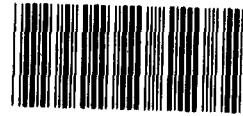


GAO

Testimony



141343

For Release
on Delivery
Expected at
9:30 a.m. EDT
Friday,
May 11, 1990

Circumstances Surrounding the ASPJ Limited
Production Decision

Statement of
Louis J. Rodrigues, Director, Command, Control,
Communications, and Intelligence Issues
National Security and International Affairs
Division

Before the
Subcommittee on Federal Services
Committee on Governmental Affairs
United States Senate



048485 / 141343

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the Airborne Self-Protection Jammer (ASPJ) program, which is to develop a common defensive electronic countermeasure system for tactical aircraft.. At the request of this Subcommittee, we have examined (1) how ASPJ test results were reported and used in the low-rate initial production decision and (2) the Department of Defense (DOD) Inspector General's (IG) conclusions from its audit of the ASPJ program.

Results of operational testing were presented at briefings of cognizant boards and committees prior to the low-rate initial production decision. Some of the briefings may have been overly optimistic. Regardless of the test results or how they were reported and interpreted, decisionmakers approved low rate initial production knowing that the ASPJ had not satisfactorily met exit criteria.

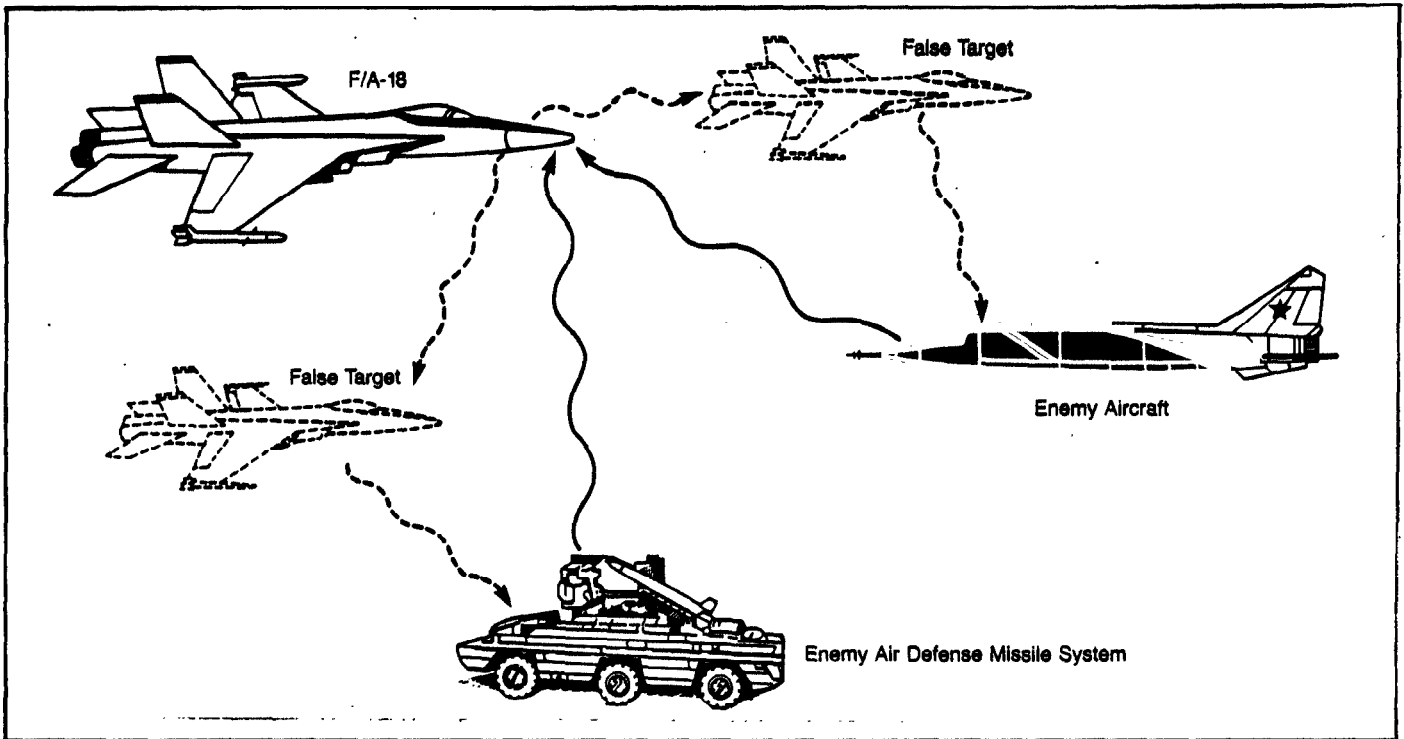
DODIG recommended stretching out deliveries and eliminating follow-on limited production decisions. We agree with the IG's recommendation since it would allow time for adequate operational testing thereby reducing program risks.

PROGRAM BACKGROUND

The ASPJ program began as separate Navy and Air Force development programs. In 1976, DOD directed the two services to jointly develop an advanced standardized system that could be used on a number of tactical aircraft and designated the Navy as the lead service. DOD awarded the full-scale development contract in 1981 to ITT Corporation and Westinghouse Electronics Corporation. The initial acquisition strategy was to eventually qualify both contractors to build the entire system and thereby open subsequent procurement to annual competition between the two. As of 1988, the Navy and Air Force planned to buy about 2,400 ASPJ systems--900 and 1,500 units, respectively--with an estimated program cost of \$4.8 billion. In January 1990, the Air Force terminated its participation in the program.

ASPJ is intended to increase aircraft survivability by masking its location or deceiving enemy radar as to the true location of the aircraft as shown in figure 1.1.

Figure 1.1: How the ASPJ Works to Deceive Enemy Radar



ASPJ is supposed to provide tactical fighter aircraft jamming capability in a high density threat environment. It is designed to automatically engage multiple threats simultaneously and overcome the threats it considers most dangerous by selecting the most appropriate defensive response from a variety of preprogrammed noise and deception jamming techniques. It must be capable of providing self-protection against the threat beyond the year 2000.

ASPJ TESTING PROGRAM

The purpose of the ASPJ test program is to determine whether the system is capable of effectively countering defensive threat systems, that is surface-to-air missiles and anti-aircraft artillery guns, and airborne radar. In accordance with DOD guidance, the test program is structured in two distinct but overlapping phases--developmental and operational test and evaluation. Developmental test and evaluation assists the engineering design and development process and verifies that technical specifications are met. Operational test and evaluation assesses a system's operational effectiveness and suitability. Initial operational testing is used to predict potential operational effectiveness and suitability. After the production decision, follow-on operational testing verifies operational effectiveness and suitability.

The Navy and Air Force conducted separate developmental testing programs from 1986 to 1988. The basic ASPJ is a five-box, 255-pound, internal system for FA-18 aircraft. In June 1986, the Navy began testing at the Naval Air Test Center, Patuxent River, Maryland, with the basic system, in the F-18A. The system for the F-16 and F-14 aircraft is referred to as the common ASPJ and adds two more boxes and about 90 pounds to the basic system. In January 1987, the Air Force began testing at Eglin Air Force Base, Florida, with the seven-box system in the F-16A.

Operational testing started in July 1988 and was completed in February 1989 using the full-scale development model integrated into the Navy's F-18A and installed on, but not integrated into, the Air Force's F-16A. System integration is required to test ASPJ's compatibility with the aircraft's other avionics. The Air Force Operational Test and Evaluation Center and the Navy's Operational Test and Evaluation Force evaluated the test results against the performance requirements in the Test and Evaluation Master Plan. The Air Force performed laboratory tests at its electronic warfare simulation facility in Fort Worth, Texas, and flight tests at Eglin Air Force Base. The Navy conducted flight tests at the Naval Weapons Center, China Lake, California, and Navy and Air Force test ranges in Nevada.

REPORTED TEST RESULTS

The Navy completed its report on operational testing in April 1989, but the Air Force did not finalize their report until August 1989. However, results of these tests were presented at briefings to cognizant boards and committees prior to the low-rate initial production review in June 1989. These briefings included the

-- Naval Air System Command Acquisition Review Board meeting of April 20, 1989;

- Navy Program Decision Meeting of May 10, 1989;
- C3I Systems Committee Review of May 31, 1989; and
- Defense Acquisition Board low-rate initial production review on June 12, 1989.

Some of the briefings on test results may have been overly optimistic. As the IG observed, these briefings may have been influenced by inappropriate direction from the Naval Air Systems Command's Acquisition Review Board. At its April 20, 1989, meeting, the Board denied approval to go forward to the next review level--the Navy Program Decision Meeting--because Navy and Air Force testers had not provided a clear supportive recommendation for the low-rate initial production decision. The Board also recommended that Navy and Air Force test organizations stress positive test results in future program briefings. In fact, Navy and Air Force test reports show that, although required during initial operational testing, the ASPJ did not demonstrate potential operational effectiveness and suitability.

Navy testers concluded that the ASPJ was marginally operationally effective and marginally operationally suitable. To become potentially operationally effective, the system had to be tested against and meet other known threat requirements, and

to become potentially operationally suitable, certain critical operational issues, such as reliability, maintainability, and built-in-test requirements, had to be resolved. Navy testers recommended disapproval of ASPJ for limited fleet introduction until several corrective actions were taken and verified during additional testing.

According to the Air Force test report, all critical operational issues and objectives in the test plan were assessed, but many ratings were undetermined because the full-scale development version of the ASPJ was not mature. In fact, the testers concluded that critical operational suitability issues were undetermined because the system tested was not production representative and therefore not ready for suitability testing. Like the Navy, Air Force testers did not specifically recommend low-rate initial production and, in a highly qualified statement, concluded that tests of the production version would be necessary to determine the system's effectiveness and suitability.

On May 17, 1989, the Office of the Director of Operational Test and Evaluation reported to the Assistant Secretary of Defense for, Command, Control, Communications, and Intelligence, on ASPJ's operational test results. The Office concluded that ASPJ was marginally operationally effective and marginally operationally suitable. It also concluded, as did the Navy, that the system should not be deployed until a successful operational

test is conducted. Given only the options of approving low-rate initial production or program termination, the Office recommended approval on July 17, 1989. (Details on the Office's position and rationale for its decision are classified.)

THE LIMITED PRODUCTION DECISION

Regardless of the quality of the test results or how they were reported and interpreted, the Deputy Secretary of Defense and Under Secretary of Defense for Acquisition knew that the ASPJ was marginally operationally effective and marginally operationally suitable. They were aware that the ASPJ had not satisfactorily met exit criteria for the authorization to proceed from full-scale development to low-rate initial production. Nevertheless, on August 7, 1989, the Under Secretary recommended approval of low-rate initial production, and on August 16, 1989, the Deputy Secretary concurred in that recommendation.

According to the Defense Management Report to the President, dated July 1989, major acquisition programs must meet established baseline requirements--cost, schedule, and performance--or exit criteria before they can transition from one milestone to the next. In commenting at a July 11, 1989, DOD news briefing on the report, the Deputy Secretary of Defense noted that the process of developing new systems has to be

disciplined so that when a program proceeds from one acquisition phase to another, DOD knows it met all the criteria. From the documents we reviewed, it appears that the decision to approve low-rate initial production for ASPJ was based on management's prerogative rather than strict adherence to the principles of DOD's acquisition guidance or the Defense Management Report to the President.

The Under Secretary offered two options to the members of the Defense Acquisition Board--approve limited production or terminate the program. A third option to delay the decision in the hope that further testing would provide substantiation for a favorable decision was considered. This option could have been implemented using the 20 production verification units scheduled for delivery from November 1989 to April 1991. However, members of the Board argued that termination or delay would have an adverse effect on operational aircraft and on the vendor base, the number of vendors in the program. They believed that a prolonged testing period would cause the vendor base to disappear and result in operational requirements not being met. Although these arguments were undocumented, the Deputy Secretary and Under Secretary apparently recommended approval for the decision largely based on their concern for vendor base dry up and impact on operational aircraft. As the DOD/IG reported, it could not validate these concerns during its audit.

DOD/IG AUDIT RESULTS

The recent DOD/IG audit confirms that problems with the ASPJ program will probably be exacerbated by the Air Force withdrawal from the program. One of the most obvious impacts is a significant increase in unit cost as a result of the drop in planned buys for the ASPJ from 2,400 to approximately 800 units.

We agree with the IG's major recommendation calling for the elimination of follow-on limited production decisions. Low-rate initial production should be limited to the 100 units currently on contract, especially as the total program buy is expected to drop to approximately 800 units. In addition, we agree with the DOD/IG's proposal to stretch out deliveries of low-rate initial production units so that complete and adequate operational test and evaluation can be accomplished without a break in production. If these recommendations are implemented, DOD would substantially reduce program risks by assuring the system demonstrates required performance prior to further production commitments.

- - - - -

Mr. Chairman, before concluding my testimony, I would like to express our concern about the implications of the Air Force withdrawal. As we have reported a number of times during the 1980s, Air Force and Navy electronic warfare programs are marked

by extensive and unnecessary proliferation of systems to meet a common threat. However, the ASPJ has represented a joint Air Force and Navy program offering potential for achieving the significant benefits inherent in common-service systems. These benefits include elimination of duplicative research and development costs, savings in production resulting from larger quantity buys, and reduced logistics costs stemming from common spare parts, maintenance equipment, and training.

The current concern about the pending ASPJ unit price increase resulting from the Air Force withdrawal clearly reinforces our belief that common systems can result in significant savings. If the Air Force decides to develop and procure a new internal jammer to meet its needs, our concern with unnecessary proliferation and duplicative developmental costs will be further reinforced.

I want to make it clear that GAO is neither an advocate nor an opponent of the ASPJ. However, as we have recommended in the past, the Air Force and Navy should acquire a common jammer to meet requirements--whether it be ASPJ or an alternative.

Mr. Chairman, this concludes my testimony. We will be pleased to answer any questions you or members of the Subcommittee have.