



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

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NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

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JUNE 6, 1983

The Honorable John G. Tower
Chairman, Committee on Armed Services
United States Senate



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Dear Mr. Chairman:

Subject: Evaluation of the Unit Cost Exception Reports
on the High Speed Anti-Radiation Missile
(GAO/MASAD-83-29)

The High Speed Anti-Radiation Missile (HARM) is a joint Navy and Air Force program with the Navy designated lead service. Although a joint program, both services prepared unit cost exception reports. We reviewed four unit cost exception reports submitted by the Secretaries of the Navy and the Air Force explaining why unit costs for HARM increased. Within a 4-month period, each service submitted two unit cost exception reports. The first set, submitted in December 1982, covered the period from March 1981 to September 1982. The second set, submitted in March 1983, overlapped the first, covered the period from December 1981 to December 1982.

The reports submitted generally provided the unit cost information required by law. However, the reports did not present a complete picture of a joint Department of Defense program. Each service based its program estimates on different acquisition strategies even though only one strategy can be followed. In addition, the reports did not disclose other reasons contributing to the differences in unit costs or fully explain why costs increased. Since separate reports were submitted, they should have clearly disclosed all differences and any implication on costs.

This review was made as part of our continuing examination of unit cost exception reports. In conducting this review, we contacted officials in the HARM project office as well as cost analysts in the Navy, Air Force, and at the Office of the Secretary of Defense. In addition, we reviewed the Navy's and the Air Force's Selected Acquisition Reports, unit cost exception reports, a HARM cost study team report, and other supporting documentation.

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NO EXPLANATION PROVIDED FOR
DIFFERENCES IN UNIT COST

The Navy and the Air Force are procuring identical missiles, but they reported substantially different unit costs. Their exception reports explain cost changes for each service but do not explain why the Navy's unit cost estimate was higher than the Air Force's.

	<u>Unit Cost Estimates</u>	
	<u>September 1982</u>	<u>December 1982</u>
Navy	\$439,000	\$433,000
Air Force	<u>327,000</u>	<u>362,000</u>
Difference	<u>\$112,000</u>	<u>\$ 71,000</u>

Although the Air Force and the Navy include cost for development, flyaway, support, and initial spares, no explanation is given for the difference in their estimates. Our analysis of the \$71,000 difference as of December 31, 1982, showed the following:

- As the service responsible for HARM development, the Navy bears approximately 90 percent of the development costs. This amounted to a difference of about \$35,000 per missile.
- The Navy acquisition strategy calls for competition at the prime contractor level and a moderate production buildup rate. The Air Force acquisition strategy presumes a single contractor and a more rapid production buildup rate which reduces their estimates of the flyaway cost. This and other factors resulted in a difference of \$14,000 per missile at the flyaway level.
- Regarding support and initial spares, the services have different basing plans and support concepts. The Navy, with more locations to support, reports somewhat higher support costs. Therefore, it allocated approximately \$22,000 per missile more than the Air Force.

A DECISION IS NEEDED ON THE
PROCUREMENT STRATEGY

The Navy and the Air Force disagree over the procurement strategy to be followed at the prime contractor level. Consequently, each service based its unit cost estimates on different procurement assumptions.

Key concerns of the Air Force appear to center on whether a second prime source would be cost effective and its desire to obtain the production missiles at the most rapid production rate possible. In light of a recent reduction in the quantity of missiles, the Air Force proposed that all the fiscal year 1983 funds be used to fund a single contractor instead of beginning a second source qualification.

The Navy favors a dual source approach. According to the Navy, the benefits of competition at the prime level offset any additional cost which, in turn, could be eliminated by possible foreign sales. At the close of our work, program officials told us that new cost estimates show an \$850 million cost savings if a dual source procurement strategy is followed at the prime contractor level. We have not examined the basis for that estimate.

Despite congressional intent to develop a second HARM prime contractor, the Department of Defense has not decided on the procurement strategy. The Congress appropriated \$80 million in the fiscal year 1983 budget to develop a second source. According to program officials, the Defense Systems Acquisition Review Council met on March 30, 1983, and the Secretary of Defense issued a memorandum on April 20, 1983, citing his intent to use only one prime contractor. However, according to a Department of Defense official, the Secretary, as of May 12, 1983, has not rendered a final decision on HARM's procurement strategy. Apparently, additional consideration is being given to the Navy's new cost estimates.

KEY REASON FOR COST INCREASES NOT IDENTIFIED

Independent Navy cost estimators who participated in a March 1982 study to analyze HARM program cost and to develop a new cost estimate, and others independent of HARM's management, agreed that system complexity was a key reason for the increased cost estimate. In developing the new cost estimate, the study team recognized the difficulty of predicting the costs of HARM without previous experience with a system as complex. The study

team reported that some of HARM's major components were more difficult to design and fabricate than anticipated. In addition, it incorporates new technology which requires labor intensive calibration to meet specifications on each missile. The Air Force did not perform its own independent analysis but was satisfied with the study team's conclusions.

Although both the Navy and the Air Force consider HARM to be a technologically advanced missile, neither specifically cited complexity as a major cause for cost increases. Instead, inflation, changing quantities of missiles, and increased labor hours are among the reasons given for increasing HARM costs.

CONCLUSIONS

The unit cost reports submitted on HARM illustrate significant differences of opinion by the Navy and the Air Force on the direction of the program. In this case, the separate reports reflected an Air Force plan for a single prime contractor and a Navy plan for dual prime contractors. Where such disagreements exist in a joint program, it appears that responsibility exists within the Department of Defense to reconcile these differences before reports are submitted to the Congress.

Due to the numerous changes that have taken place in the program since the unit cost exception reports were submitted, the reports may be outdated and may have limited use in current program evaluations.

We discussed the contents of this report with program officials but did not request official Department of Defense comments due to time constraints.

We are also sending this report to the Chairmen, House Committee on Armed Services and House and Senate Committees on Appropriations. Copies are being sent to the Director, Office of Management and Budget, and to the Secretary of Defense.

Sincerely yours,



Frank C. Conahan
Director