



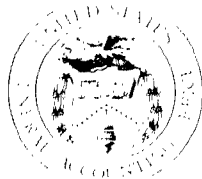
United States General Accounting Office

Report to the Ranking Minority Member,  
Committee on Governmental Affairs,  
U.S. Senate

April 1992

# ARMY ACQUISITION

## Palletized Load System Acquisition Quantity Overstated



146396

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**National Security and  
International Affairs Division**

B-247689

April 22, 1992

The Honorable William V. Roth, Jr.  
Ranking Minority Member  
Committee on Governmental Affairs  
United States Senate

Dear Senator Roth:

In response to your request, we reviewed the Army's acquisition quantity for its new ammunition resupply vehicle—Palletized Load System (PLS). The PLS consists of a truck and a trailer each with a demountable cargo bed. The PLS will be used by artillery, ordnance, and transportation units to move ammunition to and from transfer points. Our objectives were to determine whether the Army's acquisition quantity (1) had been reduced to reflect force reductions and updated threat assessments and (2) was appropriate based on their planned uses.

**Results in Brief**

The Army had reduced the PLS acquisition quantity to reflect the approved force structure reduction from 28 to 20 divisions. However, the requirements are still predicated on outdated threat assumptions that envisioned warfare against the Soviet-Warsaw Pact in Central Europe. This threat was always considered the most intense and demanding conflict that U.S. forces could face. With regional conflicts now considered the more likely threat to the United States, PLS requirements may drop further to reflect lower anticipated ammunition consumption rates. Similarly, the need for Pre-Positioning of Materiel Configured to Unit Sets (POMCUS) stored at European sites may be reduced.

While the PLS acquisition quantity had been adjusted to reflect approved force structure reductions, it includes 450 trucks, 30 trailers, and 2,480 demountable cargo beds costing \$141 million for requirements that are not appropriate based on their planned use. These PLSS are being acquired to support

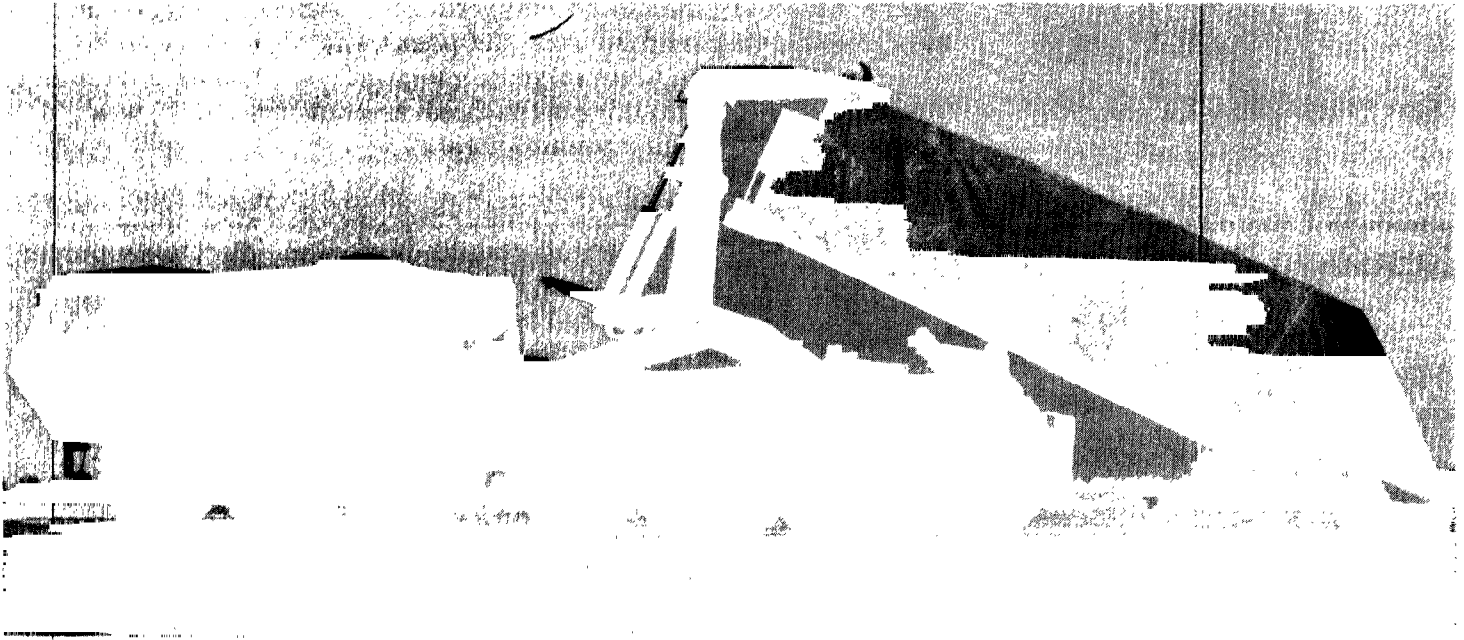
- National Guard and Army reserve artillery battalions that will use these PLSS for a limited time until their 8-inch self-propelled howitzer artillery is replaced by the Multiple Launch Rocket System (MLRS), that uses the Heavy Expanded Mobility Tactical Truck (HEMTT) for ammunition resupply and

- a requirement to equip two planned Cadre Divisions that is inconsistent with the concept to equip these low priority units with earlier-generation systems.<sup>1</sup>

## Background

The PLS is designed to improve the efficiency and effectiveness of ammunition resupply. The PLS allows one soldier to load or unload up to 24 pallets of ammunition on a demountable cargo bed at one time instead of individually with a forklift or crane. (See fig. 1.)

Figure 1: PLS Truck With Demountable Cargo Bed



Source: U.S. Army.

The PLS acquisition is in the low-rate production phase of the acquisition process. The acquisition entered this phase in September 1990 when the

<sup>1</sup>A Cadre Division includes officers and noncommissioned officers with necessary equipment for leader training, both formal and tactical leader training at every level from platoon through company, brigade, and division. Upon mobilization, Cadre Divisions would be filled out with soldiers from the Individual Ready Reserve and new recruits.

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Defense Acquisition Board approved the Army's plan to start low-rate production.

On September 28, 1990, the Army awarded a 5-year multiyear PLS contract, valued at \$859.6 million, to Oshkosh Truck Corporation for 2,626 trucks, 1,050 trailers, and 11,030 demountable cargo beds. The contract quantities can be increased up to 100 percent by exercising contract options beyond the 5th year. The Army's current and out-year budgets contain the funding needed to obtain the current planned acquisition quantities of 3,400 trucks and 1,521 trailers.

The first PLSs were delivered to the Army in February 1992. The Army is planning a production quality test and initial operational testing and evaluation on some of the initial PLSs. Positive test results will enable the Army to authorize the start of full-rate production, the next phase in the PLS acquisition process. The Army System Acquisition Review Council is scheduled to make a decision on full-rate production in November 1992 before authorizing the 3rd year of the Oshkosh 5-year multiyear contract. The Army is planning to field the PLS beginning in February 1993.

The PLS configurations, costs,<sup>2</sup> and uses are as follows:

- PLS truck with material handling crane, costing \$284,600 each, for artillery units;
- PLS truck without material handling crane, costing \$244,000 each, for ordnance and transportation units; and
- PLS trailer, costing \$47,500 each, for ordnance and transportation units.

The cost of each truck and trailer includes \$6,900 for a demountable cargo bed. The acquisition quantity contains more demountable cargo beds than trucks and trailers because additional beds will be used to maintain operations and for ammunition storage.

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<sup>2</sup>The costs for the trailer and the demountable cargo bed are the Oshkosh contract prices. The PLS truck costs are a weighted average of different configuration prices; that is, with winch, with side board.

## Acquisition Quantity Was Reduced, but Still Based on Outdated Threat

The Army reduced the PLS acquisition quantity to reflect approved force structure reductions from 28 to 20 divisions. Table 1 compares the acquisition quantity for 28 divisions, with the quantity for 20 divisions.

**Table 1: PLS Acquisition Quantity Reduced for Approved Force Structure Reductions**

	Force structure		Reduction
	28 divisions	20 divisions	
Trucks	4,200	3,400	800
Trailers	1,771	1,521	250
Demountable cargo beds	110,956	63,418	47,538

Source: GAO's analysis of Army data.

While reduced to reflect approved force structure reductions, the PLS acquisition quantity is still based on the now defunct Soviet-Warsaw Pact threat and may be further reduced as the threat is reassessed. Lower anticipated ammunition consumption rates to counter a diminished Central European threat or new regional threats may decrease the number of PLSS needed.

Similarly, POMCUS requirements—established to provide a capability to rapidly deploy U.S.-based units in the event of Soviet-Warsaw Pact aggression—may be reduced because of the diminished Central European threat. If overall POMCUS requirements are decreased based on threat reevaluation, the PLS POMCUS requirement in the acquisition quantity—444 trucks, 276 trailers and 2,720 demountable cargo beds, costing \$142 million—could be reduced.

According to the Department of Defense (DOD) and intelligence estimates, a former Soviet republic invasion into Western Europe that escalates into a global war is now considered unlikely. The republics have reduced the size of their military forces and are withdrawing troops from Europe. In January 1992, the Director of the Defense Intelligence Agency testifying before the Senate Armed Services Committee, concluded that there existed virtually no likelihood of premeditated former Soviet republic military aggression against the United States and its allies. The Director testified that the number of active ground force divisions in the republics probably will be reduced by more than half during the course of the decade—not only as a result of the Treaty on Conventional Armed Forces In Europe, but also for economic reasons. DOD and intelligence officials believe that even

if the republics did attempt to reconstitute their forces back to Cold War strengths, the United States would have time to respond with existing forces and to generate additional forces. While the likelihood of a massive war with the former Soviet republics has diminished, the chances of smaller regional conflicts have increased. As demonstrated by the recent war with Iraq, such conflicts may arise with little warning or predictability.

DOD and Army officials told us that PLS requirements will be adjusted, if warranted, to reflect the results of ongoing reviews to update ammunition consumption rates and POMCUS requirements based on the post-Soviet-Warsaw Pact threat.

### Some Planned Uses for PLS Are Inappropriate

The Army's PLS acquisition quantity had been adjusted to reflect approved force structure reductions; however, based on the Army's planned uses, the quantity of required PLSs is still overstated. The excess number will cost about \$141 million. The Army plans set out questionable PLS requirements for (1) National Guard and Army reserve artillery battalions that will use the PLS for a limited time until their 8-inch self-propelled howitzer artillery is replaced by the MLRS that does not use the PLS for ammunition resupply and (2) two planned Cadre Divisions that normally would be equipped with earlier-generation systems because of their lower priority for equipment. These PLS acquisition quantities and costs are shown in table 2.

**Table 2: Questionable PLS Acquisition Quantities and Costs**

Dollars in Millions				
	Trucks	Trailers	Demountable cargo beds	Contract costs
8-Inch battalions	300	0	300	\$85
Cadre Divisions	150	30	2,180	56
<b>Total</b>	<b>450</b>	<b>30</b>	<b>2,480</b>	<b>\$141</b>

Source: GAO's analysis of Army data.

An Army decision not to buy these PLS trucks and trailers would not effect the PLS quantities under the basic Oshkosh contract, but would reduce the quantities the Army now intends to buy under options included in the contract.

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**PLS Planned for Limited Time to Support 8-Inch Artillery Battalions**

The Army's acquisition quantity includes PLSs to support National Guard and Army reserve artillery battalions that are scheduled to use the PLS for only a limited time before their 8-inch self-propelled howitzers are replaced with the MLRS. Based on the Army's planned MLRS conversion schedule from fiscal year 1999 to fiscal year 2007, these PLSs would be used an average of 9 years to support the 8-inch battalions. After conversion, these battalions will use the HEMTT, because an Army analysis that concluded the HEMTT had operational and cost advantages over the PLS for the MLRS ammunition resupply mission.

In determining PLS cost-effectiveness, the Army assumed a 20-year useful life that is considerably longer than the average 9-year use in the 8-inch battalions. These PLSs would be subject to redistribution to other missions significantly short of the 20-year useful life projected in the PLS cost-effectiveness analysis. The Army, however, has not established cost-effective alternative missions for the PLS. While a 1990 analysis by the Army's Training and Doctrine Command (TRADOC) indicated it was feasible to use the PLS for alternative uses, such as medical shelter movement, bulk fuel distribution, and aviation maintenance, limitations in the scope of the analysis precluded making an unqualified conclusion or recommendation on the cost-effectiveness of these alternative uses. DOD and Army officials told us that TRADOC is currently conducting an analysis to identify possible cost-effective PLS applications in addition to ammunition resupply.

An October 1991 DOD Inspector General report<sup>3</sup> also challenged the PLS requirement on the basis that 8-inch artillery was being phased out of the Army. The Army commented that the requirement should not be deleted, stating that until the MLRS replaces 8-inch artillery, the Army needs the PLS to interface with the ammunition distribution system. However, our review indicated that the 8-inch battalions, if called up into active duty, could load their ammunition using their existing vehicles.

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**Cadre Division Requirement Inconsistent With Concept to Use Earlier-generation Systems in These Low Priority Units**

The Army's acquisition quantity includes a PLS requirement for two Cadre Divisions. This requirement is inconsistent with the Army's concept for equipping these units. In April 1991, the Army provided the Subcommittee on Defense, House Appropriations Committee, information that the planned Cadre Divisions would be equipped with earlier-generation systems. The planned Cadre Divisions would be the Army's lowest priority

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<sup>3</sup>Office of the Inspector General, Department of Defense, Acquisition of the Palletized Load System (Report number 92-003, Oct. 9, 1991).



units. The Army anticipated that these divisions could not be deployed until 12 months to 15 months after mobilization.

DOD and Army officials told us that purchasing the PLS for the Cadre Divisions is an exception to the policy to use earlier-generation systems in the Cadre Divisions. They believe that the low PLS quantities involved make it necessary to acquire all requirements in one acquisition and avoid a subsequent uneconomical acquisition for lower priority requirements. However, our review indicated that the Army has higher priority requirements than equipping Cadre Divisions with new equipment. Active units have requirements for medium tactical trucks and Heavy Equipment Transporters that will not be met based on current and out-year budgets. The Persian Gulf War identified a critical need for medium tactical trucks and Heavy Equipment Transporters.

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## Recommendations

We recommend that the Secretary of the Army adjust the PLS acquisition quantity

- to reflect decreased ammunition consumption rates and POMCUS requirements associated with a reduced post-Soviet-Warsaw Pact threat,
- to eliminate PLS requirements for National Guard and Army reserve artillery battalions that would use the PLS for only a limited time, and
- to eliminate PLS requirements for two planned Cadre Divisions that is inconsistent with the concept to use earlier-generation systems in these low priority units.

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## Scope and Methodology

For this report, we interviewed and obtained program documents from officials in the Department of the Army headquarters, Washington, D.C.; the Program Executive Office for Combat Support at the Army Tank-Automotive Command, Warren, Michigan; the Army Field Artillery School, Fort Sill, Oklahoma; the Army Transportation School, Fort Eustis, Virginia; the Army Ordnance Missile and Munitions Center and School, Redstone Arsenal, Alabama; and the Military Traffic Management Command Transportation Engineering Agency, Newport News, Virginia.

We conducted our review from August 1991 to March 1992 in accordance with generally accepted government auditing standards. As requested, we did not obtain fully coordinated DOD comments on this report. However, we did discuss a draft of this report with representatives of the Offices of the Under Secretary of Defense for Acquisition; Assistant Secretary of the

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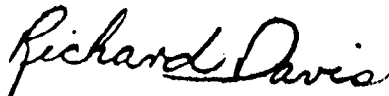
Army for Research, Development, and Acquisition; the Army Deputy Chief of Staff for Operations; and others. We have included their comments where appropriate.

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We are sending copies of this report to the Chairmen and Ranking Minority Members of the House and Senate Committees on Appropriations and on Armed Services; the Secretaries of Defense and Army; and the Director, Office of Management and Budget. We will also make copies available to others upon request.

Please contact me on (202) 275-4141 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix I.

Sincerely yours,



Richard Davis  
Director, Army Issues



# Major Contributors to This Report

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**National Security and  
International Affairs  
Division, Washington,  
D.C.**

Henry L. Hinton, Associate Director  
Derek B. Stewart, Assistant Director

---

**Detroit Regional Office**

Robert W. Herman, Regional Assignment Manager  
Myron M. Stupsker, Evaluator-in-Charge  
Rick J. Belanger, Evaluator  
Javier J. Garza, Evaluator



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