

GAO

Briefing Report to the Chairman,
Committee on Armed Services
House of Representatives

September 1986

PROCUREMENT

Simplified Munitions Lift Trailer Development Problems



131315

~~RESTRICTED~~ — Not to be released outside the General
Accounting Office except on the basis of specific
approval by the Office of Congressional Relations.

RELEASED

536742



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

National Security and
International Affairs Division

B-220113

September 10, 1986

The Honorable Les Aspin
Chairman, Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

On July 30, 1986, you asked us to review the technical problems being encountered in the Air Force contract to develop a simplified munitions lift trailer and the impact of those problems on cost and schedule. This report presents the results of our review. We have issued two prior reports¹ concerning Air Force acquisition of munitions lift trailers.

In August 1985, following an industrywide competition, the Air Force awarded PACCAR Defense Systems, Renton, Washington, a contract to develop a simplified munitions lift trailer for the strategic bomber force. The trailers are to be capable of transporting both nuclear and conventional weapons and their launchers and loading them on B-1B, B-52H, and advanced technology bombers.

The Air Force's firm-fixed price contract with PACCAR provides \$3.9 million for development of the trailer, completion of a Critical Design Review, and delivery of three trailers for testing. It also includes three options to produce 90 trailers. The Air Force intends to use these trailers to support B-1B bombers. The first option, which can be exercised within 6 months after successful completion of the Critical Design Review, provides a firm fixed price of \$5.5 million for 22 trailers. The two other options provide for 48 and 20 trailers at prices yet to be negotiated. The contract did, however, establish maximum or "not-to-exceed" prices for those options--\$10.4 million and \$4.5 million, respectively.

¹ Costs Of Alternative Munitions Lift Trailers For Strategic Bombers (GAO/NSIAD-85-142) August 28, 1985.

Requirements For Munitions Lift Trailers To Support Strategic Bombers (GAO/NSIAD-85-83) May 21, 1985.

Since the contract was awarded in August 1985, issues have surfaced concerning the (1) capability of the trailer to meet contractual requirements, (2) transfer of technical data to PACCAR for defining the trailer interfaces with bombers, weapons, and adapters, (3) total cost of development and production, and (4) ability to meet required production delivery dates. The Air Force is currently assessing potential redesign of the trailer and status of the program, and is evaluating several courses of action.

CAPABILITY OF TRAILER TO
MEET CONTRACTUAL REQUIREMENTS

The Air Force, in March 1986, conducted a Critical Design Review to assure itself that the design concept and engineering details of the trailer met the contractual specifications. According to the Air Force program manager, PACCAR's design did not meet two requirements. The two requirements not met were the handling of certain asymmetric munitions loads which may be carried by B-52H and advanced technology bombers, and satisfactory demonstration that the trailer will meet nuclear safety requirements. The Air Force program manager said the trailer design meets B-1B bomber loading requirements.

TRANSFER OF TECHNICAL
DATA TO PACCAR

PACCAR officials said certain technical data was needed to design and complete development of its trailer and finalize interface control documents with aircraft contractors. Interface control documents are formal agreements between contractors defining, in specific terms, how the affected items operate together. Under the terms of the contract, PACCAR was to establish interface control documents with aircraft contractors by mid-November 1985--90 days after award of the contract.

PACCAR told the Air Force that the Critical Design Review deficiencies exist because the Air Force failed to contractually arrange for timely transfer of technical data from bomber aircraft contractors to PACCAR. Although the aircraft contractors began providing technical data to PACCAR in September 1985, PACCAR said that much of the data it received was inaccurate, incomplete, or received late. The Air Force

said PACCAR did not completely fulfill its responsibilities in pursuing this technical data. As of August 29, 1986, the interface control documents had not been finalized.

Air Force officials told us the process for transfer of technical data between contractors and establishment of interface control documents is complex and often cannot be done very quickly. Transfer of technical data to PACCAR and establishment of interface control documents involve coordination among the Air Force Systems Command, the Armament Division where the program office is located, the Aeronautical System Division which was to make contractual arrangements with aircraft contractors, PACCAR, the Boeing Company, Rockwell International, and the advanced technology bomber contractor.

DEVELOPMENT AND PRODUCTION COSTS

PACCAR cost reports to the Air Force indicate that development costs incurred by June 1986 exceeded the \$3.9 million contract price by \$1.2 million. Also, they project an added \$4.3 million to complete the development of the trailer design submitted for Critical Design Review. These estimates do not include any additional costs to redesign the trailer to resolve deficiencies noted during the Critical Design Review.

PACCAR told the Air Force that its management supports the program. However, PACCAR officials told us they believe neither the development nor the production options can be completed at the original contract prices.

PACCAR officials said the company intends to file a claim to seek compensation from the Air Force for costs incurred because of late delivery of technical data. They also said they intend to submit a contract change proposal to obtain compensation for the cost of redesigning the trailer to resolve deficiencies identified in the Critical Design Review. PACCAR has initiated design efforts to resolve those deficiencies. According to the Air Force, these efforts were required to meet existing contract requirements.

ABILITY TO MEET REQUIRED
PRODUCTION DELIVERY DATES

The Air Force and PACCAR program managers agree PACCAR is about 7 months behind the development schedule established when the trailer contract was awarded. PACCAR met the Preliminary Design Review and Critical Design Review milestone dates of October 1985 and March 1986, respectively. However, delivery of three prototype trailers for testing scheduled for February, March, and April 1986 has not occurred. PACCAR officials told us fabrication of prototype trailers was delayed due to parts shortages and then was postponed when the trailer design was not approved during the Air Force's Critical Design Review. They estimate the first prototype trailer can be delivered to the Air Force in December 1986. Delivery dates for the other two prototype trailers are dependent upon whether the Air Force directs PACCAR to continue development of the design submitted for Critical Design Review or to pursue a new design.

The 7-month slip in the development program is considered nonrecoverable. Consequently, trailer production is also delayed by 7 months. PACCAR officials told us they are preparing a revised production schedule for the Air Force. At this time, they believe initial trailer deliveries can be made in April 1988 if the Air Force accepts the design submitted for Critical Design Review.

Strategic Air Command officials told us that delivery of lift trailers by April 1988 is essential to support B-1B bombers which are now being delivered to active forces. Currently, the Strategic Air Command is borrowing trailers from B-52 bomber bases to support the B-1Bs. These trailers, produced by a different company, are also compatible with B-1B loading requirements, and meet nuclear safety requirements, but quantities are insufficient to support the growing bomber force. They believe that with careful management, a sufficient number of B-52 lift trailers can be made available to support the B-1Bs until April 1988. If additional trailers are not provided by April 1988, however, Strategic Air Command officials said that it will face increasingly difficult force management problems, entailing both added operational cost and capability reductions.

AIR FORCE ASSESSMENT OF PROGRAM STATUS

In August 1986, PACCAR submitted a new trailer design to the Air Force to satisfy the two deficiencies noted in the Critical Design Review. The Air Force reviewed this design, its potential cost and schedule impacts, and also re-evaluated Air Force technical and schedule requirements. As a result, the Air Force is evaluating two potential alternatives:

1. Accept for production the design submitted by PACCAR for the Critical Design Review with its deficiencies. With this design:
 - B-1B loading requirements would be met.
 - The Air Force would have to procedurally work around the asymmetric loading deficiencies for B-52s.
 - Further research would have to be conducted on operational impacts related to advanced technology bombers.
 - Nuclear safety issues would have to be resolved, possibly requiring trailer modifications.

2. Direct PACCAR to redesign the trailer to meet contract specifications for all bombers and munition loads and nuclear safety requirements. With this design:
 - All technical requirements would be met.
 - Development and production costs would increase.
 - Production would be delayed.
 - Other provisions would be required to provide trailers in time to support B-1B bombers.

In August 1986, the Assistant Secretary of the Air Force (Acquisition and Logistics) recommended that the program office:

- Direct PACCAR to complete development based on the design submitted for Critical Design Review.
- Hold program costs to the \$27 million reported to the Congress.
- Resolve nuclear safety issues.
- Investigate product improvement of the trailer for use with the advanced technology bomber.

The program office verbally directed PACCAR Defense Systems to assess (1) completing development efforts on the design it had submitted for Critical Design Review and (2) preparing for production of that design if it could be accomplished without change to the original contract price and on acceptable schedule. As of August 29, 1986, PACCAR had not completed its assessment or responded to the program office direction.

- - - -

Our review of the program was conducted during August 1986 at the Air Force's program office (Armament Division), Eglin Air Force Base (AFB), Florida; Headquarters Air Force and the Air Force Systems Command, Washington, D.C.; Headquarters, Strategic Air Command, Offutt AFB, Nebraska; Aeronautical Systems Division, Wright-Patterson AFB, Ohio; and Defense Contract Administration Services Office and the PACCAR Defense Systems, Renton, Washington. At these locations, we reviewed program status reports, the contract, and other documents. We discussed the program with Air Force, PACCAR, and Defense Contract Administration Services officials. The information presented in this report is the most current available as of August 29, 1986.

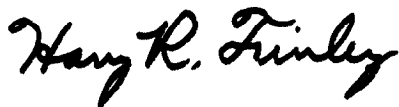
We did not obtain official agency comments on this report; however, we did discuss a draft of this report with Air Force officials and have incorporated their comments where appropriate.

B-220113

As requested by your office, we plan no further distribution of this report until 30 days from the date of issuance, unless you publicly announce its contents earlier. At that time, we will send copies to the Chairmen, Senate Committee on Armed Services and Senate and House Committees on Appropriations; the Secretaries of Defense and the Air Force; the Director, Office of Management and Budget; and other interested parties.

If we can be of further assistance, please call me on 275-4268.

Sincerely yours,

A handwritten signature in cursive script that reads "Harry R. Finley".

Harry R. Finley
Senior Associate Director

(392267)

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