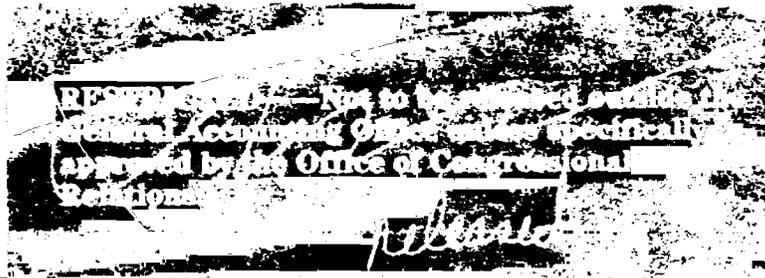


March 1991

# CONTRACT PRICING

## Defense Subcontract Cost-Estimating Problems Are Chronic and Widespread



**National Security and  
International Affairs Division**

B-242860

March 28, 1991

The Honorable John Glenn  
Chairman, Committee on Governmental Affairs  
United States Senate

Dear Mr. Chairman:

This report is one in a series being issued in response to your request that we evaluate the adequacy of controls for preventing fraud, waste, and mismanagement in Department of Defense (DOD) subcontracts.<sup>1</sup> This report deals with the Defense Contract Audit Agency (DCAA) assessments of the adequacy of contractor systems for estimating subcontract costs and provides an illustration of how subcontract estimating problems can inflate contract prices.

In March 1988 DOD revised its regulation requiring major contractors to maintain estimating systems that produce documented and verifiable price proposals. According to DOD, the revision represents its most significant action for ensuring that contractors' proposals include all the information necessary to establish fair and reasonable contract prices.

We analyzed DCAA assessments of 101 contractor estimating systems to determine whether contractors had (1) provided subcontract cost estimates that were reliable bases for negotiating fair and reasonable contract prices and (2) corrected subcontract estimating deficiencies that DCAA identified. We also did a case study on DOD's vulnerability to excessive costs resulting from subcontract estimating problems and reviewed the extent to which DOD administrative contracting officers enforced available sanctions against contractors that did not comply with the revised cost-estimating regulation.

## Results in Brief

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Despite the March 1988 revision to DOD's cost-estimating regulation, serious estimating deficiencies persist. Of the 101 contractors that DCAA reviewed, 83 had subcontract estimating deficiencies. Forty-two contractors had deficiencies severe enough for DCAA to consider their systems unacceptable for producing proposals which provided reliable bases for negotiating fair and reasonable prices. In fiscal year 1989, these 42 contractors received an estimated \$11.3 billion in DOD sales.

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<sup>1</sup>For this report, "subcontract" refers to all purchases from any supplier, distributor, vendor, or firm furnishing material, supplies, or services to DOD prime contractors or subcontractors.

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Many contractors had not corrected estimating system deficiencies in a timely manner. Sixty-four contractors had subcontract estimating deficiencies that DCAA had identified in prior reports but remained uncorrected at the time of subsequent DCAA reviews. The deficiencies had remained uncorrected for an average of 17 months.

Our case study, on one of the many subcontracts associated with parts for the Trident II missile launcher, showed overpricing that was equivalent to 75 percent of the amount negotiated in the prime contract for that part. This case illustrates the risks that stem from cost-estimating system deficiencies.

DOD administrative contracting officers can sanction contractors that do not correct estimating system deficiencies. However, the sanctions are rarely applied.

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## Background

In the past several decades, the changing role of many prime contractors from fabricating weapon systems and products to integrating work done by subcontractors has resulted in substantial subcontracting. According to DOD, active subcontracts totaled about \$195 billion at the end of fiscal year 1989. As a result, subcontract estimates in contractor proposals are a critical element in establishing the reasonableness of contract prices.

Subcontracting shifts direct management and oversight of DOD contract costs from the government to prime contractors. DOD does not have direct management responsibility over subcontracts because it does not have a contractual relationship with subcontractors. Instead, it relies greatly on prime contractors to ensure that subcontract prices are fair and reasonable.

Because many weapons and related systems are complex, one-of-a-kind products, many DOD purchases come from one supplier and are not influenced by the competitive forces of the marketplace. Contract prices for noncompetitive procurements are generally determined through extensive negotiations.

A major control for ensuring fair and reasonable noncompetitive contract prices is DOD's regulation on contractor cost-estimating systems. In March 1988, in response to evidence of overpricing, DOD revised section 215.811 of the Defense Federal Acquisition Regulation Supplement to require major contractors to establish, maintain, and disclose adequate cost-estimating systems.

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The regulation further stipulates that DCAA, along with contract administration personnel, regularly review (generally every 3 years) the adequacy of contractor estimating systems. To be considered adequate, a contractor's system must be established, maintained, reliable, and consistently applied; and it must produce verifiable, supportable, and documented cost estimates.

Shortcomings in contractor estimating systems that consistently result in proposals unacceptable for negotiating fair and reasonable prices are, according to the Defense Federal Acquisition Regulation Supplement, significant estimating deficiencies. If significant deficiencies are found, the regulation requires DCAA to recommend that the administrative contracting officer disapprove all or a portion of the system.

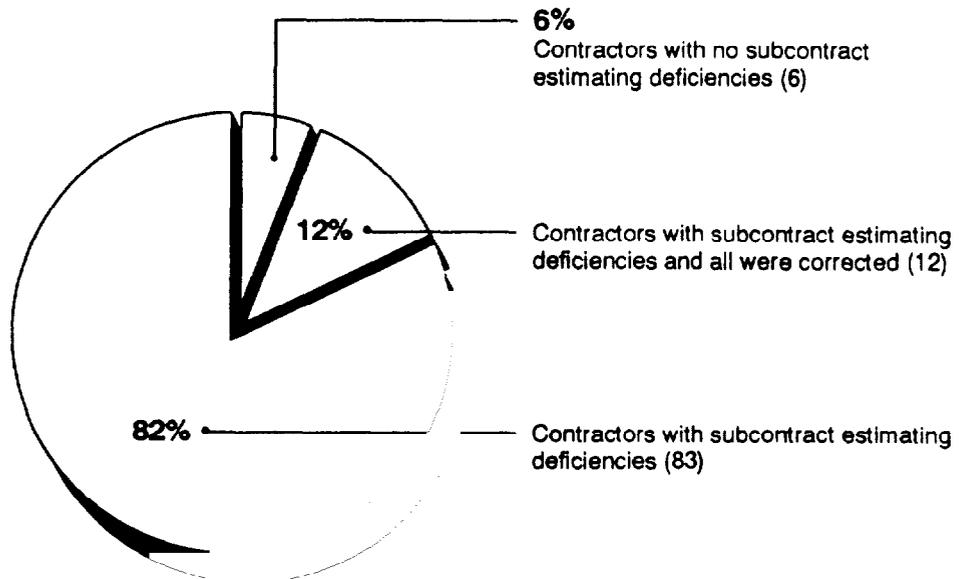
The regulation provides that administrative contracting officers shall take whatever action is determined necessary to ensure that contractors correct identified deficiencies. Actions which should be considered by the contracting officers include, but are not limited to, bringing the issue to the attention of higher-level management, reducing or suspending progress payments, and recommending that potential contracts not be awarded.

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## Subcontract Estimating Deficiencies Are Significant and Widespread

Of the 101 contractors that DCAA assessed, 83 had subcontract estimating deficiencies that required corrective action. Figure 1 shows the extent of subcontract estimating deficiencies for all 101 contractors.

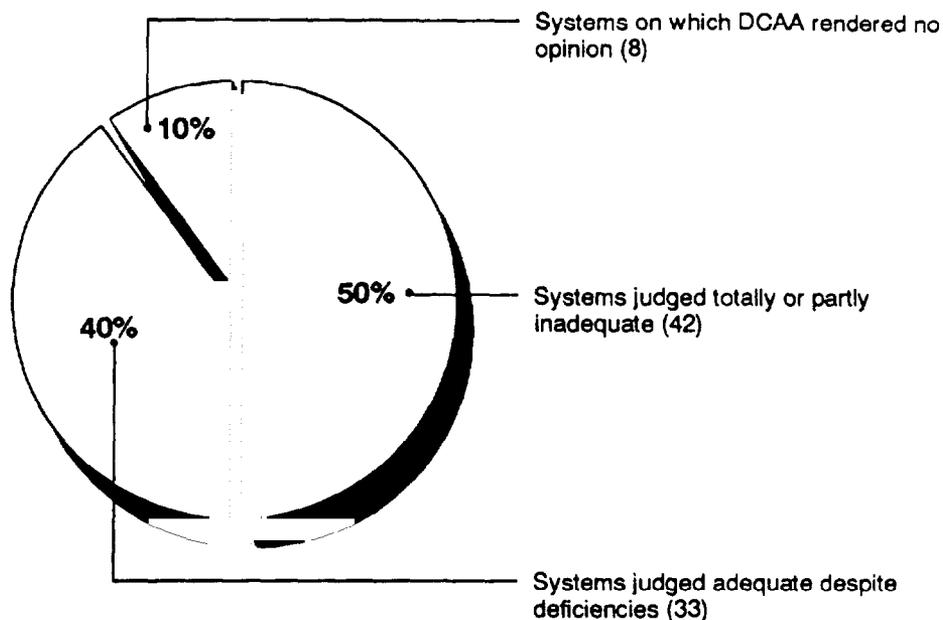
**Figure 1: Eighty-Three of 101 Contractors Had Subcontract Estimating Deficiencies That Required Corrective Action**



Forty-two contractors—about half of those with deficiencies—had deficiencies significant enough that DCAA, in accordance with the regulation, judged their estimating systems to be either totally inadequate or inadequate in some respects.<sup>2</sup> Thus, DCAA concluded that the subcontract estimates included in proposals prepared by these 42 contractors did not provide acceptable bases for negotiating fair and reasonable prices. The 42 contractors had estimated fiscal year 1989 DOD sales of \$11.3 billion. Figure 2 shows DCAA's determinations for the 83 contractors with deficiencies.

<sup>2</sup>Twenty-two of the contractors had totally inadequate systems, and 20 had systems that were inadequate in some respects.

**Figure 2: DCAA Determinations for Contractor Systems With Subcontract Estimating Deficiencies**



The types of subcontract estimating problems DCAA identified included failure to (1) conduct cost or price analyses of subcontracts and (2) develop or use historical vendor pricing information. Prior GAO and DOD audits have shown that such problems cost DOD millions annually.

### Subcontract Evaluations Are Not Adequately Conducted or Disclosed

To safeguard the government against inflated subcontract estimates, prime contractors are required, under certain circumstances, to obtain and evaluate subcontractors' proposed prices and include the results of the evaluations as part of their contract proposals. Such evaluations should be made before the prime contract is negotiated because the evaluations can provide contracting officers with assurance that the subcontract estimates included in prime contractors' proposals are reliable.

The repeated failure to perform, or disclose, subcontract evaluations is a significant estimating deficiency. Of the 83 contractors with subcontract estimating deficiencies, DCAA identified 41 with deficiencies of this type. The following examples illustrate the problem:

- In an April 1989 report, DCAA cited a contractor for failure to perform adequate, complete, and timely reviews of proposed subcontracts. In January 1991, 43 months after this deficiency was initially disclosed, DCAA reported that it remained uncorrected. For example, DCAA found

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that the contractor had not performed adequate analyses of five major subcontracts totaling about \$27.3 million.

- In an August 1989 report, DCAA cited another contractor for not performing or submitting complete and adequate subcontract cost or price analyses. In one proposal review, DCAA found that the contractor had provided inadequate analyses of 31 subcontracts totaling \$48 million (about 25 percent of the overall proposal). While the contractor indicated that it had taken some actions to correct the deficiency, we were informed by DCAA officials in November 1990 that they still considered the problem to be uncorrected, 15 months after it was initially identified.

Such deficiencies often contribute to excessively priced contracts. Appendix I contains a detailed case study showing that a prime contractor's failure to adequately evaluate a subcontractor's proposal contributed to overpricing the prime contract.

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### **Contractors' Proposals Do Not Consider Likely Vendor Reductions**

When contractors do not perform evaluations of subcontract proposals, DOD contracting officers must use alternative pricing techniques to compensate for the missing information. One alternative is to evaluate and use historical information on prior reductions achieved by contractors in negotiations with vendors and suppliers.

The revised DOD regulation states that an adequate estimating system should provide for the use of historical experience, including historical vendor pricing information. Failure to appropriately consider reductions expected from vendor negotiations is an estimating deficiency.

Of the 83 contractors with subcontract estimating deficiencies, DCAA reports showed that 34 had not adequately developed or used historical vendor pricing information to estimate the expected reduction between vendors' proposed prices and the actual prices negotiated. The following examples illustrate the problem:

- In a September 1989 report, DCAA cited a contractor's continuing failure to adequately justify its subcontract estimates. On the basis of its review of 13 proposals during 1988 and 1989, DCAA questioned \$61.9 million in proposed subcontract costs because the contractor had not used applicable historical cost and negotiation data. DCAA found that the contractor achieved an average savings of 17.3 percent below subcontractors' proposed prices. As of November 1990, 26 months after

the problem was first reported, DCAA officials told us it remained uncorrected.

- In an August 1989 report, DCAA cited another contractor's failure to consider likely vendor price reductions as a major deficiency. DCAA found that in eight proposals having significant material costs, the contractor had failed to consider likely vendor price reductions. DCAA also questioned \$2.4 million in material costs.

## Previously Identified Deficiencies Were Not Corrected

Many contractors were slow to correct their reported estimating problems. We found that 64 of the 83 contractors had subcontract deficiencies that had been previously identified but remained uncorrected at the time of subsequent DCAA reviews. The deficiencies had remained uncorrected for an average of 17 months with a range of 3 to 57 months. We believe the longer estimating system deficiencies remain uncorrected, the longer DOD will face the risk that fair and reasonable prices will not be achieved in contract negotiations.

In addition, major deficiencies identified by DCAA, such as the failure to conduct adequate subcontract evaluations and use historical vendor pricing information, were the same types of deficiencies that existed prior to DOD's March 1988 regulatory revision. For example,

- In October 1985, we testified that contractors had not adequately evaluated subcontracts and, after negotiating DOD contracts, reduced subcontract prices by \$42 million.<sup>3</sup>
- In June 1987, we reported that prime contractors had not evaluated 28 subcontracts that had been negotiated into DOD prime contracts for about \$92 million.<sup>4</sup> We found that after prime contract negotiations, the contractors evaluated the subcontracts and reduced subcontract prices by \$10 million.
- In February 1989, we reported that contractors' failure to consider historical vendor prices resulted in inflated contract prices.<sup>5</sup> Our examination of 86 material parts showed that contractors purchased the items for \$2.5 million (about 8 percent) less than the prices included in prime contracts.

<sup>3</sup>GAO Work at Defense Contractor Plants, statement of Frank C. Conahan, GAO, before the Legislation and National Security Subcommittee, House Committee on Government Operations (Oct. 3, 1985).

<sup>4</sup>Contract Pricing: Contractor Cost Estimating Systems (GAO/NSIAD-87-140, June 3, 1987).

<sup>5</sup>Contract Pricing: Contractors Should Provide Historical Vendor Prices to DOD (GAO/NSIAD-89-68, Feb. 15, 1989).

## Lack of Adequate Controls to Ensure Compliance With Regulations on Subcontract Pricing

The widespread and chronic conditions we identified are even more serious in light of DOD's failure to recognize the problems as a material internal control weakness. DOD is required to assess its internal controls under the Federal Managers' Financial Integrity Act (31 U.S.C. 3512), enacted in 1982. The act was intended to strengthen internal management controls and accounting systems throughout the federal government and reduce fraud, waste, abuse, and the misappropriation of funds. The act requires the head of each agency to prepare a statement annually to the President and the Congress regarding the condition of agency internal control and accounting systems. Among other things, where the head of an agency decides that the agency's internal accounting and administrative control systems have a material weakness, the statement must describe the weakness and agency plans to correct it. In its statement to the President and the Congress, DOD did not identify subcontract pricing as a material weakness.<sup>6</sup>

The DOD Inspector General reported that DOD contracts had been overpriced by a projected \$94 million because prime contractors had not submitted the results of their subcontract cost analyses to the government before negotiating the contracts.<sup>7</sup> On the basis of its work, the Inspector General recommended that DOD recognize subcontract pricing—specifically prime contractor cost analyses of subcontract price proposals—as a material internal control weakness.

DOD did not concur with the Inspector General's recommendation. It stated:

"The most significant action taken by the Department to ensure that contractor proposals include all the information necessary to establish a fair and reasonable contract price was the issuance in March [sic] 1988 of additional requirements with which contractor estimating systems must comply.

"We do not believe the IG [Inspector General] has identified a material internal control weakness. The problems identified are not new; they have been the subject of previous GAO reports and Congressional hearings during 1987 and 1988. Regulations have already been revised and policy memoranda have already been issued to deal with the problems identified. Had the office of the IG focused its review on more recent contract actions, we believe the results would have been significantly different because of the increased emphasis that has been placed on these issues during the past three years."

<sup>6</sup>Department of Defense Annual Statement of Assurance for Fiscal Year 1990.

<sup>7</sup>Evaluation of Subcontract Price Proposals, DOD, Office of the Inspector General (No. 90-057, Apr. 9, 1990).

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However, our work shows that issuing new regulations and policy mem-  
oranda did not solve the problem. Clearly, DOD has not done enough to  
address continuing, serious subcontract-pricing problems.

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## DOD Administrative Contracting Officers Used Sanctions Infrequently

DOD's March 1988 revision authorizes administrative contracting officers  
to take whatever action is determined necessary—including the use of  
sanctions—to ensure that contractors correct identified estimating defi-  
ciencies. Such sanctions include reducing or suspending progress pay-  
ments and recommending against the award of potential contracts.  
However, rarely have such sanctions been applied.

In February 1991 we contacted the DCAA officials and administrative  
contracting officers responsible for 21 of the 42 contractors with unac-  
ceptable estimating systems, due all or in part to significant subcontract  
estimating deficiencies. The DCAA officials stated that 16 of the 21 con-  
tractors still had significant subcontract estimating deficiencies. An  
average of 28.4 months had lapsed since DCAA reported that contractors  
should take corrective action. For the 16 contractors that had not taken  
corrective action, DOD administrative contracting officers had not disap-  
proved their systems or employed available sanctions in 14 cases. While,  
in some cases, there may be legitimate reasons for not applying sanc-  
tions, we believe their use could encourage contractors to take timely  
action on identified estimating deficiencies.

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## Recommendations

We recommend that the Secretary of Defense designate subcontract  
pricing as a material internal management control weakness in accor-  
dance with the Federal Managers' Financial Integrity Act of 1982. This  
designation would increase the public accountability of DOD managers  
and motivate them to establish or strengthen controls in an area where  
significant overpayments have occurred. We also recommend that the  
Secretary encourage stronger use of all existing regulatory sanctions to  
bring about improvements in contractor estimating systems and protect  
against fraud, waste, and mismanagement.

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## Scope and Methodology

We assessed DCAA initial and follow-up cost-estimating system reports  
issued by field offices under two of six DCAA regional offices between  
March 1989 and February 1990.<sup>8</sup> Our analysis was based on all

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<sup>8</sup>The two DCAA regions were the Western Region and the Mid-Atlantic Region.

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101 reports in which DCAA had reviewed major elements of each contractor's estimating system, such as subcontracting, materials, overhead, labor, and written policies and procedures. These reports covered contract proposals submitted by contractors and evaluated by DCAA after DOD had revised section 215.811 of the Defense Federal Acquisition Regulation Supplement on cost-estimating systems in March 1988. We assessed contractors' analyses of subcontractor proposals and their use of historical vendor pricing information.

We also summarized data on corrective actions taken by contractors on previously identified subcontractor pricing problems and developed a case study from another GAO audit which illustrates the consequences of subcontract estimating deficiencies.

Our work for the case study was done at Dean Products, Inc., Brooklyn, New York; Westinghouse Marine Division, Sunnyvale, California; and the Navy Strategic Systems Program Office, Crystal City, Virginia. At these locations, we interviewed government and contractor representatives and reviewed financial and cost accounting records, vendor price quotations and purchase orders, and contract file documents.

We conducted our review between May 1990 and February 1991 in accordance with generally accepted government auditing standards.

As arranged with your office, we did not obtain written agency comments on this report. However, we discussed its contents with DOD officials and have included their comments where appropriate.

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Unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from the date of this letter. At that time we will send copies to the Secretary of Defense; the Directors of the Defense Logistics Agency and DCAA; the Director, Office of Management and Budget; and other interested congressional committees. Copies will also be made available to others upon request.

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Please contact me at (202) 275-8400 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Paul F. Math". The signature is stylized with loops and a long horizontal stroke at the beginning.

Paul F. Math  
Director, Research, Development, Acquisition,  
and Procurement Issues

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## Abbreviations

|      |                               |
|------|-------------------------------|
| DCAA | Defense Contract Audit Agency |
| DOD  | Department of Defense         |
| GAO  | General Accounting Office     |



# Case Study—Subcontract With Dean Products, Inc.

This case study contains the results of our review at Dean Products, Inc., a subcontractor providing thermal panels to the Westinghouse Marine Division, Westinghouse Electric Corporation. The Navy prime contract (N00030-87-C-0083) is for the purchase of tactical hardware for the Trident II missile launcher. It illustrates DOD's vulnerability to incurring excessive costs when a prime contractor does not perform an adequate cost analysis of a subcontractor's proposal.

## Westinghouse's Analysis Was Inadequate

The price of this contract was overstated by \$514,000 because Westinghouse (the prime contractor) did not ensure that its proposed price for thermal panels was based on accurate, complete, and current cost or pricing data, as required by the Truth in Negotiations Act (P.L. 87-653, as amended). The overpricing represents about 75 percent of the amount negotiated in the prime contract for thermal panels. In a separate report,<sup>1</sup> we have recommended that the Navy take action to recover the overpricing.

At the time Westinghouse and the Navy negotiated this contract, Westinghouse had not awarded a subcontract to Dean. Accordingly, Westinghouse's proposal to the Navy was based on Dean's proposed price.

In July 1986, Westinghouse received Dean's proposal and conducted a desk audit comparing Dean's proposed price with the price negotiated on a prior thermal panel subcontract with Dean. On the basis of its comparison, Westinghouse reduced Dean's proposed price by 6 percent to reflect Westinghouse's anticipated negotiation results and included this amount in its proposal to DOD. The Navy contracting officer relied on Westinghouse's proposal and included the thermal panel price proposed by Westinghouse in the contract price.

One day before agreement was reached on this contract, Dean provided Westinghouse with a revised proposal which lowered Dean's thermal panel price by about 75 percent. However, Westinghouse did not disclose this reduced proposal to DOD. Therefore, Dean's reduced proposal was not used to negotiate the price of the contract.

We found cost or pricing data at Dean which showed that the proposal used to price the contract had been significantly overstated. Westinghouse's desk audit of Dean's proposal did not include a review of Dean's

<sup>1</sup>Contract Pricing: Material Prices Overstated on the Trident II Missile Launcher (GAO/NSIAD-91-147).

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books and records. During such a review, Westinghouse could have both verified the cost or pricing data cited in Dean's proposal and identified additional cost or pricing data, such as purchase histories.

The following examples show the cost or pricing data we found:

- Dean's revised proposal reduced accessory costs by over 50 percent. Dean had purchased some accessories at substantial quantity discounts 6 months before the date of the prime contract price agreement.
- Dean's revised proposal reduced heat treating costs by about 65 percent. The lower costs closely approximated a lower-tier subcontractor's invoice dated 4 months before the date of the prime contract price agreement.
- Dean's revised proposal reduced sheet metal costs by almost 50 percent. This lower amount was about the same as Dean actually paid on a previous order almost 7 months before the date of the prime contract price agreement.
- Dean's revised proposal eliminated surface blasting costs based on Dean's decision to conduct the work in-house. Dean had the capability to conduct surface blasting at least 3 months before the date of the prime contract price agreement.

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## Westinghouse Did Not Analyze Dean's Cost or Pricing Data

According to the Federal Acquisition Regulation, a cost analysis should include, as appropriate, a verification of both the existence and completeness of the cost or pricing data supporting proposed prices. Without an adequate cost analysis, Westinghouse could not determine whether Dean's cost or pricing data were accurate, complete, and current.

Westinghouse did not conduct a thorough analysis of Dean's cost or pricing data prior to reaching agreement on the prime contract price. The following examples illustrate that Westinghouse was (or should have been) aware that Dean's proposed costs required further analysis.

- Westinghouse's desk audit noted concern over an increase in the subcontractor's manufacturing overhead rate. Westinghouse's conclusion, based on the desk audit, was that an on-site audit at Dean would be necessary to substantiate the increase. Although Westinghouse had received Dean's proposal several months before prime contract negotiations, the on-site verification did not occur until after the agreement on the prime contract price.

- At the time Westinghouse conducted the desk audit, it was in the process of qualifying another subcontractor to produce thermal panels. That subcontractor had proposed a price to Westinghouse that was less than one-fourth of the price included in Westinghouse's proposal for the contract. Knowledge of a significantly lower price should have alerted Westinghouse that Dean's proposed price needed closer scrutiny.
- Westinghouse's desk audit compared Dean's proposed costs for 65 thermal panels required for the contract with the negotiated costs for the first production run of 26 thermal panels. Generally, unit costs are relatively high during initial production runs when quantities are small. As quantities increase and lessons are learned from initial production runs, unit costs generally decrease. A detailed cost analysis would have provided Westinghouse a better means of assessing the effects of these differences on Dean's proposed unit price.

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