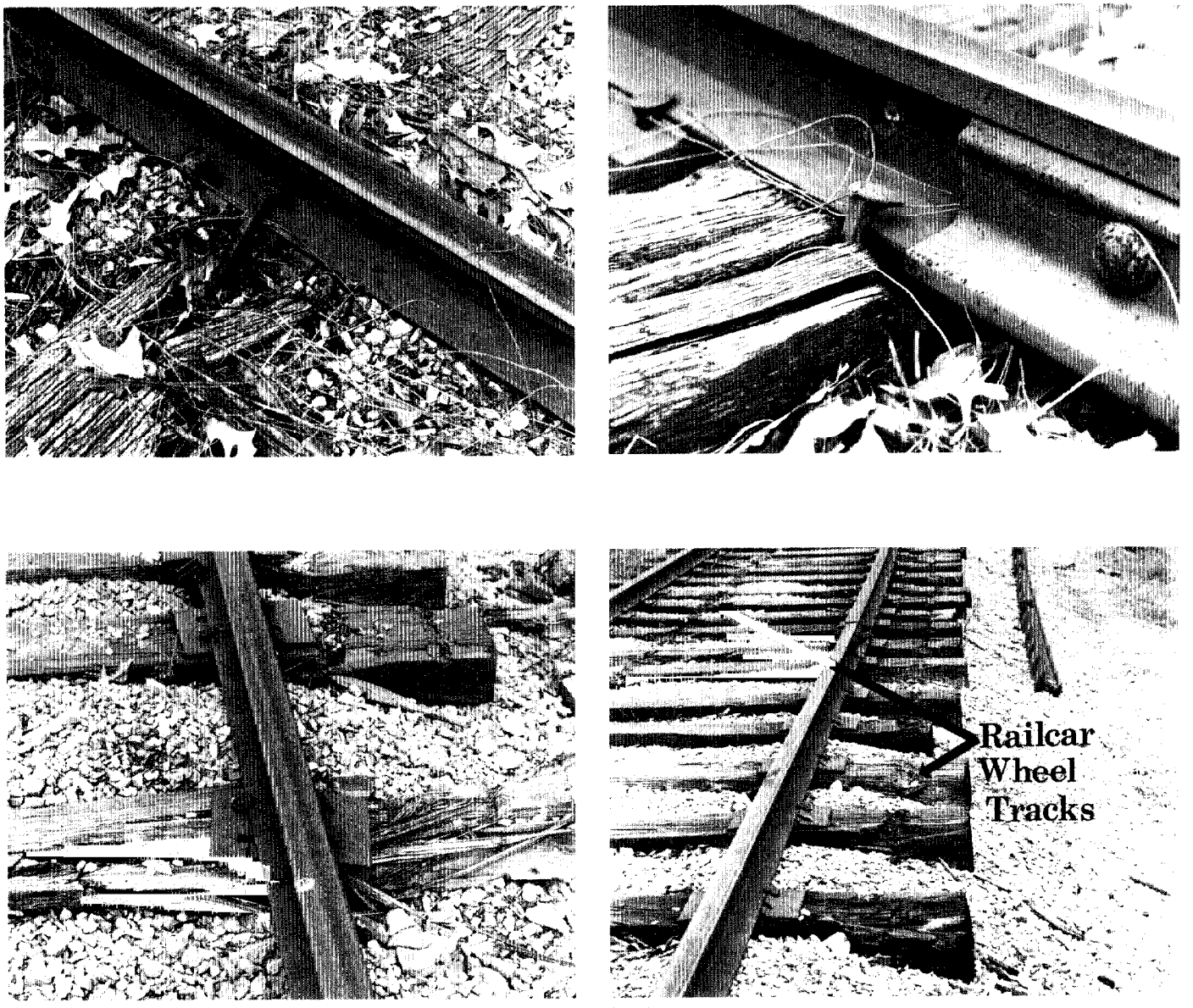
The Army's ability to mobilize and deploy as planned is dependent on its ability to move material and equipment by rail to ports of embarkation. In a 1983 GAO report,[1] we noted problems with track conditions, the abandonment of feeder lines to military installations by commercial railroads, and the potential impact on installation outloading capability. DOD has identified and documented installation outloading discrepancies and plans to spend about $100 million during fiscal years 1986 to 1992 to improve rail outloading conditions at 42 installations. At least 5 of the 16 mobilization stations we visited that planned rail outloading operations may not be able to outload as planned because of deteriorating track conditions.

For example, at Fort Campbell, poor track conditions on a leased branch line restricted train speed in places to no more than 5 miles per hour. These poor conditions have caused several derailments, and it is highly questionable whether the tracks would be able to withstand mobilization outloading. (See figure 2.1.) A Fort Campbell official stated that efforts to upgrade the tracks were expected to be completed in late fiscal year 1988. Fort Benning officials told us of similar concerns about their on-post tracks, which are owned by a commercial railroad.

In addition, some mobilization stations have allowed existing tracks that could be used during mobilization to deteriorate. For example, at two

[1]Federal Actions Needed to Retain Essential Rail Service, PLRD-83-73, dated May 20, 1983.

Figure 2.1: Ft. Campbell, Kentucky, Rail Conditions

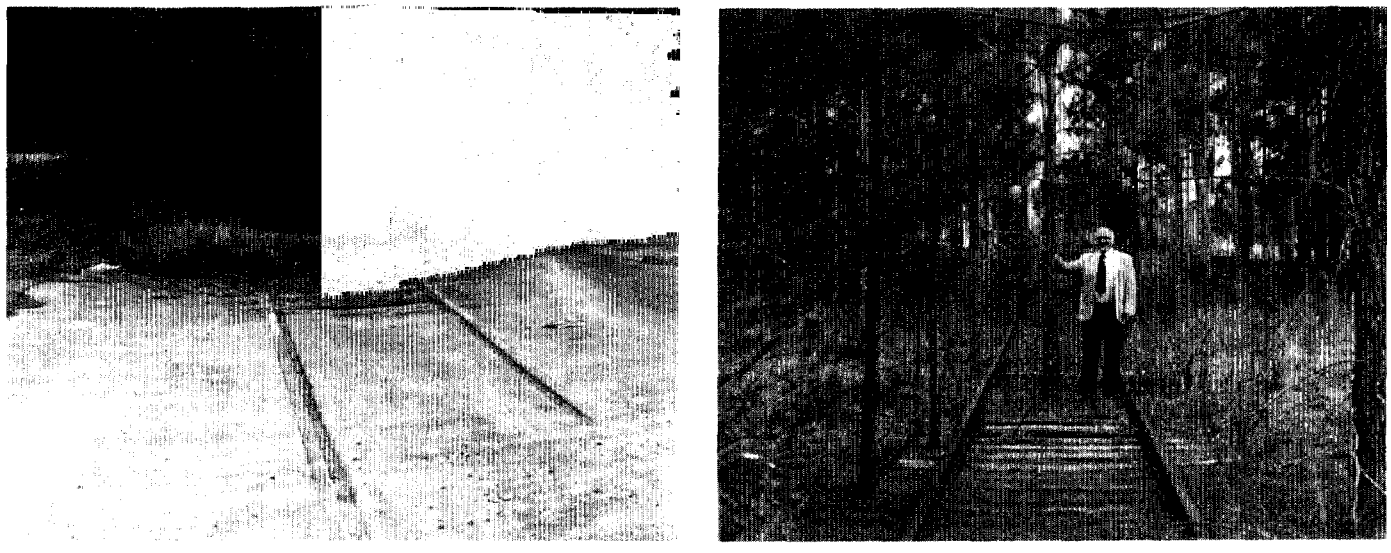


Damaged crossites, loose plates

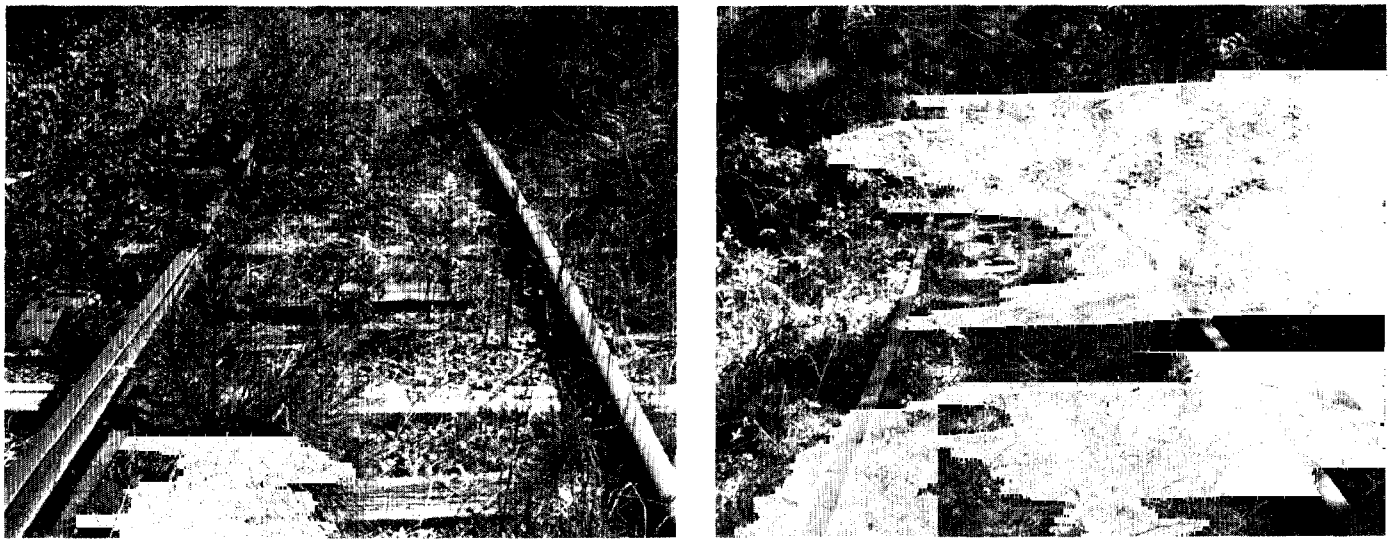
Derailment scene

mobilization stations trees and undergrowth had overgrown some on-post rail lines. (See figure 2.2.)

Figure 2.2: Deteriorating Railroad Tracks



Camp Blanding, Florida



Fort Pickett, Virginia

Better Plans Are Needed for Distributing Outloading Materials and Equipment

BBPCT materials, such as steel cable, cable clamps, and cable guides (thimbles), are needed to secure military vehicles to some types of rail flatcars and to protect them during shipment. (See figure 2.3.) According to the FORSCOM BBPCT Program Manager, mobilization stations should have detailed plans for distributing BBPCT since it is often stored some distance away from rail loading areas and may require the use of trucks and forklifts to transport heavy items, such as large spools of steel cable.

Other equipment, such as railcar spanners and rail hand tool sets, may also be needed to load and secure military vehicles on flatcars. Railcar spanners are small bridging ramps that allow military vehicles to drive from one railcar to another during circus-style loading. This is a method of rapidly loading a series of flatcars from a single end ramp. Rail hand tool sets contain the tools needed to apply BBPCT and secure military vehicles and other equipment to the flatcars. (See figures 2.4 and 2.5.) Spanners and rail hand tool sets should be located at mobilization stations for use in outloading operations, and installation officials need to establish procedures and plans for issuing and controlling this equipment before mobilization occurs.

At 15 mobilization stations that had outloading materials on hand and planned to conduct rail outloading, 8 had not developed plans showing how these materials would be distributed. Similarly, only three mobilization stations had developed definite plans for how rail hand tool sets and railcar spanners would be distributed and controlled.

Figure 2.3: BBPCT Materials Securing Trucks to Rail Flatcars

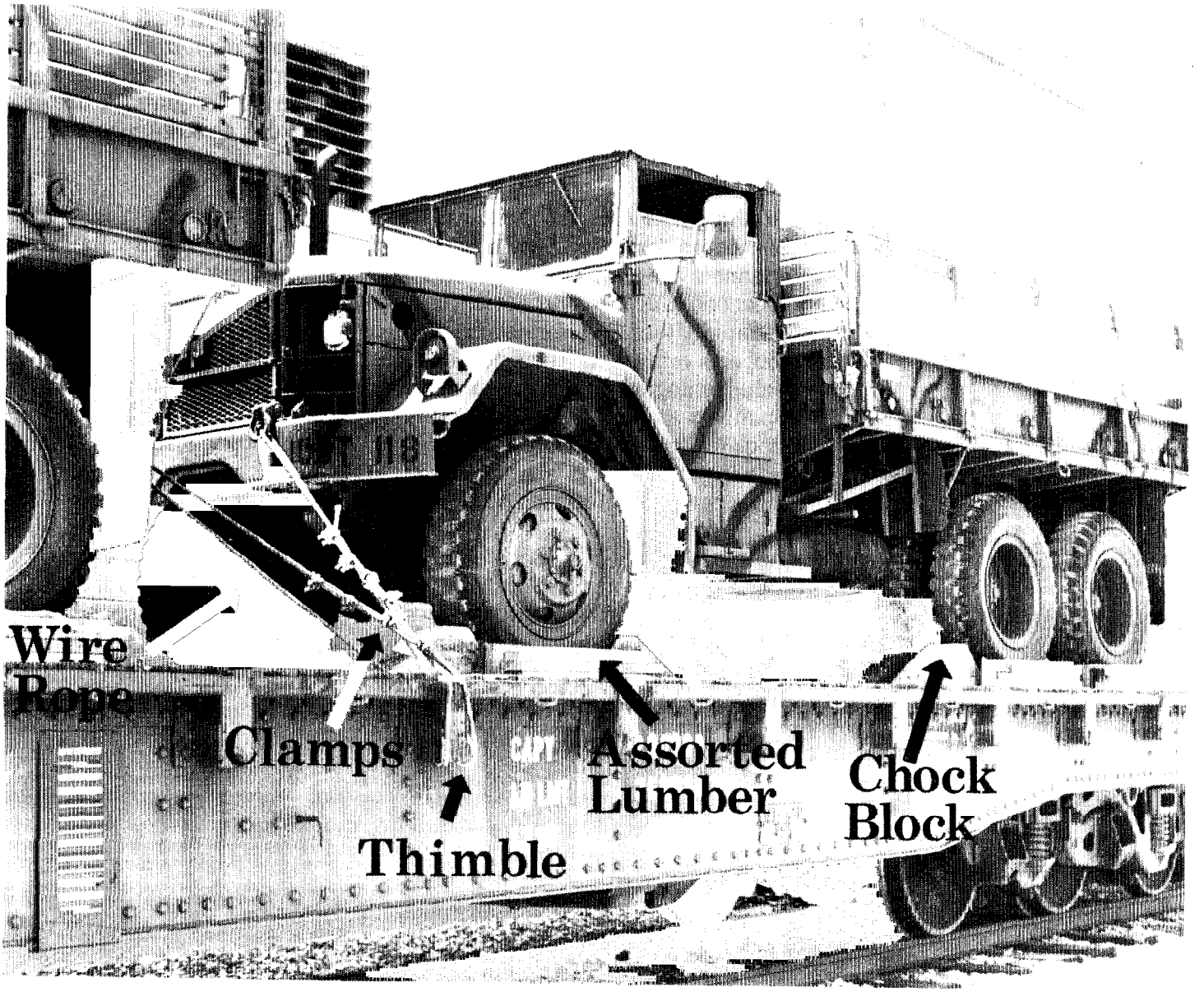


Figure 2.4: Circus-Style Loading

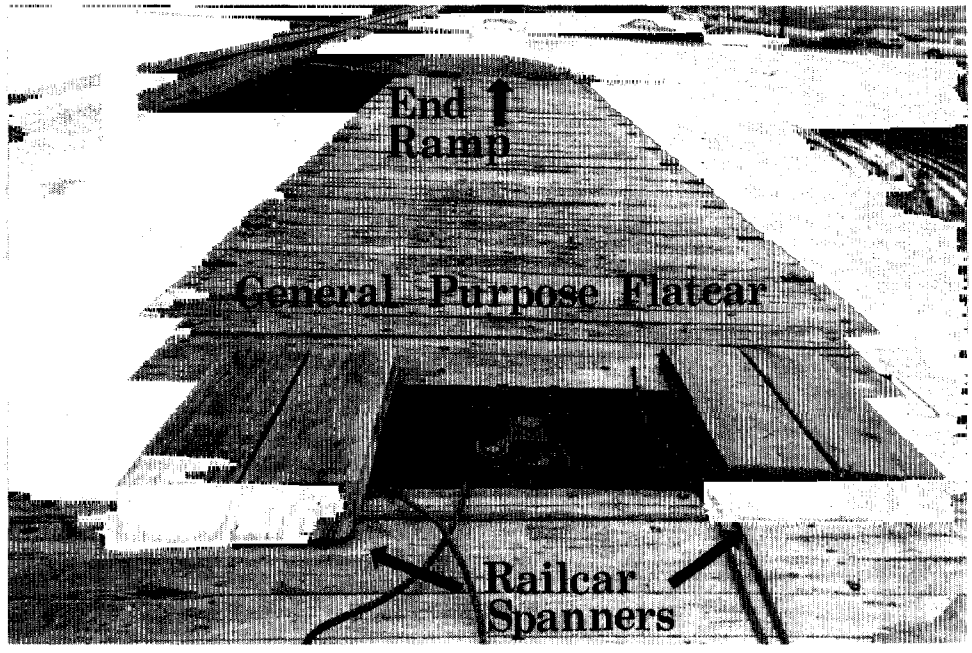
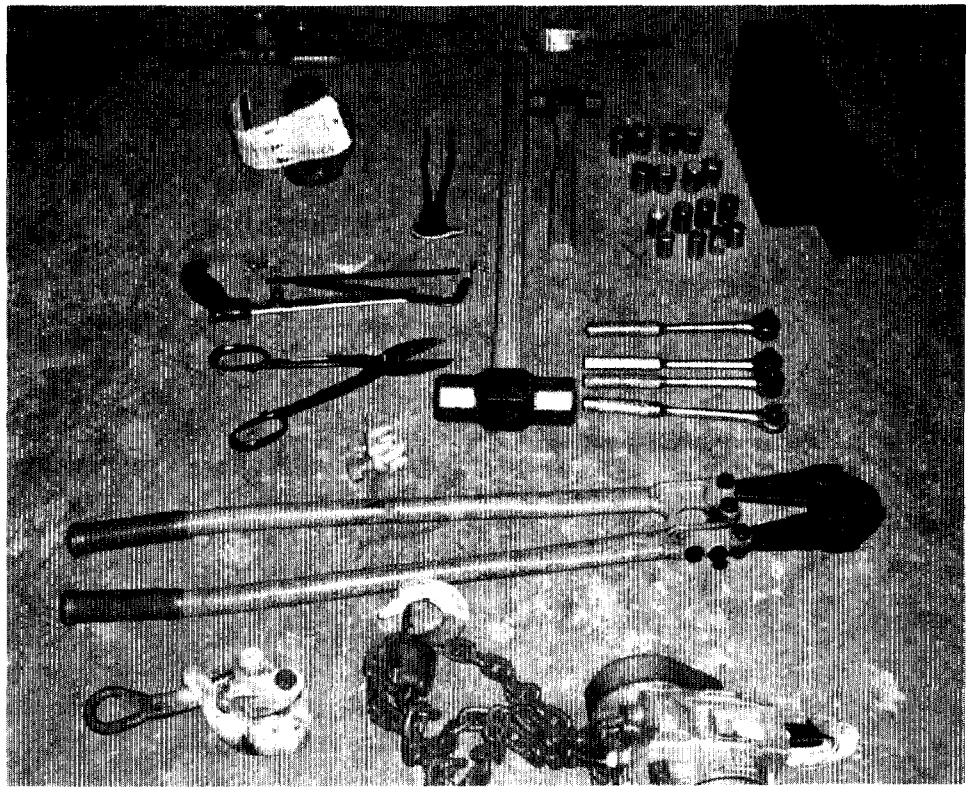


Figure 2.5: Rail Hand Tool Set Contents



Transportation Requests Are Inaccurate and Inconsistent

FORSCOM regulations require reserve component units to prepare and maintain requests for commercial transportation that would be needed upon mobilization. At mobilization, units forward these requests through their major Army reserve commands or state commands to the Army installations designated to assist them in obtaining the needed trucks, buses, or railcars. These requests identify the units' equipment and the specific locations of the equipment as well as the nearest loading facility. Additionally, the requests identify the number and location of unit personnel needing commercial transportation.

Only 1 of the 19 units reviewed—the 1st Battalion, 181st Field Artillery Regiment (Guard)—maintained a current, complete, and accurate transportation request. Seventeen other units did not maintain current, complete requests or the requests were inconsistent with the unit movement plan. One unit was not required to maintain a request because it had no commercial transportation needs.

The following examples typify these inconsistencies:

- The 7th Battalion, 9th Field Artillery Regiment (Reserve), identified commercial transportation needs to move numerous equipment items, such as heavy 8-inch self-propelled howitzers and tracked cargo carriers. However, the unit did not include a commercial transportation request in its mobilization plan.
- The 120th Engineer Battalion (Guard) identified a need to commercially transport 12.5- and 20-ton cranes, scoop loaders, and a 5-ton wrecker, but did not include a commercial transportation request in its plan.
- The 1014th Supply and Service Company (Reserve) had a request on file to commercially transport a 20-ton crane, scoop loaders, and two 5-ton forklifts. In contrast, the unit's movement plan indicated that the equipment would be moved to the mobilization station by military transportation.

Conclusions

An integral part of any mobilization effort is the ability of units to move to assigned mobilization stations and from the mobilization stations to the ports of embarkation within the time frames directed by the operation plans.

Because many military units are heavily dependent on commercial transportation to accomplish these moves, effective advance planning is imperative to ensure successful accomplishment of the movement objectives. This requires that

- the types and amounts of equipment to be moved by commercial transportation be accurately defined;
- the types and amount of commercial transportation required be available when needed; and
- the outloading plans and capabilities of the mobilization stations be in concert with the planned outload requirements identified in the operation plans.

We question whether the units can move to or from assigned mobilization stations within the time frames required. Because many of the units have not identified what equipment must be moved to the mobilization stations, identifying the number or types of transportation resources needed is difficult. Additionally, in certain cases, the equipment that must be moved has been identified, but officials have not determined the required transportation resources. Compounding these problems is the fact that some mobilization planning officials believe that the basic source document used in making transportation decisions, a COMPASS derivative called the Automated Unit Equipment List, lacks credibility because it is inaccurate and outdated.

Other factors could impede the movement of units to and from the mobilization stations: (1) the outloading capability of the mobilization stations sometimes varies from what MTMC expects would be required by the operation plans, and (2) rail lines at some mobilization stations have deteriorated. Often plans have not been developed for distributing the materials and equipment items needed to perform the outloading operations. Also, reserve component units frequently have not included requests for commercial transportation in their mobilization plans.

Recommendations to the Secretary of the Army

We recommend that the Secretary of the Army direct

- the Commander, FORSCOM, in conjunction with the mobilization station commanders, to ensure that the equipment requiring commercial transportation for movement to and from the mobilization stations be accurately reflected in COMPASS reports;
- mobilization station commanders to determine and document the amount and type of commercial transportation required to meet the most demanding requirements in the operation plans for which a mobilization station is tasked (the most demanding outload requirements may vary from mobilization station to mobilization station depending on the transportation mode selected, installation outloading capabilities, proximity to port of embarkation, etc.);

- FORSCOM and MTMC to compare the number of railcars and trucks planned for use by mobilization stations with the number expected by MTMC for each operation plan to ensure that any differences will not materially affect the outloading capabilities of the mobilization stations or port reception capabilities of the ports of embarkation; and
- mobilization station commanders to develop plans for distributing BBPCT materials and equipment to the outloading units.

Agency Comments and Our Evaluation

DOD agreed with our recommendation that the Secretary of the Army direct the Commander, FORSCOM, to ensure the accuracy of COMPASS reports. DOD stated that the Army recognizes the need to accurately identify equipment to be moved to mobilization stations and is addressing its problems with COMPASS inaccuracies by initiating several interim and long-term solutions. Interim solutions include redesigning COMPASS by fiscal year 1989 to simplify data collection/processing and provide analysis capability. Long-term solutions include additional training courses on COMPASS and unit movement. Additionally, the Transportation Coordination Automated Command and Control Information System, which will provide the source of data automation to ensure accurate and timely submission of unit movement data, will be fielded beginning in fiscal year 1988 and completed in fiscal year 1992.

DOD partially agreed with our proposal that mobilization station commanders be directed to determine and document daily commercial transportation requirements for each operation plan they are tasked to execute. DOD believes that by planning for the worst-case operation plan, requirements for lesser operation plans are covered. Although this is a generally valid position, our review disclosed instances of transportation and outloading requirements for a less than worst-case scenario being more demanding than for the worst-case scenario. In other words, the degree of difficulty in meeting the outloading requirements is more directly related to the transportation mode and installation capabilities than to a specific operation plan. We have clarified our recommendation to recognize this.

In our draft report, we proposed that FORSCOM and MTMC be directed to compare the number of railcars and trucks planned for use by mobilization stations with the number expected by MTMC for each operation plan, and to reconcile any differences. DOD partially agreed and acknowledged outloading plans and capabilities need to be more fully assessed. However, in light of its actions related to COMPASS and other systemic and procedural improvements designed to better identify transportation

requirements, DOD did not agree that detailed reconciliation of all differences is necessary. In DOD's opinion, differences will always exist between the estimates prepared by MTMC and the mobilization stations because of the methods used in developing the estimates. We agree that differences will often exist between the two estimates, but we believe there should be communication between MTMC and the mobilization stations to ensure that any such differences will not materially affect the outloading capabilities of mobilization stations, traffic movement, and port of embarkation operations. Accordingly, we have clarified our recommendation.

DOD agreed with our recommendation that plans be developed for the distribution of outloading materials and equipment. DOD stated that FORSCOM regulations will be changed to assign specific responsibilities and direct changes in mobilization station plans and procedures for distributing outloading materials and equipment.

The Military Traffic Management Command Needs to Know the Availability of Commercial Transportation to Meet Mobilization and Deployment Requirements

DOD needs to know what commercial transportation resources are available to meet mobilization and deployment requirements. Otherwise, DOD cannot develop movement plans that both meet operation plan requirements and are within U.S. transportation capabilities. While the Army needs to determine its total commercial transportation requirements, MTMC and DOT need to identify the universe and capabilities of commercial transportation resources. Only when this information is developed and subsequently matched can DOD determine whether it can move equipment in accordance with its operation plans. This situation is made more critical by the fact that the national inventory of rail flatcars suitable for military movement is decreasing.

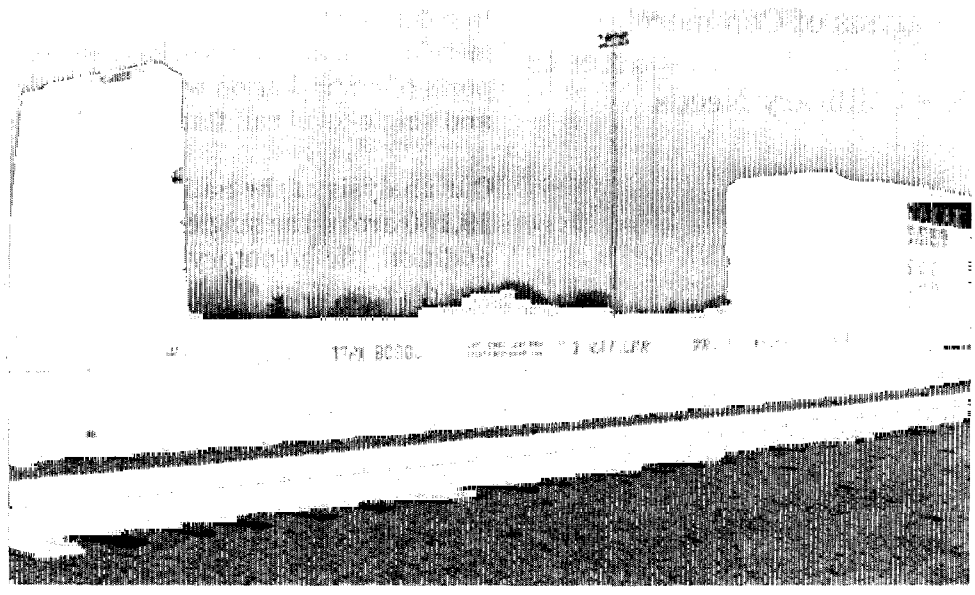
Availability of Railcars and Trucks Has Not Been Determined

Both MTMC and DOT have responsibilities for identifying and determining the availability of transportation resources that would be needed in a national emergency. For years, the general belief has been that commercial transportation resources were sufficient to meet both civilian and military needs in the event of mobilization and deployment. However, this assumption does not fully consider that the military requires certain unique types of transportation.

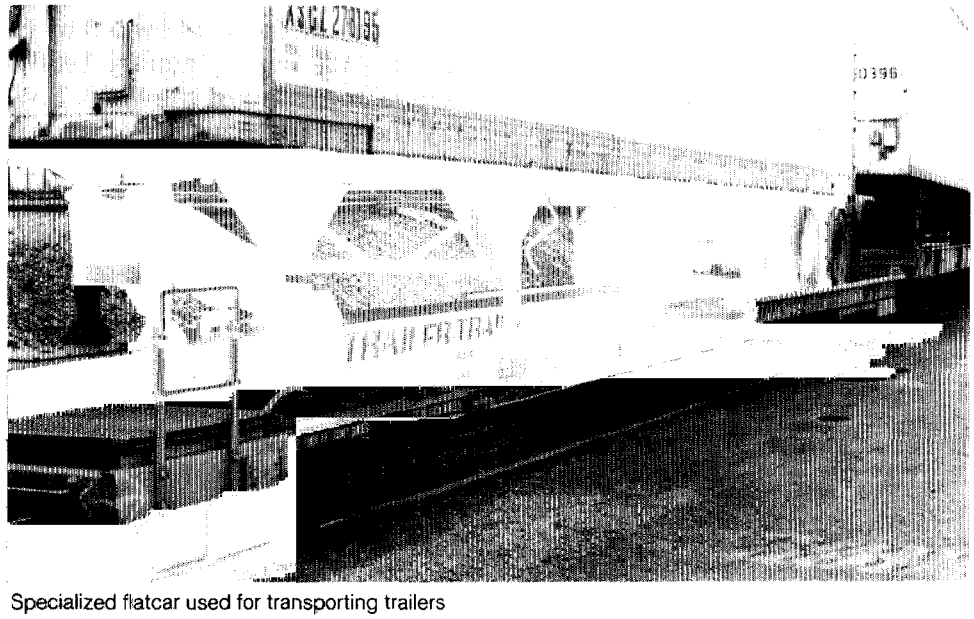
Assumptions regarding the sufficiency of commercial transportation inventories to meet mobilization and deployment requirements are based on an analysis performed by DOT's Demand Capacity Model Concept. This model compares the tonnage carrying capacity of general types of railcars and trucks against MTMC's estimate of tonnage requirements.

However, the model does not consider that specific types of railcars and trucks are required to move certain military equipment. For example, flatcars designed to carry specific loads such as wood products or commercial vans are often not suitable for transporting military vehicles because they cannot be loaded circus-style. (See figure 3.1.) Also, heavy vehicles such as tanks require heavy duty flatcars or flatbed trucks that must meet greater than normal weight capacity, width, and other dimensional characteristics. The DOT model compares railcar and truck inventories to total tonnage requirements by the general, rather than specific, type of transport required. DOT officials said that if more specific inventory data were made available by the commercial transportation industry and if the military requirements data now being collected by MTMC identified needs by specific type of railcar or truck as well as the tonnage to be moved, the model could compare resources available with resources required.

Figure 3.1: Flatcars Unsuitable for Circus-Style Loading



Bulkhead flatcar used for transporting wood products



Specialized flatcar used for transporting trailers

Analysis of Commercial Transportation Resources to Meet Military Needs

In a deployment situation, the Army plans to use a combination of commercial railcars and trucks to move from many mobilization stations to ports of embarkation with the predominant mode being flatbed trucks and single-level rail flatcars capable of circus-style loading.

Our analysis of the national flatcar inventory showed that only about 19,100 are of the single-level type suitable for circus-style loading. In addition, the inventory of the most common type of single-level flatcars has decreased by 62 percent since 1971. According to Association of American Railroad officials, many of those remaining are nearing the end of their useful life and this type of flatcar is no longer being produced. Often it is being replaced with specialized single-level flatcars that are generally not suitable for transporting military vehicles.

In addition to the problem of the decreasing inventory of suitable single-level flatcars, many of them are not capable of carrying heavy tracked vehicles, such as tanks. According to a MTMC study, as of September 1983, 14 major commercial railroads owned about 8,600 heavy duty flatcars, each of which was suitable for transporting one or two M-60 or M-1 tanks. Our analysis showed that as of January 1986, these had decreased by about 20 percent to a total of 6,854 cars. The MTMC data did not include 449 cars owned by railroads and 1,387 flatcars owned by DOD. Therefore, as of January 1986, a total of about 8,690 flatcars was available to transport the M-60. However, many of these flatcars cannot carry the increased weight of the Army's new M-1 main battle tank. For example, of the total 8,690 flatcars, only 2,243 can carry one M-1 and 676 can carry two M-1s. Also, at least 647 of the tank-capable flatcars owned by DOD are facing mandatory removal from service by 1993 due to their age.

While the national inventory of militarily usable single-level flatcars is declining, it is still unclear whether there is an overall shortage of railcars. First, the Army has not identified how many flatcars will be needed, and second, neither DOT nor MTMC has yet determined the national inventory of the types of commercial trucks that could be used to transport military vehicles, including tanks and other heavy tracked vehicles. According to MTMC and American Trucking Association officials, no central inventory of commercial trucks' capabilities presently exists that differentiates among the different types of trucks.

Additionally, there are opportunities to reduce the number of railcars needed by using more multilevel flatcars. Our analysis of data provided by MTMC showed that the need for single-level flatcars could possibly be

reduced by as much as 36 percent, depending on unit type, if DOD used multilevel flatcars to the maximum extent possible to transport military vehicles. Ten of the mobilization stations we visited had multilevel loading ramps, but only one installation had more than one such ramp, and the multilevel ramps at three installations were in either poor or unsafe condition.

Conclusions

DOD has not determined its total requirements for commercial transportation to move its equipment and supplies to and from the mobilization stations. This information is important if DOT and MTMC are to determine if sufficient and appropriate transportation will be available to meet requirements, particularly in view of the declining inventory of militarily usable single-level flatcars. Many factors influence the size of the inventory needed. These factors include mobilization station outloading capability; the time needed to withdraw the railcars and trucks from noncritical peacetime uses and make them available for military purposes; and the time to load and move them to the ports of embarkation, unload them, and return them to the mobilization stations to be reloaded.

DOD requirements for trucks were also incomplete, and the national inventory information regarding the specific types of trucks and their capabilities to transport military vehicles was not available. Consequently, the potential for using trucks could not be evaluated.

Recommendations to the Secretary of the Army

We recommend that the Secretary of the Army direct the Commander, MTMC, in coordination with DOT's Office of Emergency Transportation, to annually assess the availability of rail and truck resources for meeting the Army's deployment needs. This assessment should consider

- the Army's need for special types of railcars and trucks;
- the outload capacity and capability of the mobilization stations; and
- the capability of the ports of embarkation to receive, offload, and return the transportation resources for reloading.

Agency Comments and Our Evaluation

DOD agreed with our recommendation to make an annual assessment of motor and rail assets. The Joint Chiefs of Staff has directed the services and defense agencies to report and annually update mobilization movements requiring commercial transportation. Additionally, MTMC, in coordination with DOT, will use this data to conduct a detailed assessment of

the commercial transportation sector's ability to support DOD requirements.

DOD also stated that it has initiated a study to determine its long-term heavy lift railcar requirement. This study, expected to be completed in November 1987, will include an accounting of heavy lift cars by type (including multilevel cars), number, and potential availability at mobilization sites. Furthermore, the Army has initiated an effort to determine heavy lift motor capability, which is expected to be completed in the first quarter of fiscal year 1988.

DOT agreed with our recommendation and said it would fully coordinate with MTMC in assessing civil transportation resource availability.

Better Management of FORSCOM Rail Outloading Programs Would Result in Savings

The ready availability of the types and amounts of materiel and equipment needed to load railcars and trucks—such as BBPCT materials, railcar spanners, rail hand tool sets, and portable end ramps[1]—is critical to the Army's ability to conduct the outloading required by operation plans.

Since fiscal year 1981, FORSCOM has spent more than $7.4 million on BBPCT, rail hand tool sets, railcar spanners, loading ramps, and storage facilities at mobilization stations, and as of March 1985 planned to spend another $16.7 million for these items through fiscal year 1991, as shown in table 4.1. We were unable to determine how much had been spent to improve the reserves' ability to move from their home stations to the mobilization stations.

Table 4.1: Outloading Materials and Equipment Expenditures

	Expenditures		
	Actual	Planned	
Item	Fiscal years 1981-85	Fiscal years 1986-91	Total
BBPCT	$5,273,377	$8,000,000	**$13,273,377**
BBPCT warehouses	0	1,986,178	**1,986,178**
Rail hand tool sets	986,048	1,441,969	**2,428,017**
Rail car spanners	1,164,212	3,418,062	**4,582,274**
Portable end ramps[a]	0	1,824,494	**1,824,494**
Total	**$7,423,637**	**$16,670,703**	**$24,094,340**

[a]Data was developed in November 1985.

Implementation of FORSCOM guidance for determining installation requirements resulted in the purchase and stocking of excessive amounts of BBPCT at the mobilization stations we visited. Consequently, the $10 million that FORSCOM planned to spend on BBPCT materials and warehouses during fiscal year 1986 through 1991 may not be needed. In addition, FORSCOM's planned purchase of railcar spanners, rail hand tool sets, and portable end ramps would have exceeded outloading needs.

As a result of our analysis, the Army placed a hold on BBPCT procurement in May 1985, and FORSCOM began to reevaluate its needs for railcar spanners, rail hand tool sets, and portable end ramps.

[1]Portable end ramps are movable metal ramps that enable vehicles to drive onto the end of a flatcar from ground level.

Determining BBPCT Requirements

The FORSCOM policy guidance for the peacetime acquisition and storage of BBPCT materials needed for mobilization and deployment is intended (1) to ensure that required materials are available in time for units to comply with mobilization and deployment orders and (2) to avoid stocking BBPCT materials that could be readily obtained from local sources.

Mobilization station commanders and reserve component commanders are responsible for determining BBPCT requirements. The amount of BBPCT needed will depend directly on factors such as the distance from home stations to mobilization stations and from mobilization stations to the ports of embarkation, as well as the modes of transport to be used. The policy guidance requires reserve component units and mobilization stations to determine local commercial availability of BBPCT before acquiring it and to stock only those items that are not available within the time frames needed for deployment.

FORSCOM Policy Guidance Does Not Result in Realistic BBPCT Requirements

Beginning in 1979, FORSCOM asked mobilization station officials to identify their total BBPCT requirements so that it could determine the funding needed to purchase and store the BBPCT at these installations. FORSCOM instructed mobilization stations to compute BBPCT requirements using the assumption that blocking, bracing, and tie-down (BBT) materials[2] would be needed for every flatcar the installation planned to outload.

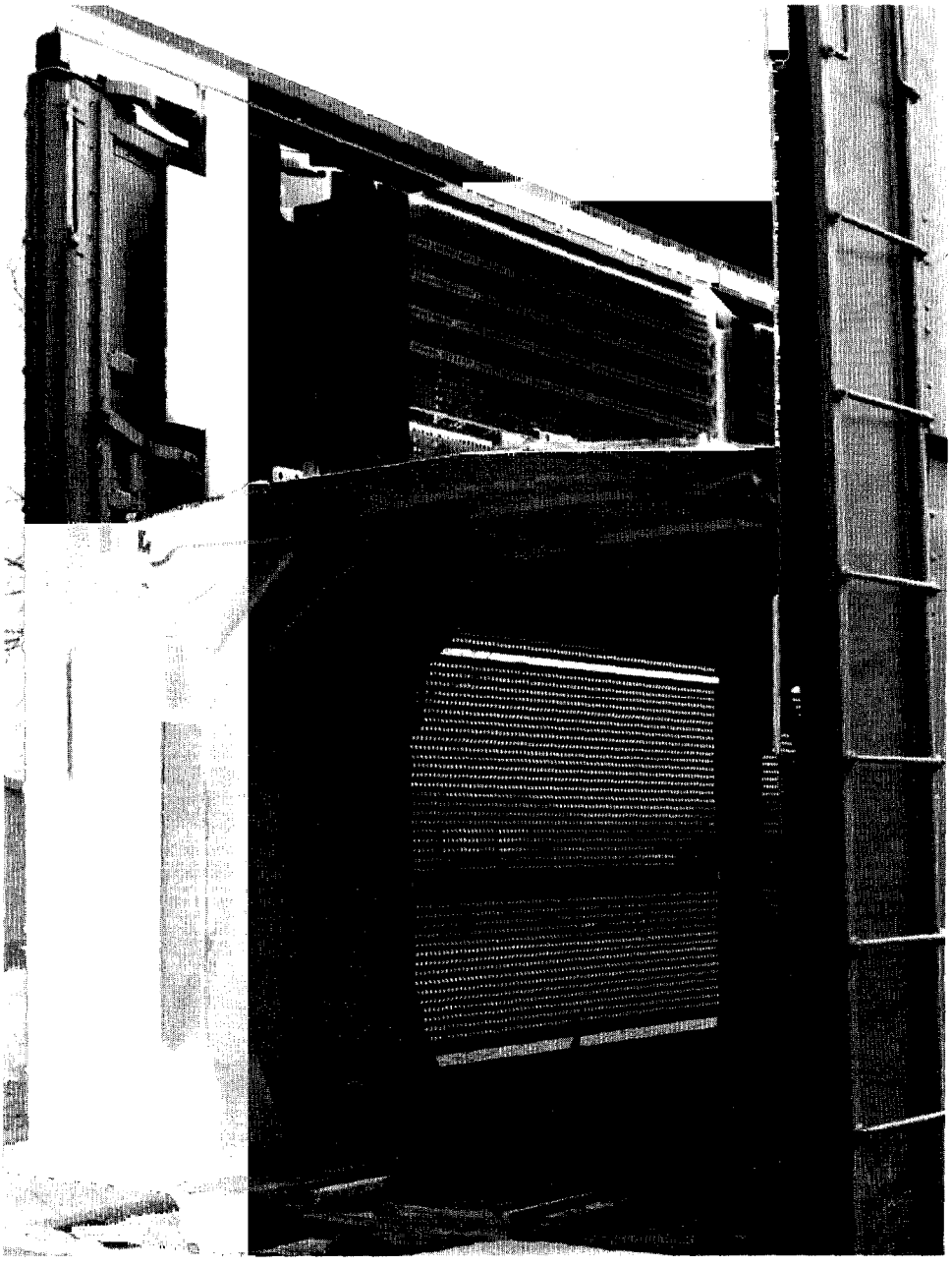
Three factors led to significant overstatement of BBPCT requirements: (1) FORSCOM's methodology of determining these requirements did not consider that many flatcars come with their own tie-down devices and do not need BBT, (2) some mobilization stations having little need for BBPCT nevertheless procured large quantities, and (3) some mobilization stations procured and stored BBPCT although it was readily available from local commercial sources.

First, our analysis of the U.S. flatcar inventory, including DOD-owned equipment, showed that 7,519 of the 19,094 militarily usable single-level flatcars available as of January 1986 are equipped with chain tie-down devices and do not require BBT. These cars provide about 42 percent of total single-level flatcar inventory deck space. Mobilization stations therefore calculated BBT requirements at a rate more than 73 percent

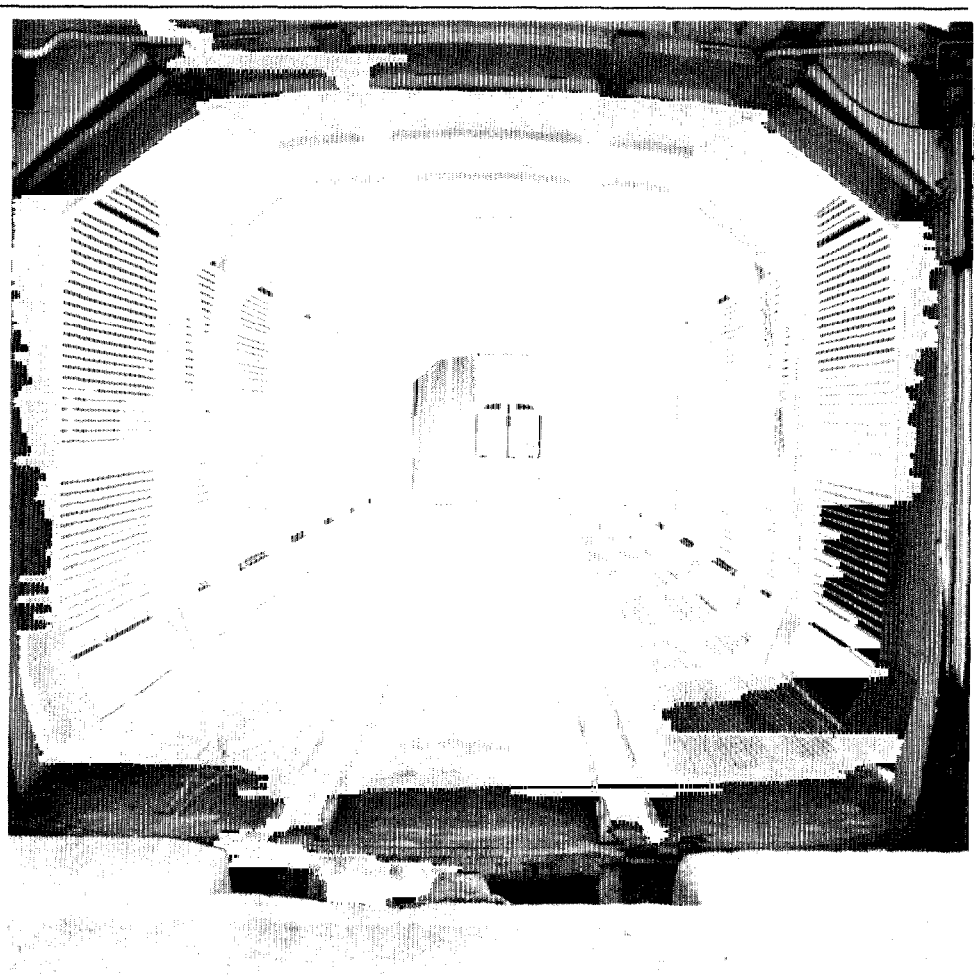
[2]BBT materials are used almost exclusively for securing military vehicles and other equipment to rail flatcars. Examples include wire rope, clamps, thimbles, and various types of nails and wood products. Packing and crating materials are used for all types of outloading.

higher than what was actually needed as the result of this factor alone. Furthermore, FORSCOM guidance considered only single-level flatcars, whereas multilevel flatcars are also suitable for transporting many types of military vehicles. (See figure 4.1.) Multilevel cars are normally equipped with their own tie-down devices and therefore do not need BBT.

Figure 4.1: Multilevel Flatcars



End view of bilevel flatcar



Interior view of bilevel flatcar lower deck

At our request, MTMC's Transportation Engineering Agency identified the types of military vehicles that could be loaded on multilevel flatcars and determined how this would affect the number and types of flatcars needed to transport various types of army units. Our analysis of this data showed that if mobilization stations used multilevel flatcars to the maximum extent possible, BBT material would be needed for a maximum of 38 percent of the total flatcar linear deck feet loaded.

We brought these matters to the attention of FORSCOM officials, who revised unit movement planning guidance and policy regarding the use of multilevel flatcars and the procedure for calculating BBPCT requirements. The revised guidance now states that for planning purposes, it

should be assumed that 50 percent of the flatcars will be equipped with tie-down devices.

A second factor affecting BBPCT requirements concerns FORSCOM's policy of computing mobilization and deployment BBPCT needs based on how the military units plan to move to their designated ports of embarkation. We found that six mobilization stations plan to use little or no commercial transportation. Nevertheless, they requested and received over $1.5 million of BBPCT funds and materials from FORSCOM. Of this total, at least $1.1 million was not needed. The above situations resulted from confusion over which port of embarkation should be used for planning purposes, accidental BBPCT procurement, procurement of BBPCT to support movement to a more distant port than the one designated, and diversion of BBPCT funds and materials to other unrelated projects.

A third factor involved buying and storing BBPCT when it could be purchased locally within required time frames. FORSCOM regulations require that after determining BBPCT needs, mobilization stations perform a survey to determine what BBPCT materials could be obtained locally within the time frames they would be needed and avoid stocking these materials.

Our review showed that only 6 of the 17 mobilization stations that identified a need for BBPCT performed a survey to determine local availability before procuring it. One other performed a survey after procuring BBPCT and three more performed surveys subsequent to our visits. Seven of the 10 surveys showed that many BBPCT items stocked by mobilization stations would be available within required time frames from local commercial sources. For example, as a result of their survey, Camp Shelby officials decided they did not need to stock any BBPCT. In another case, Fort Lewis did not perform a survey prior to obtaining BBPCT funds and materiel totaling over $641,000, including wood BBPCT valued at $156,000. A subsequent survey showed that nearly all the wood BBPCT needed for mobilization and deployment outloading was readily available on the local market.

We believe that these three factors caused a general overestimation of total BBPCT requirements. We estimate that total mobilization station needs for BBPCT, depending on the extent of multilevel flatcar use, are between $8.4 million and $9.8 million rather than the $13.3 million planned by FORSCOM.

FORSCOM has disbursed about $5.3 million in BBPCT funds and materials to a total of 28 mobilization stations. The 20 mobilization stations we visited obtained additional BBPCT worth at least $4.5 million from other sources. Inappropriate mobilization station BBPCT use and storage at the 20 we visited resulted in losses of at least $790,000. For example, mobilization stations diverted about $389,000 in BBPCT funds to unrelated projects, BBPCT worth over $151,000 was used for unauthorized training, BBPCT valued at $34,000 was lost due to exposure to the weather, and almost $205,000 in BBPCT funds and materials could not be accounted for.

After this and other adjustments, BBPCT valued at about $7.8 million remained on hand at the 20 installations. Eight other installations received more than $1 million in BBPCT funds and materiel from FORSCOM.[3] Therefore, at least $8.8 million should be on hand at the 28 mobilization stations. Since this is within the total estimated need of $8.4 million to $9.8 million, adequate BBPCT for mobilization and deployment needs may already be on hand. Consequently, most, if not all, of the $8 million that FORSCOM planned to spend on BBPCT procurement during fiscal years 1986 through 1991 may not be needed.

The FORSCOM BBPCT Program Manager told us that the revised BBPCT estimates would also eliminate the need for the $2 million that FORSCOM planned to spend on BBPCT warehouse construction during this period. FORSCOM officials subsequently removed $8 million for BBPCT and $2 million for warehouse construction from the budget justification for this program, and the Army placed a hold on any further BBPCT-related expenditures pending issuance of our report.

Overstated Requirements for Railcar Spanners

FORSCOM plans to provide mobilization stations with railcar spanners to enhance rail outloading operations. During 1983 and 1984, FORSCOM purchased and distributed 1,830 spanner sets costing almost $1.2 million and planned to procure 4,503 more costing over $5.1 million during fiscal years 1986 through 1992.

FORSCOM officials told us that mobilization station spanner requirements were based on one spanner set (two spanners to a set) for each flatcar loaded during the peak outloading day under the most demanding operation plan.

[3]We did not visit these eight installations and did not determine the amount of BBPCT on hand.

This methodology results in overstated spanner requirements because, as acknowledged by FORSCOM officials, flatcars should be loaded at the rate of at least two flatcars a day for each set of spanners. Additionally, we were advised by FORSCOM that the computed spanner requirements did not take into consideration some types of spanners already on hand at mobilization stations.

Based on FORSCOM's reassessment of the spanner requirements, it was determined that, in addition to those already bought and distributed, 1,262 spanner sets would be needed rather than the 4,503 sets budgeted for. Consequently, FORSCOM plans need to be reduced by about $3.7 million.[4]

Overstated Requirements for Hand Tool Sets and Loading Ramps

FORSCOM officials developed rail hand tool set requirements by computing the number needed if all installations outloaded totally by rail. However, only 4 of the 20 mobilization stations we visited planned to outload primarily by rail. Also, FORSCOM did not consider that some mobilization stations had procured hand tool sets on their own. For example, Fort Campbell procured 30 rail hand tool sets for mobilization and deployment outloading that were similar to those purchased by FORSCOM, and Fort Eustis had 9 such sets.

At our suggestion, FORSCOM reassessed its requirement for hand tool sets and loading ramps as well. FORSCOM determined that in addition to the tool sets and loading ramps already distributed, it needed 248 hand tool sets and 119 loading ramps rather than the 1,058 tool sets and 130 loading ramps planned.[5] These reductions in planned expenditures amount to about $1.64 million for tool sets and $132,000 for end ramps during the period fiscal years 1986 through 1992.

Rail Outloading Materiel and Equipment Distribution

Because mobilization station needs for railcar spanners, rail hand tool sets, loading ramps, and BBPCT for mobilization and deployment are directly related to the amount of rail outloading to be conducted, they should be distributed both in proportion to each other and to the degree of rail outloading planned. Our review found many imbalances in the way this materiel is currently distributed among mobilization stations.

[4]These figures reflect FORSCOM's reassessment as of November 1986. FORSCOM officials told us that continuing refinements may result in additional reductions.

[5]See footnote 4.

For example, Fort Chaffee is expected to conduct heavy rail outloading during the first 30 days after mobilization. Fort Chaffee had 79 sets of spanners on hand but no tool kits or BBPCT. Fort Gordon does not plan to conduct rail outloading or stock BBPCT. But this installation reported 21 hand tool sets and 12 sets of railcar spanners on hand, and FORSCOM planned to provide Fort Gordon with 20 portable end ramps. Appendix III shows the distribution of BBPCT, rail hand tool sets, railcar spanners, and portable end ramps among the installations we visited.

Conclusions

FORSCOM's requirements for BBPCT materials and warehouses appear to have been overstated by at least $10 million. BBPCT needs were overstated by about $8 million, largely because FORSCOM estimated BBPCT needs without considering all available information. FORSCOM did not consider that (1) many single-level rail flatcars are already equipped with tie-down devices and (2) greater use of multilevel flatcars would further reduce BBT requirements. The mobilization stations also contributed to FORSCOM's overestimation of BBPCT needs (1) by procuring BBPCT they did not need and (2) by not performing surveys to determine whether BBT could be bought locally when needed rather than buying and storing it. After factoring this information into its plans, FORSCOM may find that sufficient BBPCT is on hand to meet deployment needs, although large amounts are malpositioned. Consequently, the $2 million that FORSCOM planned to spend for BBPCT warehouse construction also may not be needed. In addition, inaccurate assumptions concerning the needs for railcar spanners, hand tool sets, and loading ramps resulted in an overstatement of requirements by about $5.5 million.

Recommendations to the Secretary of the Army

FORSCOM's revision of BBPCT regulations and planning assumptions, removal of BBPCT materials and warehouse funds from current plans, and initiation of a needs reassessment for railcar spanners, hand tool sets, and portable end ramps are all necessary for improving its management of the rail outloading program. However, additional actions are needed to help ensure the identification of reasonable funding requirements and to avoid additional unnecessary expenditures. We recommend that the Secretary of the Army direct FORSCOM to perform the following:

- Reassess installation needs for BBPCT materials and warehouses and retain the current hold on funds for these items until the reassessments are completed and existing stocks are redistributed in accordance with actual installation outloading needs. Before further funding of BBPCT,

FORSCOM should ensure that (1) the reassessments properly consider the percentage of the flatcar fleet requiring BBPCT and the use of multilevel flatcars, (2) mobilization stations are in compliance with regulations and policy regarding the development of BBPCT requirements and its use and storage, and (3) installations comply with requirements to conduct local BBPCT availability surveys and adjust BBPCT stocking requirements accordingly.

- Reduce planned funding levels for railcar spanners, rail hand tool sets, and portable end ramps by $5.5 million and place a hold on remaining funds intended for these items until FORSCOM completes its ongoing reassessment of need and redistributes existing stocks in accordance with installation outloading needs.

Agency Comments and Our Evaluation

DOD agreed with our recommendation that the Army reassess its needs for BBPCT materials and warehouses and not fund any procurement of these items until the reassessment is completed and existing BBPCT stocks are redistributed. DOD stated that the Army will develop a more refined planning ratio for use in determining its BBPCT requirements during the second quarter of fiscal year 1988. Additionally, FORSCOM plans to distribute software programs to home and mobilization stations in fiscal year 1988 to aid in determining their BBPCT requirements.

With regard to our recommendation that FORSCOM reduce funding levels for railcar spanners, end ramps, and hand tool sets, DOD stated that FORSCOM expects to complete its study of the requirements for these items during the last quarter of 1987. If the study indicates that redistribution is appropriate, a distribution plan will be developed for execution in fiscal year 1988. DOD also advised that funding for hand tool sets, spanners, and portable end ramps had been identified but not programmed or funded since fiscal year 1985.

Units Visited During Review

1st Continental U.S. Army - Ft. Meade, Maryland
80th Division - Richmond, Virginia
301st Signal Company - Lawrenceville, Virginia
99th U.S. Army Reserve Command - Oakdale, Pennsylvania
811th Ordnance Company - Rainelle, West Virginia

2nd Continental U.S. Army - Ft. Gillem, Georgia
81st U.S. Army Reserve Command - Forest Park, Georgia
324th General Hospital - Perrine, Florida
7/9th Field Artillery Battalion - Pompano Beach, Florida
1014th Supply and Service Company - Athens, Georgia
121st U.S. Army Reserve Command - Birmingham, Alabama
844th Engineer Battalion - Knoxville, Tennessee
467th Engineer Battalion - Memphis, Tennessee
Tennessee State Area Command - Nashville, Tennessee
1/181st Field Artillery Battalion - Chattanooga, Tennessee
Florida State Area Command - St. Augustine, Florida
149th General Support Company - Miami, Florida

4th Continental U.S. Army - Ft. Sheridan, Illinois
Michigan State Area Command - Lansing, Michigan
394th Station Hospital - Grand Rapids, Michigan
1432nd Engineer Company - Wyoming, Michigan

5th Continental U.S. Army - Ft. Sam Houston, Texas
Oklahoma State Area Command - Oklahoma City, Oklahoma
120th Engineer Brigade - Camp Gruebe, Oklahoma
Texas State Area Command - Austin, Texas
149th Aviation Battalion - Lexington, Oklahoma
Mississippi State Area Command - Jackson, Mississippi
1355th Supply and Service Company - Ocean Springs, Mississippi
89th U.S. Army Reserve Command - Wichita, Kansas
82nd Field Hospital - Omaha, Nebraska

6th Continental U.S. Army - Presidio of San Francisco, California
96th U.S. Army Reserve Command - Ft. Douglas, Utah
854th Supply and Service Company - Logan, Utah
63rd U.S. Army Reserve Command - Los Alamitos, California
163rd Ordnance Company - Santa Ana, California
California State Area Command - Sacramento, California
49th Transportation Company - Stockton, California
Oregon State Area Command - Salem, Oregon
2186th Maintenance Company - Clackamas, Oregon

Mobilization Stations Visited During Review

Fort Benning, Georgia
Camp Blanding, Florida
Fort Bliss, Texas
Fort Campbell, Kentucky
Fort Carson, Colorado
Fort Chaffee, Arkansas
Fort Eustis, Virginia
Fort Gordon, Georgia
Fort Hill, Virginia
Fort Hood, Texas
Fort Jackson, South Carolina
Fort Knox, Kentucky
Fort Lewis, Washington
Fort McCoy, Wisconsin
Fort Pickett, Virginia
Fort Polk, Louisiana
Fort Riley, Kansas
Fort Rucker, Alabama
Camp Shelby, Mississippi
Fort Stewart, Georgia

Distribution of Selected Outloading Supplies and Equipment by Installation

Installation	Tool kits[a]		
	On hand	Requirements	Difference
Benning	51	33	18
Blanding	0	21	−21
Bliss	25	30	−5
Campbell	20	26	−6
Carson	76	79	−3
Chaffee	0	52	−52
Eustis	9	4	5
Gordon	21	0	21
Hill	0	0	0
Hood	70	29	41
Jackson	10	13	−3
Knox	60	0	60
Lewis	6	74	−68
McCoy	15	23	−8
Pickett	19	20	−1
Polk	73	39	34
Riley	40	44	−4
Rucker	13	19	−6
Shelby	0	27	−27
Stewart	36	56	−20
Subtotal	**544**	**589**	**−45**
Others	226	429	−203
Total	**770**	**1,018**	**−248**

Spanners			Portable end ramps			BBPCT value
On hand	Requirements	Difference	On hand	Requirements	Difference	
40	260	−220	0	0	0	$131,701
0	168	−168	0	4	−4	0
490	240	250	0	3	−3	295,397
110	210	−100	0	2	−2	358,044
526	630	−104	0	8	−8	2,835,183
158	420	−262	1	3	−2	0
8	30	−22	0	1	−1	286,943
24	0	24	0	20	−20	0
0	0	0	0	0	0	29,060
768	232	536	2	1	−1	1,168,891
20	100	−80	0	2	−2	26,376
262	0	262	1	3	−2	728,601
136	594	−458	2	2	0	358,874
208	182	26	2	3	−1	266,023
154	158	−4	0	0	0	94,260
250	316	−66	0	4	−4	590,690
1,076	348	728	0	0	0	381,225
36	150	−114	0	6	−6	24,472
298	214	84	0	0	0	0
12	452	−440	0	4	−4	24,684
4,576	**4,704**	**−128**	**7**	**67**	**−60**	**$7,602,424**
1,044	3,440	−2,396	9	68	−59	1,008,293[b]
5,620	**8,144**	**−2,524**	**16**	**135**	**−119**	**$8,610,717**

[a]Data for tool kits, spanners, and portable end ramps based on FORSCOM reassessment as of November 1986.

[b]FORSCOM disbursed $1,008,293 for BBPCT for these installations, but GAO did not determine the amounts actually on hand. The 20 mobilization stations we visited cumulatively had BBPCT on hand valued at about twice the amount actually disbursed by FORSCOM, due to procurement from other sources. The amounts actually on hand are therefore likely to be higher than the amount shown.

Comments From Department of Defense

ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-8000

ACQUISITION AND LOGISTICS

L/TP

APR 17 1987

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report entitled, "DEPLOYMENT: Better Determination of Army Transportation Requirements is Needed," dated February 17, 1987 (GAO Code 393103/OSD Case 7220).

The DoD generally concurs with the GAO report. Actions are either presently ongoing or being planned to correct deficiencies identified in deployment planning.

The detailed DoD comments on each finding and recommendation are provided in the enclosure. Thank you for the opportunity to comment on this draft report.

Sincerely,

for Thomas P Christie
Robert B. Costello

Enclosure
as

GAO DRAFT REPORT - DATED FEBRUARY 17, 1987
(GAO CODE 393103) OSD CASE 7220

"DEPLOYMENT: BETTER DETERMINATION OF ARMY TRANSPORTATION REQUIREMENTS IS NEEDED"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

Now on pp. 2-3 and 10-12.

FINDING A: Deployment: Background. The GAO reported that the U.S. strategy of deterrence requires that U.S. forces be able to make a rapid transition from a peacetime to a wartime posture--that is, to mobilize and deploy within time frames prescribed by operation plans. According to the GAO, rapid mobilization and deployment capability includes both Army active and reserve component forces (Army National Guard and U.S. Army Reserve) to move from their home stations and mobilization stations to their assigned aerial and sea ports of embarkation. The GAO reported that an integral part of the mobilization planning process is ensuring the necessary transportation, either military or commercial, is available to move units to and from the mobilization stations. The GAO observed that the Army is heavily dependent on commercial rail and truck transportation to accomplish these moves due to the distances involved and because many units do not possess the transportation resources needed to move all their equipment and supplies. Concerning commercial transportation, the GAO reported that the Department of Transportation is responsible for assessing the availability of national transportation resources and allocating these resources to meet military mobilization and critical civilian needs. The GAO also reported that the Military Traffic Management Command is responsible for determining if the military's transportation systems can meet mobilization needs. (pp. 2-3, pp. 8-11/GAO Draft Report)

DOD RESPONSE: Concur.

FINDING B: Need to Identify Equipment To Be Moved To Mobilization Stations. The GAO reported that reserve component units identify and report equipment that will be moved to mobilization stations in the Computerized Movement Planning and Status System (COMPASS) report. According to the GAO, this report is used to determine and arrange for the transportation needs of the units. In comparing the equipment listed in the COMPASS report and equipment listed for 19 units in their property books, the GAO found, however, that (1) 78 equipment items were listed in the COMPASS report but were not listed in the units' property books, and (2) 387 equipment items were listed in the property books but were not listed in the COMPASS

report. The GAO reported that unit officials said of these 387 equipment items, 161 would be moved by commercial transportation. The GAO found that a primary reason for differences between the COMPASS report and unit property books was that some units did not submit the required annual updates of the COMPASS report, and other units submitted incorrect updates. The GAO also compared equipment listed in the COMPASS report for 122 units, with the equipment listed on the Army Continuing Balance System-Expanded (CBS-X) report, which is the Army automated inventory listing. The GAO found that (1) of 10,640 equipment items in the COMPASS report, 2,659 items were not in the CBS-X report, and (2) of the 10,071 equipment items shown in CBS-X, 2,090 were not shown in the COMPASS report. Overall, the GAO reported that its analysis of COMPASS reports for 3,819 reserve component units showed that 2,675 units needed some form of commercial transportation. The GAO found, however, that commercial transportation estimates had not been developed for 2,073, or 77 percent, of the units needing it. The GAO reported that it could not identify why the estimates had not been developed. The GAO concluded that the COMPASS reports do not accurately reflect what commercial transportation is required. The GAO also concluded that the wide discrepancies among the three basic sources of information (units' property books, COMPASS reports and CBS-X reports) illustrates existing problems in determining what transportation resources are needed to move equipment from the units to mobilization stations. The GAO further concluded that, because many of the units have not identified what equipment must be moved to the mobilization stations, that (1) it is difficult to identify the number or types of transportation resources needed, and (2) it is questionable whether the units can move to or from assigned mobilization stations within the time frames required. (pp. 3-4, 14-17, p. 28/GAO Draft Report)

Now on pp. 3-4, 16-18, and 26-27.

DOD RESPONSE: Concur. The Army recognizes the need to accurately identify equipment to be moved to mobilization stations. The equipment will come from two distinct areas: reserve component equipment moving into the mobilization station and the redistribution or cross-leveling of equipment between units.

As an interim solution, the COMPASS redesign, begun in FY 1986 and scheduled for completion in FY 1989, will simplify the data collection/processing, provide analysis capability, and improve edits and quality control. These areas were identified as major inhibitors to reporting accuracy. Upon requests from the installations, formal training courses on the preparation of unit movement data for COMPASS is being provided. In addition, "Command Letters," which provide guidance on problem areas such as developing commercial transportation estimates, have reduced the number of units failing to provide such estimates from 77 percent to 17 percent. The Army will develop specific steps by FY 1988 to verify the compliance of all units.

The long-term solutions include COMPASS/unit movement training which will incorporate unit movement planning into an expanded strategic mobility course, with classes scheduled to begin in FY 1988. In addition, the Transportation Coordinator Automated Command and Control Information System (TC-ACCIS), under development since FY 1986, will provide the source data automation necessary to ensure accurate and timely submission of unit movement data. Initial fielding is scheduled for FY 1988. Full fielding of TC-ACCIS, is scheduled for FY 1992, but the actual completion date will reflect funding considerations. reserve component units will submit data to TC-ACCIS on home station to mobilization station movements through the Reserve Component Automation System (RCAS).

Not discussed in the GAO report, but a very important consideration, is the necessary redistribution of equipment from the mobilization station inventory to departing units to raise them to planned deployment equipment levels. The Mobilization Equipment Redistribution System (MOBERS) will permit an accurate accounting of equipment redistribution and promote effective use of transportation resources from mobilization station to port of embarkation. This system will be tested in 1987 during the REFORGER Joint Chiefs of Staff Exercise.

FINDING C: Need To Identify The Commercial Transportation Needed to Move Equipment From Mobilization Stations. The GAO reported that the U.S. Army Forces Command (FORSCOM) Mobilization and Deployment Planning System requires mobilization station commanders to ensure that accurate movement requirements for mobilization and deployment are developed and coordinated. Based on visits to 20 mobilization stations, the GAO found that 16 planned to use varying degrees of commercial transportation and four planned to use only military transportation. In addition, the GAO found that only two of the 16 mobilization stations had determined and documented when, how many, and what type of commercial transportation would be needed. According to the GAO, officials cited various reasons why commercial transportation requirements had not been developed including:

- the data used for determining transportation requirements was inaccurate and outdated;

- reserve component units had not responded to requests for the quantity and type of equipment they planned to outload;

- the determination of commercial transportation requirements in advance of mobilization was a useless exercise and had not been done because changes in assigned ports of embarkation were likely to occur; and

- there was confusion about which port of embarkation should be planned for.

The GAO concluded that mobilization and deployment movement is made more difficult because (1) the Army has not identified the type and amount of equipment to be moved by commercial means, and (2) it has not been determined whether the required commercial transportation is available. The GAO further concluded that, because many of the units have not identified what equipment must be moved to the mobilization stations, it is difficult to identify the number or types of transportation resources needed. The GAO also concluded that it is questionable whether the units can move to or from assigned mobilization stations within the time frames required. (p.3, pp. 17-18, p.28/GAO Draft Report)

Now on pp. 3-4, 18-22, and 26-27.

DOD RESPONSE: Concur. Corrective actions include COMPASS redesign as discussed in the DoD response to the GAO Finding B. In addition, the Army has developed Contingency Standing Route Orders (CSROs) that are now being issued for reserve component units. The CSROs provide preselected transportation modes, carriers and routes by the Military Traffic Management Command (MTMC) prior to mobilization. The source data will be the annually updated installation transportation requirements, which are received from the unit and then provided to FORSCOM for validation and transmittal to the MTMC, which matches requirements with capabilities and then provides the CSROs to the installations. As of March 1987, over 100 units have CSROs and all National Guard and Army Reserve Units will have CSROs by mid FY 1989. The Army will provide CSROs from mobilization stations to the ports of embarkation by expanding CSROs to all active units by FY 1990. The Army goal is to semiannually validate the capacity of the carriers on each CSRO, make the required changes, and then provide this data directly to the installations.

FINDING D. Outloading Plans And Capabilities Have Not Been Fully Assessed. The GAO reported that the MTMC computes the tonnage of equipment and supplies and the number of railcars and trucks that mobilization stations are expected to outload on a time-phased basis during mobilization and deployment. According to the GAO, the MTMC compares this information to port of embarkation capacity to achieve maximum port use, avoid excessive port congestion, and otherwise regulate mobilization movement. The GAO found, however, that (1) MTMC does not compare its computations against actual mobilization station outloading plans, and (2) some mobilization stations plan to use significantly different types and levels of outloading transportation than expected by the MTMC. The GAO also pointed out that a previous GAO report (PLRD-83-73, "Federal Actions Needed to Retain Essential Rail Service," dated May 20, 1983 (OSD Case 6211)), noted problems with track conditions, the abandonment of feeder lines to military installations by commercial railroads, and the potential impact on installation outloading capability. The GAO pointed out that the DoD has identified and documented installation outloading discrepancies and plans to spend about $100 million during the period FY 1986 to FY 1992 to improve rail outloading conditions at 42

installations. According to the GAO, at least five of the 16 mobilization stations it visited showed that planned rail outloading operations may not be able to outload as planned because of deteriorating track conditions. In addition, the GAO found that some mobilization stations have allowed existing tracks, which could be used during mobilization, to deteriorate. The GAO concluded that one of the factors which could impede the movement of units to and from the mobilization stations is when the outloading capability of the mobilization stations is at variance with what the MTMC expects would be required by the operations plans, and/or where rail lines at some mobilization stations have deteriorated. In summary, the GAO concluded that some mobilization stations may not be physically able to dispatch the volume of traffic required by Army operation plans. (p. 4, pp. 18-21, pp. 28-29/GAO Draft Report)

Now on pp. 3, 19-20, and 26-27.

DOD RESPONSE: Concur. There is a need to more fully assess outloading plans and capabilities. Improvements are being made to both the MTMC and FORSCOM data. As discussed in the DoD response to Finding C, the MTMC is now implementing the CSRO, to select mode and carrier. As the quality of this data improves, the CSRO will become a more accurate statement of transportation requirements.

In addition, the MTMC Transportation Engineering Agency (TEA) has improved its installation outload capability study to include the movement of inbound equipment, which will more accurately reflect the transportation stresses placed on the activities. The MTMC TEA is developing a handbook on how to more accurately determine outload capability, which is the source data for Mobility Analysis Planning System (MAPS II). This handbook, scheduled for publication in FY 1988, should significantly improve the accuracy of the outload capability report. Also, on June 20, 1986, the Headquarters, Department of the Army, directed that there would be increased coordination between the MTMC, FORSCOM and other major commands in the development, evaluation and use of the DD Form 1726, Installation Outload Capability Report.

Concerning rail conditions, the Army has identified and prioritized, by installation, requirements for more than $200 million in track maintenance, rehabilitation, and other outloading requirements. Close to $100 million has been budgeted and programmed through FY 1992 under the Army Rail Program. One example of Army action under this program is the aquisition of the strategic connector rail track for the Fort Campbell, Ky., mobilization station in FY 1987. Over $400,000 will be applied to rehabilitate the track to Federal Railway Administration Class II standards to meet Ft. Campbell's mobilization and deployment requirements.

Finally, the Army will form a study group in June 1987, to develop an action plan that will address the issues of outloading plans and capabilities and other issues which adversely impact the Army's mobilization. This action plan is scheduled for completion by February 1988.

FINDING E: Better Plans Are Needed For Distributing Outloading Materials And Equipment. The GAO observed that blocking, bracing, packing, crating, and tiedown (BBPCT) materiels, such as steel cable, cable clamps, and cable guides (thimbles), are needed to secure military vehicles to some types of rail flatcars and to protect them during shipment. The GAO also observed that, according to the FORSCOM BBPCT Program Manager, mobilization stations should have detailed plans for distributing BBPCT, since it is often stored some distance away from rail loading areas and may require the use of trucks and forklifts to transport heavy items, such as large spools of steel cable. The GAO found, however, that at 15 mobilization stations, which had outloading materials on hand and planned to conduct rail outloading, eight had not developed plans showing how these materiels would be distributed. According to the GAO, other equipment, such as railcar spanners and rail hand tool sets, may also be needed to load and secure military vehicles on flatcars. The GAO pointed out that spanners and rail hand tool sets should be located at mobilization stations for use in outloading operations, and installation officials need to establish procedures and plans for issuing and controlling this equipment before mobilization occurs. The GAO found, however, that only three mobilization stations had developed definite plans for how rail hand tool sets and railcar spanners would be distributed and controlled. The GAO concluded that, among one of the factors which could impede the movement of units to and from the mobilization stations, is that plans often have not been developed for distributing the materiels and equipment items needed to perform the outloading operations. (pp. 21-24, p. 29/GAO Draft Report)

Now on pp. 23-25 and 26.

DOD RESPONSE: Concur. There is a need to more clearly articulate the guidance already established concerning the distribution of outloading materiel and equipment. A change to FORSCOM Regulation 55-1, which is being reviewed and is planned for publication in FY 1988, will assign specific responsibility to mobilization stations and will direct the necessary changes to installation mobilization plans and standard operating procedures for distribution of outloading materiel and equipment.

FINDING F: Transportation Requests Are Inaccurate And Inconsistent. The GAO reported that during peacetime, reserve component units are required to prepare and maintain requests for commercial transportation, which would be needed upon mobilization. According to the GAO, at mobilization, units forward these requests through their major Army reserve commands or state commands to the Army installations designated to assist them in obtaining the needed trucks, buses, or railcars. The GAO pointed out that the requests are required to identify (1) the units' equipment and the specific locations of the equipment as well as the nearest loading facility, and (2) the number and location of unit personnel needing commercial transportation. The GAO found, however, that of the 19 units it reviewed, only one maintained a current, complete, and accurate transportation

request; 17 units did not maintain current, complete requests or the requests were inconsistent with the unit movement plan; and one unit was not required to maintain a request because it had no commercial transportation needs. The GAO concluded that despite the requirements, reserve component units frequently have not included requests for commercial transportation in their mobilization plans. The GAO further concluded that it is questionable whether units can move to mobilization stations within the time frames required because, in certain cases, while the equipment that must be moved has been identified, officials have not determined the required transportation resources. (pp. 24-29/GAO Draft Report)

Now on pp. 26-27.

DOD RESPONSE: Concur. Corrective actions include CSROs, as discussed in Finding C, and TC-ACCIS, as well as MOBERS, as discussed in Finding B. In addition, there is a need to more clearly articulate the guidance already established for completing commercial transportation requests and including those requests in mobilization plans. The Army will develop specific steps by FY 1988 to ensure compliance with existing regulations.

FINDING G: Universe Of Railcars And Trucks For Mobilization And Deployment Has Not Been Determined. The GAO reported that the MTMC and the Department of Transportation (DOT) are responsible for ensuring that critical civil and military transportation needs can be met in a national emergency. According to the GAO, assumptions regarding the sufficiency of commercial transportation inventories to meet mobilization and deployment requirements are based on an analysis performed by the DOT Demand Capacity Model Concept. The GAO noted that the DOT model compares the tonnage carrying capacity of general types of railcars and trucks against the MTMC estimate of tonnage requirements. The GAO found, however, that specific types of railcars and trucks are required to move certain military equipment. The GAO also found that the national inventory of militarily usable single-level flatcars is declining, but that it is still unclear whether there is an overall shortage of railcars. First, the GAO found that the Army has not identified how many flatcars will be needed, and second neither the DOT nor the MTMC has yet determined the national inventory of the types of commercial trucks that could be used to transport military vehicles, including tanks and other heavy tracked vehicles. The GAO observed that the DoD has assumed that sufficient commercial transportation resources are available to meet its mobilization needs by relying on comparisons of gross cargo tonnage requirements with gross carrying capacities. The GAO concluded, however, that without a comparison of the DoD commercial transportation requirements against resources available by specific type and number, a determination of the sufficiency or insufficiency of commercial transportation cannot be made. The GAO further concluded, therefore, that the Army needs to determine its total commercial transportation requirements, and the MTMC and the DOT need to identify the universe and capabilities of commercial transportation resources (p. 4, pp. 30-33, pp. 35-36/GAO Draft Report)

Now on pp. 3 and 30-33.

DOD RESPONSE: Concur. An annual assessment of motor and rail assets is necessary. The DoD, recognizing a need to know the universe of available transportation resources, has undertaken three major efforts:

First, in May 1986, the Joint Chiefs of Staff directed the Services and the Defense Logistics Agency (DLA) to identify reserve component and mobilization support movements requiring commercial transportation. Essentially, this directive requires that the Services and Defense Agencies report and annually update all significant mobilization movements not reflected in the Time-Phased Force Deployment Data (TPFDD) and which require commercial transport that must be arranged by the MTMC. The Services and DoD Agencies will begin submitting initial reports by March 31, 1987. The MTMC, in coordination with the DOT, will use the data provided by the Services and DoD Agencies to conduct a detailed assessment of the commercial transportation sector's capability to support the DoD requirements. The MTMC will, within six months of data submission, provide the Services and Defense Agencies with the results of their assessment.

Second, a study to determine the need for a Defense Freight Railway Interchange Fleet will develop the DoD long-term heavy-lift railcar requirement. The study, started in October 1986, will evaluate alternatives ranging from a DoD organic fleet to total reliance on the private sector to meet DoD railcar needs. The analysis will contain an accounting of heavy-lift cars by type (to include multi-level cars), number and potential availability at mobilization sites. The expected completion date is November 1987.

Finally, the Army is also presently determining the universe of heavy-lift motor capability. The expected completion date is the first quarter of FY 1988.

FINDING H: Better Management Of FORSCOM Rail Outloading Programs Would Save Millions--FORSCOM Policy Guidance Does Not Result In Realistic BBPCT Requirements. The GAO reported that beginning in 1979, FORSCOM requested mobilization station officials to identify their total BBPCT requirements so that it could determine the funding needed to purchase and store the BBPCT at these installations. The GAO reported the following actual and planned expenditures for BBPCT:

	Expenditures		
	Actual	Planned	Total
Item	FY 1981-FY 1985	FY 1986-FY 1991	FY 1981-FY 1991
BBPCT	$5,273,377	$8,000,000	$13,273,377
BBPCT Warehouses	0	1,986,178	1,986,178

The GAO found, however, that the following factors led to a significant overstatement of BBPCT requirements: (1) the FORSCOM

methodology of determining these requirements did not consider that many flatcars come with their own tiedown devices, (2) the FORSCOM guidance considered only single-level flatcars, whereas multilevel flatcars are also suitable for transporting many types of military vehicles, (3) some mobilization stations used the wrong ports of embarkation for determining their BBPCT requirements, and (4) some mobilization stations procured and stored BBPCT although it was readily available from local commercial sources. Because of the aforementioned factors, the GAO calculated that adequate BBPCT for mobilization and deployment needs could already be on hand and, therefore, the planned $8 million expenditure may not be needed. According to the GAO, the FORSCOM BBPCT Program Manager said that the revised BBPCT estimates would also eliminate the need for the planned $2 million for BBPCT warehouse construction. The GAO reported that FORSCOM officials subsequently removed $8 million for BBPCT and $2 million for warehouse construction from the budget justification for this program, and the Army placed a hold on any further BBPCT-related expenditures pending issuance of the GAO report. The GAO concluded that the FORSCOM planned expenditures for BBPCT materials and warehouses appear to have been overstated by at least $10 million. (pp. 3-4, pp. 37-45/GAO Draft Report)

Now on pp. 3-4, and 36-42.

DOD RESPONSE: Concur. The DoD planned for BBPCT requirements using a worst-case scenario, i.e., total rail mobilization with wooden deck flatcars. To better define these requirements, FORSCOM issued an interim change to FORSCOM Regulation 55-1 that establishes a flatcar planning ratio of 50 percent wooden deck and 50 percent chain tiedown. A more refined planning ratio will be developed by the Army in the second quarter of FY 1988. FORSCOM developed a locally usable microcomputer program which determines BBPCT requirements for equipment in the Army inventory. This software program will be distributed to home and mobilization stations in FY 1988. The proposed change to FORSCOM Regulation 55-1, which is discussed in the DoD response to Finding E, will also clarify the requirement to stock BBPCT, to develop local sources of supply, and to determine the potential for use of multi-level cars for outload. The $10 million in requirements for BBPCT and warehousing has been identified, but not programmed or funded since FY 1985.

FINDING I: Better Management Of FORSCOM Rail Outloading Programs Would Save Millions--Overstated Requirements For Railcar Spanners, Hand Tool Sets And Loading Ramps. According to the GAO, FORSCOM officials said that mobilization station spanner requirements were based on one spanner set for each flatcar. The GAO found that this methodology results in overstated spanner requirements because, as acknowledged by FORSCOM officials, flatcars should be loaded at the rate of at least two flatcars a day for each set of spanners. According to the GAO, FORSCOM also said that the computed spanner requirements did not take into consideration some types of spanners already on hand at mobilization stations. The GAO reported that the FORSCOM reassessment of the spanner requirements determined that 1,262

spanner sets would be needed rather than the 4,503 sets budgeted. Consequently, the GAO reported that FORSCOM plans need to be reduced by about $3.7 million as of November 1986, and FORSCOM officials said continuing refinements may result in additional reductions. According to the GAO, FORSCOM officials developed rail hand tool set requirements by computing the number needed if all installations outloaded totally by rail. The GAO found, however, that 11 of the 20 mobilization stations it visited planned to outload primarily using military transportation resources and only four planned to outload primarily by rail. The GAO also found that FORSCOM did not consider that some mobilization stations had procured hand tool sets on their own. The GAO reported that, at its suggestion, FORSCOM reassessed its requirement for hand tool sets and loading ramps. According to the GAO, FORSCOM determined that it needed 248 hand tool sets and 119 loading ramps rather than the 1,058 tool sets and 130 loading ramps planned. According to the GAO, these reductions amount to about $1.64 million for tool sets and $132,000 for end ramps as of November 1986, and FORSCOM officials said continuing refinements may result in additional reductions. The GAO concluded that inaccurate assumptions concerning the needs for railcar spanners, hand tool sets, and loading ramps resulted in an overstatement of requirements by at least $5.5 million. The GAO also concluded that after it brought these matters to the attention of FORSCOM officials, they took action to revise instructions for computing BBPCT requirements and to reassess their needs for railcar spanners, hand tool sets, and end loading ramps. (pp. 3-4, pp. 45-46/GAO Draft Report)

Now on pp. 3-4, and 42-43.

DOD RESPONSE: Concur. See the DoD response to Finding H concerning BBPCT requirements. FORSCOM has had a study underway since February 1986 to address the requirements for hand tool sets, spanners and portable ramps. The study is scheduled for completion in FY 1987. If the study indicates that redistribution is necessary, then a plan will be developed for execution in FY 1988. The $5.5 million in requirements for railcar spanners, hand tool sets and ramps had been identified, but not programmed or funded since FY 1985.

FINDING J: Rail Outloading Materiel And Equipment Distribution. The GAO reported that, because mobilization station needs for railcar spanners, rail hand tool sets, loading ramps, and BBPCT for mobilization and deployment are directly related to the amount of rail outloading to be conducted, they should be distributed both in proportion to each other and to the degree of rail outloading planned. The GAO found, however, many imbalances in the way this material is currently distributed among mobilization stations. The GAO found for example, that Fort Chaffee is expected to conduct heavy rail outloading and has 79 sets of spanners on hand, but no tool kits or BBPCT. The GAO also found that, although Fort Gordon does not plan to conduct rail outloading or stock BBPCT, this installation reported 21 hand tool sets and 12 sets of railcar spanners on hand, and FORSCOM planned to provide Fort Gordon with 20 portable end ramps. (pp. 46-47/GAO Draft Report)

Now on pp. 43-44.

DOD RESPONSE: Concur. Corrective actions are discussed in the DoD response to Finding I.

* * * * *

RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Secretary of the Army direct the Commander, FORSCOM, in conjunction with the mobilization station commanders, to ensure that the equipment requiring commercial transportation for movement to and from the mobilization stations be accurately reflected on COMPASS reports. (p. 29/GAO Draft Report)

Now on p. 27.

DOD RESPONSE: Concur. The Army recognizes the need to accurately identify equipment to be moved to mobilization stations. This equipment includes reserve component equipment moving into the mobilization station and the redistribution or cross-leveling of equipment between units.

As an interim solution, the COMPASS redesign, begun in FY 1986, and scheduled for completion in FY 1989, will simplify data collection/processing, provide analysis capability and improve edits and quality control. These areas were identified as major inhibitors to reporting accuracy. Upon requests from the installations, a formal training course on the preparation of unit movement data for COMPASS is being provided. In addition, "Command Letters," which provide guidance on problem areas, such as developing commercial transportation estimates, are reducing the number of units failing to provide such estimates. The Army will develop specific steps by FY 1988 to verify the compliance of all units.

The long-term solutions include COMPASS/unit movement training which will incorporate Unit Movement Planning into a Strategic Mobility course with classes scheduled to begin in FY 1988. In addition, the Transportation Coordinator Automated Command and Control Information System (TC-ACCIS), which has been under development since FY 1986, will provide the source of data automation necessary to ensure accurate and timely submission of unit movement data. Initial fielding is scheduled for FY 1988. Full fielding of TC-ACCIS is scheduled for FY 1992, but the actual completion date will reflect funding considerations.

Not discussed in the GAO report, but a very important consideration, is the necessary redistribution of equipment from the mobilization station inventory to departing units to raise them to planned deployment equipment levels. The MOBERS will permit an accurate accounting of equipment redistribution and promote effective use of transportation resources from mobilization station to port of embarkation. This system will be tested in 1987 during the REFORGER Joint Chiefs of Staff Exercise.

Now on p. 27.

RECOMMENDATION 2: The GAO recommended that the Secretary of the Army direct mobilization commanders to determine and document the amount and type of commercial transportation required daily for each operation plan they are tasked to execute. (p. 29/GAO Draft Report)

DOD RESPONSE: Partially Concur. Reasonable, prudent planning requires the Installation Commander to plan for the local worst-case mobilization transportation scenario, but not plan for every Operations Plan they are tasked to execute. By meeting the worst-case, all transportation requirements for lesser scenarios are covered.

Actions to improve data used for planning include COMPASS redesign as discussed in the DoD response to GAO Recommendation 1. In addition, the Army has developed Contingency Standing Route Orders (CSROs) that are now being issued for reserve component units. The CSROs provide MTMC preselected transportation modes, carriers and routes, prior to mobilization. The source data will be the annually updated installation mobilization transportation requirements, which are provided by the unit through the installation to FORSCOM for validation and transmittal to the MTMC, which matches requirements with capabilities and then provides the CSROs to the installations. As of March 1987, over 100 units have CSROs and all National Guard and Reserve Units will have CSROs by mid FY 1989. The Army will provide CSROs from mobilization stations to the ports of embarkation by expanding CSROs to all active units by FY 1990. The Army goal is to semiannually validate the capability of the carriers on each CSRO, make the required changes and provide this data directly to the installations.

Now on p. 28.

RECOMMENDATION 3: The GAO recommended that the Secretary of the Army direct FORSCOM and the MTMC to compare the number of railcars and trucks planned for use by mobilization stations with the number expected by the MTMC for each operations plan, and reconcile any differences. (p. 29/GAO Draft Report)

DOD RESPONSE: Partially concur. The DoD agrees there is a need to better ensure the validity of the information used by mobility planners. However, only significant differences between movement data generated by the MTMC and mobilization station movement plans may need to be reconciled.

The MTMC system is a planning tool which uses notional unit movement data and stated installation capabilities to test the transportation feasibility of individual Operations Plans. Installation planners use actual equipment data from detailed movement plans, which are based upon particular Operations Plans. It is likely that the two will not agree. The cause for concern is when the two disagree by such a large margin as to call to question the validity of the Continental United States-wide planning information generated by the MTMC model or the

correctness of installation plans. Such differences should be explained and their causes either validated or corrected. To this end, the Army is taking or planning to take the following actions:

- On June 20, 1986, the Headquarters, Department of the Army, directed that there will be increased coordination between the MTMC, FORSCOM and other major commands in the development, evaluation and use of the DD Form 1726, Installation Outload Capability Report.

- Continue installation outload capability studies to improve analysis of outloading requirements;

- Publication by the MTMC of a handbook (scheduled for distribution during FY 1988) for Installation Transportation Officers to assist them in accurately assessing their outload capability, an input to the MTMC model; and

- Task the Commander, Military Traffic Management Command to revalidate the logic and methodology of the relevant parts of MAPS II, the MTMC planning system.

Finally, the Army will form a study group in June 1987, to develop an action plan by February 1988 that will address issues concerning outloading plans and capabilities; the reconciliation of any significant differences between them, as well as other issues which impact upon Army mobilization.

Now on p. 28.

RECOMMENDATION 4: The GAO recommended that the Secretary of the Army direct mobilization station commanders to develop plans for distributing BBPCT materiels and equipment to the outloading units. (p. 29/GAO Draft Report)

DOD RESPONSE: Concur. There is a need to more clearly articulate the guidance already established concerning the distribution of outloading materiel and equipment. A change to FORSCOM Regulation 55-1, which is being reviewed and is planned for publication in FY 1988, will assign specific responsibility to the mobilization stations and will direct the necessary changes to installation mobilization plans and standard operating procedures for distribution of outloading materiel and equipment.

Now on p. 33.

RECOMMENDATION 5: The GAO recommended that the Secretary of the Army direct the Commander, Military Traffic Management Command, in coordination with the DOT Office of Emergency Transportation, to systematically assess, on an annual basis, the availability of rail and truck resources that would be available to meet the Army deployment needs. (p. 36/GAO Draft Report)

DOD RESPONSE: Concur. See the DoD response to the GAO Recommendation 6.

RECOMMENDATION 6: The GAO recommended that the Commander, Military Traffic Management Command, in making the assessment in Recommendation 5, and in coordination with the DOT Office of Emergency Transportation, should give consideration to

-- the Army need for special types of railcars and trucks;

-- outload capacity and capability of the mobilization stations; and

-- the capability of the ports of embarkation to receive, offload, and return the transportation resources for reloading. (p. 36/GAO Draft Report)

Now on p. 33.

DOD RESPONSE: Concur. An annual assessment of motor and rail assets is necessary. The DoD, recognizing a need to know the universe of available transportation resources, has undertaken three major efforts:

First, in May 1986, the Joint Chiefs of Staff directed the Services and the DLA to identify Reserve Component and mobilization support movements requiring commercial transportation. This directive requires the Services and Defense Agencies to report and annually update all significant mobilization movements not reflected in the TPFDD and which require commercial transport that must be arranged by the MTMC. The Services and DoD Agencies will submit initial reports by March 31, 1987. The Army's initial submission identified requirements for movements from home stations to mobilization stations and for initial production base expansion. Additional data to address equipment redistribution and training base expansion are now being developed and will be reported by December 1988. The MTMC, in coordination with the DOT, will use the data provided by the Services and DoD Agencies to conduct a detailed assessment of the commercial transportation sector's capability to support Dod requirements. The MTMC will, within six months of data submission, provide the Services and Defense Agencies with the results of their assessment.

Second, a study to determine the need for a Defense Freight Railway Interchange Fleet will develop the DoD long-term heavy-lift railcar requirement. The study, started in October 1986, will evaluate alternatives ranging from a DoD organic fleet to total reliance on the private sector to meet DoD railcar needs. The analysis will contain an accounting of heavy-lift cars by type (to include multi-level cars), number and potential availability at mobilization sites. The expected completion date is November 1987.

Finally, the Army is also presently determining the universe of heavy-lift motor capability. The expected completion date is the first quarter of FY 1988.

Now on p. 44.

RECOMMENDATION 7: The GAO recommended that the Secretary of the Army direct FORSCOM to reassess installation needs for BBPCT materiels and warehouses, and retain the current hold on funds for these items until a reassessment is completed and existing stocks are redistributed in accordance with actual installation outloading needs. (p. 48/GAO Draft Report)

DOD RESPONSE: Concur. The DoD planned for BBPCT requirements using a worst-case scenario, i.e., total rail mobilization with wooden deck flatcars. To better define these requirements, FORSCOM issued an interim change to FORSCOM Regulation 55-1 that established a flatcar planning ratio of 50 percent wooden and 50 percent chain tiedown. A more refined planning ratio will be developed by the Army in the second quarter of FY 1988. FORSCOM developed a locally usable microcomputer software program which determines BBPCT requirements for equipment in the Army inventory. This software program will be distributed to home and mobilization stations in FY 1988.

There is a need to more clearly articulate the guidance already established concerning the distribution of outloading materiel and equipment. A change to FORSCOM Regulation 55-1, which is being reviewed and is planned for publication in FY 1988, will assign specific responsibility to the mobilization stations and will direct the necessary changes to installation mobilization plans and standard operating procedures for distribution of outloading materiel and equipment. The $10 million in requirements for BBPCT and warehousing had been identified, but not programmed or funded since FY 1985.

Now on pp. 44-45.

RECOMMENDATION 8: The GAO recommended that FORSCOM, before approving any further funding of BBPCT, should ensure the reassessments in recommendation seven properly consider the percentage of the flatcar fleet requiring BBPCT, the use of multi-level flatcars, and designated ports of embarkation. (p. 48/GAO Draft Report)

DOD RESPONSE: Concur. See the DoD response to GAO Recommendations 6 and 7.

Now on p. 45.

RECOMMENDATION 9: The GAO recommended that FORSCOM, before approving any further funding of BBPCT, should ensure installations comply with requirements to conduct local BBPCT availability surveys and adjust BBPCT stocking requirements accordingly. (p. 48/GAO Draft Report)

DOD RESPONSE: Concur. FORSCOM is now formulating specific steps to ensure compliance with FORSCOM Regulation 55-1, regarding installations developing/executing local BBPCT surveys. The specific steps identified are expected to be implemented in FY 1988.

Now on p. 45.

RECOMMENDATION 10: The GAO recommended that the Secretary of the Army direct FORSCOM to reduce planned funding levels for railcar spanners, rail hand tool sets, and portable ramps by $5.5 million and place a hold on remaining funds intended for these items until FORSCOM completes its ongoing reassessment of need and redistributes existing stocks in accordance with installation outloading needs. (p. 48/GAO Draft Report)

DOD RESPONSE: Concur. FORSCOM has had a study underway since February 1986 to address the requirements for hand tool sets, spanners and portable ramps. The study is expected to be completed by the end of the fourth quarter of 1987. If the study indicates redistribution is appropriate, a distribution plan will be developed for execution in FY 1988. The $5.5 million in requirements for hand tool sets, railcar spanners and ramps had been identified but not programmed or funded since FY 1985.

Prepared by: Bill Cefaratti/69067/870406
File: BC/GAO7220
Approved by: TP_____

TP comeback copy
DASD(L) copy
TP chron copy

Comments From Department of Transportation

U.S. Department of Transportation

Assistant Secretary
for Administration

400 Seventh St., S.W.
Washington, D.C. 20590

MAR 31 1987

Mr. Herbert W. McLure
Associate Director
Resources, Community, and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. McLure:

Enclosed are two copies of the Department of Transportation's comments concerning the U.S. General Accounting Office draft report entitled, "DEPLOYMENT: Better Determination of Army Transportation Requirements Is Needed."

Thank you for the opportunity to review this report. If you have any questions concerning our reply, please call Bill Wood on 366-5145.

Sincerely,

Marcia J. Allen for

Jon H. Seymour

Enclosures

DEPARTMENT OF TRANSPORTATION
STATEMENT ON GAO REPORT

I. TITLE: DEPLOYMENT: Better Determination of Army Transportation Requirements Is Needed. Draft report dated February 17, 1987.

II. SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS

The overall thrust of this GAO report is directed at the Department of the Army's inability to fully identify DOD surface transportation mobilization movement requirements and the availability of civil transportation resources to meet any developed requirements. In recognition of DOT's role as the emergency manager of the civil transportation system, GAO recommended that any Army (through MTMC) identification of civil transportation assets be done in coordination with DOT's Office of Emergency Transportation (OET).

III. SUMMARY OF THE DEPARTMENT OF TRANSPORTATION POSITION

The Department of Transportation (DOT) agrees with the GAO recommendation to periodically assess civil transportation resource availability as it relates to Department of the Army deployment requirements. Such DOT action will be taken in full coordination with MTMC.

Of significant bearing to this report is the necessity to recognize the on-going coordination between OET and MTMC regarding the implementation of a deployment requirement data exchange project. Both OET and MTMC have agreed upon a format for automated data exchange which will provide OET with deployment time-phasing information, types and numbers of required equipment and appropriate origin-destination information. Computer programming actions have been taken to facilitate the data exchange. This system will be tested by June 1, 1987.

Following the test cycle, OET will initiate, again in full coordination with MTMC, an effort to determine the availability of civil transportation resources required to meet deployment requirements. Thus, the foundation is being established to determine surface civil transportation capability in relation to mobilization requirements.

It also must be noted that extensive coordination is conducted on a virtual daily basis between MTMC and OET in relation to the joint DOT/DOD Contingency Response (CORE) Program. This program provides for the expeditious provision of civil transportation support to an actual DOD deployment and involves not only DOT but other members of the Federal transportation community.

DOT requests that the following statements in the draft GAO report be corrected:

Now on p. 3, para. 1.

1. On page 3, paragraph 3, GAO states that DOT is responsible for allocating resources to meet mobilization demands. For accuracy purposes, the sentence should state: "The Department of Transportation is responsible for assessing the availability of civil transportation resources and either prioritizing and/or allocating these resources to meet military mobilization and critical civilian needs."

Now on p. 11, para. 6, and p. 30, para. 2.

2. On both page 10 (paragraph 3) and page 30 (paragraph 2) GAO gives the perception that DOT is responsible for ensuring that sufficient civil transportation assets are available to meet emergency needs. This infers that DOT itself must make provision to acquire sufficient resources to compensate for any emergency-level asset shortfall that exists in the civil transportation industry. Such an assumption is incorrect. The Secretary of Transportation's emergency responsibility is to manage available civil transportation resources in order to meet, to the extent possible, defense and critical civil movement requirements.

Now on p. 11, para. 6.

Therefore, the third paragraph on page 10 should be revised to read: "The Secretary of Transportation is responsible for managing available civil transportation resources in order to meet, to the extent possible, defense and critical civil movement requirements." This sentence also should replace the first sentence in the second paragraph on page 30. DOT also notes that MTMC's responsibilities should be separately stated within the paragraph.

Glossary

Home Station	The assigned permanent location of reserve component units, such as the location of a National Guard Armory or U.S. Army Reserve Center.
Mobilization Station	The designated military installation (active, semi-active, or state owned/operated) to which a reserve component unit is moved for further processing, organization, equipping, training, and employment after mobilization and from which the unit may move to a sea or aerial port of embarkation. Most active Army units in CONUS are based at installations designated as mobilization stations.
Outloading	During mobilization and deployment, the process of loading personnel, equipment, and supplies aboard a means of transportation and dispatching them from the loading location.

*U.S. G.P.O. 1987-181-235:60036

Requests for copies of GAO reports should be sent to:

U.S. General Accounting Office
Post Office Box 6015
Gaithersburg, Maryland 20877

Telephone 202-275-6241

The first five copies of each report are free. Additional copies are $2.00 each.

There is a 25% discount on orders for 100 or more copies mailed to a single address.

Orders must be prepaid by cash or by check or money order made out to the Superintendent of Documents.

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

Official Business
Penalty for Private Use $300

Address Correction Requested

First-Class Mail
Postage & Fees Paid
GAO
Permit No. G100