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FOREIGN MILITARY SALES

Use of FMS in Proposed Commercial Sale of Airborne Self-Protection Jammer



94-31941

National Security and
International Affairs Division

B-256864

June 16, 1994

The Honorable David Pryor
Chairman, Subcommittee on Federal Services,
Post Office, and Civil Service
Committee on Governmental Affairs
United States Senate

The Honorable William V. Roth, Jr.
Ranking Minority Member
Committee on Governmental Affairs
United States Senate

As you requested, we are providing information on the use of the Foreign Military Sales (FMS) program in connection with the proposed commercial sales of the Airborne Self-Protection Jammer (ASPJ) to foreign governments. Based on discussions with Senator Pryor's office, we addressed the following issues:

- Did the Department of Defense (DOD) violate its policy that the Under Secretary of Defense must approve the foreign military sales of major weapons that have not successfully passed operational test and evaluation (OPEVAL) by authorizing the sale of the ASPJ's system software through the FMS program?
- Did certain correspondence from DOD to you accurately portray DOD's decision to provide FMS support for the sale of the ASPJ?
- Did DOD's decision to allow the foreign military sale of the ASPJ software and integration services after ASPJ failed operational testing raise concerns about U.S. liability and national security?
- Why are foreign governments still interested in purchasing the ASPJ after it failed operational testing and the United States terminated further procurement of the system for U.S. aircraft?
- What information on ASPJ test results was provided to prospective foreign buyers?

Background

In 1981, DOD awarded a full-scale development contract to ITT Avionics and Westinghouse Electric Corporation (ITT/W) to provide an advanced standardized jammer. The jammer was intended to detect and neutralize enemy radars for several U.S. inventory aircraft, including the Air Force's F-16 and the Navy's F-18 and F-14 aircraft. The Air Force dropped out of the program in January 1990 because of budget constraints and poor test

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results and decided to equip its F-16s with either the ALQ-131 or the ALQ-184 jammer. The ASPJ failed the Navy's OPEVAL in August 1992, and DOD terminated production of the system for U.S. aircraft in December 1992 after receiving 95 of 136 ASPJ units through low-rate initial production. DOD authorized use of these units on the F-14D for that aircraft's OPEVAL. The Navy has initiated its Integrated Defensive Electronic Countermeasures Program to develop an electronic warfare suite for its F-18 aircraft by the year 2001.

In December 1991, DOD issued a memorandum requiring the specific approval of the Under Secretary of Defense for Acquisition before the foreign military sale of any major weapons system that has not successfully completed operational test and evaluation. This became known as the Yockey policy.¹ The basis for this policy was a concern that it would be difficult for a foreign country to obtain logistical support for a system that the U.S. government had decided not to acquire.

Prior to the establishment of the Yockey policy, DOD had decided that any jammer selected for F-16 purchases by South Korea and F-18 purchases by Finland and Switzerland must be made through the FMS program. Since the ASPJ was expected to enter the U.S. inventory as a standard item upon successful completion of OPEVAL, aircraft procurement documents prepared prior to OPEVAL for the Swiss and Finnish fighter aircraft programs used the ASPJ for pricing estimates in lieu of a specific jammer, whereas the South Korean program specified the ASPJ.

In May 1992, DOD issued formal guidance on the Yockey policy. DOD officials then advised customers through written correspondence and provisos in Letters of Offer and Acceptance (LOA) that any foreign military sale of the ASPJ would depend on the system's successfully passing OPEVAL. Despite the jammer's failure to pass OPEVAL, the countries continued to express an interest in the ASPJ. They also expressed a strong preference to use the FMS program because (1) they would rather buy a complex weapon system and all its subsystems from a single source, in this case, the U.S. government; (2) they expect long-term hardware and software support to be available through the U.S. government; and (3) they expect the U.S. government to work with contractors to ensure that the system will meet agreed-upon specifications. All the countries stated that a commercial-only sale would be unacceptable.

¹Donald Yockey was the Under Secretary of Defense for Acquisition from January 1991 to January 1993.

DOD briefly considered prohibiting ASPJ sales completely but rejected this option because it would be unfair to ITT/W and might be susceptible to legal challenge. In response to requests from the countries for the ASPJ, DOD considered allowing the sale of the ASPJ as a nonstandard FMS case.² DOD rejected this option due to concerns that such a move might be interpreted as an attempt to reestablish the ASPJ as an U.S. inventory item. Therefore, DOD decided to authorize commercial sales of the ASPJ system, provided the export licenses contained the proviso that potential customers be advised that U.S. procurement of ASPJ had been terminated because it failed to successfully complete OPEVAL. Because of national security, flight safety, and technical concerns, DOD finally decided to permit the commercial sale of the hardware but provide the system software and integration services on a government-to-government basis through FMS procedures. ASPJ export marketing licenses were revised in April 1993 to require this arrangement.

Results in Brief

The ASPJ system, including its hardware and software, failed OPEVAL. However, DOD's decision to permit the sale of the ASPJ's software through the FMS program does comply with the Yockey policy because the Office of the Under Secretary of Defense for Acquisition approved the sale based on national security and technical concerns. This decision was not consistent with statements made by DOD to you in congressional correspondence we reviewed that the FMS sale of the ASPJ would not be allowed. DOD did inform you that it intended to integrate the jammer through FMS procedures.

DOD's decision to permit the foreign military sale of the ASPJ software after the system failed operational testing does not raise any U.S. financial liability or national security concerns. It may raise dispute resolution issues because of the general difficulty of establishing whether a performance problem is due to a hardware or software deficiency. The LOA states that the United States does not warrant or guarantee any of the items sold unless specifically stated. The FMS nature of the software sale would not make the U.S. government responsible for any specific performance of a commercially procured item such as the ASPJ hardware. However, the U.S. government, as the contracting party, would be responsible for the contractor's adherence to software design specifications which are stated in the LOA. Moreover, foreign government officials stated that they expect items to meet the specifications included in the LOA and look to the United States, rather than the contractor, to ensure conformance. There are no cost implications for the U.S.

²DOD generally limits FMS support to standard U.S. military inventory items. Under special circumstances—at the request of the foreign government and for installation on a major weapon system—FMS support can be authorized for nonstandard items not in the U.S. inventory.

government should disputes arise because FMS buyers are responsible for all program costs.

Foreign government officials provided several reasons for their continued interest in procuring the ASPJ, despite the system's failure to pass OPEVAL and the subsequent DOD decision to terminate U.S. production. These officials stated that (1) the ASPJ will meet each country's operational needs if it performs to agreed-upon design specifications,³ (2) DOD agreed to provide life-cycle software support services via a funded FMS case, (3) the ASPJ is close to being fully integrated on the F-18, and (4) the F-18 was wired for the ASPJ. Regarding the ASPJ's ability to meet each country's operational needs, Swiss and Finnish officials stated that they had not yet received all information on the OPEVAL process and related documents, which would permit a more informed assessment of the ASPJ's operational capabilities.

**Office of the Under
Secretary of Defense
for Acquisition
Authorized Foreign
Military Sale of ASPJ
Software**

The ASPJ system, including its hardware and software, failed OPEVAL. The failure was associated with certain software problems—the most obvious problem being the performance of the built-in-test software, which contributed to the system's failure to meet the test's suitability criterion.⁴

DOD's decision to permit the sale of the ASPJ software through FMS procedures, however, does comply with the Yockey policy because the Office of the Under Secretary of Defense for Acquisition approved the sale. In implementing this decision, Navy officials noted that national security, safety of flight concerns, and the interactive nature of the jammer and aircraft software components⁵ dictated the need to sell the ASPJ's software and integration into the aircraft through the FMS process. This decision was

³U.S. operational needs assume that U.S. forces may need to be deployed anywhere in the world. In contrast, Swiss and Finnish operational needs are driven by concerns over specific threats to their countries. As a result, the ASPJ may satisfy a country's operational needs even though it does not meet U.S. effectiveness standards. LOA jammer specifications would be based on the country's needs.

⁴The ASPJ's software has two major components. The user data file contains the threat data and jamming techniques designed to defeat the identified threat. The operational flight program collects incoming radar information, compares it against the threat data, and executes the appropriate jamming response. The built-in-test is a part of the operational flight program and tells the pilot whether the system is functioning properly.

⁵As explained by Navy officials, the F-18 is a highly integrated aircraft in which all software systems such as radars, avionics, mission control, navigation, and jammers are linked together through the aircraft's operational flight program. These systems undergo continuous updating and modification due to changes in threat or technology. A change in one system could have a cascading and possibly negative effect on the others. As a result, close government oversight of both the aircraft and ASPJ's software components is required.

consistent with long-standing DOD policy on the need to protect classified information and address all safety of flight concerns.

DOD's Approval of an FMS Software Transfer Was Not Consistent With Statements Made to Senators Pryor and Roth

Senator Pryor's office asked us whether certain correspondence from DOD to you accurately portrayed DOD's decision to provide FMS support for the sale of the ASPJ. DOD did not communicate its decision to provide the ASPJ's software through the FMS program in the congressional correspondence we reviewed. However, DOD did inform you of its intention to integrate the jammer onto the aircraft through the FMS program.

In a September 8, 1993, letter, the Under Secretary of Defense for Acquisition informed you that he was not approving the ASPJ for the FMS program. He restated this in a March 15, 1994, letter to Senator Pryor reasoning that such a sale might imply a warranty on a system that would not be procured for U.S. aircraft. This second letter was written about 5 months after the Office of the Under Secretary of Defense for Acquisition gave final approval to provide the ASPJ's software and related threat data and jamming techniques through the FMS program.

We noted that the letter of March 15 describes in general terms DOD's rationale for handling the integration of jammers on U.S. aircraft through an FMS case. We also noted that the Under Secretary of Defense for Acquisition provided you with a copy of a February 2, 1994, letter to other Senators outlining DOD's position on the proposed sale of the ASPJ to South Korea, Switzerland, and Finland. This correspondence clearly indicates that DOD offered FMS integration of the jammer to the South Koreans due to safety of flight, aircraft performance, and national security concerns. The letter stated that this position would also apply to Finland and Switzerland.

Financial Liability and National Security Concerns Were Properly Addressed, but Commercial/FMS Arrangement Could Create Problems for DOD

LOAS state that the U.S. government does not warrant or guarantee any items sold under the LOA unless specifically stated. Generally, disputes are worked out between the United States and the buying country under provisions in DOD's Security Assistance Management Manual. The Defense Security Assistance Agency General Counsel stated that only two disputes between the United States and a buying government went to international arbitration for settlement through a preexisting mechanism.

While the United States is relieved of any legal or financial liability for problems occurring under a foreign military sale, it would be expected to

resolve contract disputes. Foreign government officials stated that they expect items to meet the specifications included in the LOA and look to the United States, rather than the contractor, to ensure conformance. Use of separate procedures for hardware and software sales might make such disputes more contentious because experience has shown that it is often difficult to trace system performance problems to a discrete hardware or software problem. There are no cost implications for the U.S. government should such disputes arise because FMS buyers are responsible for all program costs.⁶

National security concerns were protected in DOD's proposal for the software/hardware arrangement. DOD agencies that commented on export license applications for defense items adhered to DOD's long-standing policy, which mandates the government-to-government transfer or foreign military sale of national security information such as electronic combat data and related software found in the ASPJ and similar jammers.

Many Factors Influence Foreign Buyers' Interest in the ASPJ

After the ASPJ failed OPEVAL and dropped out of U.S. consideration, Finland and Switzerland were told that they could purchase (1) a standard U.S. inventory jammer, such as the Lockheed/Sanders-built ALQ-126B, through the FMS program; (2) the ASPJ, through commercial/foreign military sale procedures; or (3) a mutually agreed-upon alternative nonstandard jammer system from another manufacturer.⁷

Finnish officials said that the ALQ-126B was not an acceptable option because the system does not meet operational requirements. Swiss officials stated that if the ASPJ could not be procured through the standard Swiss procurement process, the ALQ-126B would be compared with other options. The Finnish and Swiss officials also provided several reasons for their continued interest in procuring the ASPJ, despite the system's failure to pass OPEVAL and the subsequent DOD decision to terminate U.S. production. These officials stated (1) the ASPJ will meet each country's operational needs if it meets agreed-upon design specifications; (2) DOD has agreed to a partial FMS transfer, which includes life-cycle software support services; and (3) the ASPJ is close to being fully integrated on the F-18. Finnish officials also noted that the aircraft was wired to accept the ASPJ.

⁶Administrative charges are added to all FMS cases to recover expenses of sales negotiations, case implementation, and administration.

⁷Alternative internal U.S.-made jammers are Loral's ALQ-178 and the ALQ-202 and Raytheon's ALQ-187. The ALQ-178 has been installed on F-16 fighter aircraft in Israel and Turkey. The ALQ-202 has been proposed for both the F-16 and F-18. The ALQ-187 has been installed on Greece's F-16 aircraft.

Neither Switzerland nor Finland has ruled out the selection of an alternative system, noting that a final decision will involve the careful weighing of a number of factors. Other contractors have told the Swiss and Finns that, from a performance standpoint, they can provide systems that will also meet the two countries' operational needs. However, as with the ASPJ, these capabilities have not been demonstrated to the countries on an F-18. Both countries noted that one major issue in their decision is the cost of integration. They noted that, unlike the ASPJ, they would incur significant costs to integrate other jammers on the F-18. DOD officials also noted that the F-18 was not wired to accept competing jammers and these jammers are not currently configured for the F-18.

Swiss and Finnish officials noted that their F-18 aircraft programs have a jammer requirement. In response to our question, they also noted that if they were unable to buy the ASPJ, it would not jeopardize their aircraft purchases. However, the Swiss said inability to buy the ASPJ could have implications on future sales with the U.S. government.

Statements Attributed to a DOD Official Appear Inconsistent With DOD Policy

DOD policy prohibits U.S. officials from favoring one U.S. system over another when a competitive situation exists. DOD's Security Assistance Management Manual states that "Security Assistance Officials should support the marketing efforts of U.S. companies while maintaining strict neutrality between U.S. competitors." During this review, we found information relating to a DOD official's comments to foreign government representatives that appeared to indicate a preference for one U.S. jammer over others for their F-18 aircraft.

In August 1993, DOD and Swiss officials met to discuss the status of Switzerland's purchase of the F-18. A DOD summary of the meeting stated that Switzerland preferred the ASPJ but they only wanted it if the United States was using it and could be purchased through FMS procedures. The Deputy Secretary of Defense reportedly responded that if he were buying a jammer, he would buy the ASPJ. He added that ASPJ OPEVAL test standards were unrealistic and impossible to meet.

Finland issued a request for proposal in July 1993 after being notified that ASPJ would not be available for foreign military sale. Finland received several proposals from U.S. companies and at least one foreign company and has recently requested that the companies keep their offers open through September 1994. However, a summary of a meeting between DOD and Finnish officials in December 1993 indicated that the Deputy Secretary

of Defense made similar statements as he made to the Swiss about which jammer he preferred. Finnish officials noted that the Deputy Secretary of Defense, in an effort to show evenhandedness, agreed to provide U.S. software support for any U.S.-made jammer selected for the F-18.

Both these meetings were held before either country had formally committed to purchase a particular jammer. Finland was reviewing responses to its July 1993 request for quotations and Switzerland was holding informal discussions with manufacturers and Navy officials about alternative jammers.

In commenting on a draft of this report, a DOD official in the Office of the Secretary noted that Finland evaluated state-of-the-art jammers and decided they wanted the ASPJ, even after the ASPJ ran into DOD testing trouble and was canceled by DOD. He added that Finland and Switzerland studied the issue, and both nations insisted that the ASPJ was their first choice for the F-18s. According to this official, when the Deputy Secretary of Defense first met with the Finnish representatives, their question to him about jammers was not "What is the best jammer for us?" but "How can we buy and integrate the ASPJ on the F-18?" The DOD official indicated that the Deputy Secretary of Defense did not push the purchase of any particular system when he met with the Finns in December 1993. He was only discussing the most practical way the United States could assist them in making ASPJ work, that is, ASPJ integration in the F-18 funded through an FMS case. The DOD official indicated that his statements also applied in the Deputy Secretary's discussions with Swiss officials.

As previously indicated, neither Finland nor Switzerland has ruled out the selection of alternate systems.

Foreign Buyers Have Not Yet Received All Information on ASPJ Test Results

Swiss and Finnish officials stated that they had not yet received all information on the OPEVAL process or related documents, which would permit them to make a more informed assessment of the ASPJ's operational capabilities. As of May 1994, Swiss and Finnish officials had received some classified and unclassified performance data from DOD and contractor officials and through a review of open literature but had not yet received copies of classified OPEVAL results, which discuss the test results and system performance problems in detail.

Finnish officials noted that they had asked DOD for any information, including classified information, that would further document the ASPJ's

demonstrated operational capabilities. They noted that DOD was still processing this request and that they hoped to receive the requested information soon. The Finns also said that they are still missing the significant performance data that is essential to deciding how well the system meets their requirements. They added that a procurement decision could be made without this information but they would be less confident that the ASPJ could meet agreed-to specifications. Swiss officials said that they may ask for additional classified information to allow them to satisfy their normal procurement process of basing a decision on demonstrated capability. In commenting on a draft of this report, DOD officials stated that DOD will provide all releasable information to requesting customers.

Senator Pryor's office questioned whether the Finns and the Swiss had seen other documents and analyses that discuss alleged faults in the OPEVAL process. Finnish and Swiss officials stated that they had seen an ITT/W-prepared position paper that discussed past and current problems with ASPJ development and testing. ITT/W wrote the position paper as a direct response to points made by Senator Pryor in a February 1994 letter to the Secretary of Defense. The paper also raised technical issues about how well the ASPJ improved the F-18's survivability during OPEVAL. The position paper included several points discussed in an ITT/W-commissioned report of the OPEVAL process. Through an analysis prepared by the Institute for Defense Analyses, DOD's Office of Operational Test and Evaluation concluded that some statements in the ITT/W-commissioned report, which were also in the position paper, were incorrect as they related to flawed testing and unrealistic test scenarios. Neither Finland nor Switzerland reported seeing the ITT/W-commissioned analysis or the Institute's report.

Agency Comments and Our Evaluation

In written comments on a draft of this report, DOD generally concurred with our findings (see app. I). DOD did, however, clarify its position on our statement that DOD's decision to permit the foreign military sale of the ASPJ software was not consistent with DOD statements to Senators Pryor and Roth. DOD stated that its action was consistent with its statements and cited as confirmation the subsequent appeals of South Korea, Finland, and Switzerland to DOD to reconsider its decision *not* to sell the ASPJ through FMS procedures. DOD added that it does not view the no-FMS-sales position as contravening standard policies requiring government-to-government transfer of electronic combat data and related software through FMS procedures. According to DOD, the authorization for FMS transfer of the software was not a decision as such but a standard practice.

While we agree that the sale of the software through FMS procedures is a standard practice, the fact remains that DOD did not convey this information to the Senators given their expressed concerns over the use of the FMS program for the ASPJ.

We also made technical corrections to the report, as appropriate, based on DOD's comments.

Scope and Methodology

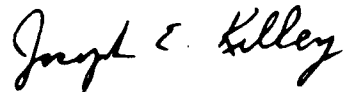
We discussed the issues in this report with officials in the Office of the Under Secretary of Defense for Acquisition, the Defense Security Assistance Agency, the Navy International Programs Office, and ASPJ and F-18 program offices and obtained documentation. We were unable to schedule a meeting with F-16 program officials before we prepared this letter. We also obtained information from the Department of State's Office of Defense Trade Controls. We met with Swiss and Finnish representatives to discuss their need for a jammer on their F-18s; the Swiss also provided a formal written response.

We asked RRT/W to provide information on certain matters. They did not do so by the time we completed this report. South Korean officials agreed to meet with us but were not able to schedule a meeting before we prepared this report.

We performed this work between February and May 1994 in accordance with generally accepted government auditing standards.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after its issue date. At that time, we will send copies to the Secretaries of Defense and State and interested congressional committees. Copies will also be made available to others on request.

Please call me on (202) 512-4128 if you have any questions. Major contributors to this report were Louis H. Zanardi, Barbara Schmitt, and Michael ten Kate.



Joseph E. Kelley
Director-in-Charge
International Affairs Issues

Comments From the Department of Defense

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



ASSISTANT SECRETARY OF DEFENSE

3300 DEFENSE PENTAGON
WASHINGTON DC 20301-3300



June 10, 1994

Mr. Joseph E. Kelley
Director-in-Charge
International Affairs Issues
National Security and International Affairs Division
U.S. General Accounting Office
Washington, DC 20548

Dear Mr. Kelley:

This is the Department of Defense (DOD) response to the General Accounting Office (GAO) draft report, "FOREIGN MILITARY SALES: DOD Use of FMS Program in Proposed Commercial Sales of the Airborne Self Protection Jammer," dated June 6, 1994 (GAO Code 711071), OSD Case 9704. The Department generally concurs with the draft report.

Although the DOD generally concurs with the draft, the Department would like to offer several comments for purposes of clarification and technical accuracy. First, the GAO indicates that the DOD decision to permit the sale of the Airborne Self Protection Jammer (ASPJ) software through the Foreign Military Sales (FMS) program was not consistent with DOD statements to Senator Pryor that FMS sale of the ASPJ would not be allowed. The DOD views this action as consistent with its statements to Senator Pryor. Subsequent appeals to DOD by Korea, Finland and Switzerland to reconsider the no-FMS-sale position of the Department is confirmation of the DOD view.

Second, the report refers to a compromise solution and hardware/software split decision in a manner that suggests a collective and concurrent determination by the Department to package the ASPJ sales in two parts, commercially sold hardware and FMS sold software and integration. That portrayal is misleading. The DOD decision on "commercial sale only" for the ASPJ was articulated on October 7, 1992, and was contingent only on the anticipated termination of the U.S. program. The formal offer of FMS integration of the system to the Korean Minister occurred in December 1993, although it was long the view of the Department that integration of any jammer, or any major subsystem on a U.S. developed aircraft for a foreign customer would be overseen by the U.S. through an FMS case--even were the jammer to be of foreign origin.



See p. 9.

See comment 1.

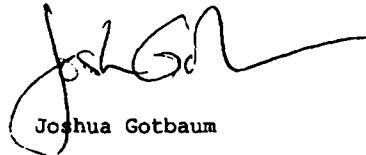
Appendix I
Comments From the Department of Defense

See comment 2.

Finally, the GAO indicates that the Department decided to permit the FMS sale of ASPJ software after the system failed operational testing and that this action is inconsistent with the DOD position of no-FMS-sale of the ASPJ system. The DOD does not view the no-FMS-sales position as contravening standard policies requiring government-to-government transfer of electronic combat data and related software through FMS procedures. The DOD authorization for FMS transfer of this information was not a decision as such. Rather, it was confirmation that standard practices would be followed.

The DOD appreciates the opportunity to comment on the draft report and wishes to express its appreciation for the highly professional manner in which the GAO evaluators conducted the review.

Sincerely,



Joshua Gotbaum

The following are GAO's comments on the Department of Defense's letter dated June 10, 1994.

GAO Comments

1. We included in the background section of the report a description of the events that led to DOD's decision to sell the ASPJ hardware commercially and the ASPJ software and integration services through FMS procedures. We revised the draft to eliminate any references that suggested a determination by DOD to package the sale of the ASPJ. Nevertheless, the DOD process resulted in the commercial/FMS sale.
2. We did not raise the issue of whether DOD's decision to permit the sale of the ASPJ software after the system failed operational testing was inconsistent with DOD's position not to sell the ASPJ through FMS procedures. We said that the decision complied with DOD policy because the Office of the Secretary of Defense approved the sale based on national security and technical concerns.