

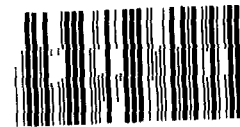
GAO

Briefing Report to the Honorable
John C. Stennis, United States Senate

February 1987

NAVY CONTRACTING

Competition in Providing Maintenance for Navy Aircraft



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

National Security and
International Affairs Division

B-225248

February 19, 1987

The Honorable John C. Stennis
United States Senate

Dear Senator Stennis:

On February 10, 1986, you asked us to review the recently awarded contract to maintain the Navy's T-34C and T-44A trainer aircraft fleet. As requested, we focused on the Navy's contracting methods and the results of going from a sole-source negotiated contract to a fixed-price, competitively bid contract, including

- procedures used to obtain competition,
- total cost of maintenance before and after competition,
- reliability of the aircraft fleet and quality of maintenance before and after competition, and
- lessons learned from this competition, which might be used to improve future maintenance contract decisions.

NAVY PROCEDURES TO OBTAIN COMPETITION

Beech Aerospace Services, Inc. (BASI), a wholly owned subsidiary of Beech Aircraft Corporation, had performed maintenance on the Navy's T-34C and T-44A aircraft under two separate sole-source, negotiated contracts since 1979. However, in January 1985, the Navy announced that the maintenance of its T-34C and T-44A trainer aircraft fleet would be performed under a competitively awarded contract for fiscal year 1986, plus four option years. According to Navy contracting officials, the decision to award the contract competitively responded to the 1984 Competition-In-Contracting Act and the Navy's concern with the rising cost of the existing sole-source contracts.

A Navy comparison of BASI's fiscal year 1979 cost to perform maintenance on the T-34C with its fiscal year 1983 cost revealed an 81-percent increase in cost while the workload (hours supported) grew only 17 percent. (Flying hours

supported increased from 108,942 in fiscal year 1979 to 127,725 in fiscal year 1983.) Hourly maintenance and material costs also increased more than 80 percent, and the total cost of the contract increased over 100 percent, as shown in table 1. According to Navy officials, similar increases occurred in the T-44A maintenance cost.

Table 1: T-34C Maintenance Cost Increases from Fiscal Years 1979 through 1983

	<u>Fiscal year</u>		<u>Percent of increase</u>
	<u>1979</u>	<u>1983</u>	
Flying hours supported	108,942	127,725	17
Costs per hour:			
Maintenance	\$ 18.92	\$35.53	88
Material	16.05	29.07	81
On-site support	<u>12.74</u>	<u>21.88</u>	72
Total	\$47.71	\$86.48	81
	=====	=====	
Total contract cost	\$5,197,000	\$11,044,000	113

The Naval Aviation Logistics Center opened competition for both the T-34C and T-44A maintenance when it issued an invitation for bids on a firm-fixed price contract on April 26, 1985. A two-step, sealed bid procedure was used. Step one involved requesting technical proposals from 38 prospective bidders. Step two evaluated the qualifications of prospective contractors based on their technical proposals and solicited sealed bids from those determined to be qualified.

The Navy received technical proposals from 7 of 38 prospective bidders. Of the seven proposals, four were initially judged technically acceptable as submitted and three (BASI's, Lear Siegler's, and Burnside-Ott's) were not. BASI's technical proposal was initially unacceptable in part because it did not

- provide a plan to ensure the currency of technical data used to maintain the aircraft and
- specify acceptable quality assurance procedures.

These three contractors subsequently submitted additional information and their proposals were judged acceptable. Thus, seven contractors were asked to submit price proposals under step two. The proposals are shown in table 2.

Table 2: Contract Bids for Fiscal Years 1986-90

<u>Contractors</u>	<u>Maintenance support</u>	<u>Material support</u>	<u>Bid total</u>
	----- (millions) -----		
Dynalectron	\$49.9	\$26.3	\$76.2
Sikorsky	58.8	31.2	90.0
BASI	65.3	26.7	92.0
Northrop	63.7	30.7	94.4
Burnside-Ott	57.9	43.3	101.2
Hawthorne	81.6	27.8	109.4
Lear Siegler	83.2	30.8	114.0

Before the contract was awarded, one of the bidders asked the Navy to review the bids because of its concern that part of the solicitation dealing with engine overhaul may have been misunderstood by some bidders. The contractor believed that an equal evaluation of all bids was not possible because of a disparity in perceptions of the maintenance services to be provided. Subsequently, the Navy requested that the low bidder, Dynalectron, validate its entire bid, giving special attention to the engine overhaul requirements. On September 6, 1985, Dynalectron validated its cost proposal, and a firm-fixed price contract was awarded to Dynalectron Corporation, Aerospace Operations Division (Dynalectron), Fort Worth, Texas, on September 13, 1985.

On September 16, 1985, BASI filed a bid protest with the General Accounting Office. As supplemented, BASI contended that:

- Answers provided by the Navy in response to the prospective bidders' questions were not incorporated into the bid solicitation by amendment, as required by the Federal Acquisition Regulation.
- Step-two pricing evaluation criteria were not applied in a manner that assured an accurate and fair determination of the lowest overall price. Specifically, the Navy evaluated bidders' prices on only 300 of the currently estimated 6,000 material support items that are required to maintain the aircraft.

-- The contract, as awarded, was not the same as the invitation for bid solicitation. Information on certain acquisition procedures was withheld from the bidders; this created an atmosphere under which an intentional "buy-in and recover later" bid was highly probable.

We dismissed the bid protest on December 20, 1985, because it was untimely. The alleged improprieties were apparent before bid opening, but the protest was filed only after bids had been opened. Other reasons were that the bid protest was not accompanied by any factual detail when initially presented and a "buy-in" by the awardee did not provide a basis to challenge the award.

MAINTENANCE COSTS BEFORE AND AFTER COMPETITION

It is not yet possible to determine whether the Navy reduced its maintenance costs by going from a sole-source to a competitive firm-fixed price contract. Under the sole-source contracts, the parts inventory was owned by the contractor and support charges were based on total flight hours. Under the firm-fixed price contract, the Navy pays for establishing an initial inventory and replenishing it as parts are used. Moreover, final contract costs will depend upon the actual cost of materials used and contractor support items, which are currently being negotiated. The Navy currently estimates the net contract cost for fiscal year 1986 at \$25.6 million. (BASI's fiscal year 1985 net cost was \$29.9 million.)

Dynalectron has requested that the fiscal year 1986 contract payment be further increased by \$9.8 million to pay for material and support items that it believes were not included in the solicitation, including

- an increase in inventory line items from 2,000 to 6,000;
- development of a definitive list of support equipment;
- the identification, location, and placement of government-furnished equipment, as well as making such equipment operational;
- revision of aircraft log books to reflect current contract requirements and aircraft status;
- accomplishment of a higher level of maintenance than was envisioned under the initial solicitation; and

-- performance of maintenance above that Dynalectron believes was in the initial solicitation (weight and balance, compass calibration, added inspections, etc.)

The Navy has not yet determined the actual amount of payment on these requests. The final contract cost will not be established until all equitable adjustment requests are received and final payment is made on the contract.

RELIABILITY AND QUALITY OF MAINTENANCE
BEFORE AND AFTER COMPETITION

The best available indicator of the reliability and quality of maintenance performed is the reported readiness of the trainer aircraft fleet, which indicates the availability and capability of aircraft to perform the training mission. Reported readiness levels for the fleet of T-34C and T-44A trainer aircraft have dropped below levels achieved under the sole-source contracts with BASI. The T-34C readiness rate dropped from 85 percent availability, when Dynalectron took over, to 43 percent on December 19, 1985. The T-44A readiness dropped from 85 percent readiness levels to 50 percent during that same period. Navy officials said decreased readiness generally occurs when contractors are changed, but as time passed the levels would improve. During calendar year 1986, the reported readiness rates for the T-34C and T-44A aircraft averaged 68 and 55 percent, respectively.

Under the sole-source contracts, BASI was required to have 80 percent of the aircraft operationally ready to meet all primary missions. If this level was not achieved, penalties were to be imposed on BASI. According to the Navy, penalties were never imposed because readiness rates reported to the Navy by BASI consistently exceeded the 80-percent level.

Dynalectron's contract also has an 80-percent readiness goal, but penalties are not imposed if this goal is not achieved. Furthermore, the contract defines readiness goals in terms of operationally ready aircraft capable of performing one or more, but not all, of the primary missions of the unit. Recent statistics at Training Air Wing Four, Corpus Christi, Texas, show that many of the T-34Cs and T-44As are not capable of meeting all or part of their designated missions. For example, on March 26, 1986, Training Air Wing Four reported 30 of 54 T-34C aircraft as operationally ready. Of these, 23 were considered fully mission capable and 7 were partially mission capable. On this same date, 26 of 56 T-44A aircraft were reported operationally ready, of which only 1

was fully mission capable. June 1986 statistics show improvement with 37 of 54 T-34Cs and 32 of 56 T-44As operationally ready.

Dynalectron and the Navy believe that the reduction in readiness resulted partially from contractor transition problems. Specifically,

- The initial provisioning of the spare parts inventory and required emergency orders for parts were delayed during the first part of fiscal year 1986 because the Navy was operating under a continuing budget resolution, which limited its ability to buy spare parts.
- BASI delayed some maintenance of aircraft after it lost the contract, causing an unusually large number of aircraft to need maintenance at the beginning of the new contract period.
- Ownership of repair equipment was disputed by BASI and the Navy. Consequently, some maintenance equipment was not available to Dynalectron when it assumed responsibility for maintaining the aircraft.
- Technical manuals for maintenance support were either not available to Dynalectron or not complete.
- The replacement parts list BASI furnished for the initial provisioning of spare parts was incomplete.

Despite these difficulties, Navy officials state that flight training requirements are being met. However, training needs are being accomplished by routinely flying on weekends, a provision not included in the contract.

LESSONS LEARNED

According to Naval Air Training officials, the major lesson they have learned from the competition is the need to develop and provide bidders with adequate specifications on the maintenance support required. The Navy lacked the necessary data to do so because it did not closely monitor the maintenance performed by BASI. If an historical compilation of the maintenance actually performed by BASI had been developed, Navy officials believe that the Navy would have been in a position to develop tighter specifications. This would likely have reduced the number of contract amendments to be noncompetitively negotiated between the Navy and Dynalectron. For example, the Navy has decided in retrospect

that a change to the engine overhaul specifications is needed. This change will increase the estimated cost of engine overhauls and the eventual cost of the maintenance contract. The added cost will be negotiated noncompetitively with Dynalectron.

Overall, both the Navy and some competing contractors now believe the competition process and subsequent contractor performance can be improved by

- providing tighter maintenance specifications to reduce the number of changes that are negotiated noncompetitively after contract award,
- providing clearer and more timely response to questions by bidders on the contract requirements to reduce the number of subsequent contract changes, and
- allowing more time between solicitation and contract award to accomplish these tasks.

CURRENT STATUS

The Navy recently decided to recompetete the maintenance support for its T-34C and T-44A trainer aircraft, but not in time for fiscal year 1987. The decision was based in part on the contractor's performance and on specification deficiencies in the current contract with Dynalectron. According to Navy officials, contract specifications for engine overhauls will be changed with the new solicitation.

The Naval Audit Service began a review of selected provisions of certain maintenance contracts, including the T-34C and T-44A contract, after our examination had been initiated. The results of its work were similar to ours.

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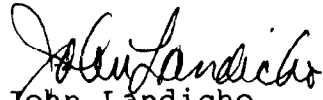
To conduct this review, we examined records and files relating to the contracts for maintaining the Navy's T-34C and T-44A trainer aircraft. We interviewed and collected data from (1) Navy contracting and program officials at the Naval Air Logistics Center, Patuxent River, Maryland, and (2) Naval Air Training officials at the Naval Air Station, Corpus Christi, Texas. We also collected data from the previous and current contractors. In addition, we observed contractor

B-225248

operations at Training Air Wing Four, Corpus Christi, Texas. We discussed the results of our work with Department of Navy officials and obtained their comments. Their views were considered and incorporated where appropriate. As requested, we did not obtain official agency comments. Our work was conducted in accordance with generally accepted government auditing standards.

As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this briefing report until 30 days from its issue date. At that time, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,



John Landicho
Senior Associate Director

(394147)

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