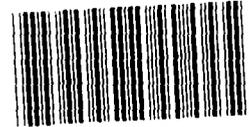




UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548



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PROCUREMENT, LOGISTICS,
AND READINESS DIVISION

B-209656

JANUARY 18, 1983

The Honorable Caspar W. Weinberger
The Secretary of Defense

Dear Mr. Secretary:

Subject: Poor Procurement Practices Resulted in
Unnecessary Costs in Procuring M1 Tank
Spares (GAO/PLRD-83-21)

We have examined sole-source negotiated procurements for M1 tank spare components under contract DAAK30-77-C-0006 awarded initially to Chrysler Defense, Incorporated, and subsequently acquired by General Dynamics Corporation, Land Systems Division, Sterling Heights, Michigan. This contract provided for the initial procurement of M1 production tanks and spares on a fixed-price incentive basis. The spares are being obtained at a negotiated ceiling price of \$48.8 million.

The overall objective of this review was to assess the reasonableness of sole-source negotiated prices for spares to support first year M1 tank production and training requirements. Our objective included determining whether the M1 contracting officer (1) followed sound procurement practices, (2) obtained cost or pricing data to support proposed prices, and (3) evaluated and used the data in negotiating contract prices.

We made our review at the Office of the Project Manager, M1 Tank system, and at the U.S. Army Tank-Automotive Command, both in Warren, Michigan. We examined contract files and held discussions with contracting officials. In addition, we held discussions with cognizant Defense Contract Audit Agency resident auditors at the Lima Army Tank Plant in Lima, Ohio, and at the Detroit Army Tank Plant in Warren, Michigan. This review was performed in accordance with generally accepted government auditing standards.

Details of our review are included in the enclosure. In summary, we found that in procuring M1 tank spares, the Government incurred unnecessary costs because the contracting officer (1) accepted ceiling prices for spares negotiated on a sole-source basis before obtaining cost or pricing data and then failed to change the ceiling prices once the cost data was received, (2) combined the sole-source spare ceiling prices with the one competitively established in the original contract, and (3) permitted inappropriate transfers of spares to other contracts. The last two actions resulted in decreasing the contractor's risk

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of exceeding the ceiling on the original contract price and in allowing the contractor an opportunity to recoup \$5.6 million in costs to which it would not otherwise be entitled. In addition, the contracting officer did not prepare and maintain memorandum records of negotiations as required by the Defense Acquisition Regulation (DAR).

Accordingly, we recommend that you direct the Director, Defense Acquisition Regulatory Council, to strengthen Defense guidance on fixed-price incentive contracts by identifying circumstances which preclude combining ceiling prices under an existing contract with those established under modifications to that contract. In particular, we believe ceiling prices established in initial fixed-price incentive contracts should not be combined with ceiling prices established in modifications to those contracts, especially when the contract costs will exceed, or are expected to exceed, the target prices.

We also recommend that you direct the Secretary of the Army to instruct M1 contracting officers of the importance of complying with the requirement in the DAR to prepare and maintain adequate memorandum records of negotiations which demonstrate that the negotiated prices were fair and reasonable.

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As you know, 31 U.S.C. §720 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Chairmen, Senate and House Committees on Government Operations and on Appropriations; the Director, Office of Management and Budget; the Secretary of the Army; and the Vice President, Contracts and Estimating, General Dynamics, Land Systems Division.

Sincerely yours,



Donald J. Horan
Director

Enclosure

POOR PROCUREMENT PRACTICES
RESULTED IN UNNECESSARY COSTS
IN PROCURING M1 TANK SPARES

INTRODUCTION

Contract DAAK30-77-C-0006 was awarded to Chrysler Defense, Incorporated, on November 12, 1976, following competitive negotiations with Chrysler and the General Motors Corporation. On March 16, 1982, Chrysler Defense was acquired by the General Dynamics Corporation and renamed Land Systems Division.

The contract provided for full-scale engineering development of M1 tanks and options to acquire the first 2 years' production of tanks on a fixed-price incentive basis. The competitive ceiling prices obtained under the options did not include acquisition of spares, such as engines and transmissions. Therefore, in early 1978, in preparing to exercise the Government's option to procure the first year's production of 110 tanks, the M1 contracting officer entered into negotiations with the contractor to acquire the spares needed to support the first year's production of tanks. These negotiations resulted in procuring spares on a sole-source basis under contract modifications P00086, dated August 1, 1978; P00096, dated August 21, 1978; and P00098, dated September 13, 1978.

Contract terms and prices to acquire the spares were adjusted under contract modifications P00151, dated May 7, 1979; P00219, dated September 30, 1980; and P00229, dated December 5, 1980. Under P00151, the contracting officer unilaterally determined the target costs, target profits, and target prices for both tanks and spares. These prices were adjusted under P00219 based on a mutual agreement between the contractor and the contracting officer. P00229 adjusted the quantities and the prices to the current ceiling price of \$48.8 million for spares.

POOR PROCUREMENT PRACTICES

In negotiating the procurement of M1 spares under the cited contract modifications, the contracting officer did not always follow sound procurement practices. As a result, spares were overpriced by an estimated \$5.6 million. The overpricing occurred because the contracting officer

--did not protect the competitively established contract price for tanks,

- accepted prices for sole-source contract modifications without the benefit of cost or pricing data, and
- inappropriately transferred spares to other contracts.

In addition, the contracting officer did not prepare and maintain memorandum records of negotiations as required by the DAR.

Failure to protect competitively
established M1 tank price

The contracting officer did not protect the competitively established ceiling price for M1 tanks because he agreed to combine sole-source ceiling prices for spares with the original ceiling price for tanks. As a result, the contractor was able to recoup costs to which it otherwise would not have been entitled. This action reduced the contractor's risk of absorbing tank production cost overruns because these costs could now be offset by underruns on the spares.

In situations where it is impractical to obtain competition after the initial award, contractors may accept unrealistically low prices for the initial competitively awarded procurement with the expectation of realizing higher profits on follow-on, sole-source procurements. Therefore, contracting officers must be particularly careful in negotiating sole-source modifications to protect the price initially obtained through competition.

The initial procurement of M1 tanks was made on a fixed-price incentive basis. Under this form of contracting, contractors are obligated to absorb any cost exceeding an established ceiling price. Thus, a contractor, by accepting an unrealistically low ceiling price, runs the risk of realizing lower profits than anticipated or losses depending upon the extent of the ceiling overrun. In negotiating sole-source modifications to the basic M1 tank contract to acquire spares, the contracting officer agreed to combine the ceiling prices for the spares with the competitively established ceiling price for the tanks. This resulted in the contractor being able to use ceiling underruns on the spares to reduce ceiling overruns on the tanks. Other alternatives available to the contracting officer were to (1) procure the spares under the basic M1 tank contract as a separate line item without combining ceiling prices or (2) purchase the spares under a new contract.

On June 9, 1978, the contractor submitted its initial proposal to furnish M1 spares. The ceiling price quoted in the proposal was based upon the price being added to the ceiling price for the initial procurement of 110 M1 tanks. The contracting

officer apparently accepted this condition without making adequate analyses or considering its likely impact on the overall contract price. The contracting officer did not prepare a memorandum record of negotiation as the DAR requires nor were any other records, correspondence, or data found in the contract files that explains why this condition was accepted.

Accordingly, on August 1, 1978, the initial quantity of spares procured under a modification to the basic M1 tank contract provided that a single ceiling price would be established for the tanks and spares. The quantities for spares were increased under two later modifications dated August 21, 1978, and September 13, 1978, but the agreement to combine the ceilings remained unchanged. The ceiling prices of the three sole-source contract modifications for M1 spares totaled \$26.5 million. (For escalation purposes, the ceiling prices for spares were stated in fiscal year 1976 dollars since the basic price for tanks was in fiscal year 1976 dollars.)

Prices for sole-source contract
modifications accepted without
benefit of cost or pricing data

The contracting officer incorporated the contractor's proposed ceiling prices into the contract modifications without obtaining cost or pricing data. Consequently, the Government was not assured the prices were fair and reasonable. Subsequently, cost data was obtained indicating the ceiling prices were excessive. However, no information was located in the contract file nor provided by the contracting officer to show that he had tried to negotiate an equitable adjustment of the prices.

In sole-source procurements such as these, the DAR requires contracting officers to obtain contractors' cost or pricing data to use in negotiating fair and reasonable prices. For a fixed-price incentive contract, the DAR requires that a firm target profit, or the formula for final profit and price (i.e., all elements) be established at the same time. However, in this case, the contracting officer incorporated the contractor's proposed ceiling prices into the contract without negotiating the other elements. In addition, the contracting officer did not obtain target costs, target profits, and target prices nor did he obtain cost or pricing data from the contractor to support the proposed ceiling prices.

In lieu of not having this cost data, the contracting officer performed a price analysis based on available information. The analysis identified the estimated component costs shown in the tank estimates and compared those costs with the prices offered by the contractor for the same components to be procured as spares.

This comparison showed a strong likelihood the proposed ceiling prices for the spares were excessive. For example, in regard to engines, the contractor's price of \$10.5 million was 44 percent higher than the Government's \$7.3 million estimate. For transmissions, the contractor's price of \$4.9 million was 63 percent higher than the Government's estimate of \$3.0 million. According to the documents provided to us by the contracting officer, these two items accounted for the bulk of the price the contractor offered to the Government to buy spares and training components.

Therefore, the contracting officer should not have accepted the proposed ceiling prices prior to obtaining current cost or pricing data on the spares. Moreover, by accepting ceiling prices prior to receiving cost or pricing data, the contracting officer did not follow the DAR.

As required by the modifications, the contractor submitted a proposal in November 1978 setting forth the proposed target costs, target profits, sharing arrangements, and ceiling prices to use in negotiating firm pricing arrangements for the spares. Using Defense Contract Audit Agency audits and price analyses of this proposal, the contracting officer established negotiating objectives to price the spares and tanks. The analyses clearly showed that the accepted ceiling price for spares was excessive. As shown in the following schedule, the ceiling price for the spares was considerably higher than the target price set by the contracting officer and, in contrast, the competitively established ceiling price for M1 tanks was only slightly higher than the target price set by the contracting officer.

Comparison of Tank and Spares Prices

| <u>Item</u> | <u>Ceiling price</u> <u>(note a)</u> | <u>Target</u> <u>price</u> | <u>Difference</u> | <u>Percentage</u> <u>difference</u> |
|-------------|---|-------------------------------|-------------------|--|
| | (millions) | | | |
| Tanks | \$152.0 | \$143.3 | \$ 8.7 | 6 |
| Spares | <u>35.5</u> | <u>25.7</u> | <u>9.8</u> | 38 |
| Total | <u>\$187.5</u> | <u>\$169.0</u> | <u>\$18.5</u> | 11 |

a/Original ceiling prices in 1976 dollars escalated to include inflation through May 1979.

Further, because tank and spare ceiling prices were combined, the amount available to cover tank ceiling overruns increased from \$8.7 million to \$18.5 million.

After evaluating the proposal, the contracting officer entered negotiations with the intent of reaching an agreement in May 1979. This was the Government's deadline to exercise its contract option to obtain the tanks at the competitive prices set

in 1976. However, the negotiations became deadlocked. Therefore, on May 7, 1979, the contracting officer executed a contract modification exercising the Government's right to unilaterally determine the target costs, target profit, target prices, and sharing arrangements. The target prices set were \$143.3 million for tanks and \$25.7 million for spares. The ceiling prices for spares, however, remained as previously set. Further, there was no evidence that the contracting officer had prepared a memorandum record of negotiations nor were other file documents located to show that the contracting officer had attempted to reduce the ceiling prices.

Following the contracting officer's unilateral determination, the contractor exercised its right of appeal to the Armed Services Board of Contract Appeals on October 11, 1979, and both parties resumed negotiations. These negotiations resulted in an agreement that was formalized in a contract modification dated September 30, 1980. As a part of this agreement, the contractor withdrew its appeal.

The following table compares the target and ceiling prices for spares both before and after the agreement.

| | <u>Ceiling price</u> | <u>Target price</u> | <u>Difference</u> |
|-----------------------------|--------------------------|-------------------------|-------------------|
| | —————(millions)————— | | |
| Unilateral determination | \$35.5 | \$25.7 | \$ 9.8 |
| Mutual agreement | <u>a/\$40.4</u> | \$30.0 | \$10.4 |

a/Original ceiling price in fiscal year 1976 dollars escalated to completion for inflation.

Again, we found no memorandum record of negotiations or other file documents that would explain why the contracting officer did not obtain a more equitable ceiling price while negotiating the mutual agreement.

Inappropriate transfers of
M1 spares to other contracts

The contracting officer negotiated two transfers of spares from contract DAAK30-77-C-0006 to other contracts. The transfers resulted in decreasing the contractor's risk of overrunning the ceiling price.

Transfers from contract DAAK30-79-C-0003

When additional M1 spares requirements emerged in early 1979, the contracting officer determined that it would have been impractical to purchase the spares under another modification to

contract C-0006 because negotiations to definitize the contract were in process. Therefore, the contracting officer negotiated letter contract C-0003 on March 6, 1979, authorizing the contractor to begin work on the additional spares. Contract C-0003 provided that a fixed-price incentive type contract was contemplated and established (1) a requirement that the contractor submit cost or pricing data and (2) a target date to definitize the contract. This contract also provided that after it was definitized, this purchase, like the earlier ones, would be incorporated into contract C-0006.

During the next 14 months, the contracting officer, on five occasions, modified contract C-0003 to add more spares and test equipment. As of September 1980, the letter contract had not been definitized because the contractor was not timely in providing the cost or pricing data, and negotiations with the contractor were protracted. The contracting officer and contractor agreed that most of the spares in C-0003 should be definitized as part of the ongoing negotiations to reach a mutual agreement on C-0006. As part of the agreement, the ceiling price for these spares was combined with the ceiling prices for the tanks and spares in contract C-0006. As a result, C-0006 was increased by the following amounts.

| | |
|---------------|--------------|
| Target cost | \$ 9,800,000 |
| Target profit | 980,000 |
| Target price | 10,780,000 |
| Ceiling price | 12,500,000 |

We noted that the contracting officer had obtained cost data and the results of Defense Contract Audit Agency audits concerning this transfer. However, we found no memorandum record of negotiations or any other file documents explaining how this information was used, or how the contracting officer had calculated the cost, profit, and prices cited above.

By including the transferred spares in contract C-0006 rather than retaining the spares in contract C-0003, the contractor increased the difference between ceiling and target prices from \$10.4 to \$12.1 million. Thus, a \$1.7 million increase was unnecessarily added to the amount that would be available to cover any tank ceiling overruns. The prices for the spares are summarized in the table on the next page.

Spares Prices Obtained Under Mutual Agreement and Transfer

| | <u>Ceiling</u> <u>prices</u> | <u>Target</u> <u>prices</u> | <u>Difference</u> |
|----------------------------------|---------------------------------|--------------------------------|-------------------|
| —————(millions)————— | | | |
| Initial spares | \$40.4 | \$30.0 | \$10.4 |
| Additional spares transferred | <u>12.5</u> | <u>10.8</u> | <u>1.7</u> |
| Total | <u>\$52.9</u> | <u>\$40.8</u> | <u>\$12.1</u> |

Transfers to contract DAAE07-79-C-0149

Because there was not enough money to cover the first year's purchase of all spares under contract C-0006, the contracting officer negotiated to transfer some training spares to contract C-0149 which had sufficient funds. Contract C-0149 covered the second year's procurement of M1 spares. These spares, unlike the first year's procurement of spares, are being procured separately under a firm-fixed price contract.

Our analysis shows that an appropriate amount of target cost, target profit, and target price was transferred to C-0149 under a December 5, 1980, modification. However, the contracting officer failed to negotiate a reduction in the ceiling price for the training spares which was proportional to the amount of target price transferred. At that time the ceiling price for the training spares was \$15.1 million, or about 37 percent more than its \$11.0 million target price. Thus, an equivalent ceiling for the \$4.0 million in target price applicable to the quantity of spares transferred should have been 37 percent higher, or \$5.5 million. Instead, the contracting officer negotiated a \$4.1 million ceiling price reduction. Had the contracting officer reduced the ceiling by an additional \$1.4 million, the contractor would have been prevented from using it to cover tank ceiling overruns. Once again the contracting officer did not prepare a memorandum record of negotiations nor were other file documents located to show how the contracting officer arrived at the \$4.1 million ceiling price reduction.

As a result of this reduction, the contract target and ceiling prices for the spares were adjusted as follows.

| | <u>Ceiling prices</u> | <u>Target prices</u> | <u>Difference</u> |
|--------------------------|---------------------------|--------------------------|-------------------|
| | ----- (millions) ----- | | |
| Mutual agreement | \$52.9 | \$40.8 | \$12.1 |
| Less transfer to C-0149 | <u>4.1</u> | <u>4.0</u> | <u>0.1</u> |
| Revised contract amounts | <u>\$48.8</u> | <u>\$36.8</u> | <u>\$12.0</u> |

EFFECT OF COMBINING CEILING PRICES

As a result of the poor procurement practices followed by the contracting officer in procuring M1 spares, the Government incurred an estimated \$5.6 million in unnecessary costs. This figure represents the estimated difference between what the Government would have paid had the spares been separately priced rather than combined with the M1 tank procurement.

We obtained the contractor's unaudited costs through June 30, 1982, and compared the pricing of tanks and spares separately with the pricing of tanks and spares together. We found that the contractor was able to turn a projected loss of \$2.6 million into an estimated profit of \$6.2 million--a change of \$8.8 million. However, the contractor was entitled to about a \$3.2 million profit on the spares thereby reducing the \$8.8 million to \$5.6 million as the amount available to offset tank overruns when combining ceilings. The \$5.6 million available eliminated the contractor's \$2.6 million tank loss and left a \$3.0 million profit. The \$3.2 million profit on spares and the \$3.0 million profit on tanks gave the contractor a total profit of \$6.2 million. The estimated profits are shown in the following table.

Impact of Combining Tank and Spare Ceilings
as of June 30, 1982 (note a)

| | <u>Priced separately</u> | <u>Priced together</u> | |
|----------------------------|--------------------------|------------------------|-------------------------|
| | <u>Tanks</u> | <u>Spares</u> | <u>Tanks and spares</u> |
| | ----- (millions) ----- | | |
| Actual cost | \$151.2 | \$39.0 | \$190.2 |
| Estimated cost to complete | <u>0.5</u> | <u>1.0</u> | <u>1.5</u> |
| Total | \$151.7 | \$40.0 | \$191.7 |
| Ceiling price | <u>149.1</u> | <u>48.8</u> | <u>197.9</u> |
| Difference | <u>\$ (2.6)</u> | <u>\$ 8.8</u> | <u>\$ 6.2</u> |
| Estimated profit (loss) | <u>\$ (2.6)</u> | <u>\$ 3.2</u> | <u>\$ 6.2</u> |

a/Tank amounts represent a quantity of 90 instead of 110--20 were transferred to the second year's production contract.

It should be noted that the estimated profit or loss shown may increase or decrease depending on what the final audited costs will be under the completed contract.

FAILURE TO PREPARE AND MAINTAIN
MEMORANDUM RECORDS OF NEGOTIATIONS

The M1 contracting officer did not prepare memorandum records of negotiations as required by the DAR. In sole-source situations, the DAR requires contracting officers to prepare a memorandum at the end of each negotiation, setting forth the principal cost elements and rationale for their acceptance. Reviewing authorities use these memorandums to evaluate the reasonableness of the negotiated prices, the appropriateness of demands and concessions made in negotiations, and the extent the Government's interests were protected.

The memorandum should explain why or why not cost or pricing data was required. If a negotiated contract is over \$500,000 and cost or pricing data was not used, the method of determining the price should be included in the memorandum. In addition, the memorandum should reflect the extent the cost or pricing data was or was not used by the contracting officer in determining the total price objective and in negotiating the final price.

The purpose of documentation is to demonstrate why the contract price was fair and reasonable. Accordingly, the memorandum should show the price the contractor offered, the data used by the contracting officer to evaluate the offer, and the

conclusion reached, and should explain why the conclusion was sound. As discussed in previous sections of this report, the absence of such records hindered our effort to reconstruct the contracting officer's basis for pricing M1 spares.

Contracting officer's comments

We provided the contracting officer an opportunity to comment on the matters discussed in this report and we considered his comments in preparing the report. However, the contracting officer did not provide us with any evidence to support the actions cited in this report. The contracting officer does not agree with our position on the appropriateness of combining ceiling prices for tanks and spares and the reasonableness of the spares ceiling prices negotiated for spares.

The contracting officer indicated there would have been no agreement on the spare ceiling prices without accepting the contractor's condition to combine tank and spare ceilings. In our opinion, the M1 contracting officer had no obligation to procure the initial spares as part of the basic tank contract. As indicated earlier, spares were procured separately under contract C-0003. Moreover, the Tank-Automotive Command contracting officer is procuring the second year's production spares separately under fixed-price contract C-0149, and there is no combining of tank and spare ceiling prices.

The contracting officer justified accepting the proposed ceiling prices before receiving detailed cost or pricing data because spares were needed for scheduled tank testing. The contracting officer also claimed the ceiling prices accepted were not excessive and cited difficulties that could arise through program changes or production startup.

We do not agree with the contracting officer's position that timeliness necessitated accepting ceiling prices prior to receiving cost or pricing data. As noted earlier, the spares could have been procured under a separate contract which could have been definitized at a later date when costs or prices would have been known.

The possible difficulties relating to program changes or with production startup should normally be considered in developing estimates for the spares. The contracting officer did not provide us with any documentation to support his claim of possible difficulties. Moreover, since the Government's analyses found the contractor's proposed prices for spares to be overpriced, the contracting officer should not have accepted the proposed ceiling prices for spares before obtaining current cost or pricing data.