

Audit



Report

OFFICE OF THE INSPECTOR GENERAL

SUBCONTRACT AWARDS FOR THE
F-16 MULTINATIONAL FIGHTER
PROGRAM MID-LIFE UPDATE

Report No. 95-279

July 21, 1995

Department of Defense

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Acronyms

GAO	General Accounting Office
MLU	Mid-Life Update



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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ARLINGTON, VIRGINIA 22202-2884



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**MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE
(FINANCIAL MANAGEMENT AND COMPTROLLER)
DIRECTOR, DEFENSE LOGISTICS AGENCY**

**SUBJECT: Audit Report on Subcontract Awards for the F-16 Multinational Fighter
Program Mid-Life Update (Project No. 4FA-0031.01)**

Introduction

We are providing this report for your information and use. This report discusses the results of our evaluation of the Lockheed Fort Worth Company's (Lockheed's) source selection and award of subcontracts for the F-16 aircraft Mid-Life Update (MLU) Program. This audit was conducted in response to a request by the Supreme Audit Institutions¹ of Belgium, Denmark, Norway, and the Netherlands regarding the source selection process used by Lockheed for the award of subcontracts for the MLU to U.S. domestic companies and European participating industries.

Audit Results

European participating industries competed equally for subcontracts on the F-16 Mid-Life Update Program. European participating industries were awarded a total of \$303.3 million of the \$380 million available for foreign manufacture on the F-16 Mid-Life Update Program. Contractors complied with the Federal Acquisition Regulation and the Defense Federal Acquisition Supplement in the solicitation, source selection, and award process for subcontracts on the F-16 aircraft Mid-Life Update Program. No material management control weaknesses were identified.

¹The Supreme Audit Institutions are comparable to the U.S. General Accounting Office and report to their respective legislatures.

This report contains no recommendations, and is therefore not subject to the provisions of DoD Directive 7650.3.

Audit Objectives

The audit objectives were to evaluate the solicitation, source selection, and award of subcontracts for the F-16 aircraft MLU Program. We determined whether:

- o Lockheed complied with the Industrial Cooperative Agreement and gave European participating industries an opportunity to compete equally for subcontract work;

- o Subcontracts were awarded using full and open competition in accordance with the Federal Acquisition Regulation and the Defense Federal Acquisition Regulation Supplement in the solicitation, source selection, and award of subcontracts.

Scope and Methodology

Elements of Scope. We reviewed 15 out of 29 subcontracts designated in the Industrial Cooperative Agreement as having the highest probability for European participating industries to successfully compete with U.S. companies for subcontracts on the F-16 aircraft MLU Program. We reviewed the Defense Contract Management Command's assessment of Lockheed's purchasing system used to competitively solicit proposals from potential subcontractors. We also examined the contractor's source selection process. We reviewed negotiation documents such as price negotiation memorandums, and interviewed the Lockheed contracting officials. We also reviewed Lockheed's justification for why the foreign participating industries were not awarded the subcontracts.

Computer-Processed Data. We did not evaluate the accuracy of computer-processed data from Lockheed or the Lockheed Defense Plant Representative Office. Our audit procedures did not disclose any information that caused us to doubt that data.

Audit Period, Standards, and Locations. This program audit was performed from March 1994 through March 1995 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, and accordingly included such tests of management controls as were considered necessary. The fieldwork was completed as part of our audit of the Turkish F-16 aircraft coproduction program. Enclosure 2 lists the organizations we visited or contacted.

Management Control Program

We evaluated the effectiveness of the management controls that Lockheed used to select subcontractors for the F-16 aircraft MLU Program. We also

determined whether Lockheed selected subcontractors and awarded subcontracts to U.S. domestic and foreign companies based on full and open competition, and in accordance with the Federal Acquisition Regulation and the Defense Federal Acquisition Regulation Supplement. We identified no material management control weaknesses as defined by DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987. Because no material management control weaknesses were identified, this report does not address the self-evaluation aspects of the management control program.

Prior Audits and Other Reviews

Since May 1989, the F-16 aircraft MLU Program has been the subject of three reports from the General Accounting Office, the Inspector General, DoD, and the Defense Contract Management Command that were directly related to our audit objectives. Enclosure 1 discusses the three prior audit reports.

Audit Background

Mid-Life Update Program. The F-16 aircraft MLU Program is a \$2 billion upgrade to develop, produce, and install 301 avionics kits for the improvement of F-16 aircraft purchased by Belgium, Denmark, Norway, and the Netherlands. The F-16 MLU includes a modular mission computer, the advanced APG-66 radar, an enhanced cockpit, and the advanced integrated friend or foe system. The four countries originally purchased the F-16 aircraft in 1976. Those purchases were consolidated with a larger Air Force purchase under the F-16 Multinational Fighter Program. A total of 998 F-16 aircraft were produced under the Multinational Fighter Program coproduction agreement. The European participating governments bought 348 aircraft, and the U.S. Air Force bought 650 aircraft. The U.S. Government participated in the development phase of the F-16 aircraft MLU Program, but withdrew in November 1992 from the production phase. Lockheed and the European participating industries are scheduled to produce a total of 301 kits for the European participating governments: 48 for Belgium, 61 for Denmark, 56 for Norway, and 136 for the Netherlands. Because of cost considerations, all F-16 aircraft owned by the four countries will not be upgraded.

Overview of the Mid-Life Update Procurement. The F-16 aircraft MLU Program has three categories of parts and services. Group A items consist of items such as harnesses and connectors that have a relatively low cost per unit. Group B items comprise the other two categories and are grouped as old or new items. Old items in Group B are the existing components on the F-16 aircraft supplied by U.S. domestic suppliers; those components are not open to foreign competition. New items in Group B are subsystems, the key components of the F-16 MLU Program. New items in Group B are open to foreign competition under the Industrial Cooperative Agreement.

Supreme Audit Institutions' Areas of Interest. This audit was conducted in response to an audit request by the Supreme Audit Institutions regarding the source selection process and the award of subcontracts for the F-16 aircraft

MLU Program. The Supreme Audit Institutions requested assurance that the European participating industries' price proposals were given the opportunity to compete for the F-16 aircraft MLU subcontracts.

Industrial Cooperative Agreement. On May 27, 1991, an Industrial Cooperative Agreement was signed for the development and production of the F-16 aircraft MLU. The U.S. Government has no obligation under this agreement. Lockheed agreed to place a minimum of 58 percent of the dollar value of the F-16 aircraft MLU development and production with European participating industries, subject to certain provisions. The agreement specified that Lockheed was to select subcontractors on a fully competitive basis. Central to the agreement was the provision that the European participating industries must sell F-16 aircraft MLU items and services at prices that do not exceed the prices of the same items and services offered to Lockheed by U.S. domestic companies.

Discussion

European participating industries that did not receive subcontracts fell into one of four categories.

Smaller Production Quantity. The European participating industries' bids were based on smaller production quantities than the quantities used by U.S. domestic contractors. Foreign subcontractors could bid only on the proposed quantities that the European participating governments planned to purchase. U.S. contractors bid on F-16 aircraft MLU kits that were to be installed not only on F-16 aircraft of European participating governments, but also on other F-16 aircraft expected to be sold through the DoD foreign military sales program to other foreign countries, and on Lockheed sales to the U.S. Air Force. Lower production quantities resulted in a higher unit cost to the European participating industries and made it difficult to propose prices that would have been successful in the competitions.

Nonrecurring Costs. Some European participating governments subsidized nonrecurring production costs, while others did not. Where European governments did not subsidize the nonrecurring costs, European participating industries appropriately included the costs in their bids, resulting in a higher proposed price.

Technical Advantages. Since the F-16 Multinational Fighter Program began in 1976, U.S. contractors were heavily involved in the development and production of the F-16 aircraft. They also participated in the research and development of the F-16 aircraft MLU Program. This gave U.S. contractors an advantage in developing and applying technical data and in tooling, manufacturing, and assembling F-16 aircraft MLU components. Conversely, the European participating industries had to develop their technology and skills before they could manufacture the F-16 aircraft MLU components at competitive prices.

Follow-On Procurements. Some items in the F-16 aircraft MLU Program, primarily old items in Group B, were follow-on procurements to the original

research and development contracts between the Lockheed and U.S. domestic contractors. Those research and development contracts allowed Lockheed to exercise an option if the items were needed for future production. Therefore, U.S. domestic subcontractors had the advantage of supplying Lockheed if favorably-priced options were exercised to satisfy follow-on procurements for F-16 aircraft MLU components.

Awards to European Participating Industries. Lockheed and other U.S. domestic contractors awarded subcontracts totaling \$57.7 million to the European participating industries for manufacturing Group B (new) items. In addition to the subcontracts for new items in Group B, Lockheed awarded \$245.8 million in contracts noncompetitively to four European subcontractors for production of Group A items. Those contract awards are summarized and discussed below.

<u>MLU Component/ Subcontract</u>	<u>Foreign Subcontractor</u>	<u>Total Value of Contract (millions)</u>	<u>Award to EPI (millions)</u>
Modular Mission Computer Texas Instruments	Nea Lindberg	\$84.6	\$20.6
Integration of Modular Mission Computer Terma	Terma	1.0	1.0
Modular Mission Computer Subassemblies Signaal	Signaal	29.9	29.9
Programmable Display Generator Honeywell	Hazeltine	<u>22.0</u>	<u>6.0</u>
Total		\$137.5	\$57.5

As shown by the table, U.S. domestic subcontractors attempted to award F-16 MLU work to foreign subcontractors. Both Texas Instruments and Honeywell awarded subcontracts to European participating industries to manufacture the modular mission computer and the programmable display generator. Lockheed also awarded subcontracts to Terma and Signaal as single-source suppliers, based on their past performance on the F-16 Multinational Fighter Program.

Management Comments

We provided a draft of this report to management on June 9, 1995. Because the report contained no findings or recommendations, no comments were required, and none were received. Therefore, we are issuing this memorandum report in final form.

The results of the audit were formally briefed to the Supreme Audit Institutions of the European participating governments; the Commander, Defense Plant Representative Office, Lockheed-Fort Worth Company; and the Lockheed F-16 Program Manager.

We appreciate the courtesies and cooperation extended to the staff. If you have questions about this audit, please contact Ms. Evelyn Klemstine, Audit Program Director, at (703) 604-9172 (DSN 664-9172), or Mr. Robert Otten, Audit Project Manager, at (703) 604-9177 (DSN 664-9177). Enclosure 3 lists the distribution of the report. Members of the audit team are listed on the inside back cover.



Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosures

Summary of Prior Audits and Other Reviews

The General Accounting Office (GAO); the Inspector General, DoD; and the Defense Contract Management Command had each issued one prior report related to this audit.

The General Accounting Office. GAO Report No. NSIAD-90-181, "F-16 Program: Reasonably Competitive Premiums for European Coproduction," May 14, 1990, reviewed the procedures used by General Dynamics Corporation (now Lockheed) to calculate competitive premiums for the F-16 Multinational Fighter Program. The GAO report stated that the General Dynamics Corporation had used reasonable methods, suitable data, and accurate computations to set premiums for awarding subcontract work. The report did not identify any miscalculations that caused premium values to be overstated or prevented European subcontract proposals from being reasonably competitive.

Inspector General, DoD. The Inspector General, DoD, Audit Report No. 89-074, "Pricing and Billing of the F-16 Aircraft for the European Participating Governments," May 11, 1989, stated that the Air Force effectively managed and controlled the F-16 Multinational Fighter Program, with some minor exceptions. That report identified weaknesses in negotiating and finalizing memorandums of understanding. Weaknesses were also found in accounting procedures for tracking and monitoring costs, and in recording those costs on billing statements for foreign military sales. The Under Secretary of Defense (Comptroller) and the Defense Security Assistance Agency concurred with the findings and planned corrective actions.

Defense Contract Management Command. In March 1994, the Defense Contract Management Command reviewed Lockheed's purchasing system. The report stated that the contractor performed well in the areas of price and cost analysis. No recommendations were made regarding competitive purchases because of the small number of purchases that required competitive bids. The report recommended that the contractor's purchasing system be approved for the following 12 months.

Organizations Visited or Contacted

Department of the Air Force

Air Force Materiel Command, Wright-Patterson Air Force Base, OH
Air Force Aeronautical Systems Center, Wright-Patterson Air Force Base, OH
F-16 Systems Program Office, Wright-Patterson Air Force Base, OH

Defense Agencies

Defense Contract Audit Agency, Fort Worth, TX
Defense Logistics Agency, Alexandria, VA
Defense Contract Management Command, Southeast Region, Marietta, GA
Defense Plant Representative Office, Fort Worth, TX

Non-Government Organizations

Lockheed Fort Worth Company, Fort Worth, TX

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- Senate Subcommittee on Defense, Committee on Appropriations
- Senate Committee on Armed Services
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- House Committee on Appropriations
- House Subcommittee on National Security, Committee on Appropriations
- House Committee on Government Reform and Oversight
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Audit Team Members

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