

GAO

Report to the Chairman, Subcommittee on
Investigations, Committee on Armed
Services, House of Representatives

June 1992

OPERATION DESERT STORM

Comparing Peacetime and Wartime Unit Price Change Patterns



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**National Security and
International Affairs Division**

B-248224.2

June 18, 1992

The Honorable Nicholas Mavroules
Chairman, Subcommittee on Investigations
Committee on Armed Services
House of Representatives

Dear Mr. Chairman:

As requested, we reviewed the unit prices associated with selected Department of Defense (DOD) purchases made to support Operations Desert Shield and Desert Storm.¹ You had expressed concern about whether the prices for those items suggested the possibility that contractors might have taken advantage of a wartime environment to demand excessively high prices. Our specific objectives were to (1) compare wartime unit prices to peacetime unit prices for like items to determine the extent that unit prices changed;² (2) determine whether the wartime environment had resulted in a pattern of price changes that was significantly different than those experienced during peacetime; and (3) review transactions involving large percentage increases in unit price to ascertain the stated reasons for those increases.

Results in Brief

Of the estimated \$4.6 billion in Desert Storm purchases at the six procurement activities where we evaluated data,

- about \$2.7 billion represented purchases that were within the range of lowest to highest peacetime unit prices for like items,
- about \$1.4 billion represented purchases where unit prices were more than the highest peacetime unit price, and
- about \$514 million represented purchases where unit prices were less than the lowest peacetime unit price.

About 75 percent of the \$1.4 billion in the more than the highest peacetime unit price category exceeded the highest peacetime unit price recorded for like items by 25 percent or less. On the other hand, the DOD records showed that approximately \$34 million, or about 2.5 percent, of Desert Storm purchases in that same category had unit prices that were more than

¹For purposes of this report, both operations are referred to as Operation Desert Storm.

²For the comparison we defined peacetime as the period of procurement activity occurring between August 1, 1988, and August 1, 1990.

double the highest peacetime price. We reviewed about \$20 million of that \$34 million in purchases and found that in over 60 percent of those cases, unit price increases were the result of costs associated with accelerating the delivery of urgently needed items. In another 23 percent of those cases reviewed, we found that higher prices reflected in DOD procurement data were caused by unit of measure differences rather than price increases. Procurement personnel cited a variety of other reasons for increases in the remaining cases we reviewed, including negotiated changes to forward pricing rate agreements,³ changing market conditions,⁴ and drawing or engineering changes.

In addition, we found that the pattern of unit price increases and decreases during Desert Storm was similar to unit price change patterns occurring during peacetime. Moreover, we found that large unit price increases occurred less frequently during Desert Storm than during peacetime. Similarly, large unit price decreases occurred more frequently during Desert Storm than during peacetime. For these reasons, we did not determine fairness and reasonableness of price on any individual transaction.

Background

The six defense procurement activities included in our review are responsible for purchasing a variety of items such as food, clothing, medical supplies, aircraft spare parts, troop support equipment, ammunition, fuels, and special weapons. During wartime, they continued to buy the same items as well as some others that are unique to desert war requirements.

These activities recorded purchases of about \$17.8 billion during the period from August 1990, when Iraq invaded Kuwait, through September 1991. We included procurement data through September 1991 in order to capture Desert Storm-coded purchases that were made but not recorded in the automated procurement data systems by the time hostilities ceased in February 1991. About \$4.6 billion, or 26 percent, of those purchases were made specifically to support Operation Desert Storm.

³Forward pricing rate agreements are written agreements negotiated between a contractor and the government to make certain rates and factors available during a specified period for use in pricing contracts or contract modifications.

⁴Conditions in which the selling price of an item or commodity is based on supply and demand for the item in the commercial marketplace.

Nearly 60 Percent of Desert Storm Unit Prices Were Within Range of Peacetime Prices

Of the estimated \$4.6 billion in Desert Storm purchases at the locations where we did our work, about \$2.7 billion, or almost 60 percent, of those purchases had unit prices that were within the range of lowest to highest peacetime unit prices recorded for the same item. The range of lowest to highest peacetime unit prices reflects the highest unit price and the lowest unit price recorded in automated procurement data for like items.

About 30 Percent of Unit Prices Exceeded Peacetime Prices

Of the \$4.6 billion in Desert Storm purchases, \$1.4 billion, or about 30 percent, represented purchases in which the unit price exceeded the highest peacetime price. Approximately 75 percent of the \$1.4 billion associated with Desert Storm unit price increases was for purchases with unit prices that were 25 percent or less higher. However, as shown in table 1, there were about \$34 million in Desert Storm purchases where the unit price was more than 100 percent higher than the highest recorded peacetime unit price for the same item. That \$34 million includes purchases at all six locations where we did our work and is less than 1 percent of total Desert Storm purchases at those locations.

Table 1: Price Change Categories—Desert Storm Unit Price Was Higher Than the Highest Peacetime Unit Price

Percentage of unit price increase	Total dollars	Percentage of total
Over 0 to 25	\$1,024,343,781	74.7
Over 25 to 50	219,425,469	16.0
Over 50 to 75	78,695,937	5.7
Over 75 to 100	15,456,241	1.1
Over 100	34,012,299	2.5
Total	\$1,371,933,727	100.0

About 11 Percent of Unit Prices Were Lower Than Peacetime Prices

About \$514 million, or roughly 11 percent, of the \$4.6 billion in Desert Storm purchases represented purchases that had unit prices that were lower than the lowest peacetime price. About 81 percent of the \$514 million associated with Desert Storm unit price decreases was for purchases with unit prices that were up to 25 percent lower than the lowest peacetime unit price for like items.

Table 2 displays, according to the percentage of unit price change, Desert Storm procurement dollars for purchases where unit prices were lower than the lowest peacetime unit price.

Table 2: Price Change Categories—Desert Storm Unit Price Was Lower Than the Lowest Peacetime Unit Price

Percentage of unit price decrease	Total dollars	Percentage of total
Over 0 to 25	\$415,629,864	80.9
Over 25 to 50	53,590,296	10.4
Over 50 to 75	39,846,293	7.8
Over 75 to 100	4,801,293	0.9
Total	\$513,867,746	100.0

Peacetime Price Changes Show Similar Pattern

The pattern of peacetime and Desert Storm unit price change activity was similar. Table 3 shows, according to total dollars in each price change group, peacetime purchases where unit prices for buys made between February 1990 and July 1990 (the last 6 months of the peacetime period) were higher than the highest unit price recorded for the same item between August 1988 and January 1990 (the previous 18 months of the peacetime period). About 84 percent of the total dollars associated with peacetime unit price increases were for purchases with increases of 25 percent or less, and about 7 percent represent purchases with unit price increases greater than 100 percent.

Table 3: Price Change Categories—Peacetime Purchases Where 6-Month Unit Price Was Higher Than Highest Previous 18-Month Unit Price

Percentage of unit price increase	Total dollars	Percentage of total
Over 0 to 25	\$944,790,269	84.4
Over 25 to 50	59,144,432	5.3
Over 50 to 75	26,048,948	2.3
Over 75 to 100	11,309,227	1.0
Over 100	78,145,934	7.0
Total	\$1,119,438,810	100.0

Table 4 shows, according to the percentage of unit price change, procurement dollars for the peacetime purchases where 6-month unit prices were lower than the lowest previous 18-month unit prices. About 86 percent of the total dollars associated with peacetime unit price decreases were for purchases with decreases of 25 percent or less, and about 2 percent represent purchases with unit price decreases in the 75- to 100-percent category.

Table 4: Price Change Categories—Peacetime Purchases Where 6-Month Unit Price Was Lower Than Lowest Previous 18-Month Unit Price

Percentage of unit price decrease	Total dollars	Percentage of total
Over 0 to 25	\$577,130,519	86.0
Over 25 to 50	66,348,094	9.9
Over 50 to 75	16,672,355	2.5
Over 75 to 100	11,144,562	1.6
Total	\$671,295,530	100.0

Although the price change patterns were generally similar, where differences did occur, the Desert Storm price changes appear to be more favorable to the government than the peacetime price changes. For example, the unit price increases in the two highest price change categories occurred less frequently during Desert Storm than during peacetime (3.6 percent and 8.0 percent, respectively), and the unit price decreases in the two highest price change categories occurred more frequently during Desert Storm than during peacetime (8.7 percent and 4.1 percent, respectively).

Contract Files Contain Reasons for Price Increases of More Than 100 Percent

We reviewed contract files for about \$20 million, or approximately 59 percent, of the \$34 million in Desert Storm purchases that had unit prices that were more than double the highest peacetime prices. The cost of speeding up deliveries for urgently needed items was the most frequently cited reason for price increases—representing 61 percent of the \$20 million in transactions that we reviewed. Unit price increases in another 23 percent of the cases we reviewed were due to unit of measure differences. In the remainder of the cases reviewed, procurement personnel also cited other reasons for price increases, including negotiated changes to contractor forward pricing agreements, changing market conditions, and drawing or engineering changes.

Desert Storm purchases at the Army’s Aviation Systems Command (AVSCOM), the Army’s Troop Support Command (TROSCOM), and the Defense Logistics Agency’s Defense Personnel Support Center (DPSC) accounted for about \$24.2 million of the \$34 million in Desert Storm purchases with unit prices that were more than double the highest peacetime unit price recorded for the same item. Those locations also accounted for about 69 percent of the \$4.6 billion in estimated Desert Storm purchases.

Table 5 summarizes, by location, the results of our review of this \$20 million in transactions, showing the reasons for price increase as noted in contract files.

Table 5: Percentage of Contracts Reviewed According to Reason for Unit Price Increase

Reason	Procurement activity			Combined total
	AVSCOM	TROSCOM	DPSC	
Accelerated delivery schedule	59.1	33.3	68.4	61.4
Changing market conditions	0	0	5.3	2.3
Drawing or engineering change	9.1	0	0	4.5
Forward pricing rate change	4.5	0	0	2.3
Unit of measure difference	13.7	66.7	26.3	22.7
Other	13.6	0	0	6.8
Total	100.0	100.0	100.0	100.0

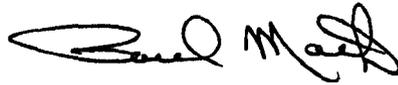
In about 23 percent of the cases, we found that the unit of measure forming the basis for calculating a unit price was different in peacetime versus wartime. For example, in one transaction the peacetime unit price was calculated on a per can basis, but during wartime, the unit price had been calculated on a per case basis. Therefore, unit price per can and unit price per case would not be comparable for determining a unit price change.

We performed our work from April to November 1991 in accordance with generally accepted government auditing standards. We did not perform a reliability assessment of data obtained from the six computer-based systems. In commenting orally on this report, DOD concurred with our findings and had no other comment to offer. Appendix I details the scope and methodology of our review.

Unless you publicly announce its contents earlier, we plan no further distribution of this report until 15 days from its date of issue. At that time, we will send copies to other appropriate congressional committees; the Secretaries of Defense, the Army and the Air Force; the Director, Defense Logistics Agency; and the Director, Office of Management and Budget. We will make copies available to others upon request.

Please contact me at (202) 275-4587 if you or your staff have any questions concerning this report. 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 fluid and cursive, with the first name "Paul" being more prominent than the last name "Math".

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

Scope and Methodology

We evaluated procurement data from the following six defense procurement activities:

- Defense Personnel Support Center, Philadelphia, Pennsylvania;
- U.S. Army Aviation Systems Command, St. Louis, Missouri;
- U.S. Army Troop Support Command, St. Louis, Missouri;
- U.S. Army Tank Automotive Command, Warren, Michigan;
- U.S. Army Armament, Munitions and Chemical Command, Rock Island, Illinois; and
- U.S. Air Force San Antonio Air Logistics Center, San Antonio, Texas.

We reviewed these six defense procurement activities because they are responsible for procuring a variety of items for the Department of Defense. Such purchases include clothing, food, and medical supplies, as well as aircraft spare parts and equipment.

For example, the Defense Personnel Support Center, the largest of six Defense Logistics Agency support centers, is responsible for the purchase of clothing and textiles, subsistence items, and medical supplies. During Desert Storm, this command purchased food, uniforms, chemical suits, medical support items, and equipment.

The Army Aviation Systems Command buys aircraft spare parts for the AH-64 Apache helicopter and its target acquisition and designation sight, the UH-60 Blackhawk helicopter, the AH-1 Cobra helicopter, the CH-47 Chinook helicopter, and the OH-58 Kiowa helicopter. The aviation command also buys aircraft survivability equipment such as radar jammers.

The Army's Troop Support Command devotes its entire mission to troop support activities. As part of this mission, this command procures items such as protective clothing, air delivery equipment, bridging and topographic equipment, mobile electric power generators, and rail containers. The command also buys other items, including shelters, water purification systems, and watercraft.

The Army's Tank Automotive Command purchases the Army's wheeled and tracked vehicles, such as the M-1 Abrams tank and the M-2 Bradley Fighting Vehicle.

The Army's Armament, Munitions and Chemical Command purchases conventional ammunition for all military services.

The Air Force San Antonio Air Logistics Center purchases a range of items in support of Air Force requirements. These purchases include aircraft engines for the C-5 Galaxy, F-15 Eagle, and F-16 Falcon aircraft; spare parts and avionics test equipment for F-111 multimission aircraft; aerospace fuels for the Minuteman II and III ballistic missiles; and special weapon systems.

Our methodology involved using each activity's automated procurement data. We identified unit prices for \$4.6 billion in purchases made to support the war and unit prices for peacetime purchases of like items. We then compared unit prices as recorded for each group. Next, we grouped Desert Storm purchases according to percentage price change, identifying the extent to which the Desert Storm unit price was either higher or lower than the corresponding highest and lowest peacetime unit prices recorded for the same items.

Our initial grouping of purchases involved a price change of more than 25 percent. We used this as a benchmark based on the Defense Federal Acquisition Regulation Supplement 217.7504, entitled "Limitations on Price Increases," which requires additional pricing analysis for sole-source spare parts purchases when the award of a contract would result in a price increase of more than 25 percent over the most recent 12-month period.

We also identified those Desert Storm purchases with unit prices that were within the range of lowest to highest recorded peacetime unit prices. We reviewed approximately \$20 million, or about 59 percent, of the \$34 million in Desert Storm purchases that had unit prices that were more than double the highest peacetime prices. We reviewed the contract files and interviewed procurement personnel responsible for these purchases to ascertain the reasons why unit prices were more than double the peacetime unit prices recorded for the same item.

To determine whether peacetime unit prices increased or decreased in the same or a different pattern as wartime prices, we identified unit prices for items purchased during the last 6 months of the peacetime period, February 1990 through July 1990. We compared those unit prices to the unit price(s) recorded for the same item, if purchased, during the first 18 months of the peacetime period, August 1988 through January 1990.

Because automated procurement data did not include a code identifying which purchases were made to support the war, we developed a method for identifying those purchases. At the Defense Personnel Support Center,

procurement personnel gave us a list of Desert Storm contract numbers which we used to identify automated Desert Storm procurement data. At the other procurement activities, we matched an automated procurement request file, which included a code identifying Desert Storm purchase requests, to an automated contract award file. That comparison allowed us to identify Desert Storm contract awards and corresponding price data. We also used automated data to develop an estimate of the cost of Desert Storm purchases. In addition, we interviewed procurement personnel at each of the six locations.

Items purchased in support of Desert Storm, but not bought during peacetime, lack the peacetime unit price basis used for our price comparison and therefore were not included in our analysis. Finally, our review was not designed to determine the reasonableness or fairness of the prices paid, and results cannot be projected to all DOD Desert Storm purchases.

Major Contributors to This Report

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D.C.**

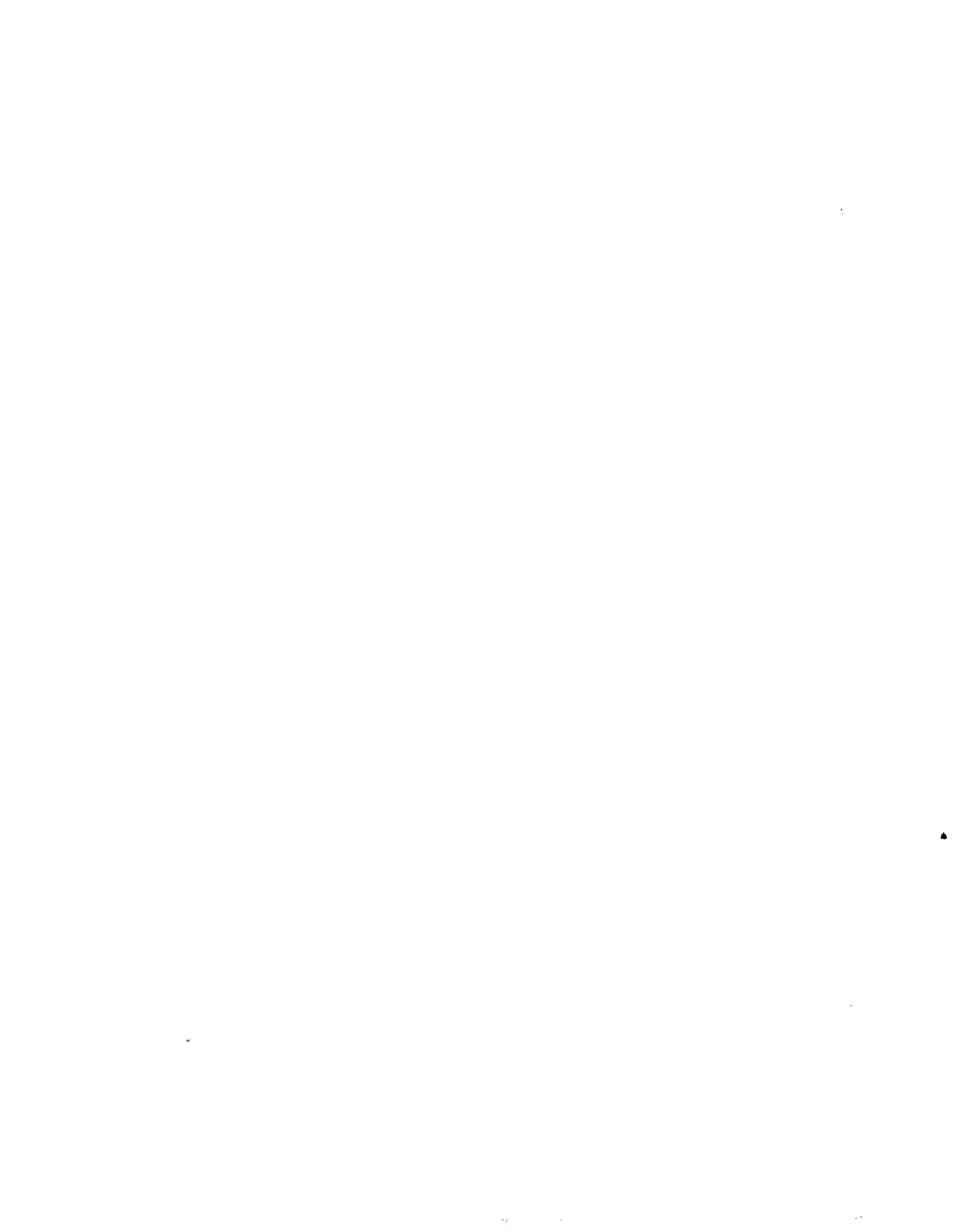
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