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REPORT BY THE COMPTROLLER  
GENERAL OF THE UNITED STATES

THE ARMY'S STANDOFF TARGET  
ACQUISITION SYSTEM--A  
PROGRAM HAVING DEVELOPMENT  
DIFFICULTIES

D I G E S T

The Standoff Target Acquisition System (SOTAS) is a \$1.1 billion Army program to develop an airborne radar system to detect and locate moving targets at distances far beyond the forward edge of the battle area. Although experimental SOTAS models have been fielded in Europe for about 2 years, a better model, operating from a new helicopter with an advanced radar and a jam-resistant data link, is now in development. (See pp. 1 to 3.)

SOTAS can add a significant military capability to the Army. However, the system has experienced technical difficulties which are causing significant delays in the program's schedule and which could signal substantial cost overruns. Principally, the problems arose because SOTAS did not lend itself to the fast-paced development effort the Army has attempted in order to field the system quickly. The system's initial operating capability date has slipped several years.

The Department of Defense chose to expedite development of SOTAS by curtailing some of the testing normally done in the advanced development phase and by placing the next phase--engineering development--on a very ambitious schedule. However, the system being developed in the engineering development phase is significantly different and more advanced than the model used in Europe.

Difficulties have been compounded because

--the most critical components involved advanced technology and were creating technical problems that were not anticipated by the Army and its contractors (see pp. 7 and 8);

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--a critical component that is being developed, the data link, has to meet the requirements of two other programs that are unrelated to SOTAS (see p. 7);

--the management of the major SOTAS components--the helicopter, the radar, and the data link--has been diffused among three project offices which operate independently and are separately responsible for the performance of the components they manage (see p. 10); and

--the SOTAS project office has not been able to provide the necessary intensive program management because of limited resources. (See p. 11.)

The Army expects SOTAS to be a high-priority target. This dictates that SOTAS be made as survivable as possible. The Army's analysis of SOTAS survivability, made in 1978, was based on threat assessments that were not current at that time. New developing threats have prompted an updated survivability analysis, which is due to be completed this spring. There are indications that it is technically feasible to improve the system to counter the increased threat. (See pp. 12 to 16.)

SOTAS is using the Black Hawk helicopter modified for the SOTAS target acquisition mission. Black Hawk reliability demonstrations shows that a mission abort due to a malfunction can be expected with a frequency more than twice the rate the Army considers acceptable. Unless there is substantial improvement, more SOTAS helicopters may be required to accomplish the SOTAS mission. (See pp. 17 to 19.)

### RECOMMENDATIONS

GAO recommends that the Secretary of Defense require the Army to

--perform a sufficient number of integrated tests involving the helicopter, radar, and data link to assure that the SOTAS will meet its performance and reliability requirements and

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--reevaluate quantity requirements for the SOTAS helicopters based on the Black Hawk's demonstrated mission reliability.

GAO did not request official comments on this report because of the tight reporting deadline. Instead, a draft of this report was discussed with high level officials associated with the management of the program to assure that the report is accurate and complete. Their points of view are included as appropriate.