The Honorable
The Secretary of Defense

Attention: Assistant Secretary of Defense (Comptroller)

Dear Mr. Secretary:

We made a limited review of the Air Force's program for acquisition of ground support equipment for the TF-41-Al engine for the A-7D aircraft weapon system (code 57008).

Our review identified several potential problem areas which we believe need management improvement. A check of two other programs--the F-15 and UH-1N aircraft systems--revealed some of the same problem areas. Because we did not make a detailed evaluation, we are not making formal recommendations at this time. We believe, however, these matters warrant consideration.

We noted that (1) documentation was lacking as to whether adequate search was made of Government inventory and commercial sources for available support equipment (the ratio of contractor-furnished to Government-furnished support equipment was about 5 times greater than normal), (2) procurement decisions were made without adequate description of the item and the task to be performed, (3) contractor's cost estimates for developing and procuring the equipment seemed excessive, and (4) adequate provisions were not made for maintaining the equipment. Details follow.

Documentation lacking on adequacy of search for available equipment

Because the quantity and type of support equipment to be acquired is directly related to the aircraft's mission, an aerospace ground equipment plan is prepared early in the development of the aircraft system. This plan is included in the system's program package.
On the basis of the plan, the prime contractor for the system identifies and recommends to the Air Force specific pieces of ground equipment believed necessary to maintain and operate the system. To avoid development and procurement of new equipment when a satisfactory item is already in the Government's inventory or available commercially, the Air Force requires a search of such sources by the contractor.

Because the engine contractor did not maintain any record of the sources checked, we were unable to determine whether any search was made. Contractor personnel told us, however, that most decisions were made on the basis of the project engineer's memory and familiarity with Government and commercial items which could do the required task. We believe it would be in the Government's best interest for the Air Force to verify that an adequate search has been made or for the Air Force to check available sources.

Air Force officials told us that the normal ratio of contractor-furnished to Government-furnished support equipment was 5 or 6 to 1. We noted that a 40 to 1 ratio existed for the TF-41-Al engine. We believe this may be related to a lack of formal search and that such a search might have resulted in identifying available equipment.

**Procurement decisions made without sufficient data**

We noted several instances where the contractor did not furnish an adequate description of the recommended item or task to be performed. Although a number were returned to the contractor for additional descriptive information, the Air Force approved procurement of the low dollar cost items to avoid delaying the procurement. Many of the procurements were recommended by the contractor based only on an in-house search of prior contractor engine programs and were supported by a statement to the effect that there was no known item or tool that could perform this function.

Because an effective search of Government and commercial inventories cannot be made without a sufficient description of the item and the task to be done, new items might be developed and procured unnecessarily. When we brought this to the attention of Air Force officials, we were told that for the F-15 program—and presumably other programs—approval of proposed procurements is given only after receipt of sufficient information regardless of the estimated cost of the item.
Cost estimates seemed high

In addition to recommending specific items, the contractor provides an estimate of his development and procurement costs. Although this initial estimate does not necessarily mean this is what the Government will pay for the item, it provides a starting point for negotiating the price.

Several of the contractor's estimated development and procurement costs seemed excessive. We noted that the Air Force told the UH-1N contractor that the unit costs on practically all contractor-furnished items seemed enormously high, in many cases out of proportion to the simplicity of design of the item itself. Our observations with respect to the TF-41-Al and F-15 programs indicated similar practices.

We were told by Air Force officials that the negotiated prices for items procured to support the TF-41-Al engine were about 20 percent lower than had been estimated by the contractor. Excessive cost estimates obviously can adversely affect final negotiated prices.

Inadequate provisions for maintaining support equipment

The A-7D prime contractor did not identify, and therefore did not recommend, calibration equipment and other tools required for maintenance of certain support equipment. As a result, equipment was not acquired and maintenance men had to use "trial and error" and past experience to identify malfunctions with the equipment. This in turn resulted in a less efficient maintenance operation at the using unit level. We believe better planning by the Air Force and the contractor might have disclosed this oversight and resulted in earlier identification of the need for such equipment.

Although we are not making any specific recommendations, we are calling the above matters to your attention to enable improved management control over the development and procurement of ground support equipment for future aircraft weapon systems. We shall be pleased to consider your views in reaching our final conclusions and will consider them in any report to the Congress we may issue on the subject.
If you or your representatives wish to obtain further details concerning this matter, please contact Mr. Harold H. Rubin, Deputy Director (Technology Advancement), code 129, extension 4515.

Copies of this report are being sent to the Secretary of the Air Force.

Sincerely yours,

[Signature]

Director