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

RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION

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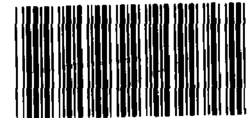
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B-216182

The Honorable Martha Hesse Dolan
Assistant Secretary for Management
and Administration
U.S. Department of Energy

Dear Mrs. Dolan:

Subject: Overpricing on Naval Nuclear Contract (GAO/NSIAD-85-92)

This report discusses the results of our review of the reasonableness of prices negotiated for two fixed-price incentive contracts--DE-AC11-76-PNR00158 and DE-AC12-SN00562. The first contract (0158) was awarded by the Department of Energy (DOE), Pittsburgh Naval Reactors Office, West Mifflin, Pennsylvania. The price of the contract, including three modifications, was $129.7 million. The second contract (0562) was awarded by DOE, Schenectady Naval Reactors Office, Schenectady, New York. The value of this contract, including five modifications, was $132.4 million. Both contracts--for nuclear reactor cores--were awarded to the Babcock and Wilcox Company, Lynchburg, Virginia.

The primary focus of our review was to determine the fairness and reasonableness of the contract prices negotiated based on contractor's proposals and the cost and pricing data supporting those proposals. Essentially, we found the following questionable costs included in the negotiated prices.

Item	Contract no.	Amount of question
Escalation to firm fixed-price quotations for material	(0158)	$ 345,884
Interdivisional profits	(0158)	3,112,519
Uranium recovery labor and overhead	(0158)	70,645
Uranium recovery labor and overhead	(0562)	301,484
Computational errors	(0158)	11,571
Total		$3,842,103

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After obtaining and analyzing comments from the prime contractor and DOE on an earlier draft of this report, we have concluded that the inclusion of these questionable costs in the contract price was not caused by the contractor's submission of defective cost or pricing data. However, we believe that one contracting officer did not use appropriate contracting provisions to protect the government from contingent costs in one instance, failed to obtain necessary specific prior approval to deviate from procurement regulations, and accepted a contractor proposed labor cost that was not supported by the contractor's prior experience. Further, contracting officers for both contracts failed to properly document the cost data relied on during price negotiations. In addition, we identified $11,571 in computational errors in the contractor's proposal that ultimately were included in the contract price. We are bringing these matters to your attention so that you can take action to reduce the possibility that these events will occur in the future.

METHOD USED IN PROVIDING ALLOWANCES FOR PRICE ESCALATION DID NOT PROTECT GOVERNMENT'S INTEREST

On January 16, 1974, the contracting officer requested that the contractor submit a Contract Pricing Proposal (DD-633) to supply special reactor materials. The contractor submitted the original contract pricing proposal on April 19, 1974. Negotiations began that same month and on November 1, 1974, contract-0158 was awarded in the amount of $15,443,900 for long-lead material for reactor cores plus spare components. Between December 4, 1974, and March 15, 1977, the contractor was awarded four modifications to the contract increasing the contract to $129,747,962. These modifications included funding for 29 reactor cores, preproduction, and additional spare material.

The contractor and the contracting officer said they believed that cost or pricing data available for most material, at the time of negotiations for the original contract and subsequent modifications, did not reflect the actual price the contractor would have to pay for the material purchased at a later date--typically 2 to 3 years later, because of escalating prices. To compensate for possible price increases, the contractor applied an escalation rate to firm fixed-price quotes received from vendors. During negotiations, the contracting officer accepted the estimated escalation, which increased the contract price by $345,884. The contractor, however, bought the items much earlier than anticipated--at quoted prices. The contracting officer told us escalation was always allowed on material regardless of the expiration dates of the firm-fixed price quotes since the contractor had always bought the items 2 or 3 years after contract award.

In its comments on a draft of this report, Babcock and Wilcox stated that the amount of escalation that was applied and the reasons for doinq so were fully disclosed as a part of the negotiations of the contract price. We agree with the contractor's comments.

Our concern relates to the contracting officer's actions in dealing with these contingent costs. The contracting officer accepted an estimate of material costs plus escalation and was aware that Babcock and Wilcox had firm quotations from vendors that could be accepted at the company's sole discretion shortly after contract award, with no requirement to adjust the price if this option was exercised.

DOE stated that the contractor's practice on prior orders was generally to order certain material about 1 year after contract award. DOE further stated that the contractor's material ordering schedule supported the need to provide for escalation. DOE stated it tacitly approved the contractor's early purchase because material prices were unstable, inflation rates high, and many material suppliers were withdrawing proposals or taking orders only on the basis of price in effect at the time of delivery.

Babcock and Wilcox estimates, together with its material ordering schedule, implies an intention, at the time of contract award, to make the particular material purchases many months later, thus supporting the need for some protection from the effects of inflation. However, the procedure used by the contracting officer did not protect the government's interest. We believe a more appropriate way to have recognized the contractor's need for inflation protection while protecting the government's interest would have been to include an economic price adjustment clause in the contract. The clause would allow the contractor to bill the government for inflation related price increases for specific items, based on specified inflation indexes at the time the purchases are actually made. The approach used by the contracting officer provided no protection for the government in the event that prices did not increase as much as projected by the contractor or if materials were bought earlier than planned.

SPECIFIC APPROVAL TO ALLOW INTERDIVISIONAL PROFITS NOT OBTAINED

W. F. and John Barnes Company, a subdivision of the Automated Machine Division of Babcock and Wilcox, supplied components (structurals) to the prime contractor for contract-0158. Barnes' price for structurals per reactor core on the first three modifications to contract-0158 were $741,362.50, $851,875, and $826,871, respectively. The contractor did not obtain quotes from any other source for parts

on the basic contract, or for the first two modifications. On the third modification, the contractor did obtain quotes from two other sources. Barnes' price for structurals for the third modification, awarded 17 months later, was $826,871 per reactor core--$25,004 less than the cost per core for the second modification ($851,875-$826,871), suggesting that competition was instrumental in lowering the price. Barnes' prices to Babcock and Wilcox on the basic contract and the first two modifications included profits of $3,112,519.

Barnes submitted a contract pricing proposal for each modification subcontract to the contract. Each proposal was audited by the Chicago Branch Office of the Defense Contract Audit Agency, that questioned Barnes' inclusion of profit on its proposals. Since Barnes is a subdivision of Babcock and Wilcox, the Defense Contract Audit Agency concluded that the proposals would constitute interdivisional transfers that would be covered by the Federal Procurement Regulations, section 1-15.205.22. This section requires purchases between divisions to be on the basis of cost incurred without profit except when the price is based on an established catalog or market price or the result of adequate price competition. Since neither of the exceptions applied, the transfers should have been made at cost.

The contracting office stated that allowing Barnes a profit has been a way of doing business based on an agreement between the Pittsburgh Naval Reactors Office and Babcock and Wilcox. According to officials in the Pittsburgh Naval Reactors Office, the government was probably better off doing business this way since it might have to agree to pay actual cost which would be more if Barnes had an overrun. The implication is that if Barnes was paid its costs only, overruns, if any, would be subject to the incentive pricing formula. Since the formula covers both overruns and underruns, it would not necessarily cost any more.

At a subsequent meeting with the contracting officer and DOE representatives, the contracting officer told us that the Pittsburgh Naval Reactors Office had attempted, many years ago, to negotiate out the interdivisional profits, but that Babcock and Wilcox had refused to remove the profits. We were also told by DOE officials that Babcock and Wilcox would eliminate interdivisional profits only if its overall profits on the entire contract were increased.

DOE, in its comments on a draft of this report, extensively pointed out why the contracting officer allowed Babcock and Wilcox to contract noncompetitively with one of its divisions at a price that included a profit. DOE further stated that agencies have authority to enter into such arrangements and in this case, DOE did so for valid reasons. A relevant section of DOE comments on this matter is quoted below.

"In the late 1960's, W. F. & John Barnes, a division of B&W, was one of three bidders for certain subcontracted work under the B&W core contracts. Barnes was generally the low bidder, although other suppliers also received portions of the work through split awards. Since there was competition, the Barnes work was done under firm fixed-price subcontracts, which presumably included a profit for Barnes.

"In the early 1970's the Contracting Officer obtained an audit of actual costs incurred by Barnes on prior orders and determined that despite competitive bidding, the profits realized were too high. After extensive negotiations, B&W agreed to refund $1.6 million, but insisted that the Government recognize that: (1) no violation of the contract or any procurement regulation had occurred; (2) the refund was being made on a voluntary basis; and (3) B&W would be able to charge a reasonable profit on future orders with Barnes.

"Shortly after this agreement, Barnes' competitors withdrew from the business, leaving Barnes as sole supplier. The Government pointed out that with the demise of competition, interdivisional profits on Barnes' work should not be allowed. B&W, however, maintained that its over all contribution to the product would not diminish simply because competition for Barnes had evaporated; if B&W could not charge profit on the Barnes work, B&W would no longer honor the historical profit rate accepted for core manufacturing.

"As a result of negotiations, the Contracting Officer concluded that the Government's long-term interests would be best served by agreeing to allow future Barnes subcontracts at price.

"Based on the above, the Contracting Office stipulated in the contract, which was reviewed and approved by Headquarters, that B&W would be reimbursed for Barnes subcontracts at price."

Given the circumstances described by DOE in its comments we do not disagree with the merits of the contracting officer's decision. However, the decision to deviate from the Federal Procurement Regulations is not within the sole discretion of a contracting officer and should have been specifically approved by the Atomic Energy Commission's General Counsel.[1] Since the

[1]The Atomic Energy Commission was a predecessor agency to the Energy, Research, and Development Agency, which was a predecessor agency to DOE.

Federal Procurement Regulations provide certain exemptions to the disallowance of interdivisional profits, a written justification for the deviation from the Federal Procurement Regulations should have been included in the contract file and forwarded to the Atomic Energy Commission's General Counsel.

Although the Atomic Energy Commission Headquarters approved the recommendation of the contracting officer for contract placement, we found no indication that the specific deviation from the procurement regulations was brought to headquarters' attention at the time this approval was sought and obtained, even though a significant dollar amount was involved. The contracting officer's standard request for approval did not justify or otherwise mention interdivisional profits. The Atomic Energy Commission's General Counsel reply was a standard reply approving the contract, and did not mention any unusual circumstances. The rationale for the regulation is that without competition there is doubt as to the fairness or reasonableness of prices established in a less than arms length transaction between affiliated organizational entities. Further, the government does not want to encourage firms to pyramid profits by assigning portions of the work to other company segments at prices that include a profit.

DOE agrees that the program office should have highlighted, for specific headquarters' approval, the arrangement negotiated with Babcock and Wilcox for reimbursement of interdivisional profit on work performed by its Barnes division.

Babcock and Wilcox stated in its comments on a draft of this report that it fully disclosed the existence of interdivisional profits and that specific contract language was included to cover this matter. We agree with the contractor's statement. Our concern relates to the contracting officer's actions in allowing interdivisional profits even though the procurement regulations clearly prohibited it whenever there was no competition for the "subcontract" award.

RECOVERY LABOR AND OVERHEAD PRICED AT WRONG YEARS' RATES

Uranium is furnished to the contractor by DOE. Throughout the fabrication process, some components are rejected because they fail to meet the contract's technical requirements. The rejected components are reprocessed to recover the uranium which is returned to DOE. The contractor has a separate department to perform this recovery.

Based on available data, the contractor projected the volume of uranium it expected to recover in future years and the estimated cost of the recovery department. Using this data and expected uranium usage, the contractor established a recovery

rate per gram by year. This rate increased yearly due to increases in labor rates because of inflation.

When estimating uranium recovery for contract-0158 and -0562 and modifications to them, the contractor used the rate per gram that had been established for the year in which the last reactor was to be shipped, rather than allocating a percentage of the recovery over each year of contract performance. For example, on one modification to contract-0158, the contractor assumed 100 percent recovery during the 7th year and used the rate per gram for that year in calculating recovery costs. However, the historical data over the last 7 to 8 years on prior contracts showed that the recovery process occurred throughout the life of the contract, not just in the final year. The data further showed that the bulk of the uranium recovery, 65 to 70 percent, generally occurred during the 3rd and 4th year of the contracts. Thus, we believe a more accurate basis for estimates would have been the applicable year's rate during the year of recovery. This could have been done by using a weighted average based on estimated recovery by year. Had the percentages derived from prior experience been used and the applicable years' rates applied, the cost of recovery work under contract-0158 would have been reduced by $70,645. The contracting officer did not disagree with us.

On contract-0562 the same procedure was used in estimating uranium recovery.

Had the percentages derived from prior experience been used and the applicable years' rates applied, the cost of recovery labor for contract-0562 would have been reduced by a total of $301,484. The contracting officer did not disagree with us.

Babcock and Wilcox points out various uncertainties in estimating uranium recovery costs. Given these uncertainties, it believes that its method is "one approach to estimating the total cost of recovery." Babcock and Wilcox stated that its method of estimating the cost of recovery was disclosed and the estimated cost was one of the items in the price negotiations. Babcock and Wilcox also stated that the method we used to estimate recovery costs, based on a weighted average of prior experience, would not be appropriate because the expected period of performance was very different as a result of the shop load at the time.

Babcock and Wilcox's method of estimating uranium recovery costs assumes that all costs will occur in the last year. This method produces the highest cost. None of the historical prior experience we examined showed all or most of the recovery labor occurring in the last year of the contract. The method we used

to estimate recovery labor, a weighted average of prior experience, although imperfect, more nearly approximates what is likely to occur.

In commenting on a draft of this report, DOE stated that although we followed what would normally be a valid pricing technique, we did not take into account differences in period of performance in applying recovery data from previous contracts to current contracts.

In response to DOE's comment, we reviewed data on actual recovery labor for the only contract modification for recovery work ($66.7 million) that had been completed. We note that our weighted average of prior recovery experience indicated that 80.8 percent of the uranium would be recovered during the 2nd, 3rd, and 4th years of the contract. The result of our analysis of the completed modification shows that 74.3 percent of the uranium was actually recovered during those 3 years. In the absence of data to the contrary, we continue to believe that our approach, though not perfect, is more appropriate for projecting recovery rates than the one used by the contractor.

In its comments DOE also stated:

> "While it is true that B&W submitted its proposal as GAO describes, the final contracts were not priced this way. In at least two of the cases cited by GAO, contract files show that the contracting officer did not agree with the contractor's proposal and established negotiation objectives on the basis of recovering uranium during contract performance. The files are less clear for the other cases. However, negotiated reduction of about $2.5 million to the B&W proposed prices more than offset any questioned amounts in this judgmental area."

We note that Federal Procurement Regulations require that costs relied on during various stages of negotiation be documented and clearly identified to show their influence on the final contract price. Further, when lump-sum reductions to a contractor's price proposal are agreed to in the negotiations, it is incumbent upon the contracting officer to document in the records, the contract items and amount to which the reduction applies. We found no evidence in the files explaining why the contractor's proposal was reduced or the items the reduction applied to.

COMPUTATIONAL ERRORS

In computing the cost of special tooling and subcontracted work, the contractor made several computational errors. For example, on contract-0158, modification 2, an estimating

worksheet containing a listing of 21 components of special tooling was erroneously added as $105,705, whereas the total should have been $103,705, or $2,000 less.

Had this and other computational errors not been made, the cost of special tooling on modification 2 would have been reduced by $9,167, and subcontracted work on modification 8 would have been reduced by $2,404, for a total of $11,571. The contracting officer reviewed our calculation and agreed there were errors in the contractor's calculations.

According to Babcock and Wilcox, had the errors been discovered at the time of negotiations they would not have affected the prices negotiated. Also, Babcock and Wilcox believes the amounts were small when compared to the other differences that existed at the time of negotiations. Babcock and Wilcox further stated that if computational errors are to be classified as overpricing, then all calculations should be checked to be certain that no offsetting computational errors are in our calculations. We considered offsetting computational errors in our calculations. The amount we have indicated is a net figure. We believe that the computational errors would have affected the prices negotiated, and DOE has agreed to pursue an appropriate price reduction based on further review of information we provided.

CONCLUSIONS

We do not believe the government is legally entitled to recovery for the $345,884 escalation added to the firm fixed-price material quotations since it was caused by the contracting officer's action in accepting the contractor's proposal rather than defective data in support of the proposal.

DOE agreed that the program office should have highlighted, for specific headquarter's approval, the arrangement negotiated with Babcock and Wilcox for inclusion of the $3.1 million interdivisional profit on work done by Barnes. We do not believe, however, that the government is legally entitled to the recovery of the interdivisional profits.

We believe the contractor's estimates totaling $372,129 for uranium recovery labor on the two contracts that were accepted by the contracting officer, were unsupported by the contractor's prior experience. The contracting officer said that the data submitted by Babcock and Wilcox in support of uranium recovery labor cost estimates was not relied on. Under the circumstances, it is unclear what the contracting officer used as a basis for negotiating what the officer presumably believed was a fair and reasonable price. We believe the uncertainty

about the basis for prices negotiated points out the need for contracting officers to clearly document what occurred during contract negotiations.

The overall impact on the government and the contractor will not be known until the contracts have been completed and it can be determined whether the contractor's actual cost is over or under target. The share ratio (the relative portion paid by the government and the contractor) is directly related to actual contract cost.

Complete records on actual labor cost and overhead were no longer available at the time of our review, according to the contractor. Although required by Federal Procurement Regulations, the contract clause governing records retention does not clearly specify that the contractor is to retain records supporting cost and pricing data.

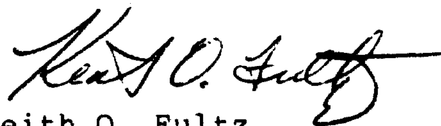
We believe you should take the necessary actions to assure that (1) future compliance with applicable procurement regulations or the deviation therefrom is approved in advance, (2) contracting officers use procedures that protect the government's interest in situations of economic uncertainty, and (3) contracting officers clearly document what occurred during contract negotiations.

In our opinion, DOE should seek a price adjustment because of the $11,571 in computational errors.

We discussed our findings with contractor officials, the contracting officers, and DOE's resident auditor responsible for the audit of the contract. Formal comments were received from the contractor and DOE. We incorporated their comments into the report where appropriate.

We are sending copies of this report to the Secretary of the Navy and other interested parties.

Sincerely yours,



Keith O. Fultz
Associate Director