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UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

07 JUL 1983

Major General Robert L. Moore, USA
Commander, U.S. Army Missile Command
Redstone Arsenal, Alabama 35898

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Dear General Moore:

Subject: Contract Overpriced Because of Duplicate Labor Hours and Excessive Material Pricing Rates (GAO/PLRD-83-93)

We have examined the pricing of contract DAAK40-78-C-0042 awarded to Litton Systems, Inc., Data Systems Division, Van Nuys, California, by the U.S. Army Missile Research and Development Command. This Command was consolidated with the Missile Materiel Readiness Command on July 1, 1979, to form the U.S. Army Missile Command. This fixed-price incentive contract provided for the production of nine AN/TSQ-73 Missile Minder Systems at a target price of $19,779,000.

The review was made as a part of our continuing effort to examine the reasonableness of negotiated noncompetitive contract prices. Our objective was to determine whether the negotiated price of contract -0042 was based on current, complete, and accurate cost or pricing data available at the time of negotiations, as required by Public Law 87-653. We selected this contract for review because our survey indicated the contractor experienced a significant cost underrun under the contract and the Defense Contract Audit Agency (DCAA) had completed its defective pricing review of the contract.

We made our review at the contractor's facility. We reviewed pertinent documents and held discussions with contractor personnel. We also reviewed field pricing work performed at Litton by the DCAA. In addition, we reviewed the contract pricing and negotiation files and held discussions with contracting personnel at the procuring agency. We discussed our findings and conclusions with both the contractor and the contracting officer. Their comments were considered in preparing this report. This review was made in accordance with generally accepted Government audit standards.

Details of our review, including agency and contractor comments, are included in the enclosure. In summary, we concluded that the contract target price was overstated by $472,000 because:

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--The contractor submitted cost data resulting in the Government's accepting duplicate fabrication and assembly hours for a number of major assemblies known as card cages.

--The contracting officer did not rely on the most recent contractor cost data available in negotiating material attrition and line flow material rates.

The overstatement in the target price resulted in increased costs to the Government totaling about $265,000.

We recommend that you:

--Determine the extent to which the Government is entitled to a price adjustment for the duplicate card cage labor hours.

--Determine what action is needed to preclude future acceptance or negotiation of material attrition and line flow material rates higher than indicated by the contractor's most recent cost data.

Copies of this letter are being sent to the President of Litton's Data Systems Division; the Los Angeles Regional Director, Defense Contract Audit Agency; and the Commander, Defense Contract Administration Services Region, Los Angeles, California.

We would like to take this opportunity to acknowledge the courtesy and cooperation extended to our Los Angeles staff during this review.

Sincerely yours,

Robert M. Gilroy

Robert M. Gilroy
Senior Associate Director

Enclosure

REVIEW OF THE PRICING OF CONTRACT DAAK40-78-C-0042 WITH LITTON'S DATA SYSTEMS DIVISION

BACKGROUND

In response to an Army request, Litton's Data Systems Division submitted a firm fixed-price proposal to the Army Missile Research and Development Command on August 29,1977, for nine AN/TSQ-73 Missile Minder systems. This Command was consolidated with the Missile Materiel Readiness Command on July 1, 1979, to form the U.S. Army Missile Command. After its initial proposed submission, Litton submitted updated proposals and supplemental data to the Army through late November 1977. The contract price negotiations were completed December 7, 1977, and on December 8, a Certificate of Current Cost or Pricing Data was executed. A defective pricing clause was incorporated into the contract.

The Defense Contract Audit Agency (DCAA) evaluated Litton's initial proposal and submitted an audit report to the Army contracting officer September 20, 1977. DCAA qualified the audit report because Army technical personnel were tasked to evaluate the contractor's proposed labor hour estimate. Army personnel submitted their technical evaluation and price analysis reports to the contracting officer on September 22, October 3 and 7, 1977.

On December 16, 1977, the Army awarded a fixed-price incentive contract (DAAK40-78-C-0042) to Litton at a target price of $19,779,000. The pricing provisions included a 50/50 sharing ratio for incentive profit. The contract was the fourth production effort for the AN/TSQ-73 system, excluding a small two-unit foreign military sales contract. These previous awards are identified as follows:

--DAAK40-71-C-0012, P00310; low rate initial production - 4 systems.

--DAAK40-75-C-1290; foreign military sales - 8 systems.

--DAAK40-71-C-0012, P00380; full-scale production - 12 systems.

The Army contracting officer selected a fixed-price incentive contract arrangement because the items to be procured had (1) a limited production history and (2) an uncertain cost experience. When contract -0042 was negotiated, contracts -0012, P00310 and -1290 had been completed. However, only limited production had been completed on contract -0012, P00380.

In performing the contract, Litton experienced a significant cost underrun compared to the labor hours it proposed for fabrication and assembly effort. Our review of contract -0042 was primarily limited to evaluating the historical labor hour data available at the time of contract negotiations. In addition, we evaluated the reasonableness of the negotiated material attrition and line flow material pricing rates because there were significant differences between the historical and negotiated rates.

The contractor performed the bulk of the contract work from December 1977 through August 1979 and submitted its final cost claim in October 1979. Some contract effort was performed after August 1979 to complete the contract. The contractor submitted an invoice for final payment in June 1980. Our review was started in September 1982 about 2 years after DCAA completed its postaward review of the contract.

RESULTS OF REVIEW

We believe the target price of contract -0042 was overstated by about $472,000, including applicable add-on pricing factors and profit. Of this amount, $137,000 pertained to a duplication of fabrication and assembly hours for a number of major assembly units. The remaining $335,000 was caused by the contracting officer's having negotiated higher than warranted material attrition and line flow material rates despite Litton's disclosure that it experienced substantially lower rates during its most recently completed accounting period.

Of the $472,000 overstatement in target price, about $414,000 pertained to costs and the remainder of $58,000 pertained to profit. Since this contract is a fixed-price incentive contract, the Government's share of the overstatement would be one-half of the overstated costs of $414,000, or $207,000, plus the entire profit of $58,000, or a total of $265,000.

Duplicate labor hour estimate

The negotiated labor hours needed for basic fabrication and assembly effort was overstated by about 6,840 hours, or $137,000 including add-on pricing factors and profit. The overstatement occurred because the price proposal included a duplication of labor hours to assemble card cage units used in the AN/TSQ-73 systems. The duplication was not identified during either the Army's evaluations of Litton's proposal or during contract negotiations.

Litton's revised November 18, 1977, proposal included 169,776 basic fabrication and assembly hours needed to produce the nine AN/TSQ-73 systems. The hours were based on an improvement curve projection using historical data from prior production. The proposal also included an additional 17,918 hours for basic fabrication and assembly of required card cages for the nine systems. A card cage is a mechanical chassis that houses circuit card assemblies. Litton justified the additional hours on the basis of a change in its make or buy program to provide for performing certain operations that previously had been done by outside suppliers. The 17,918 hours included total in-house assembly operations required to complete the card cage units.

Prior to this procurement, Litton was subcontracting some of the required work on the card cages, but was also performing some in-house fabrication and assembly effort on them. Accordingly, we determined that about 6,840 labor hours included in the 17,918 estimate were already included in the fabrication and assembly hours negotiated for the nine AN/TSQ-73 systems. This duplication caused the contract target price to be overstated by about $137,000, including add-on pricing factors and profit.

Litton did not eliminate the duplication in labor hours because it did not adjust either the historical labor hour data or the estimate for card cage assembly hours. We determined that the contracting officer did not obtain a price reduction during negotiations because the duplication was not identified during the various price proposal evaluations. Since Litton did not adjust or eliminate the duplicate labor hours and the contracting officer did not identify the duplication, we believe the labor hour data was not complete, current or accurate, as certified by the contractor.

Excessive material attrition and line flow material costs

We believe negotiated material attrition and line flow material costs were overstated by about $335,000 because the contracting officer did not rely on the latest available contractor cost data.

Litton's initial proposal included $865,000 in material attrition costs and $597,000 in line flow material costs. The costs were calculated by applying a 15 and 9 percent rate, respectively, to the contractor's proposed burdenable material of $5,766,000. The line flow material rate is also applied to material attrition. Material attrition consists of scrap, lost parts, lot charges, residual material, and inventory costs. Line flow consists of common usage low dollar value material. The rates had not been agreed to in advance by the contractor and the Government administrative contracting officer (ACO) for forward pricing purposes. The contractor's proposed material attrition rate was based on division-wide historical data for Litton's fiscal years 1974-1976. The proposed line flow material rate was estimated.

DCAA recommended that the Army contracting officer should use material attrition and line flow rates of 7 and 7.2 percent, respectively. The Army price analyst recommended rates of 9 and 7.2 percent, respectively, on the basis of a March 31, 1977, Should Cost Review made in connection with the pricing of contract -0012, P00380. The recommended material attrition rate was based on Litton's fiscal year 1976 historical division-wide rate excluding a substantial portion of residual material expenses in the cost pool. The analyst's recommended line flow rate was based on division-wide averages experienced for fiscal years 1973-1976.

In December 1977, the Army contracting officer negotiated rates of 12 and 7.5 percent, respectively, in the target price for contract -0042. These rates were substantially higher than the most current and relevant fiscal year 1977 division-wide rates of 9.1 and 5.7 percent. The fiscal year 1977 rates were substantially lower than the rates proposed by Litton and those experienced in fiscal years 1974-1976. Prior to the November 1977 contract price negotiations, Litton disclosed the more current fiscal year 1977 rates to the Army contracting officer. These rates were not available when Litton submitted its August 1977 price proposal. Neither the contracting officer's memorandum of negotiation nor other Army pricing files at the procuring office evidenced why the most recent cost experience was not used to negotiate the contract price.

Had the Army contracting officer negotiated rates comparable to the fiscal year 1977 experienced rates, the target price of contract -0042 would have been reduced by about $335,000, of which $183,000 relates to material attrition and $152,000 to line flow material. Litton experienced 7.7 and 6.3 percent rates during performance of contract -0042.

A comparison of material attrition and line flow rates is as follows:

	Material attrition	Line flow material
Fiscal Year 1977	9.1	5.7
Proposed	15.0	9.0
DCAA recommendation	7.0	7.2
Price analyst recommendation	9.0	7.2
Negotiated	12.0	7.5
Experienced on contract -0042	7.7	6.3

PROCUREMENT OFFICIALS AND CONTRACTOR COMMENTS

Army procurement officials initially withheld comment on the labor hour duplication effort pending a review of factual data cited in our report. We subsequently provided detailed supporting information to the Army Missile Command for their evaluation and were advised that action would be taken to negotiate a price adjustment with Litton. Army officials did not agree that the negotiated material attrition and line flow material rates were excessive. They stated that the AN/TSQ-73 program was in its infancy and therefore, the rates could be expected to be higher than for programs where considerable experience had been gained. However, they could furnish no support for this position.

We do not agree with the Army on this matter. Litton accounts for material attrition and line flow material on a division-wide basis without regard to program, contract, or program maturity. The cost estimating methodology used by the contractor for material attrition consistently follows the division-wide cost accounting practice. Accordingly, the most recent division-wide historical rates would have provided the Army contracting officer with a sound basis to negotiate similar costs for material attrition and line flow material under contract -0042.

Litton officials stated there was a possibility of some duplication in the fabrication and assembly hours for card cage items, but they did not believe the duplication was as large as what GAO had identified. We believe the record clearly shows the labor hour estimate for card cage assemblies duplicated hours already included in the basic fabrication and assembly hours proposed and negotiated for AN/TSQ-73 systems.