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Report to the Ranking Minority Member, Committee on Governmental Affairs, U.S. Senate

June 1987

PROCUREMENT

Defense Logistics Agency Implementation of the Spare Parts Initiatives





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National Security and International Affairs Division B-220528

June 1, 1987

The Honorable William V. Roth, Jr. Ranking Minority Member Committee on Governmental Affairs United States Senate

Dear Senator Roth:

In response to your request, we have assessed the Department of Defense's (DOD's) progress in implementing its spare parts initiatives. The Secretary of Defense announced the initiatives in July and August 1983 to improve the procurement of spare parts. A more detailed discussion of these initiatives and the results of our review are provided in the appendixes.

We previously reported to you on spare parts procurement at the San Antonio Air Logistics Center, Aviation Systems Command, Ships Parts Control Center, and Defense Electronics Supply Center (DESC). Our follow-up work was performed at these same activities. This report presents the results of our review at the Defense Logistics Agency's (DLA'S) DESC and includes

- information on price increases during the two periods we examined (see app. III),
- an evaluation of the adequacy of the price analysis procurement officials performed during each of these periods (see app. IV),
- an assessment of the personnel changes made in response to the initiatives (see app. V), and
- a discussion of the difficulties DESC is experiencing in maintaining a trained and experienced contracting work force. (See app. VI.)

Our methodology is explained in appendix II. Separate reports are being issued on the results of our review at the other locations.

We compared the prices on 107,333 procurements totaling \$507.9 million to determine the changes that occurred during the 12-month period ending March 31, 1985. Our review showed that 8 percent of the procurements experienced price increases of 25 percent or more while 65 percent had either no price change or a price decrease. We could not

¹DOD Initiatives to Improve the Acquisition of Spare Parts (GAO/NSIAD-86-52, Mar. 11, 1986).

quantify how much the initiatives, as opposed to other factors,² helped achieve these results. However, we found substantial evidence that the initiatives are being implemented, and it is likely that they have had an effect. For example, DESC is buying in larger quantities, as required by one of the initiatives, and has increased the use of competition. Further, employee performance evaluation factors were changed to emphasize the need for quality pricing. Also, internal government price estimates are being prepared and provided to procurement officials for use on items being procured for the first time.

While these efforts provide reasons for optimism, ample opportunity exists for further improvement. We found, for example, that inadequate price analyses occurred in 46.7 percent of our sampled procurements with price increases of 25 percent or more. Price increases of this magnitude should prompt close scrutiny. Further, inadequate price analysis occurred frequently on procurements where there was no change in price (28 percent of our sample). While procurements with unchanged prices would receive less priority than those with price increases, the fact that prices remained unchanged should not be the sole basis for accepting a price as reasonable. The Armed Services Pricing Manual (also known as the Small Purchase Manual) states that:

"A price previously paid should not be accepted as a basis for determining that the offered price is reasonable unless it can be determined that the previous award was based on adequate competition or some other valid method of establishing that the price was reasonable."

We also found that DESC buyers had not consolidated purchase requests. Projecting our sample results, there could have been over 10,000 awards where the opportunity to consolidate may have been missed.

Failure to consolidate procurements causes

- unnecessary duplication of contract awards,
- increased administrative costs, and
- uneconomical purchase quantities.

In addition to the initiatives that call for consolidation, the DOD Inspector General in a May 25, 1984, report to the Director, DLA recommended that

²Changes in spare parts prices could have been the result of several factors. Certainly lower inflation and improvement in the economy played major roles. The attention given spare parts pricing by top DOD officials and efforts by contractors to minimize price increases and avoid adverse publicity may have also contributed.

DESC be directed to buy items in quantities that take advantage of price breaks.

DESC officials indicated that the major obstacle to continued improvement in price analysis under the spare parts initiatives is their inability to retain experienced, well-trained buyers. They explained that it takes about 3 years for a buyer to receive the necessary training and acquire appropriate experience to qualify for a grade 7 or 9 position. Yet, these are the grades where the most personnel are lost. DESC officials stated the Air Force provides higher grades (pay) and pointed out that the Air Force activity is less than 20 miles away.

A previous report³ to the Secretary of Defense confirmed that DESC as well as other DLA activities have recruitment and retention problems with contracting personnel. Forty-one percent of the buyers and line supervisors in the various supply centers had less than 3 years experience.

DLA officials told us that college graduates are being recruited and a national recruiting center has been opened in Columbus, Ohio. Supply centers can hire directly from the employment rolls prepared by the recruiting center. DLA increased its last 3 fiscal year requests for additional personnel and emphasized to the supply centers the need to establish realistic staffing goals.

DLA officials agreed that DESC has a buyer retention problem in grades 7 and 9 but believe the actions taken should improve the situation. However, the actions taken will not completely resolve the problem because a major factor prompting buyers to leave DESC for Air Force positions is better career opportunities. Thus, DESC will continue to have a problem to some extent. We believe, therefore, that this problem could slow or reduce the improvement in price analysis necessary to the success of the initiatives.

Regarding the problem of purchase request consolidation, we believe ample guidance has been provided on the desirability of this procurement technique. We are, therefore, recommending that the Director, DLA require the Commander, DESC to take the necessary steps to assure consolidation of purchase requests occurs when appropriate. The need for

³Progress and Challenges at the Defense Logistics Agency (GAO/NSIAD-86-64, Apr. 7, 1986).

such action at other DLA centers should also be assessed, and if necessary, a system established to ensure consolidation is considered during price analysis.

DOD agreed with our report. Further, DLA indicates it is testing a new system that should improve purchase request consolidations. Upon completion of the testing, the new system will be provided to all DLA hardware centers. DOD will also ensure that DLA informs its hardware centers in writing of current policies on consolidating purchase requests.

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

Sincerely yours,

Frank C. Conahan

Assistant Comptroller General

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Abbreviations

DESC	Defense Electronics Supply Center
DLA	Defense Logistics Agency
DOD	Department of Defense
FAR	Federal Acquisition Regulations

Background

In July and August 1983, the Secretary of Defense set the tone for the DOD position on unwarranted price increases and/or excessive pricing on spare parts procurement. In two memorandums, the Secretary announced a series of initiatives such as

- pursuing refunds on a voluntary or legal basis;
- strengthening procedures for debarring and/or suspending contractors;
- refusing to do business with contractors guilty of excessive pricing; and
- identifying alternate sources, including foreign sources.

The Secretary of Defense asked each service and DLA to initiate comprehensive programs to fully address the problem. In addition, the Secretary called for efforts by the DOD Inspector General and the Deputy Secretary of Defense and established an Office of Spares Program Management. The Secretary's memorandums and the responses from the services and DLA have produced a corrective action plan commonly referred to as the "spare parts initiatives."

The Congress, also concerned with spare parts procurement, enacted the Defense Procurement Reform Act of 1984, requiring DOD to address spare parts pricing problems by

- refusing to enter into contracts unless the proposed prices are fair and reasonable;
- continuing and accelerating ongoing efforts to improve defense contracting procedures to encourage effective competition and ensure fair and reasonable prices;
- using standard or commercial parts whenever such use is technically acceptable and cost effective;
- acquiring replenishment parts in economic order quantities and on a multiyear basis whenever feasible, practicable, and cost effective; and
- reexamining the policies relating to acquisition, pricing, and management of replenishment spare parts and technical data related to such parts.

In 1984 several congressional requesters asked us to analyze growth in spare parts prices and to discuss DOD's improvement initiatives and their status. A previous report² on these issues indicated that DOD had made

 $^{^1}$ Section 1201 of the Defense Authorization Act, 1985, was designated the $\underline{\text{Defense Procurement}}$ Reform Act of 1984.

²DOD Initiatives to Improve the Acquisition of Spare Parts (GAO/NSIAD-86-52), Mar. 11,1986).

progress but it will take time before the initiatives are fully implemented. The report also indicated that from January 1980 through August 1983:

- significant price increases occurred in the procurement of spare parts at four DOD locations;
- contractors' prices were, in many cases, accepted by DOD procurement officials (buyers and principal contracting officers) without challenge;
- management emphasized the number of awards made rather than the quality of prices obtained;
- procurement officials were encouraged to limit the amount of analysis performed on low-dollar value procurements; and
- DOD announced the spare parts initiatives and established a system for monitoring their progress.

In 1985 the Chairman, Senate Committee on Governmental Affairs requested a follow-up review. As agreed with the Committee's representatives, we did the follow up at the same DOD locations where we did our earlier work and are reporting the results separately by location (Air Force, Army, DLA, and Navy).

DESC is one of six supply centers operated by DLA. DESC procures and manages inventories of electronic parts for the military services. At the beginning of fiscal year 1985, DESC managed about 897,000 electronic items such as resistors, connectors, transformers, and semiconductors. During the first 10 months of fiscal year 1985, DESC awarded 166,028 contracts totaling about \$583 million. Approximately, 51 percent of the awards were made through DESC's automated procurement systems.³ About half of these awards were for \$25,000 or less.

³DESC operates three procurement systems: phase I is automated and is used for procurements of \$1,000 or less; phase II is automated and is used for procurements between \$1,000 and \$10,000; contracts over \$10,000 are manually awarded.

Objectives, Scope, and Methodology

Our objectives were to determine whether

- increases in spare parts prices had improved;
- the improvement, if any, indicated that the initiatives were working;
- the adequacy of price analyses on individual procurements had improved as compared with the results shown in our earlier report;
- personnel changes required by the initiatives had been implemented;
 and
- changes, other than personnel related changes, indicated that various initiatives are being followed.

To meet these objectives, we did the following:

- Identified price changes that occurred on procurements made during the 12-month period ending March 31, 1985, and grouped these changes into four categories: price decreases, prices that remained unchanged, price increases of up to 24.9 percent, and price increases of 25 percent or more.
- Analyzed whether factors such as competition, changes in quantity, and dollar value influenced price behavior. (We performed the same analyses during our previous review.)
- Selected a statistical sample of 150 procurements (contract files) from a universe of 189,263 procurements to evaluate the adequacy of price analyses on individual procurements and compared the results to those from our earlier effort.
- Determined if DESC had made changes in its personnel evaluation system as required by the initiatives.
- Determined the number of competitive awards and the number of procurements for which quantities had increased from previous buys. (The initiatives emphasize the need for competition as well as buying in larger quantities to avoid frequent buys of small quantities.)

To make unit price comparisons, we obtained the DESC procurement history master files. These files contain detailed procurement information on all DESC procurements. Since we were concerned only with replenishment spare parts, we eliminated procurements that did not meet that definition from the data files.

We also excluded unpriced orders because price comparisons cannot be made on spare parts procured under such arrangements.¹ We included

¹We are performing a separate review of unpriced orders for the Senate Committee on Governmental Affairs

basic ordering agreements² and other similar agreements in our sampling unless the final price determination was accomplished by government representatives at contractor plants or other locations. We excluded those procurements because our objective was to assess the adequacy of price analysis at DESC.

We used computer analysis to compare price changes for each item. This analysis compared the most recent unit price within our time frame (April 1, 1984, through March 31, 1985) to the second most recent unit price and then compared the second most recent price to the third most recent price. If an item was procured only once during our review, no comparison was made unless a procurement occurred between January 1, 1980, and April 1, 1984.

This process resulted in 107,333 unit price comparisons. We adjusted percentage price changes if the interval between purchases exceeded 1 year by dividing 365 days by the number of days between procurements and multiplying this amount by the actual percentage price change:

If the interval between procurements was less than 1 year, we made no adjustment.

Our review covered replenishment spare parts procurements for 1 year and compared them with procurements occurring in that same year, or as far back as January 1, 1980. Our earlier report covered procurements for 3-1/2 years between January 1, 1980, and June 30, 1983, in which both procurements had to occur. Because of the difference in designs, the earlier study contained a higher proportion of more frequently purchased items and used a shorter period for developing comparisons. These differences could affect the proportion of items purchased at relatively longer intervals included in the two periods. Thus, the results of the two studies cannot be directly compared.

²The basic ordering agreements are not contracts but written agreements that provide the contract provisions that will apply to orders subsequently issued under the agreements. Orders under the basic ordering agreements may be issued as priced or unpriced. Priced orders occur before issuance. Unpriced orders are not priced until some time after issuance.

Our results show price increases within each period for those procurements that met our selection criteria. They also indicate some differences in the price increases but because of the design differences previously mentioned, the exact differences between periods are not known. However, because of the large number of procurements involved, the results provide an indicator of change between periods.

To measure improvement, if any, in the adequacy of price analyses, we randomly sampled procurements from five categories: single procurements (or buys), those procurements with price decreases, those without price change, those with price increases up to 24.9 percent, and those with price increases of 25 percent or more.

Price analysis is defined as the process used to determine whether the offered price—before making a contract award—is fair and reasonable. To evaluate the adequacy of the price analyses performed, we used criteria contained in the Federal Acquisition Regulations (FAR), the DOD FAR Supplement, and the Armed Services Pricing Manual, Number 2.

We based our analyses on the information contained in the DESC procurement history files and on data obtained during interviews with the responsible buyer or contracting officer. These interviews were made to resolve any questions arising from our review of the documents and to provide these personnel an opportunity to comment or discuss the case. Although we did not perform a formal reliability assessment of the DESC data base, we did verify that more than 94 percent of the award dates, national stock numbers, and unit prices in our sample contracts were recorded correctly in the automated file. Thus, the data could be used for review purposes.

We did not review the implementation of each initiative nor could we identify improvement in relation to specific initiatives. Although we did not evaluate the implementation of each initiative, we attempted to identify, based on discussions with procurement officials and a review of procurement files, those instances where it was evident that selected initiatives were not being adequately implemented.

Our review was performed in accordance with generally accepted government auditing standards.

Spare Parts Prices and Factors That Influence Price

Spare Parts Prices

Our review indicated that spare parts prices are moving in the right direction. Table III.1 shows a 6.4 percent increase in procurements with decreased or unchanged prices, fewer (5.2 percent) procurements with higher prices, and a decrease of 22.9 percent in procurements with price increases of 25 percent or more over data from our previous review. Table III.2 presents this data in terms of dollars and shows a 21.9 percent increase in decreased or unchanged prices, fewer (16.7 percent) with higher prices, and a decrease of 34.3 percent in price increases of 25 percent or more.

Table III.1: DESC's Spare Parts Procurements by Price Change Category in Transactions

	During the 42 ended June	! months 30, 1983	During the 12 months ended March 31, 1985		
Category	Number	Percent	Number Percent		
Decrease in price	80,530	43.8	51,064	47.6	
No change in price	30,985	16.9	18,274	17.0	
Increase up to 24.9%	53,045	28.8	29,278	27.3	
Increase of 25% or over	19,310	10.5	8,717	8.1	
Total	183,870	100.0	107,333	100.0	

Table III.2: DESC's Spare Parts Procurements by Price Change Category

	During the 42 ended June 3	months 30, 1983	During the 12 months ended March 31, 1985	
Category	Awards	Percent	Awards	Percent
Decrease in price	\$367.1	38.7	\$245.3	48.3
No change in price	88.1	9.3	52.2	10.2
Increase up to 24.9%	397.0	41.8	176.9	34.8
Increase of 25% or over	96.6	10.2	33.5	6.7
Total	\$948.8	100.0	\$507.9	100.0

These changes in spare parts prices may have been the result of several factors. Certainly, lower inflation and improvement in the economy played major roles. The attention given spare parts pricing by top DOD officials and efforts by contractors to minimize price increases and avoid adverse media publicity probably contributed. DOD's initiatives were also likely to have had a favorable effect because:

• DESC increased its competition rate and the number of procurements where quantities were larger than on previous procurements, thereby supporting the initiative to increase the use of competition and also to take advantage of economic order quantities and avoid frequent buys of small quantities. (See tables III.4 and III.6.)

Appendix III Spare Parts Prices and Factors That Influence Price

- In responding to other initiatives, DESC revised its evaluation system for people working in procurement and established a system of rewards designed to recognize employees who obtain competition on spare parts that had been procured sole source.
- DESC also instituted a series of actions to provide more and better information to its buyers so they are familiar with the spare parts they are buying.

We believe that the spare parts initiatives, as reflected in the various actions taken by DESC, have contributed to the favorable direction of spare parts prices, but room exists for improvement in the adequacy of price analyses. We could not, however, quantify the effect of the initiatives versus the effects of other factors.

Factors That Influence Spare Parts Prices

As in our previous review, we analyzed three factors to determine if they influenced price behavior. These factors are

- competitive versus noncompetitive procurement,
- · quantities procured, and
- dollar value of procurements.

The following are the results of both our previous and current reviews.

Competition

In our previous review, we compared price increases in competitive procurements with those in noncompetitive procurements and found that 44.6 percent of the noncompetitive procurements compared to 39.8 percent of the competitive procurements experienced price increases. We also found that 13.7 percent of the noncompetitive procurements experienced price increases of 25 percent or more compared with 9.6 percent for the competitive procurements. We concluded, therefore, that competition reduces both the frequency and severity of price increases. Competition is not a panacea, however, and its effectiveness depends to a large degree on conditions in the marketplace.

In our current review, 37.7 percent of the noncompetitive procurements and 36.2 percent of the competitive procurements experienced price increases. Also, 9.6 percent of the noncompetitive procurements and 7.8 percent of the competitive procurements experienced price increases of 25 percent or more. Table III.3 presents the data.

	During the 42 months ended June 30, 1983			1983	During the 12 months ended March 31, 1985			
	Competi	tive	Noncompe	titive	Competi	tive	Noncompe	etitive
Category	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Decrease in price	21,064	51.9	6,367	33.6	27,860	51.9	6,719	38.1
No change in price	3,353	8.3	4,118	21.7	6,371	11.9	4,269	24.2
Increase up to 24.9%	12,267	30.2	5,862	30.9	15,279	28.4	4,961	28.1
Increase of more than 25%	3,898	9.6	2,601	13.7	4,212	7.8	1,699	9.6
Total	40,582	100.0	18,948	99.9	53,722	100.0	17,648	100.0

Table III.3 also indicates that DESC increased its competition rate. In our previous review, 68.2 percent of the awards were competitive. Our current review shows 75.3 percent were competitive awards. (See table III.4.)

Table III.4: DESC Competition Rates

	Previous r	Current review		
Wards	No.	Percent	No. Percer	
Competitive	40,582	68.2	53,722	75.3
Noncompetitive	18,948	31.8	17,648	24.7
Total	59,530	100.0	71,370	100.0

Purchase Quantity

Our previous review showed that for 71.1 percent of the procurements, unit prices decreased or remained unchanged when purchase quantities were increased. In our current review, the unit price decreased or remained unchanged for 73.7 percent of the comparisons where quantities increased. (See table III.5.)

_	During the	e 42 months e	inded June 30,	1983	During the 12 months ended March 31, 1985			
Category	Quantity increase	Percent	Quantity decrease	Percent	Quantity increase	Percent	Quantity decrease	Percent
Decrease in price	63,547	58.4	12,637	22.5	40,110	60.5	8,227	25.9
No change in price	13,780	12.7	9,231	16.4	8,724	13.2	6,253	19.6
Increase up to 24.9%	24,913	22.9	23,228	41.3	14,133	21.3	12,582	39.5
Increase of more than 25%	6,556	6.0	11,159	19.8	3,325	5.0	4,773	15.0
Total	108,796	100.0	56,255	100.0	66,292	100.0	31,835	100.0

Table III.5 also shows that decreases in quantities contribute significantly to price increases. Our earlier review showed that 61.1 percent of decreased-quantity procurements experienced price increases, and 19.8 percent of these had increases over 25 percent. The current review shows that 54.5 percent of the decreased-quantities experienced price increases, and 15 percent had increases of 25 percent or more. The value of consolidating purchase requests is discussed on page 20.

As noted in our earlier report, a requisite for buying in quantity is accurate requirements data. Sufficient quantities must be procured to meet needs, yet excesses must be avoided. If a large quantity is procured but is not sufficient to meet total needs, a subsequent procurement of a small quantity is quite likely to experience a price increase.

Table III.6 shows that DESC had a substantial proportion of its procurements with increased quantities. Our previous review showed 65.9 percent of all procurements had increases in quantities. In our current review, 67.6 percent of all procurements had quantity increases.

Table III.6: Increased Quantity Procurements

	Previous review		Current review	
	No.	No.	Percent	
Quantity Increase	108,796	65.9	66,292	67.6
Quantity Decrease	56,255	34.1	31,835	32.4
Total	165,051	100.0	98,127	100.0

Dollar Value

Severe price increases occurred on procurements in all dollar ranges. Table III.7 shows 9.2 percent of procurements for \$1,000 or less experienced severe price increases while 5 percent of procurements for \$100,000 experienced such increases. Thus, dollar value appears to influence the frequency of severe price increases—it occurs almost twice as often in the lower ranges. However, the incidence of severe price increases, 5 percent, in the higher dollar ranges would make them more significant.

Table III.7: Total Procurements and Procurements Increasing in Price by 25 Percent or More (In Dollar Ranges)

	Total	Procurements in price by 25 more	percent or
Dollar range	procurements	Number	Percent
\$ 0 -\$ 1,000	55,449	5,117	9.2
1,001 - 10,000	43,267	3,014	7.0
10,001 - 25,000	5,873	451	7.7
25,001 - 50,000	1,302	67	5.1
50,001 - 100,000	989	45	4.6
Over \$100,000	453	23	5.1
Total	107,333	8,717	8.1

Adequacy of Price Analyses on Individual Procurements

Significant improvement occurred in the price analyses of procurements with price increases of 25 percent or more. Table IV.1 shows that 46.7 percent of such procurements in our sample were inadequately analyzed. Although DESC has achieved major improvement, the opportunity exists for further improvement since price increases of this magnitude should prompt close scrutiny.

Another procurement category where analysis needs improvement is unchanged prices. In this category, one out of four analyses was inadequate. Unchanged prices would be of less concern than price increases; however, the fact that prices remained unchanged should not be the sole basis for accepting prices as reasonable. As indicated earlier, the Armed Services Pricing Manual states that adequate price analysis is required on every contract. Further, inadequate analyses can adversely effect future prices because their acceptability often depends on how they compare with prior prices.

To determine the adequacy of price analyses, we reviewed 150 procurements randomly selected from the universe of 189,263 contracts awarded between April 1, 1984, and March 31, 1985. We concluded that price analyses were adequate on 115 contracts and inadequate on 35 contracts, as shown in table IV.1. Our conclusions were based on a review of the documents in individual contract files and interviews with responsible buyers and/or contracting officers. These interviews were made to resolve any questions arising from a review of the documents and to provide procurement officials an opportunity to discuss or comment on the case.

Table IV.1: Summary of DESC's Price Analyses on 150 Sample Contracts Awarded During the 12-Month Period Ended March 31, 1985

	Total	Adequate pric	e analysis	Inadequate pri	ce analysis
Category	sample	Number	Percent	Number	Percent
First time buys	40	34	85.0	6	15.0
Price decrease	30	25	83.3	5	16.7
No change	25	18	72.0	7	28.0
Price increase up to 24.9%	25	22	88.0	3	12.0
Price increase 25% or more	30	16	53.3	14	46.7
Total	150	115	76.7	35	23.3

Projecting our sample results, we estimate that procurement officials' price analyses may have been inadequate on 30,407 contract awards, plus or minus 11,243 of the 189,263 awards. The estimate was made at

Appendix IV
Adequacy of Price Analyses on
Individual Procurements

** the 95 percent confidence level, with a standard error rate of plus or minus 5.94 percent. In other words, between 19,164 and 41,650 contracts may not have had adequate price analysis. Our evaluation of price analysis does not provide a basis for determining if prices were fair and reasonable. However, it does provide some indication of DESC's vulnerability to unreasonable prices because adequate price analyses were not performed.

Buyer Actions Adequate

In determining whether contracts received adequate price analysis, we relied on guidance in the FAR, the DOD FAR Supplement, and the Armed Services Pricing Manual, Number 2. These documents state that procurement officials are responsible for selecting and using price analysis techniques that will ensure a fair and reasonable price. For example, the Armed Services Pricing Manual states that:

"For every procurement, the contracting officer must decide as to the fairness and reasonableness of the price he is going to pay for a product or a service. The obligation to contract at fair and reasonable prices does not diminish as we move down the scale from multi-million dollar contracts for systems acquisition to the nickel and dime item prices for nuts, bolts, and screws The conclusion that a price is fair and reasonable must be based on some form of analysis How detailed the analysis is will depend on the dollars and the nature of the product . . . being purchased."

To determine that a price is fair and reasonable, a procurement official may do one or more of the following:

- compare competitive price quotations received in response to a solicitation,
- compare prior quotations and contract prices with current quotations for the same or similar items,
- compare proposed prices with independent government cost estimates,
- compare proposed prices with competitive published price lists, and
- exercise personal knowledge that the price quoted reflects the value of the item being purchased.

Buyer Actions Inadequate

Table IV.2 summarizes our reasons for concluding that procurement officials did not perform adequate price analysis on 35 contracts.

Table IV.2: Reasons for Inadequate Price Analysis

Category	Number
Purchase requests not consolidated	12
Competitive opportunity missed	7
Substantial difference between target price and vendor quote	6
Potential price breaks not determined	5
Significant price increases not justified	4
Previous vendor not contacted	· 1
Total	35

The following discusses four of the categories, accounting for 29 of the 35 inadequate price analyses.

Purchase Requests Not Consolidated

We questioned the acceptance of proposed prices on 12 contracts because they had been awarded shortly after another award for the identical spare part. For example, both buys were for 25 units at \$2.40 each. The two buys were from the same contractor. The first buy was made on July 5, 1984, and the second on August 5, 1984, less than 30 days later. The request for the second buy, however, was issued on June 26, 1984, 9 days before the first buy was awarded.

The buyer agreed that the buys should have been consolidated but could not explain why they were not. The dollar value of this example is small. However, based on a projection of our sample, there could have been over 10,000 awards where the opportunity to consolidate may have been missed.

The spare parts initiatives emphasize the need to consolidate procurements by pointing out that the cost of acquiring spare parts is increased by low-volume (small quantity) procurements. Failure to consolidate procurements causes

- unnecessary duplication of contract awards,
- increased administrative costs, and
- · uneconomical purchase quantities.

In addition to the initiatives that call for consolidation, the DOD Inspector General in a May 25, 1984, report to the DLA Director recommended that DESC be directed to buy items in quantities that take advantage of price breaks.

Competitive Opportunity Missed

In 7 of the 35 cases, DESC procurement officials had the opportunity to use competitive procurement procedures but did not. For example, there were two buys by the same buyer from the same contractor.

- On September 6, 1984, 25 units were purchased at \$278 each, for a total of \$6.950.
- Thirty-five days later eight units were purchased at the same price, \$278, for a total of \$2,224. The buyer, when making this award, solicited only one source, the previous contractor. The buyer justified acceptance of the \$278 proposed price by stating,

"though competition was not present... the integrity of the contractor is such that the price quoted is within their normal pricing structure... the contractor, from experience, has been ethical in its pricing practices. This procurement is judged to be fair and reasonable."

The reasonableness of the first procurement was justified on the same basis. However, we found that the buyer had no experience with the contractor when the first procurement was made, and was relatively new to procurement. Although there was no attempt to solicit additional sources on either procurement, the contract file for the second buy contained a document from a contractor other than the one solicited. This document is a major source for identifying additional contractors that can be solicited. The buyer, however, did not solicit the vendor listed on the drawing.

Significant Difference Between Target Price and Vendor Quote

We questioned the adequacy of the price analyses on six contracts because the buyers did not effectively use target prices established by DESC. Target prices are provided to buyers on first time buys for use in evaluating vendor quotes. This procedure can be a valuable aid in price analysis because buyers often have little information to analyze first time prices. To be effective, however, target prices must be effectively used. This was not always done. For example:

• The buyer procured 132 items at \$21.23 each for a total of \$2,802.36. The target price was \$1.66 each for a total suggested price of \$219.12. The buyer solicited two distributors representing the same manufacturer. One did not bid. The buyer, therefore, made a noncompetitive award. Before the award, the buyer asked the sole bidder why the price was so high. The distributor stated that the costs consisted of set-up charges, testing, new material, and overhead. The buyer accepted the explanation and made the award. However, set-up charges, testing, and

Appendix IV Adequacy of Price Analyses on Individual Procurements

new material are generally associated with fabrication not distribution. In our opinion, additional price analysis should have been performed since the buyer knew of the difference between the target and bid prices.

• The buyer was provided a target price of \$149 per item. The proposed price from the sole bidder was \$278 for a total difference of \$4,257. Although the buyer was in a noncompetitive situation and had a target price, the bidder was not contacted and asked to explain why the price was so high.

The FAR states that the reasonableness of a proposed price should be based on competition and, when one response is received, additional effort on the part of the buyer is required. In both of the prior examples, the buyers were in noncompetitive situations. The buyers ignored the target price in one case and accepted the bidder's explanation without challenge in the other.

Significant Price Increases Not Justified

We questioned the adequacy of the price analysis on four contracts because prices had increased significantly when compared to the last price paid. However, buyers took no additional steps to justify acceptance of the significantly increased prices. For example, the buyer procured 39 items at \$147 each for a total of \$5,733. This was equivalent to an annual increase of 95 percent over the unit price previously paid. The buyer solicited three vendors and accepted the lowest bid received as permitted under the FAR.

We believe the buyer should have taken further action to determine why the price increased so dramatically. For example, the buyer could have asked the low bidder why the price had increased or requested assistance from DESC's technical personnel.

Conclusions

Certainly, ample guidance has been provided regarding the opportunities to obtain more favorable prices through consolidation of procurement requests and use of alternate vendors.

In addition, while DESC has employed target prices to assist buyers on first time buys, this tool was not effectively used in all cases. We believe this may indicate some buyers need additional guidance and/or training in the use of target prices.

Appendix IV Adequacy of Price Analyses on Individual Procurements

Recommendation

We recommend that the Director, DLA, require the Commander of DESC to take the necessary action to assure consolidation of purchase requests occurs when appropriate. The need for such action at other DLA centers should also be assessed, and if necessary, systems established to ensure consolidation is considered during price analysis.

Agency Comments

DOD agreed with our report. Further, DLA indicates it is testing a new system that should improve purchase request consolidations. Upon completion of the testing, the new system will be provided to all DLA hardware centers. DOD will also ensure that DLA informs its hardware centers in writing of current policies on consolidating purchase requests.

Personnel Changes Related to Spare Parts Initiatives

We identified two personnel-related changes that are the result of the spare parts initiatives. DESC provided product (spare parts) familiarity training and revised performance appraisals to emphasize quality pricing and competitive procurement. We also found, based on a limited number of interviews, an apparent change in the attitude of procurement officials—a shift from productivity (awarding contracts) to performing quality price analysis. Finally, a number of other programs were instituted to assist buyers or to improve spare parts prices by other means.

Apparent Shift in Attitude

In our previous review, we found that buyers had not taken reasonable action to investigate large price increases. We discussed these cases with the buyers who told us that management had emphasized awarding small-dollar value contracts as quickly as possible (productivity). Consequently, buyers paid little attention to the quality of price analysis. During the current review, we interviewed a number of buyers who told us that the initiatives had increased the emphasis on the quality of price analysis. They also stated the prior emphasis on productivity remained, but believe the emphasis on quality price analyses resulted in savings.

We pointed out in our previous report that the emphasis on productivity had resulted in the exclusion of quality price analyses. Decisions on the proper balance between the amount of time to be spent on price analysis and the dollar value of the procurement will always be a challenge, but it is very important to maintain a reasonable balance.

Training

One of the spare parts initiatives calls for

"expanded training to insure proper emphasis, understanding, and skill level for personnel engaged in the acquisition of spare parts."

DESC instituted classes for buyers to provide additional information on the commodities they buy. The objective is to make buyers more knowledgeable of the characteristics of items procured. In addition, DESC is improving its engineering staff's assistance to buyers.

Engineering staff have been assigned to work with groups of buyers procuring specific commodity groups. The personnel visit regularly with buyers to answer questions of a technical nature and provide assistance in pricing spare parts.

Appendix V Personnel Changes Related to Spare Parts Initiatives

To supplement its efforts of having "more informed" buyers, DESC is also requesting contractors to submit drawings of their parts when bidding on contracts. This effort was initiated in September 1985. In addition, DESC buyers attend regularly scheduled training classes and are required to complete these courses during their first 2 or 3 years. The training becomes more sophisticated as the buyer obtains more experience.

We believe DESC's efforts to have informed buyers have significant potential. Informed buyers are likely to ask the right questions at the right time and challenge responses that do not appear reasonable.

Performance Appraisals

Another spare parts initiative required the services and DLA to

"revise performance evaluation factors for acquisition and logistics managers to include emphasis on spare parts pricing, breakout, and competition"

At DESC, the following critical element was included in the performance standards for buyers and contracting officers:

"Complies with instructions, programs, and basic contracting principles toward quality pricing, efforts to break out sole source procurements, utilization of value engineering techniques, and maintenance of a high level of competition."

The buyer's performance is rated on the number of inadequate pricing instances the contracting officer identifies. The number of instances vary with the grade level of the buyer.

DESC officials stated their most severe personnel problem was retaining trained and experienced buyers. To some extent, these officials indicated that their efforts benefit others because once DESC buyers are fully trained and have 2 or 3 years of experience, about 10 percent of the buyers annually leave DESC for jobs at Wright-Patterson Air Force Base. This issue is discussed more fully in appendix VI.

Other Programs

DESC has instituted a number of other programs. Some of these, such as a pricing matrix and the video cassette, are designed to assist buyers. Others, such as value engineering and the filtering procedure, are to avoid or prevent overpricing and achieve more reasonable prices. A partial list of these programs and their goals are shown in table V.I.

Table V.I: DESC's Efforts to Improve Spare Parts Prices

Program	Goal
Competition Advocate	Develop additional competition and recognize employee actions to get fair prices
Value Engineering	Develop bid sets, additional sources, and reverse engineering
Visits to contractors	Identify actual manufacturers
Commodity training	Generally familiarize buyers with what they buy
Pricing matrix	Aid to buyer in deciding what action to take to determine if a fair price is proposed
Filtering procedure	Screening to identify items which may be overpriced
Review and approval process	Policy to review buyer actions in order to reduce chances of items being overpriced
Quantity price break policy	Encourage buyers to take advantage of quantity price breaks
Video cassette	Familiarize buyers with specific parts by using photographs
Full buyer staffing	Negate effects of personnel turnover

We believe these programs are indicative of DESC management's commitment to the initiatives and to making changes that will help to obtain reasonable prices.

Observation on Implementation of Spare Parts Initiatives

During our review, DESC officials consistently pointed out that a persistent problem affecting their ability to perform adequate price analysis is their inability to retain experienced, well-trained buyers. They explained that the Air Force provides higher grades (pay) and Wright-Patterson Air Force Base is only 20 miles from DESC. Thus, buyers do not have to relocate. Further, the Air Force finds DESC buyers to be highly attractive candidates because they have completed mandatory training, have about 3 years of experience, and are well versed in defense acquisition regulations.

In a previous report,¹ we pointed out that DLA activities, including DESC, had recruiting and retention problems with procurement personnel. For example, 41 percent of the buyers and line supervisors in the various supply centers had less than 3 years of experience. DOD indicated that DLA would take or had taken various actions to remedy the situation.

DLA officials stated these actions include

- opening a national recruiting center in Columbus, Ohio;
- recruiting college graduates;
- · establishing a gifted scholar program;
- providing the supply centers with direct hire authority;
- increasing budget requests for additional personnel;
- emphasizing to the supply centers the need for realistic staffing goals;
- defining a management information system with standardized definitions; and
- performing exit interviews to determine the reasons why employees leave.

These officials view these actions as efforts to improve both the quality as well as, the size of the work force. However, they pointed out that DESC, as well as other DLA activities, will always have retention problems to some extent. There is competition between DLA activities and other, larger DOD activities, for quality procurement personnel, and these other activities can offer better career opportunities. DLA activities are also excellent training centers where personnel can acquire experience and receive necessary procurement training. According to DLA officials, the severity of the problem can be reduced but not completely resolved. It is a problem that the centers will have to cope with and live with. This problem could slow or reduce the improvement sought under the initiatives at DLA activities.

¹Progress and Challenges at the Defense Logistics Agency (GAO/NSIAD-86-64, Apr. 7, 1986).

Comments From the Assistant Secretary of Defense for Acquisition and Logistics



ASSISTANT SECRETARY OF DEFENSE

WASHINGTON, D.C. 20301-8000

L(SPM)

APR 15 1987

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and International
Affairs Division
US General Accounting Office
Washington, DC 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report, "SPARE PARTS: Initiatives at the Defense Electronics Supply Center," dated February 18, 1987 (GAO Code 396411/396418) OSD Case 6851E. The DoD agrees with the report. Comments relative to each of the major points raised in the report are enclosed.

The GAO examined data for the 12-month period ending March 31, 1985, but further progress has been made in the intervening two years. The Defense Logistics Agency (DLA) reviewed the subject of combining purchase requests (PRs), which was addressed as the one recommendation in the GAO audit. For the past six months, the DLA has been prototyping an upgraded preaward system that, among other things, provides for the referral of all new PRs for items to the buyer responsible for any open PR for that identical item. Upon completion of prototyping, this revision of the Standard Automated Materiel Management System (SAMMA) will be provided to all the DLA hardware centers. In the interim, the DoD will ensure that the DLA reminds all hardware centers in writing, within 60 days of this letter, of the current policies regarding consolidating PRs.

Other progress in the procurement of spare parts is evident in both the Services and the Defense Logistics Agency, and was recently confirmed by the DoD Inspector General in the "Summary Report on the Follow-up Defense-Wide Audit on Procurement of Spare Parts," dated February 17, 1987.

Appendix VII Comments From the Assistant Secretary of Defense for Acquisition and Logistics

In summary, the DoD considers the DLA spares program one that has achieved some measure of success but still requires additional attention. The DoD appreciates the opportunity to comment on the GAO draft report.

Sincerely,

Robert B. Costello
Assistant Secretary of Defense
(Acquisition and Logistics)

Enclosure

GAO DRAFT REPORT - DATED FEBRUARY 18, 1987 (GAO CODE 396418) OSD CASE 6851-E

"SPARE PARTS: INITIATIVES AT THE DEFENSE ELECTRONICS SUPPLY CENTER"

DEPARTMENT OF DEFENSE COMMENTS

* * * * *

FINDINGS

FINDING A: Trends In Spare Parts Prices At The Defense Electronics Supply Center. The GAO reported that it compared the prices on 107,333 procurements, valued at \$507.9 million, made by the Defense Logistic Agency (DLA) Defense Electronics Supply Center (DESC) during the 12-month period ending March 31, 1985. The GAO found that 8 percent of these procurements, valued at \$33.5 million, experienced price growth of 25 percent or more. The GAO also found that 64.6 percent of the DESC procurements, totaling nearly \$298 million, had either no price change or a price decrease. The GAO compared these trends with similar data for the 42-month period ended June 30, 1983, and concluded that the DESC spare parts prices have moved in the right direction. (p. 2, pp. 17-18/GAO Draft Report)

DOD RESPONSE: Concur.

Prices. The GAO found that the changes in DESC spare Parts prices may have been the result of several factors, including: (1) lower inflation and improvement in the economy, (2) the attention given spare parts by DoD officials, and (3) efforts by contractors to minimize price growth and avoid adverse media publicity. The GAO also found substantial evidence that the DESC has made progress in implementing the DoD spare parts initiatives. The GAO found, for example, that the DESC has made two personnel changes that are the result of the spare parts initiatives: (1) product familiarity training has been provided to DESC buyers, and (2) performance appraisals have been revised to emphasize quality pricing and competitive procurement. The GAO also reported that the DESC has instituted a number of other programs, such as value engineering and price filtering, to improve spare parts prices. The GAO also noted an apparent shift in attitude by DESC buyers toward quality price analyses. The GAO concluded that these

ENCLOSURE

Now on pp. 2 and 13.

Now on pp. 13 and 14.

Now on pp. 25 and 26.

actions are indicative of the DESC management commitment to the Dob initiatives, and to making changes that will help obtain reasonable prices. The GAO further concluded that the DESC is implementing the spare parts initiatives, and it is likely that they have had an effect. (pp. 2-3, pp. 19-24, pp. 35-40/GAO Draft Report)

DOD RESPONSE: Concur.

FINDING C: Adequacy Of DESC Price Analyses. The GAO found that of 150 contracts sampled, inadequate price analysis had been performed on 35, representing about 23 percent of the contracts. The GAO also found that of 30 sampled contracts with price growth of 25 percent or more, 14, or 46.7 percent, did not have adequate price analysis performed. The GAO concluded that price growth of this magnitude should prompt close scrutiny. The GAO further found that inadequate price analysis occurred on 7 of 25, or 28 percent, of those contracts sampled where there was no change in price. While acknowledging that procurements with unchanged prices would receive less priority than those with price growth, the GAO concluded that unchanged prices should not be the sole basis for accepting a price as reasonable. The GAO also pointed out that the Armed Services Pricing Manual states that adequate price analysis is required on every contract. The GAO concluded that, overall, there is opportunity for further improvement in DESC price analyses. (p. 3, pp. 25-27/GAO Draft Report)

DOD RESPONSE: Concur

FINDING D: Reasons For Inadequate Price Analyses. The GAO identified several reasons why buyers were not performing adequate price analyses, including: (1) not consolidating purchase requests; (2) missed competitive opportunities; (3) substantial differences between target price and vendor quote; (4) not determining potential price breaks; and (5) not justifying significant price increases. The GAO found that the failure to consolidate purchase requests occurred most frequently, accounting for 12 of the 35 contracts with inadequate price analysis. Based on its sample results, the GAO estimated that there could have been over 10,000 awards where the opportunity to consolidate purchases may have been missed. According to the GAO, there are several adverse effects that result from the failure to consolidate procurements, including (1) unnecessary duplication of contract awards, (2) increased administrative costs, and (3) uneconomical purchase quantities. The GAO pointed out that the DoD initiatives call for consolidation,

and that a May 1984 DoD Inspector General report recommended that the DESC buy items in quantities that take advantage of price breaks. The GAO concluded that ample guidance already exists on the desirability of consolidating purchase requests. The GAO further concluded, therefore, that the DESC needs to take the steps necessary to assure the technique is used whenever appropriate. The GAO noted that some buyers may need additional guidance and/or training in the use of target prices. (pp. 3-5, pp. 28-34/GAO Draft Report)

DOD RESPONSE: Concur.

FINDING E: Retention Of DESC Procurement Personnel. The GAO reported that, according to DESC officials, the major obstacle to continued improvement in price analysis is the inability of the DESC to retain experienced, well trained buyers. According to the GAO, DESC officials explained that it takes about three years for a person to obtain the necessary training and experience to qualify for a grade 7 or 9 position, but these are the grades where most personnel are lost. The GAO pointed out that its previous report, "Progress and Challenges At The Defense Logistics Agency," GAO/NSIAD-86-64, dated April 7, 1986 (OSD Case 6882) confirmed that the DESC, as well as other DLA activities, have recruitment and retention problems. The GAO reported that, to deal with this situation, the DoD indicated that the DLA would take, or had taken, several actions, including increased emphasis on recruiting, management and personnel budgets. The GAO also reported, however, that DOD officials believe the DESC, as well as other DLA activities, will always have retention problems to some extent since other DoD activities can offer better career opportunities -- i.e., that the severity of the retention problem can be reduced but not completely solved. The GAO concluded that the retention issue is a problem with which the DESC and other centers will have to cope and live. The GAO also concluded, however, that the retention problem could slow or reduce the improvement in price analysis necessary to the success of the DoD initiatives. (pp. 4-5, pp. 41-42/GAO Draft Report)

DOD RESPONSE: Concur.

Now on pp. 3 and 27.

Now on p. 22.

RECOMMENDATIONS

RECOMMENDATION 1: The GAO recommended that the Director,
DLA, require the Commander, DESC to take the necessary
action to assure consolidation of purchase requests occurs
when appropriate. The GAO further recommended that the
need for such action at other DLA centers should also be
assessed and, if necessary, systems established to assure
consolidation is considered during price analysis. (p. 5,
p. 34/GAO Draft Report)

DOD RESPONSE: Concur. The DLA has already assessed the need for a system change, applicable to all DLA centers. Prototyping of changes to the Standard Automated Materiel Management System (SAMMS) is currently underway, with planned implementation within three years. These changes are expected to result in improvements to all DLA hardware centers. In the interim, a DLA reminder will be issued within 60 days to all centers emphasizing the current policies regarding the consolidation of purchase requests.

Now on pp. 3 and 23.



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