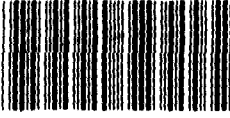


UNITED STATES GENERAL ACCOUNTING OFFICE
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STATEMENT OF
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NATIONAL SECURITY AND INTERNATIONAL AFFAIRS DIVISION
BEFORE THE
SUBCOMMITTEE ON RESEARCH AND DEVELOPMENT
COMMITTEE ON ARMED SERVICES
UNITED STATES HOUSE OF REPRESENTATIVES
ON
MUNITIONS LIFT TRAILERS FOR STRATEGIC BOMBERS

Mr. Chairman and Members of the Subcommittee:

We are here today to discuss our work on the acquisition and modification of munitions lift trailers for the nation's strategic bomber force. Our evaluation of munitions lift trailers focused on issues related to the quantity of lift trailers needed to support B-52s and B-1B bombers. We also examined Air Force strategies to improve lift trailer operational effectiveness and reduce their acquisition and support cost. Last week the Department of Defense commented on our draft report and concurred that lift trailer requirements for the bomber force should be reevaluated. This review is now underway. We expect to issue our final report within the next few weeks.

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At the time our audit work was completed in late 1984, the Air Force was involved in a competition to obtain a new lift trailer for B-1B bombers. Because of the ongoing competition, our work did not include a comparative evaluation of candidate lift trailers which included an improved version of the existing lift trailer and several new designs.

Munitions lift trailers are large support vehicles which are used to transport air launched cruise missiles and other nuclear weapons and load them onto strategic bombers. The Air Force developed the MHU-173 munitions lift trailer in the late 1970s to load air-launched cruise missiles on B-52G model bombers. Development of the MHU-173 and associated support equipment, initial spare parts, and technical documentation cost about \$13 million. The average unit cost of the lift trailers acquired to date is \$588,000.

At the time of our audit work, the Air Force had identified requirements for 245 munitions lift trailers: 153 to support B-52 bombers and 92 to support B-1B bombers. Of this requirement, 82 lift trailers have been acquired for B-52 bombers and another 71 have been ordered.

REQUIREMENTS FOR MUNITIONS LIFT TRAILERS

The stated Air Force requirement for 245 munitions lift trailers was generated to support the planned strategic bomber force of 270 B-52G, B-52H, and B-1B aircraft. The requirement is a function of the number of bombers in the force structure, the number of weapon loads the bombers are designed to carry, and assumptions about the weapons loading operations. Details

of this requirement are provided in an attachment to my statement.

Our evaluation indicates that the requirement for 245 munitions lift trailers may be overstated and should be reexamined because

--the assumptions used to derive the requirement were based on an outdated 1977 Strategic Air Command analysis of lift trailer operations,

--operational plans at an existing bomber base and lift trailer availability data indicate fewer lift trailers may be needed, and

--the requirement assumes each B-1B bomber will carry three internal weapon loads but they may carry only two.

In 1977, SAC prepared an analysis of the number of munitions lift trailers needed to support a force of 151 B-52G bombers equipped to carry cruise missiles. At the time of the analysis, the Air Force expected to equip each B-52G bomber with two cruise missile pylons and one internal launcher for cruise missiles, that is, three weapon loads. The SAC analysis concluded that one lift trailer was required to load each B-52G bomber with the three weapon loads it was expected to carry. Because SAC's analysis was prepared before cruise missiles and MHU-173 lift trailers were delivered in 1981, the study relied upon previous experience in loading nuclear weapons using older lift trailers. While this method may have been the best available in 1977, differences between SAC's projections and actual experience loading B-52Gs with MHU-173 lift trailers could affect the

quantity of lift trailers needed. Also, the Air Force significantly changed its planned bomber force in 1981.

Despite operational experience acquired by the Air Force and the force structure changes which have been made since 1977, SAC's analysis was not updated. Instead, the 1:3 ratio of lift trailers to weapon loads was applied to the currently planned force structure to derive the requirement for 245 lift trailers.

To evaluate the operational requirements for lift trailers, we visited Griffiss Air Force Base, New York, where 12 MHU-173 lift trailers are assigned to support B-52G bombers equipped to carry cruise missiles. Some of these bombers are continuously on alert and fully loaded. Griffiss, like other bomber bases, prepares a force generation plan that precisely identifies the tasks and equipment necessary to bring all assigned bombers to a full alert status. The Griffiss force generation plan calls for eight MHU-173 lift trailers to load cruise missile pylons on the non-alert B-52G bombers. Our review of this plan shows that it allows for some of the problems which may be encountered in an emergency, such as the worst likely weather conditions, transit and loading times expected of the most inexperienced loading crew, and potential delays caused by malfunctioning equipment. However, in addition to the eight lift trailers required to load non-alert bombers, there are four additional lift trailers: two as spares, another to maintain and check out missile pylons, and a fourth to train and certify loading crews.

Based on recent Air Force availability data for MHU-173s and results of practice force generations, we believe that the

two spare trailers may not be needed at Griffiss Air Force Base. Since January 1984, availability for MHU-173 lift trailers at Griffiss has averaged 81 percent; during the same time period, lift trailer availability at all B-52G bases averaged 82 percent. The other lift trailers were either undergoing maintenance, awaiting spare parts or both. This availability data, which GAO did not verify, indicates that under normal operations, 10 of the 12 MHU-173 lift trailers assigned to B-52G bases were available to support bomber force generations. Griffiss Air Force Base officials told us that during force generation, every effort is made to complete trailer repairs rapidly and defer nonessential maintenance. Also, crew training and routine maintenance on cruise missile pylons are suspended, thus, releasing trailers assigned to those functions for aircraft loading.

The Griffiss Air Force Base generation plan allows for expected problems during force generation and lift trailers normally assigned to training and maintenance functions would be available to assure that at least the eight lift trailers required for aircraft loading are operating. Accordingly, we believe that the two spare lift trailers may not be needed at Griffiss Air Force Base. Since each of the 5 B-52G bomber wings is to be assigned 12 munitions lift trailers (for a total of 60), we believe a reanalysis of lift trailer requirements based on force generation plans could show that up to 10 lift trailers may not be needed. Similarly, because B-52G and B-52H bombers are identical with respect to loading cruise missile pylons, Air

Force requirements for 60 lift trailers to load B-52H bombers externally may also be overstated by 10 lift trailers.

The Air Force has also identified requirements for 92 munitions lift trailers to load the B-1B bombers to be deployed between 1985 and 1988. These requirements are based on the B-1B bomber having three internal bomb bays and the 1:3 ratio determined in SAC's 1977 analysis for B-52G bombers. The B-1B lift trailer requirement may be overstated because Air Force plans to acquire 200 rather than 300 weapons launchers for B-1B bombers indicate that 2 rather than 3 weapon loads are planned for each B-1B bomber. Further, the quantity needed may be affected by Air Force plans to buy new simplified munitions lift trailers for the B-1B that are expected to be easier to operate and repair, and more reliable than the MHU-173. Considering these factors, we estimate a need for only 71 lift trailers to support the 90 B-1B bombers, or 19 fewer trailers than the quantity now shown as required.

In our view, reanalysis of Air Force lift trailer requirements should be conducted before additional lift trailers are acquired. We believe this analysis could show that as many as 39 of the 245 lift trailers previously identified as required may not be needed. Depending on the assumption about the unit cost of the lift trailer, reanalysis of lift trailer requirements could save \$13-\$16 million. Our draft report recommended that the requirements be reevaluated before the Air Force obligates funds to buy additional lift trailers.

During our work on this study, SAC and Headquarters Air Force officials agreed that the 1977 requirements analysis should be updated; and that the overall requirement for munitions lift trailers should be reevaluated, taking into account recent operational experience, bomber force structure changes, and the greater effectiveness of the improved MHU-173 and the simplified B-1B lift trailer design. In the fall of 1984, Headquarters Air Force directed SAC to conduct this reevaluation. DOD and Air Force officials, in commenting on our draft report, stated that the review is underway, and that total munitions lift trailer requirements will be determined by the results of that review.

PROPOSED LIFT TRAILER MODIFICATIONS

Numerous operational, maintenance and support problems were experienced with the MHU-173 lift trailers when they were initially deployed. Air Force analyses show certain trailer parts failed more frequently than expected, which placed a heavy burden on spare parts support systems. These problems were aggravated by a shortage of technical manuals, and limited operator and maintenance personnel training and experience. Taken together, these conditions resulted in low trailer availability, unexpectedly high repair parts demands, and a general dissatisfaction with the MHU-173 during initial deployment.

These problems have been largely overcome following increased management oversight, experience gained using the trailers and improvements to supply and support systems. While its performance has improved, the MHU-173 remains more costly to

operate and support than the Air Force desires. A major redesign of the MHU-173 was approved in December 1983 to make this lift trailer easier to operate and less costly to acquire and support.

The Air Force remanufactured 2 of its 82 MHU-173 lift trailers to the improved MHU-173 configuration in 1984. Preliminary tests indicate that the improved MHU-173 is easier to operate and the Air Force estimates that its annual support costs will be about one-fourth of MHU-173s support costs. The improved MHU-173 can also support B-1B bombers and its acquisition cost will be significantly less than the MHU-173. These factors led the Air Force to stop buying MHU-173s with the 82nd trailer and plans were adopted to buy 71 improved MHU-173s to meet B-52 requirements for 153 lift trailers.

At the time of our review, the Air Force was also considering remanufacturing the remaining 80 MHU-173s to incorporate all of the features of the improved version thereby providing a single, standard lift trailer for all B-52 bombers. Advantages of this remanufacturing program were said to include better lift trailer performance, elimination of an estimated \$4.6 million in costs for engineering changes approved or proposed for the original MHU-173 design, elimination of the problems associated with two different lift trailers and related support and training systems at B-52 bases, and an estimated \$34 million reduction in operating and support costs over 20 years of use. These savings would repay the estimated \$20 million cost of remanufacturing the 80 MHU-173s in about 12 years.

Currently, 60 of the MHU-173 lift trailers that may be remanufactured are assigned to B-52G bomber bases. The other 20 are to be assigned to B-52H bases. Long range bomber force plans indicate the 90 B-52G bombers equipped to carry cruise missiles are to be phased out of the force and retired as advanced technology bombers are acquired. While no firm date has been established for this force structure change, planning estimates range from the late 1980s through the early 1990s. B-52H bombers are to remain in the bomber force until at least the late 1990s. If these plans are implemented, remanufactured MHU-173 lift trailers supporting B-52G bombers will be needed for another 4 to 8 years, while lift trailers supporting B-52H bombers will be needed for about 15 years. Since it will take several years to remanufacture all MHU-173 lift trailers, the 20 year useful life projected by the Air Force for them, or even the 12 year life required to offset the remanufacturing costs, may not be obtained unless the lift trailers are used to support future bombers after B-52Gs are retired.

The Air Force could remanufacture the 60 MHU-173 lift trailers for use with advanced technology bombers and obtain the 20 years of useful life and associated savings projected in its analysis. This alternative assumes remanufacturing MHU-173 lift trailers is the least costly alternative for obtaining lift trailers for advanced technology bombers. However, this has not been demonstrated, and other alternatives may be available (for example, the 60 MHU-173 lift trailers could be transferred to B-52H bomber bases and a similar number of improved trailers

could be modified at relatively low cost and used to load advanced technology bombers). Our draft report recommended that the decision to remanufacture the existing 80 MHU-173 lift trailers be deferred until the uncertainty surrounding their useful lives and cost effectiveness is resolved. In commenting on our draft report, DOD officials concurred with our recommendation, and stated that a decision concerning how best to provide munitions lift trailers for the B-52 bombers will not be made until the requirements review is completed and the most cost effective alternative is identified.

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This concludes my prepared statement on our study of munitions lift trailers. If you have any further questions, we would be pleased to answer them.

Lift Trailer Requirements
for Strategic Bombers

<u>Bomber type</u>	<u>Number of aircraft</u>	<u>Weapons loads</u>		<u>Lift trailers required</u> (Total weapon loads/3)
		<u>Each aircraft</u>	<u>Total</u>	
B-52G	90	2 wing pylons	180	60
B-52H	90	2 wing pylons 1 internal launcher	180 90	60 30
B-1B	90	3 internal launchers	270	90
Development and training	—			<u>5</u>
Total	<u>270</u>			<u>245</u>