



United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

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March 1, 1996

The Honorable David Pryor
United States Senate

Dear Senator Pryor:

This letter is to inform you that we have completed our review of the Navy's plans for testing the Airborne Self-Protection Jammer (ASPJ) on the F-14D Aircraft. As you requested, we sought to determine how the Navy's F-14D Test and Evaluation Master Plan would be modified to account for the testing of ASPJ and demonstrate that the F-14D will operate more effectively with ASPJ than without it. Additionally, we sought to determine what impact the Office of the Director of Operational Test and Evaluation (DOT&E) had on the development of the plan.

Our review indicates that DOT&E had a major impact on the final F-14D Test and Evaluation Master Plan and test plan annex. At DOT&E's insistence the Navy revised its plan to provide for discrete and more thorough testing of ASPJ than the Navy had originally intended. Thus, if the revised plan is carried out, the Navy should be able to determine whether the F-14D is more survivable with ASPJ than without it and obtain data relevant to ASPJ's suitability for the aircraft. Given the stated purpose of the testing, that is, to support a decision to deploy ASPJ units currently in storage and not try to use F-14D test results to justify further ASPJ production, we believe that the test plan is adequate.

The Navy's plan initially provided for assessing the integration and compatibility of ASPJ with other F-14D avionics and the survivability of the F-14D based on its electronic warfare suite as a whole. The Navy plan contained no provisions for assessing ASPJ's specific contribution to the aircraft's survivability or suitability for the aircraft. Revisions made at DOT&E's insistence include:

- A critical operations issue to determine whether the F-14D is more survivable with ASPJ as part of the electronic warfare suite than without it,
- 18 additional flight tests to measure ASPJ's effectiveness against air-to-air threats, and
- A requirement to gather suitability data pertaining to ASPJ, including its built-in test equipment.

As a result, the modified test plan provides for 36 flights dedicated to measuring ASPJ's effectiveness against air-to-air threats (18 flights) and surface-to-air threats (18 flights). For each segment of 18 flights, 9 flights will be done with ASPJ turned on and 9 with it off, to enable measurement of ASPJ's contribution to aircraft survivability. The tests are to be done against a credible mix of threats.

The modified plan also includes testing of ASPJ's compatibility with other aircraft systems that are often sensitive to self-jamming such as the radar and radar warning receiver. ASPJ will also be tested to determine its effect on friendly aircraft. According to the plan, suitability data will be gathered relating to ASPJ's reliability and maintainability. Built-in test equipment will be tested before, during, and after each flight.

We do caution, however, that the modified test plan does vary from operational testing done to support a production decision in the following areas. It provides for fewer flights than would be done in a normal operational evaluation, resulting in lower confidence in the test results. It also contains no quantitative criteria for evaluating ASPJ effectiveness or suitability, relying instead on better than nothing criteria that will make it difficult to determine ASPJ's precise worth. Finally, because the Navy configured the F-14D to carry only ASPJ, there is no provision in the modified test plan for comparison to alternative means of aircraft self-protection as was done in the 1992 operational evaluation of ASPJ.

To address our objectives, we performed work at the Office of the Director of Operational Test and Evaluation and the Naval Air Systems Command, Washington, D.C.; and Commander, Operational Test and Evaluation Force, Norfolk, VA. We interviewed responsible agency officials and reviewed applicable documents. We conducted our review between November 1993 and February 1996 in accordance with generally accepted government auditing standards.

We appreciate the courtesies extended to us during the review. If you or your staff have any questions concerning the observations in this letter, please contact me at (202) 512-4841. Major contributors to this assignment were Jack Guin, Frank Papineau, Carol Kolarik, David Hand, and Charles Ward.

Sincerely,



Louis J. Rodrigues
Director, Defense Acquisition
Issues

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