

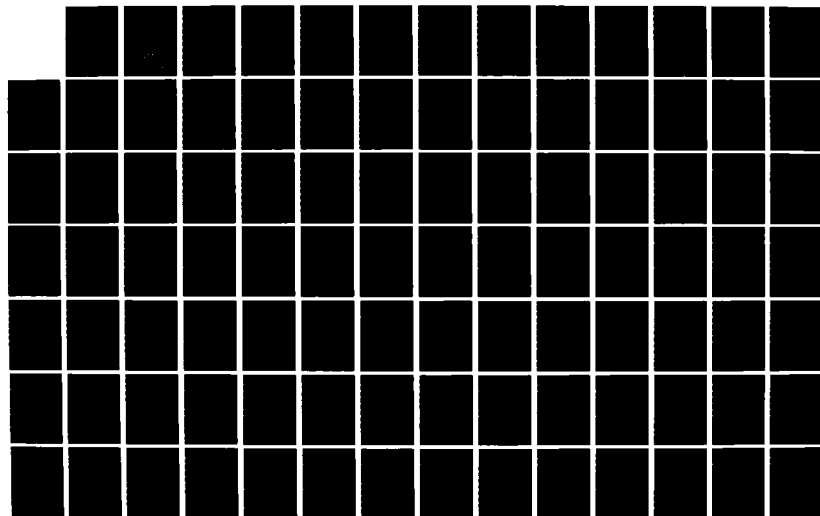
AD-A159 755

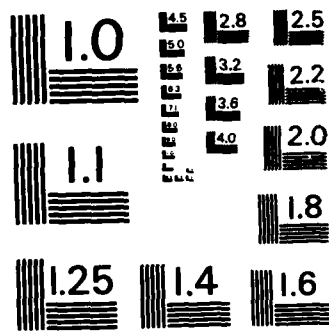
EVALUATION OF CONTRACTING AND PRODUCTION ACTIVITIES AT: 1/2
THE DEFENSE LOGIS. (U) COOPERS AND LYBRAND WASHINGTON
DC H J TASHJIAN ET AL. 01 MAR 84 DLA600-83-C-5001

UNCLASSIFIED

F/G 15/5

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD-A159 755

①

FINAL REPORT

EVALUATION OF CONTRACTING AND
PRODUCTION ACTIVITIES AT:
THE DEFENSE LOGISTICS AGENCY'S
DEFENSE SUPPLY CENTERS

VOLUME II HARDWARE CENTER REVIEW

DTIC FILE COPY

March 1, 1984
Coopers & Lybrand

DTIC
ELECTE
OCT 3 1984
D

This document has been approved
for public release and sale; its
distribution is unlimited.

85 10 03 003

FINAL REPORT

EVALUATION OF CONTRACTING AND PRODUCTION ACTIVITIES AT: THE DEFENSE LOGISTICS AGENCY'S DEFENSE SUPPLY CENTERS

VOLUME II HARDWARE CENTER REVIEW

March 1, 1984

Contract No.: DLA 600-83-C-5001

PROJECT STAFF

Michael J. Tashjian	Partner-in-Charge
Ian D. Littman.....	Project Manager
James H. Dillard.....	Analyst
William M. Lucianovic.....	Analyst
Judy K. Wade.....	Analyst
Howard W. Zaner.....	Analyst

COOPERS & LYBRAND

BY <i>A-1 per FL-NP2</i>	
DISTRIBUTION	
Availability Codes	
Unit	Avail. and/or Special
<i>A-1</i>	

HARDWARE CENTER REVIEW

TABLE OF CONTENTS

Page No.

I.	INTRODUCTION	
A.	OBJECTIVES OF THIS REPORT.....	1-1
B.	METHODOLOGY AND APPROACH.....	I-1
C.	ORGANIZATION OF THIS REPORT.....	I-4
II.	ORGANIZATIONAL STRUCTURE	
A.	MAJOR OPPORTUNITIES FOR IMPROVEMENT.....	II-2
	Recommendations :	
II-1.	Organize all purchasing activities by commodity.....	II-2
II-2.	Integrate automated procurement in buying divisions.....	II-3
II-3.	Combine small and large purchasing in same purchasing branch.....	II-4
II-4.	Do not adopt a "cradle to grave" approach to purchasing.....	II-5
II-5.	Establish standard buying organizations below division level and standardize contracts division staffing structure.....	II-6
B.	OTHER OPPORTUNITIES FOR IMPROVEMENT.....	II-10
	Recommendations	
II-6.	Use a technical reviewer when supervisory span of control exceeds 15.....	II-10
II-7.	Assign procurement filing function to operations support office instead of production division.....	II-11
II-8.	Assign contract preparation and control staff to buying sections instead of operations support office.....	II-11

III. STAFFING/PERSONNEL

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT.....III-2

Recommendations

III-1. Classify all buyers in GS-1102 series.....III-2

III-2. Return entry level buyer grade (for manual purchases) to GS-5; adopt 5-7-9-11 progression program.....III-4

III-3. Shorten position descriptions; highlight matters of key classification significance.....III-4

B. OTHER OPPORTUNITIES FOR IMPROVEMENT.....III-5

Recommendations

III-4. Strengthen performance standards to more closely reflect job content.....III-5

III-5. Place greater emphasis on buyer's commodity knowledge.....III-6

IV. WORKLOAD: RESOURCE MANAGEMENT

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT.....IV-2

Recommendations

IV-1. Apply greater proportion of procurement resources to the buying function.....IV-2

IV-2. Monitor and shift workload of individuals and work-groups to maximize productivity.....IV-4

IV-3. Transfer all hardware center contracts to field administration.....IV-5

B. OTHER OPPORTUNITIES FOR IMPROVEMENT.....IV-8

Recommendations

IV-4. Study high PRLI cancellation rate and consider resourcing for time currently expended working cancelled PRLI's.....IV-8

IV-5. Review warranting process and consider issuing DLA-P guidance on numbers and criteria.....IV-10

- IV-6. Develop 1106 series resources, increase their use, and cross-train in various duties.....IV-10

V. WORKLOAD: PRODUCTIVITY IMPROVEMENT

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT.....V-1

Recommendations

- V-1. Establish workload priority system at all hardware centers.....V-1
- V-2. Institute series of higher level reviews for problem PR's; place "cap" on unprocurables.....V-3
- V-3. Convert medium- and low-dollar-value items to a more manageable reorder cycle.....V-5
- V-4. Renew efforts to solve F-96 report problems.....V-6

B. OTHER OPPORTUNITIES FOR IMPROVEMENT.....V-7

Recommendations

- V-5. Give buyers more discretion to make economical buys.....V-7
- V-6. Design and implement a comprehensive program to increase automation.....V-8
- V-7. Consider simplified methods of awarding under small purchase procedures.....V-9
- V-8. Use communication capabilities of commercial firms that advise vendors on upcoming solicitations.....V-10
- V-9. Consolidate PR's for low-quantity, nonpriority items over 2-week rather than 1-week period.....V-10
- V-10. Encourage use of indefinite-delivery-type contracts (IDTC) and requirements-type contracts (RTC) for center purchases.....V-11
- V-11. Evaluate accuracy of formula used to compute "acceptable on-hand workload.".....V-11
- V-12. Organize and institute an aggressive and coordinated program to manage delinquent contractors.....V-12

V-13.	Conduct information needs analysis to determine center managers' SAMMS report requirements.....	V-14
V-14.	Collect data on supply status code of items received and awarded.....	V-16
V-15.	Review appropriateness of bypassing supply operations when purchasing non-stocked items.....	V-17
V-16.	Encourage centers to understand their workload more completely.....	V-17

VI. MANAGEMENT INDICATORS

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT.....VI-2

Recommendations

VI-1.	Use purchase requests in lieu of line items as a basis for measuring workload.....	VI-2
VI-2.	Adopt "on-time shipments" as a management indicator in lieu of delivery effectiveness.....	VI-3
VI-3.	Develop PALT performance goals and management indicators based on PR priorities rather than aggregate PALT.....	VI-4
VI-4.	Set reasonable, attainable, and negotiated procurement performance goals.....	VI-5

B. OTHER OPPORTUNITIES FOR IMPROVEMENT.....VI-9

Recommendations

VI-5.	Use various measures of central tendency to provide more accurate and meaningful evaluative information in measuring DSC efficiency and effectiveness.....	VI-9
VI-6.	Amend time periods at which PR becomes "aging" for both management indicators and performance goals.....	VI-9

APPENDIX A - HARDWARE CENTER ORGANIZATIONAL CHARTS FOR CONTRACTS DIVISION

APPENDIX B - SUPPORTING DATA

APPENDIX C - STAFFING AND PERSONNEL ANALYSIS

APPENDIX D - PROTOTYPE POSITION DESCRIPTIONS

APPENDIX E - MANAGEMENT INDICATORS RESEARCH

**APPENDIX F - DLA-P PROCUREMENT WORKFORCE COMPARED
TO THE PROCUREMENT WORKFORCE OF
OTHER FEDERAL ORGANIZATIONS**

APPENDIX G - ACRONYMS AND TERMINOLOGY

I. I N T R O D U C T I O N

I. INTRODUCTION

A. OBJECTIVE OF THIS REPORT

The objective of this report is to present Coopers & Lybrand's independent analysis and evaluation of the contracting and production functions performed at the four hardware centers. The purpose of the evaluation is to determine: (1) whether the centers' contracting and production activities are organizationally structured and operating most effectively and efficiently; (2) if lines/levels of authority and responsibility, assignment patterns, and other position management aspects are appropriate; and (3) whether management indicators used by DLA-P to determine the contracting and production performances of the defense supply centers (DSC's) are valid and responsive.

B. METHODOLOGY AND APPROACH

The initial phase of this study consisted of meeting with DLA-P representatives to review study objectives and gather data. The C&L project team attended a monthly management review meeting which included discussion of current management indicators and supply center performances, and prepared an interview guide comprised of 70 open-ended questions to elicit baseline information about the organization, staffing, workload, systems, procedures, and management indicators at the four hardware centers. In addition, the team prepared a list of specific data requirements (e.g., organizational charts, position descriptions, summary data on charges to personnel accounts, and management information systems reports) and an introductory presentation to explain the purpose of the study and our expectations of the initial visits.

Project team members contacted each of the four hardware center commanders in advance of the C&L project team visit, informing them of our research plans. We traveled to each

center, briefing commanders and/or their designated representatives. Over a 3-day period, we conducted interviews with approximately 40 field staff personnel at the 4 hardware supply centers. The data collected focused on supply center problems and issue areas. Data requested and received during our onsite research far exceeded the scope of the initial report.

Following the site visits, the project team assembled to review observations and data. Current major issues and problem areas identified by the defense supply center staffs were addressed in our Interim Technical Report, dated January 31, 1983, entitled "Evaluation of Contracting and Production Activities at: Defense Construction Supply Center, Defense Electronics Supply Center, Defense General Supply Center, and Defense Industrial Supply Center."

This Interim Technical Report divided the issues and problems into six major categories: organization, staffing and personnel, procedures, systems, workload, and management indicators. The major issues and problems at each of the four hardware centers were described using these six categories. The report also identified 35 research objectives for future study.

DLA-P studied our Interim Technical Report and in a letter dated 2 March 1983, directed that the C&L project team place major emphasis on accomplishing the research objectives for the following study areas:

Organization, including:

- Methods of planning procurement resource requirements;
- Feasibility of diverting more contracting and production (C&P) resources to buying;
- Evaluation of the DSC criteria for assignment of contracts to DCAS for postaward administration;
- Excessive layering and span of control;
- Feasibility of "cradle to grave" work groups.

Staffing and Personnel, including:

- Evaluation of job content, position descriptions and performance standards, and opportunities for career development;
- Comparison of government purchasing positions with the military departments and other Federal agencies and individuals with similar responsibilities in industry;
- Adequacy of staffing and methods for quantifying and measuring individual performance;
- Development of prototype position descriptions reflecting a career ladder for GS-5 to GS-14.

Workload, including:

- Accuracy of workload backlog;
- Composition of workload and appropriate allocation of resources;
- Workload management;
- Workload control;
- Methods of improving productivity through such means as streamlining procedures, review levels, etc.

Management Indicators, including:

- Effective use of existing data base;
- Portrayal of data;
- Appropriateness of identical goals for all DSC's;
- Determination of indicators that will best reflect organizational performance and mission accomplishment;
- Improvement in C&P indicators based on those used by other Federal organizations and industry.

The interchange of findings and observations by the project team insured that innovations and problems found at one center would be researched and tested at all centers. The insights gained while visiting the hardware centers, coupled with the

direction cited in the DLA-P 2 March 1983 letter, and our discussions with the DLA-P staff regarding their perceptions of the project's scope and objectives, resulted in a refinement of methodology to concentrate on the areas of greatest need.

A course of action which included "objective data folders" met every research objective in the study areas stipulated by DLA-P. These data folders consisted of:

- Clear, specific statements regarding the study objectives;
- Data to be collected for future analysis to resolve problems and realize objectives;
- Questions to ask in future interviews and factors to lead our continued research efforts;
- Specific actions required to resolve issues;
- Sources from which to obtain needed information;
- Information to report to meet DLA-P requirements.

The C&L project team scheduled week-long return visits to the four hardware centers. Based on firm DLA-P guidance and the "objective data folders," the team was able to meet with key managers at the directorate, division, branch and section levels, plus individual buyer personnel; one-on-one interviews, which included free exchange of ideas and maximum cooperation from DSC personnel, enabled the C&L project team to compile extensive information.

The results of our analysis and evaluation were briefed to the DLA-P director and staff on June 10, 1983, and to each hardware center staff (including the commander, when available) during the week of June 13-17. This final report represents a culmination of our analysis and the briefed recommendations.

C. ORGANIZATION OF THIS REPORT

Interviews, data collection, and internal analysis resulted in recommendations that were grouped into the four study areas

documentation. These individuals are responsible for the typing, editing, and quality control of document preparation and are found either centralized in the OSO or decentralized within each contracts division. It appears that decentralizing is of greater benefit to the buying division managers, supervisors, and buyers than centralizing the function and creating another opportunity for a bottleneck of the workflow.

Contract preparation and control activities to be decentralized in the buying sections should include editing, typing, and other aspects of document preparation. The OSO should retain all other administrative functions that are best accomplished by a centralized organization.

Decentralization of this function provides division managers with more discretion for managing resources to meet workload fluctuations. The supervisory level would have additional resources to apply to special needs, and issues can be brought immediately to the buyer's attention. Finally, this organizational arrangement permits the contract preparation and control staff exposure to career paths and upward mobility assignments.

Recommendation II-7. Assign procurement filing function to operations support office instead of production division.

It would be more appropriate to assign the procurement filing function to the operations support office (OSO) instead of the production division. Current DSC organizational charts place the procurement file function within the supply center's production divisions. Because all elements of the C&P directorate utilize the files, and the function is staffed with administrative/clerical personnel, it would be more appropriately placed in an OSO environment. The mission of an OSO is to provide centralized, specialized procurement support services to the C&P directorate elements. The procurement filing function is made up of activities and staff much more aligned with an OSO than the very specialized staff and activities associated with production management.

The major objections to this recommendation are that the OSO is not a sufficiently powerful or influential organizational element (i.e., low grade level of the OSO division chief) to protect these important records. In addition, the OSO is believed not to be centrally located in most supply centers and therefore is less accessible to directorate staff. The opposition to transferring the filing function is not significant enough to overshadow the benefit of more accurate tracking of P-100 resource utilization and more rational placement of clerical/administrative staff.

Recommendation II-8. Assign contract preparation and control staff to buying sections instead of operations support office.

Contract preparation and control staff should be decentralized in the buying sections rather than centralized in the operations support office. Contract preparation and control staff comprise that segment of the C&P directorate population responsible for the production aspects of solicitation and award

B. OTHER OPPORTUNITIES FOR IMPROVEMENT

Recommendation II-6. Use a technical reviewer when supervisory span of control exceeds 15.

First-line supervisory span of control should not be less than 5, nor should it exceed 15 subordinates in any C&P organizational element without implementing a "technical reviewer" concept (see Recommendation II-5) or some other method to decentralize supervisory responsibilities. In some hardware centers, first-line supervisory span of control exceeds 21 subordinates per supervisor in the buying sections. These situations are especially problematic when the ratio of buyers to supervisor exceeds 15 to 1, straining award review authority. Also, in some DSC management support and contract review offices, there are fewer than five subordinates per supervisor. High span of control is only problematic when there is no "technical reviewer" concept or some other method of decentralizing some of the supervisory responsibilities. The isolated examples of low span of control are usually for functions with a few higher level positions (e.g., contract review officer). For most of these, combining functions with other organizational elements is not necessarily appropriate.

In cases where supervisory span of control exceeds the ratio of 1 to 15, there should be some decentralization of certain supervisory responsibilities. The team leader concept has been successfully used by a number of DSC directorates as a method of easing the pressures of first-line supervision and developing the next group of supervisory personnel. The technical reviewer concept should be implemented at those centers currently not using this organizational technique. It is critical that the technical reviewer possess the skills and abilities required to effectively function in this position.

In addition to three to four buying branches, each division would contain a contract preparation branch. The supervisory spans of control are within generally accepted ranges and include a buying team structure of one to three teams for each section. The typical section thus would have at least 14 employees and would include at least one GS-11; the grade would be based on nonsupervisory work.

The technical reviewer structure is beneficial to all buyers and the section chief. The technical reviewer generally is a GS-11 procurement agent with a \$100,000 procurement authority. Three to five lower-graded buyers constitute the team. The team is staffed so that the technical reviewer devotes approximately 50 percent of total time to:

- Instructing and giving technical advice to purchasing team members.
- Assigning and reviewing status of procurement workload.
- Reviewing and approving awards recommended by team members.

Technical reviewers also act as buyers for purchases within their delegated authority. Because the technical reviewers assist with the technical aspects of the workload, section chiefs are thus free to give supervisory attention to all section members. All performance appraisal is conducted by the section chief.

On the average, section chiefs should spend no more than 20 percent of their time on nonsupervisory work, with the rest of the time given to strict attention to matters such as quality control, training, performance appraisal, evaluating and insuring the timeliness of work, and coordinating the work of the section with that of other sections. Section chiefs should be classified as GS-12's based upon the Supervisory Grade Evaluation Guide, Part II.

- At DCSC, there are 3 divisions and 12 branches; half of the branches do not have any sections, whereas the other 6 branches have between 2 and 4 sections.
- Among the four centers, divisions include as few as 38 people and as many as 238; branches range from 11 to 77 people, and sections from 3 to 45. The smallest branch has 11 people, yet each center has at least one section with more people. The largest division (238 at DESC) is 600 percent larger than the smallest division (38 at DISC).

In order to improve management of the procurement function, enhance staff development, strengthen grade levels, and meaningfully compare hardware centers to each other, there should be more organizational consistency between the four hardware center C&P directorates.

Exhibit II-2 represents a standardized contracts division staffing structure which could be adopted throughout the hardware centers.

EXHIBIT II-2

STANDARDIZED CONTRACTS DIVISION STAFFING STRUCTURE

<u>Supervisory Level:</u>		<u>Staffing</u>
GM-14	Division Chief/Deputy	1
GM-13	Branch Chief	3
GS-12	Section Chief	3

Typical Section:

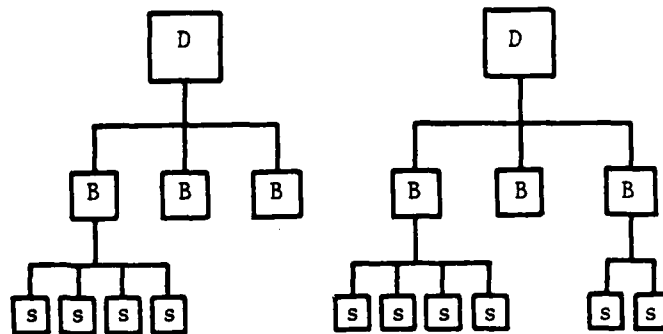
GS-11	Procurement Agent/Technical Reviewer	1
GS-9	Procurement Agent	6
GS-7	Procurement Agent	4
GS-5	Procurement Specialist	<u>3</u>
Section Subtotal		14

EXHIBIT II-1

BUYING DIVISIONS IN THE FOUR HARDWARE CENTERS

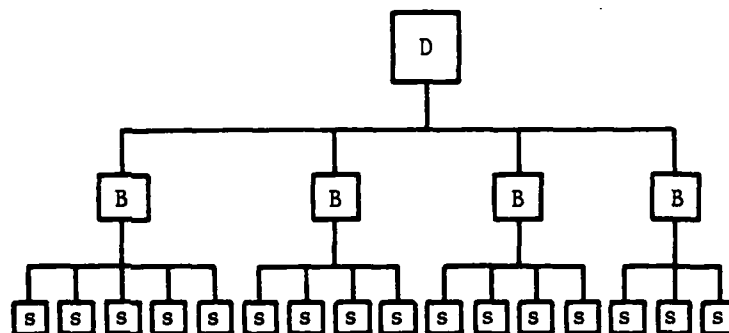
ISC

	<u>MANPOWER</u>	
	MIN.	MAX.
Divisions	102	134
Branches	13	77
Sections	13	21



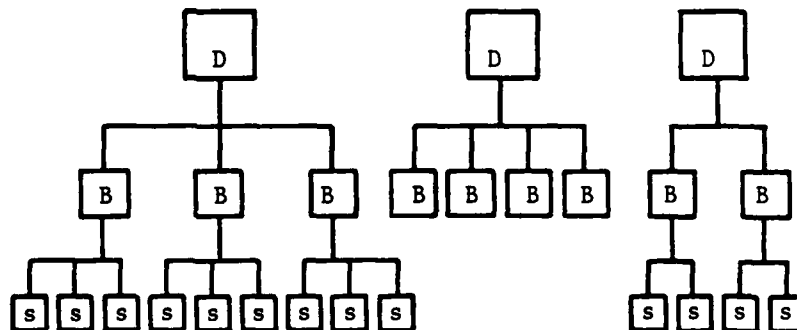
ISC

	<u>MANPOWER</u>	
	MIN.	MAX.
Divisions	238	
Branches	51	65
Sections	3	45



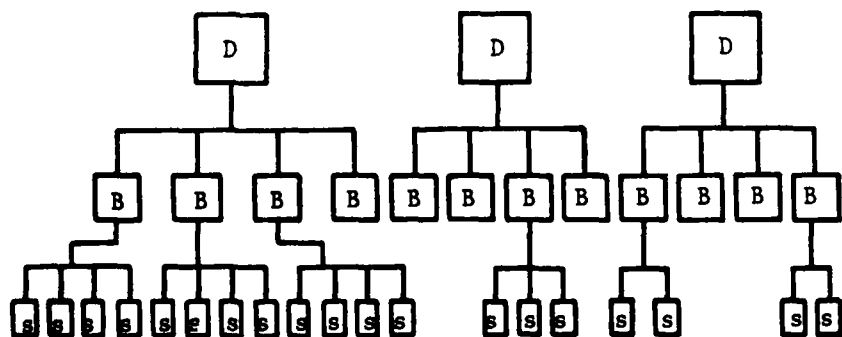
ISC

	<u>MANPOWER</u>	
	MIN.	MAX.
Divisions	38	175
Branches	17	58
Sections	8	23



CSC

	<u>MANPOWER</u>	
	MIN.	MAX.
Divisions	69	183
Branches	11	61
Sections	7	22



functions, voiced the opinion that combining pre- and postaward would be disruptive to the buying mission and probably result in less effective contract administration service. DSC managers believe that staff will spend more time on buying than postaward responsibilities if they are given both functions to perform. Based on this reaction, there is little justification for implementing "cradle to grave" in hardware center buying functions. In addition, separating the functions allows contracts to be assigned to DCAS for administration.

Recommendation II-5. Establish standard buying organizations below division level and standardize contracts division staffing structure.

The hardware centers should move towards standard buying organizations below the division level. If supply centers, or more specifically, hardware centers, are to be meaningfully compared to each other, they should display a higher degree of organizational consistency. There are significant organizational inconsistencies throughout the hardware centers. The inconsistencies are illustrated in Exhibit II-1 which shows buying divisions in the four hardware centers.

The full extent of the inconsistencies is obvious at the branch and section levels, both in organizational structure and in number of people. Note the following disparities:

- At DGSC, one division has three branches; one of those branches has four sections, while the other two branches have none. In the second division, there are also three branches, one with four sections, one with none, and one with two sections.
- DESC is organized into only one division, although it has nearly as many people assigned to it as DGSC.
- DISC has three divisions and nine branches; three branches have three sections each; four branches do not have any sections, while two branches have two sections.

procurement organizations segregate their small and large procurement functions in separate "purchasing" and "contracting" organizations. Because of the commodity orientation of defense supply center buying, requisitions are directed (regardless of dollar value) to a commodity branch and assigned to buyers who are capable (through experience and warrant level) of procuring the requested items. Combining small and large purchasing in the same work group gives DSC procurement staff exposure to a more extensive range of purchasing methods and procedures and prepares less experienced staff for future duties and responsibilities. Because of the nature of volume purchasing, the lack of formal training programs, and the high turnover of center staff, this method can enhance on-the-job training and should be encouraged at DSC's.

Recommendation II-4. Do not adopt a "cradle to grave" approach to purchasing.

Combining both buying and postaward responsibilities ("cradle to grave") in the same work group or individual will not improve the effectiveness of hardware center purchasing. Many Federal procurement organizations have adopted such an approach to purchasing which combines responsibilities for pre- and post-award activities within the same work group or individual. This method is considered beneficial because procurement professionals are ultimately made responsible for all the business management aspects of a purchase from inception to closeout. Centralizing all procurement-related responsibilities in one individual or work group is considered to be an economical way of managing a purchase and a benefit to procurement professionals because it diversifies their activities and gives them a true sense of "ownership" for the success or failure of a buy.

Unfortunately, the volume of hardware center purchases is so high, and the focus on buying so strong, that "cradle to grave" is an inappropriate method of organizing the function. Virtually all supply center managers, in both procurement and postaward

effectiveness need attention, too. With the right organization design, DLA-P should be able to maintain dependability, effectiveness, and reduced processing time.

Isolating an entry-level buyer in an automated section unnecessarily reduces his or her exposure to the commodity-related decisions more typical of the manual buying sections. Continuing to segregate automated buying from manual buying would slow the pace at which buyers and their supervisors learn the ins and outs of automated systems and procedures and would retard the further improvement of automated approaches.

If automated buying continues to be assigned to sections that are devoted exclusively to automated work, the orientation of those sections will grow to be more and more clerical. At some point, the positions will almost certainly have to be reclassified outside the GS-1102 series, reflecting that reality. The effect would be a slowing of desirable staff and career movement between the automated and nonautomated sections.

Although SASPS II is conceptually a manufacturer-based rather than a commodity-based system, the importance of this recommendation justifies further study. SASPS II is highly adaptable to commodity orientation as is Autotelex and Buyer-Directed RFQ.

Appendix A of this report includes organizational charts of the four hardware centers' buying divisions. These charts illustrate that all the centers have separate organizational elements for automated buying with the exception of DGSC, which has developed a commodity orientation for its SASPS II purchasing.

Recommendation II-3. Combine small and large purchasing in same purchasing branch.

It is most effective to organize defense supply hardware center procurement functions by combining small and large purchases in the same purchasing branch. Generally, Federal

procurement receives many requisitions for nonstocked and non-standard items which bypass supply operations completely. (See Recommendation V-15.) Therefore, an element of the agency workload will always be greater for procurement than for supply, and some work will not be easily distributed by commodity. Organizing automated and manual procurement (to the maximum extent possible) by commodity is of benefit to the defense supply hardware centers and their staff.

Of the hardware centers, only DGSC claims to have organized their SAMMS Automated Small Purchase System Phase II (SASPS II) automated procurement by commodity. Although this is a relatively new organizational shift, DGSC believes it has contributed to reducing their small purchase procurement administrative lead time (PALT) from 47 to 43 days since implementation. To further illustrate the benefit of organizing by commodity, DGSC has lowered its large-purchase PALT from 108 to 89 days since it reorganized its large-purchase buying activities by commodity in October 1982.

Recommendation II-2. Integrate automated procurement in buying divisions.

DLA-P should encourage the integration of automated procurement within each buying group rather than segregate automated procurement in its own organizational element. As a first step, establishing separate organizations for automated procurement was a practical and effective action. As a long-term organization design strategy, it can produce serious harm in several ways.

In isolation, the pace of automated procurement, unlinked to commodity orientation, forces a "procedural" or "clerical" approach on the part of the buyer. For the simplest buys, this may be acceptable for the near term, but in this mode, automation, by itself, will only speed the processing of actions. But "processing" actions quickly is not the only objective. Cost and supply

the maximum extent possible, making automated purchasing commodity oriented; standardizing the structure of "special" contracts divisions; and moving "misplaced" clerical/administrative resources to more appropriate divisions. The following recommendations pertain to the organizational structure of hardware center procurement operations.

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT

Recommendation II-1. Organize all purchasing activities by commodity.

It is most effective to organize all DSC purchasing activities by commodity. A major inconsistency in the organization structure of hardware centers is that automated procurement sections are not organized by commodity but rather established as distinct organizational units responding to any and all commodities.

Organizing the DSC buying function by commodity has proven to be a successful technique for maintaining interdirectorate relations and for developing purchasing staff capabilities. The practice of organizing purchasing divisions, branches, sections, and individual buyers by Federal supply class (commodity) has reinforced the relationship between DSC procurement and supply operations staff and led to the development of a cadre of procurement professionals who have considerable knowledge about prices, items, markets, and vendors of their assigned commodities. It is important to maintain the integrity of "commodity orientation" because it supports effective buying and benefits the career development of the purchasing staff. Using this approach, an entry-level buyer is assigned to a commodity branch and develops his/her procurement skills within the context of familiar items.

Dividing the workload by Federal supply class is the distribution method currently used by both DLA procurement and supply operations. An inconsistency in this distribution method is that

II. ORGANIZATIONAL STRUCTURE

The mission of the four hardware centers of the Defense Logistics Agency (DLA) is to provide effective and economical support to the military departments, other Department of Defense (DoD) components, and to Federal and civil agencies as provided in interagency support agreements. Hardware centers are responsible for procurement support related to assigned Federal supply classes, nonstocked and non-NSN items. The organizational structure of the procurement function at the four hardware centers is standardized to the division level as set forth in DLAM 5810.1, Organization of DLA Field Activities. This study confirms that the organizational alignment of the procurement function at the hardware centers is in accordance with DLA guidance up to and including the division level.

The Coopers & Lybrand study team reviewed the organizational structure of the four hardware centers and found a number of initiatives that have fostered staff development and reinforced good operating procedures. Commodity orientation is the centerpiece of DLA workload distribution and procurement organizational structure. Most importantly, commodity orientation is what makes the skills and knowledge of the DLA procurement workforce unique. DLA field procurement divisions have for the most part maintained the integrity of the commodity orientation by combining small and large purchasing in the same work group. Combining small purchasing with contracting, although unusual for most government purchasing organizations, has worked well in the hardware centers and has helped foster buyer staff development.

A greater degree of organizational consistency among the C&P directorates below the division level would improve the management of the field procurement function, continue to enhance staff development, strengthen positions and grade levels, and allow meaningful comparisons between and among hardware centers. This includes integrating automation into all buying divisions and, to

II. ORGANIZATIONAL STRUCTURE

specified by DLA-P: Organization, Staffing and Personnel, Workload, and Management Indicators. In turn, each of these four study areas is further divided into "Major Opportunities for Improvement" to highlight essential recommendations which DLA-P should address initially, and "Other Opportunities for Improvement," recommendations which DLA-P might wish to address subsequently. Furthermore, since the third area, "Workload," was extensive yet diverse in its content, we subdivided it into "Resource Management" and "Productivity Improvement."

Many of the recommendations in the four study areas are interrelated. To the maximum extent possible, these are cross-referenced in the report. There are also exhibits throughout the report to illustrate our recommendations. The data provided should assist DLA-P in understanding the issues and recommendations noted throughout the report.

III. S T A F F I N G / P E R S O N N E L

III. STAFFING/PERSONNEL

The hardware center C&P directorates are comprised of a workforce of over 2,000. Coopers & Lybrand's project team reviewed staffing patterns and individual positions throughout the divisions, branches, and sections of the four organizations. Our research produced considerable evidence that the hardware centers are staffed with a dedicated procurement workforce engaged in a highly complex and difficult mission. Although other centralized procurement functions exist in the Federal government, the consequences of ineffective purchases are more pronounced at the DSC's. The hardware centers' purchases affect the readiness posture of the military services--specifications and characteristics of the purchased items must be closely examined.

Major staffing strengths of the hardware centers are found in the commodity orientation of DSC's. Combining small and large purchasing within the same "commodity" work unit provides ample opportunity for staff training and development in procurement skills and knowledge. Potential problems with excessive span of control at the first-line supervisory level have been effectively avoided by use of team leaders at some of the hardware centers.

Opportunities for improvement of staffing at the hardware centers can be found by addressing the issues identified by the C&L project team. The personnel management recommendations that follow deal primarily with establishing sound approaches to the selection, training, development, supervision, and evaluation of buyers within DLA. Most can be adopted without additional cost; some may result in savings. Those having to do with training may involve costs in the short run but would produce savings and improvements in effectiveness in the long run.

The buyer is the single resource that determines DLA's success or failure. Each buyer can routinely save or waste great amounts of money and affect the operations of the military services--just through his or her normal discharge of duties.

A basic theme of our findings is that commodity knowledge is critical to DLA buyers, and more emphasis should be placed on enhancing buyer commodity knowledge. The importance of commodity knowledge sets the DLA procurement workforce apart from other Federal procurement professionals. DLA procurement staff have also experienced the increasing complexity of procurement procedures, advancing automation, and regulatory changes. Faced with these complexities as well as commodity orientation, the DLA procurement workforce is challenged to buy efficiently and effectively. In addition to commodity knowledge, there are other problems: a mix of 1102 and 1105 series professionals are engaged in comparable work; the GS 7-9 entry progression does not provide an adequate career ladder; and incomplete position descriptions and unmeasurable performance standards leave the workforce vulnerable to classification and grade changes. A standardization of the position and grade structure of the hardware centers below the division level would improve this situation.

The project team has analyzed the procurement position (see Appendix C) and developed prototype position descriptions and performance standards for the buying function (see Appendix D).

Recommendations regarding procurement function staffing at the hardware centers follow.

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT

Recommendation III-1. Classify all buyers in GS-1102 series.

All buyer positions within the defense supply hardware centers should be classified in the GS-1102 series. The procurement activity at the hardware centers has been increasing in complexity in several areas, one area being the commodities themselves. New metals, synthetics, and the requirements of high-performance weapon systems have resulted in a variety of manufacturers and suppliers new to government contracting. The

buyer thus needs to keep abreast of industry trends, competition levels, and industrial process characteristics.

The advancing level of automation has also made the procurement career field more complex. A buyer who is involved with automated purchases actually finds his or her workload becoming more (rather than less) complex, since generally only the routine work can be computerized. The nonroutine, the exceptional, remains as a residual that must be handled manually. (In our observations, about one in five automated purchases cannot be completed by computer-only processing.) In fact, there are at least 15 situations in which the Standard Automated Materiel Management System (SAMMS) will not accept a purchase request (PR) under SASPS II automated purchases. Some of the most significant are: "Priority 1" purchases; special message code for direct-ship requirement; "QPL Items Exempt"; "Immediate Shipment"; and other "critical items."

Abundant evidence shows that the practice of using buyer positions at the lowest levels as part of a de facto career ladder leading to higher buying positions is common. This applies to many positions which, if classified in isolation, might be classified in the GS-1105 series. It is also clear that individuals in these lower level positions do, in fact, develop knowledge, skills, and abilities that are required at the higher grade levels. Even at the lowest grade levels in the automated sections (where in-depth knowledge of specific commodities is hardest to acquire), buyers universally reported that any knowledge gained concerning the commodities being bought had a marked effect on the quality of the buyer's work. (For a detailed discussion of the required skills and duties of all DLA buyers, see Appendix C, Staffing and Personnel Analysis.)

To successfully implement this recommendation, it is especially crucial to integrate automated and manual along with large and small purchasing in the same work group and maintain the commodity orientation. Data and analysis comparing the DLA-P GS-1102 workforce to other government agency procurement manpower

is found in Appendix F, DLA-P Procurement Workforce Compared to the Procurement Workforce of Other Federal Organizations.

Recommendation III-2. Return entry-level buyer grade (for manual purchases) to GS-5; adopt 5-7-9-11 progression program.

Return entry-level buyer grade (for manual purchases) to GS-5 and adopt a 5-7-9-11 progression program. Such a program would significantly strengthen DLA-P's procurement career ladder. The lower entry grade would allow more time for training and management development. A 5-11 program, administered by DLA-P, in which the junior positions are at the centers and the GS-11 position at headquarters, would serve to attract college graduates and other highly qualified applicants and reduce position turnover. This program would supplement existing upward mobility career programs. Another advantage would be that more headquarters staff personnel would be experienced in field activities and operations.

Recommendation III-3. Shorten position descriptions; highlight matters of key classification significance.

Position descriptions need to be strengthened to more closely reflect job content and position responsibility. Most position descriptions appeared current although they tended to be lengthy and redundant, both within and between grades. The discussions of buying responsibilities (practices and procedures) were extensive and tended to look similar almost without regard to grade. Additionally, the discussions lacked emphasis on decisions the buyers make regarding the appropriateness of price and other judgmental factors. (See Appendix D, Prototype Position Descriptions.) If this issue is not addressed, procurement staff will be subject to further difficulties in defending and retaining grades.

B. OTHER OPPORTUNITIES FOR IMPROVEMENT

Recommendation III-4. Strengthen performance standards to more closely reflect job content.

Performance standards also appeared similar across the grades of each center. A majority of performance job elements reflected timeliness, quality of documentation, and productivity levels, although no weights of relative importance were attached. Additionally, many standards were not measurable, attainable, or reflective of the essence of the job. For example:

<u>Job Element</u>	<u>Performance Standard at the Fully Acceptable Level</u>
Provides professional advice, assistance, and guidance.	Maintains complete familiarity with most (80%) ongoing work in the organization.
Coordinates with technical specialists, supply specialists, and procurement support personnel to insure logical and economically sound acquisition actions ensue.	Actively establishes liaison with technical operations and supply. Routinely questions technical requirements and reorders quantities to fully insure that purchase requests will result in the item actually required and that optimum quantities are procured.
Evaluates offers and awards contracts (business acumen).	Usually (85% to 90% of the time) applies acceptable judgment with respect to problem-solving with a minimum of guidance.

Many performance standards also contained a job element addressing management's PALT objective. Interestingly, even at the exceptional level of performance, employees were not expected to meet this DLA management objective. For example, most center standards awarded an exceptional performance level if the employee reached 90 percent of the PALT objective.

However, neither position descriptions nor performance standards referred to "knowledge of the appropriate price," even

though virtually all buyers said that such knowledge was critical. The ability to recognize and/or negotiate price--via telephone or in person--is fundamental to the skill requirements of the procurement occupation. To be able to determine reasonableness of price to negotiate a better price requires knowledge of all aspects of procurement, the commodity's characteristics and price history, and industry conditions.

Additionally, the performance appraisal systems should be thoroughly reviewed--merit pay as well as pay for the lower grades--to strengthen their orientation and measurement with regard to actual job content.

Recommendation III-5. Place greater emphasis on buyer's commodity knowledge.

Two types of knowledge are essential for dependable and effective performance in buying organizations: knowledge concerning the management systems and procedures to be used; and knowledge concerning the items to be bought (from the standpoint of both the customer and the source of supply).

Although both types of knowledge are essential, they contribute differently to dependability and effectiveness.

- Knowledge associated with the management systems and procedures is essential for all buyers, but does not generally distinguish the superior buyer from the average.
- Knowledge associated with the items themselves is not absolutely essential for all positions, but contributes to superior performance in all buying positions.

Organization structure does little to strengthen or weaken the teaching of systems and procedures knowledge, but is critical to the teaching of commodity knowledge.

- Knowledge concerning systems and procedures is the easier of the two to teach and is handled adequately in DLA-P. Such knowledge can be gained through

classroom training and through closely monitored on-the-job training.

- Knowledge concerning the items to be bought is much more difficult to teach. Training success depends heavily upon the buyer's exposure to the buying of that particular item or very similar items; familiarity with the item as it is used by the customer; and familiarity with the manufacturing and marketing practices of the industry.

Buyers will develop a sound fundamental knowledge of items if they have a chance to work consistently with the same types of items for extended periods of time.

Commodity training for buyers should include descriptions of factors that affect supply, demand, and degree of competition. Field visits to manufacturing or supply points would greatly enhance the knowledge of the commodity.

In conclusion, no significant long-term improvement in the professionalism of the buying workforce will be possible without careful attention to developing the skills and effectiveness of the buyer. The DLA's unique mission and criticality of buyers' actions underscore the fact that human resources should continue to receive management's highest priority.

IV. WORKLOAD: RESOURCE MANAGEMENT

IV. WORKLOAD: RESOURCE MANAGEMENT

Management of the high-volume workload is the greatest challenge to hardware center procurement managers. In FY82, the DLA hardware centers processed nearly 823,000 actions leading to awards valued at over \$2.5 billion. (A breakdown of the number of actions awarded by dollar category is shown for each hardware center in Appendix B, Exhibit B-1.) When the Coopers & Lybrand project team visited field activities, DLA hardware center procurement staff were contributing to a stock availability level of 92 to 93 percent, the DLA goal.

The Coopers & Lybrand project team reviewed the hardware center resource management and sought to identify opportunities for productivity improvement. A major problem for buying activities is conflicting workload priorities. Only DISC appears to be working toward a solution to the prioritization problem. Increased use of automation at the hardware centers is critical to improving efficiency of operations. Very little in the way of coordinated planning or goal setting for increased automation currently exists at the hardware DSC's. There is inconsistency in the use of DCAS for contract administration and generally insufficient resources are devoted to the buying function.

In addition to the aforementioned problems, hardware center managers need to understand and manage their backlogs more effectively and be less resistant to moving workload and people during workload swings. A major workload issue, the quarterly "dump" of purchase requests (PR's), can only be resolved with the concerted efforts of DLA procurement, comptroller, and supply operations. The broad topic of workload is subdivided into the major topic areas of "Resource Management" and "Productivity Improvement." Recommendations regarding procurement workload follow.

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT

Recommendation IV-1. Apply greater proportion of procurement resources to the buying function.

Since the major emphasis and focus of DLA-P is on PR processing and award, more resources than are currently devoted should be applied to the buying function. The most recent figures available indicate that only about one-half of all DSC procurement personnel are assigned to the buying function (percentages range from 48 to 54 among the four hardware centers). This appears to be an unusually low percentage of total personnel assigned to perform the directorates' primary function. In fact, historical data indicates that only half of directorate resources have been assigned to the buying function in recent years and the basic proportions have not changed at all. Exhibit IV-1 illustrates this trend.

Although the other functions--postaward contract administration, management support, and operations support--are obviously essential, the buying function demands, by far, the greatest percentage of DLA-P time and energy. The major procurement-related issues to each center commander focus on the buying function. The majority of management indicators, DSC performance goals, and SAMMS reports are dedicated to the buying function. Consequently, it is sound management judgment to assign more than just one-half of personnel to this primary mission--buying. Although there is no "perfect" distribution ratio of buyer-contract administrator-management support, a minimum 60 percent should be assigned to perform the buying function.

EXHIBIT IV-1

P-100 ACCOUNT UTILIZATION HISTORY

% of Resources

<u>Sub- account</u>	<u>Center</u>	<u>Year</u>			
		82	81	80	79
P110	DCSC	26.6	27.6	26.4	29.7
	DESC	20.9	21.3	21.4	21.6
	DGSC	28.4	29.8	29.5	32.5
	DISC	28.1	29.7	29.5	31.6
	DFSC	19.8	17.7	18.9	18.7
	DPSC	<u>20.1</u>	<u>20.6</u>	<u>17.7</u>	<u>18.5</u>
	DLA	24.1	24.8	23.7	25.2
P120	DCSC	47.5	46.7	46.7	44.9
	DESC	54.4	53.5	53.9	53.5
	DGSC	51.8	49.5	48.2	44.9
	DISC	51.2	50.8	50.0	46.0
	DFSC	60.2	61.6	61.3	60.8
	DPSC	<u>60.4</u>	<u>58.8</u>	<u>61.1</u>	<u>61.1</u>
	DLA	54.0	53.0	53.5	52.0
P130	DCSC	25.8	25.6	26.2	25.3
	DESC	24.5	25.0	24.6	24.8
	DGSC	19.6	20.5	22.1	22.5
	DISC	20.4	19.4	20.3	22.2
	DFSC	16.0	17.0	16.4	16.7
	DPSC	<u>19.4</u>	<u>20.5</u>	<u>20.6</u>	<u>19.5</u>
	DLA	21.5	21.8	22.3	22.1

Recommendation IV-2. Monitor and shift workload of individuals and workgroups to maximize productivity.

DSC managers should urge their supervisors to closely monitor the workload of individuals and workgroups to maximize productivity. DLA reports contain adequate information regarding the distribution of workload and DSC managers and supervisors seem to review workload data. However, there is a reluctance to move people or to meet workload fluctuations.

From discussions with contract division managers and supervisors in each of the hardware centers, there is considerable agreement that buyers require a minimum of purchase requests (PR's) to be fully utilized. There is also agreement that to exceed a maximum level of PR's on a buyer's desk will in most cases cause confusion and lower productivity. Observations of supervisors and comments from buyers lead us to believe that approximately 250 PR's is the optimum workload for a buyer at any given time. If individual buyer workloads fall below 150 or exceed 350, supervisors contend there is usually reduced productivity.

Hardware center contract division supervisors must closely monitor buyer workload trends and meet on a weekly basis to identify opportunities to shift work or resources to accommodate severe workload swings. In many cases, extreme workload shifts are predictable because of the cyclical nature of the procurement process. For example, two weeks after the start of a new fiscal quarter, buyers receive a surge of PR's. The workload of the contract preparation and control staff and operations support office increases within the next few weeks and award-related activities surge during the next month.

On a weekly basis, DSC's should thoroughly examine their systems for bottlenecks and, if necessary, reassign resources to meet workload problems throughout the directorate. Management support activities should be responsible for collecting workload planning data and presenting it to the directorate and division

management. This management information is critical for the meaningful application of temporary or overtime resources to system "hot spots."

Recommendation IV-3. Transfer all hardware center contracts to field administration.

Although it does not appear to be cost effective to transfer more DSC purchase orders, delivery orders, or basic ordering agreements/blanket purchase agreements (BOA/BPA's) to DCAS for administration, all contracts can be field administered. In addition, all contracting officer responsibilities should also be delegated.

In 1977, a DLA working group was established with representation from P, A, H, Q, J, C, and R to develop plans for assigning all DLA hardware procurement instruments, except automated small purchase SASPS, to field Defense Contract Administration Services Regions (DCASR's) if economically feasible. The DLA study primarily focused on the feasibility of increasing the DLA assignment percentage for all awards. This would have resulted in the assignment of an additional 252,000 awards to DCASR's. The administrative burden of this recommendation proved to be an uneconomical alternative. It is more economical to retain most small purchase awards for DSC administration. It is estimated that if DCAS were to receive the additional purchase orders (PO's), delivery orders (DO's), and BOA's/BPA's, DCAS would require more than 350 new staff to handle the new workload. This, coupled with the need for production staff at the centers to respond to DCAS inquiries, would represent a significant increase in the manpower requirement for DLA.

The Defense Audit Service (DAS) was studying contract administration during the same time DLA was, and the DLA working group cited some interesting DAS observations. Based on a DAS review of 27 major procurement organizations including the Defense Industrial Supply Center (DISC) and the Defense Construction Supply Center (DCSC), distinguishing among procurement

- Contractors complain that they are not being solicited, when in fact the PR has not yet been solicited and they are among the companies to be solicited.
- The centers receive requests for solicitation by PR number before the PR is received in procurement and before it has been solicited.

The problems with the F-96 report stem from a legal case involving the FOIA. This recommendation is not intended to reverse that ruling. Rather, it is an attempt to attain management attention and an acceptable solution--possibly by changing the report format or inclusive information, or some other legitimate revisions--to a problem which is needlessly costly to the government and interferes with the discourse of government business. For example, the buyer's name and phone number could be removed from the report; a recorded telephone announcement could be implemented, directing inquiries through the proper channels for solicitations.

Beyond this, however, practices such as dealers selling an internal agency report for profit go beyond the intent of Congress when it enacted the FOIA.

B. OTHER OPPORTUNITIES FOR IMPROVEMENT

Recommendation V-5. Give buyers more discretion to make economical buys.

Individual buyers should be given more discretionary authority to make on-the-spot quantity adjustments in order to make the most economical buy for the government. Many hardware center purchased items can be purchased at significant discounts if the award quantity can be adjusted to the most economical buy quantity. Individual DSC buyers should be given the flexibility to solicit for a quantity range, and award the most economical price break quantity. In addition, supply operations should be more receptive to the economic ordering quantity (EOQ) judgments of buyers.

If ordering every 4 months becomes too restrictive because of changing requirements, adjustments (and PR submittals) could be made on an as-needed basis.

Recommendation V-4. Renew efforts to solve F-96 report problems.

DLA-P should rigorously renew efforts to solve the problems (e.g., interruptions in buyer productivity) associated with publishing the F-96, "Active/Cancelled Purchase Request List," to include seeking the assistance of DLA's legal staff.

The F-96 SAMMS report is issued as a DSC management tool for controlling PR's. It provides a listing of all current PR's in the DSC and the buyer assigned.

Numerous contractors/vendors and dealers obtain the F-96 report through the Freedom of Information Act (FOIA). Dealers sell the list to contractors and vendors for profit; contractors/vendors use this report to determine DLA requirements upon which to bid. This activity has led to increasing numbers of DSC suppliers either receiving the F-96 directly or obtaining a variation of the report from dealers. The end result is that DSC procurement buyers are receiving bids and quotations on small purchases via direct phone calls, while some vendors call buyers to complain about not winning awards. These phone calls have placed a serious burden on buyers, interrupting their workload processing, penalizing their productivity, and actually increasing the administrative cost to the government through wasted buyer time.

The magnitude of the F-96 problem is illustrated by the following events which are common to the hardware centers:

- Contractors call in unsolicited offers before PR's have been solicited.
- Contractors call buyers directly concerning a PR assigned to them on the F-96 report, but subsequently reassigned to another buyer.

The above processes should be tested for a given period, say, one year. At that time, DLA-P management may determine that the series of action days (100, 150, 200 and 160, 230, 280) should be shortened in the PR life cycle.

Recommendation V-3. Convert medium- and low-dollar-value items to a more manageable reorder cycle.

Discuss with supply operations and comptroller the feasibility of converting the medium- and low-dollar-value items to a more manageable reorder cycle. Inventory managers (IM's) currently review and reorder high-dollar-value items on a monthly basis, adjusting quantity requirements as needed. However, the medium- and low-dollar-value items are reviewed and reordered quarterly, thus creating the "quarterly dump" of PR's into the DSC procurement directorates. This large influx of PR's causes disruption of the work in process.

There is merit in attempting to extend the ordering cycle of medium- and low-dollar-value items. Such a "stretchout" of the ordering period--to perhaps every 4 months instead of quarterly--would result in one less workload "dump" into procurement each year. Being on a 4-month cycle to process the workload might provide a steadier, more controllable flow of work and enhance procurement managers' workload planning, prioritization, and distribution. This change would also reduce costs per award because of fewer interruptions in workload processing. Another option would be to institute a perpetual inventory system, where on a rotating basis, specific classes of supply items would be reordered.

Supply operations would also benefit from this change in the ordering cycle. It would provide inventory managers with an additional month to adjust reorder points and quantity requirements. The improved flow of PR's through procurement would result in faster awards and more timely deliveries, thus providing a greater opportunity for IM's to attain and maintain the desired 92 to 93 percent stock availability level.

Unprocurable PR's of this nature are often left in the workload inventory for 300 to 500 days, increasing the backlog. At DCSC alone, there were 40 PR's over 400 days old at the time of the C&L team visit. By this time, it is questionable if an award can ever be made and moreover, if the customer still requires the item (after a year or more). This situation can be resolved by adopting a similar process for both small and large purchases.

Institute a series of higher level reviews for problem PR's; ultimately place a "cap" (number of days) at which time a PR is determined "unprocurable" and deleted from the workload inventory. Advise the customer through a machine-generated card, specifying a reason for the cancellation. This process could be established as follows:

For Small Purchases:

- Institute a series of high-level reviews and management decisions, to occur at the following time periods:
 - . After the PR is 100 days old, escalate the problem to the division chief.
 - . After the PR is 150 days old, escalate the problem to the director.
 - . If the PR is still "unprocurable" at 200 days, remove and cancel the PR from the workload inventory.
- Use the machine-generated cards, with "reason codes," to inform the customer of procurement delays. Send these cards at the 100- and 150-day periods, and then at 200 days, if the PR is determined "unprocurable" and cancelled.

For Large Purchases:

- Institute the same series of higher level management reviews, use of a "cap" and PR cancellation, and machine-generated cards to inform customers as stipulated above for small purchases. However, implement "action" days of 180, 230, and 280 respectively (in lieu of 100, 150, and 200 days).

D or E	Buy which will release actual or expected priority group 2 or 3 backorders.
F or G	All other stock buys (based on the essentiality of the item being procured).
Z	Military interdepartmental purchase requests (MIPR's) and error conditions such as a direct vendor delivery unmatched to the backorder file, or a stock buy for an NSN not in the supply control file.

A prioritization system is an important and necessary development for improving the quality of DSC purchasing. DLA-P should actively pursue the exportation of this or a similar system to other DSC's and develop a set of management indicators to track the ability of DSC's to meet customer priorities.

Recommendation V-2. Institute series of higher level reviews for problem PR's; place "cap" on unprocurables.

Institute a series of higher level reviews for problem PR's; ultimately place a "cap" (number of days) at which time a PR is determined "unprocurable" and deleted from the workload inventory. Resolving backlog problems erodes a great deal of management's productive time, both at DLA-P and at the hardware centers. A significant portion of the backlog is aging PR's, which for one reason or another, cannot be awarded. The reasons for nonaward may include:

- No available sources (either no bids, or an item is obsolete and was not replaced);
- Inadequate quantity (sources will not bid at low, uneconomical quantities);
- Excessive prices quoted;
- Inadequate technical description, drawing, or specification stipulated on the PR;
- Alternate bids (contractors offer alternate product from item originally ordered, and customer's determination cannot be obtained).

is establishing a standard set of PR priorities at all centers. The procurement priority system established at DISC appears to be functioning well and should be considered as a means of satisfying the problem of two competing sets of priorities and increasing productivity.

In response to the conflicts created by attempting to process the various priorities in DSC buying, DISC developed a standard system for determining the significance of each buy, relating urgency of need to customer priority. This customer oriented system offers the DSC's a rational system for organizing their workload. The objectives of the DISC system are as follows:

- Improve customer support.
- Increase supply effectiveness.
- Decrease internal communications.
- Provide tools for operational/management control.

Consistent with these objectives, DISC developed criteria to assign significance codes to all buys, stock and direct delivery. Assignment of these codes is based on the Uniform Materiel Movement and Issue Priority System (UMMIPS).

The significance codes range from A through G and Z, with the following meanings:

<u>Significance Codes</u>	<u>Meaning</u>
A	All stock or direct delivery buys which will release one or more priority designator 01 backorders.
B	Buy which will release priority group 1 special coded or NORS type backorders.
C	Buy which will release all other priority group 1 actual backorders or expected priority group 1 backorders.

V. WORKLOAD: PRODUCTIVITY IMPROVEMENT

Productivity improvement is a major concern of hardware center management because they know that resources are not unlimited yet workload is likely to increase. The project developed several recommendations which when implemented should improve productivity without an adverse impact on the quality of work.

Our recommendations for productivity improvement follow:

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT

Recommendation V-1. Establish workload priority system at all hardware centers.

There is a need to establish a standard "set" of PR workload priorities at all hardware centers. Procurement managers and buyers are constantly faced with two "sets" of competing priorities. These priority sets are:

- Goal priorities, such as meeting PALT goals, working aging PR's, awarding the maximum number of line items, and obligating dollars, versus
- PR workload priorities, such as Uniform Materiel Movement and Issue Priority System (UMMIPS), weapon systems, selective management category codes (SMCC), and consumable item transfers (CIT).

A conflict results in trying to accomplish both sets of priorities simultaneously.

PR workload priorities (UMMIPS, etc.) often interrupt work on aging PR's, threaten attainment of PALT goals, or delay awards due to inadequate technical descriptions, insufficient sources, or periods of extensive competition.

DLA-P should consider these competing priorities when establishing DSC performance goals. One manner of accomplishing this

V. WORKLOAD: PRODUCTIVITY
IMPROVEMENT

lead to a significant increased workload in clerical and administrative activities. The current perception of center managers is that resource management is best accomplished by moving work to people rather than actually physically reassigning people. We believe that a well-trained and mobile 1106 workforce can be especially useful in accomplishing major elements of SASPS I and II, Autotelex, and other procurement activities which include a high proportion of clerical/administrative duties.

For example, instead of applying 1102 overtime to a large SASPS I backlog, center managers could use available and cross-trained 1106 staff to attack the problem. Having a well-trained and mobile clerical/administrative staff will permit more resourcing flexibility than currently exists and give center managers and supervisors more latitude in staff utilization.

Recommendation IV-5. Review warranting process and consider issuing DLA-P guidance on numbers and criteria.

DLA-P should review the warranting process currently in effect at the hardware centers and consider issuing guidance to the centers on controlling warrants. The process by which contracting officer warrants are recommended and approved and the number of warrants issued needs close monitoring and analysis. Authority for contract officer appointment is retained by individual centers at the command or directorate level. There is little evidence that standardization for issuing, processing, or controlling warrants exists across the hardware centers or even internally between divisions. Variations in dollar thresholds exist, and in many cases personnel holding warrants are not actively engaged in the buying process. In other cases buying personnel with warrants are not being given the opportunity to exercise their responsibilities because of excessive review levels.

DLA-P should review the warranting process at each hardware center and consider issuing standard guidance for warrant control. Examples of well-structured, centralized warranting procedures used by other Federal agencies are included in Appendix B, Exhibit B-5.

Recommendation IV-6. Develop 1106 series resources, increase their use, and cross-train in various duties.

Develop 1106 resources into a highly mobile group of procurement support professionals cross-trained in the various buying and postaward administrative duties. Throughout the fiscal year, there are periodic circumstances that require the application of additional procurement support resources to accomplish the workload. These circumstances are most dramatically evident in the quarterly buying peaks. These buying peaks

EXHIBIT IV-2

MONTHLY STATUS OF PURCHASES

PROCUREMENT SUMMARY

SUMMARY OF PURCHASES

<u>Reason Code*</u>	<u>No. of PR's</u>	<u>No. of PRLI's</u>
BQ	890	898
BR	131	131
CA	648	668
CD	135	165
CE	9	10
CG	1,859	1,893
CH	135	138
CJ	3	3
CK	23	23
CM	1	4
CN	1	1
CP	1	1
CR	26	34
CW	1	1
CY	91	117
D3	29	29
ZB	495	521
ZJ	255	259
TOTAL	4,733	4,896

*Note: Reason codes CA, CG, CJ, CY indicate purchases that are unprocureable.

B. OTHER OPPORTUNITIES FOR IMPROVEMENT

Recommendation IV-4. Study high PRLI cancellation rate and consider resourcing for time currently expended working cancelled PRLI's.

DLA-P should study the reasons for the high purchase request line item (PRLI) cancellation rate and consider granting appropriate resourcing credit for the PR processing time expended in the procurement directorates prior to a PR being cancelled. Cancellation of 1 out of every 10 procurement actions appears to be excessive and the reasons for this rate should be thoroughly investigated. For example, Appendix B, Exhibit B-4 illustrates the PR cancellation rate by DSC for FY82. In addition, the F-33-2 report, "Monthly Status of Purchase Requests" for DCSC, in Exhibit IV-2, indicates that more than half of the cancelled PR's are for items that are unprocurable.

In order to determine resource requirements hardware centers use a combination of Performance Evaluation Reporting System (PERS) standards, work units, nonproductive factors, and available hours. Since final resource requirements are based on the best estimate of actual workload, the DSC procurement directorates should receive credit for effort expended on cancelled PR's. There has been considerable discussion among field managers as to whether or not DSC's receive resourcing credit for their current rate of cancelled PR's. Work expended on cancelled PR's often involves 60 days or more of procurement effort. Thus, it is critical to build a current resource utilization rate for cancelled PR's into the equation for computing productive equivalents.

Postaward Responsibilities Retained in the Hardware Centers
for Field-Administered Contracts

- Modifications
- Change Orders
- Terminations
- Extending Delivery Schedule
- Waivers and Deviations

Currently DISC and DGSC, by their definition of field administration, pass all contracts to DCAS for administration, while DCSC and DESC retain a large proportion of their awarded contracts for internal monitoring and administration. This divergence in procedures is reflected in Appendix B, Exhibit B-2. Exhibit B-3 (also Appendix B) shows that since October 1979, DCSC has retained a higher percentage of its contracts each year. Over the same period, DESC has retained between 40 and 53 percent of its contracts for administration, with that figure at 40 percent as of October 1982. When questioned about this inconsistency, DLA production managers could shed little light on their varying interpretation of DLA guidance. While the delivery effectiveness rates for the two centers that retain contracts is somewhat higher, there is no evidence to confirm that the administration provided to DSC-retained contracts is causing the improved delivery effectiveness. (See Recommendation VI-2.)

DCSC and DESC should gradually pass all of their contracts to field administration and redirect resources to more pressing problem areas (e.g., reducing the backlog, improving vendor lists, increasing automated procurements, etc.). In addition, the full range of contract administration responsibilities should be delegated for field-administered contracts.

DCAS managers pointed out that a gradual transfer of work from the supply centers to DCAS would not necessitate a transfer of resources or a special staffing allocation to DCAS.

instrument types was emphasized as important in considering assignment versus retention statistics. DAS stated that a majority of contracts were being assigned for field administration and that other procurement instruments did not normally need field administration unless source inspection was required.

The results of the 1977 DLA study concluded that the 11 percent assignment level was the least expensive alternative and should be continued by DLA supply centers. The study, however, did not address the question of assigning all contracts to DCAS even though DAS comments regarding the relative value of contract administration were included. At the time of the study, the hardware centers assigned approximately 95 percent of their contracts to DCAS for administration. Recent data indicates that the hardware centers are currently assigning approximately 82 percent of their contracts. Turning over contracts for field administration would require little or no increase in DCAS manpower requirements and would represent administration of more than half of the total DLA dollars spent.

Although the centers are forwarding contracts for field administration, they are retaining significant responsibilities that probably should be delegated to field activities. Lists of those responsibilities that are either delegated or retained by centers for contracts that are field administered follow:

Postaward Responsibilities Delegated for Field-Administered Contracts

- Negotiation
- Pricing
- Quality Assurance
- Inspection/Surveillance
- Progress Payments
- Industrial Security
- Property Management

Recommendation V-6. Design and implement a comprehensive program to increase automation.

DLA-P should design and implement a comprehensive program of increased procurement automation throughout the defense supply hardware centers. Such a program should include automation goals and objectives for the production and contracts divisions. These goals and objectives should focus on the following:

- Increase the general proportion of automated procurements. (The disparity in hardware center use of automated purchase methods to process PR awards is quite evident from Appendix B, Exhibit B-6.)
- Increase the use of Autotelex requests for quotation (RFQ) and buyer directed RFQ's.
- Update the vendor data base.
- Postaward automation initiatives should include delivery forms, data base of NSN sole-source awards, a comprehensive vendor performance system, and eventually automated contract files.
- Increase of the number of NSN's available through SAMMS Automated Small Purchase System, Phases I and II (SASPS I and II).

DLA-P should plan the procurement automation program as a major agency goal of the 1980's. Automation should not be viewed exclusively as SASPS I or II. A variety of purchasing techniques and variations are available to the hardware centers and choosing the most effective approach for the given purchase should be encouraged. Many of these automation initiatives can and should be accomplished outside of SAMMS.

Following is a representative sample of items that are worthy of potential automation initiatives at the centers:

- Purchase order preparation
- PR tracking system
- Commonly used forms
- SF-129 for a comprehensive bidders' mailing list

- Contractor performance history file
- Lists of NSN's requiring Qualified Products List (QPL) (and the QPL for each NSN)
- Applicable bidders' list by Federal class
- Typewriter processing of sequential contract page numbers and procurement instrument identification numbers (PIIN's)
- Notice of award (while waiting for award preparation)
- Communications with delinquent contractors (standard type letters informing them of unsatisfactory performance and government action)
- Reports of discrepancies (ROD's)
- Second material receipt follow-up
- Postaward contract administration workload listings
- Contract closeout procedures/process

Automation goals and objectives should be established with each center. DLA-P should not rely on PALT goals to encourage the increased use of automation.

Recommendation V-7. Consider simplified methods of awarding under small purchase procedures.

DLA-P should review the appropriateness of DSC's issuing letter notices of award to vendors immediately after award and following up with the complete award package at a later time. Because of time constraints, DSC's are contributing to contractor delinquencies by mailing award documents late or permitting clerical errors such as unsigned or unnumbered contract documents. Also, significant backlogs occur in the SASPS II because of pending reviews and signature requirements not being promptly executed by Phase II contracting officers. Since small purchases are not contractual relationships between the government and its vendors, the use of minimum documentation is probably sufficient.

Additionally, SASPS II is not programmed to process awards over \$10,000. With the increase of the small purchase threshold to \$25,000, special efforts should be made to expedite all awards at this higher level.

Recommendation V-8. Use communication capabilities of commercial firms that advise vendors on upcoming solicitations.

The hardware centers should take advantage of communication opportunities available to them through the commercial firms that advise vendors on upcoming solicitations. There are commercial firms that have been publishing DLA F-96 report information and other government data to identify future DLA purchases for subscribing vendors. These firms appear to be so successful in educating the market of pending DLA business opportunities that the supply centers have been inundated with solicitation inquiries, and the volume of responses to RFQ's has in some cases doubled and tripled. Although this is not viewed as a welcomed development by most supply center staff, it does provide the centers with an excellent opportunity to broadly "advertise" those items for which there is only a single source or no source at all. Commodities which are not "competitively" available can be listed in these commercial publications and vendors can be incentivized to help DLA reduce its backlog.

Recommendation V-9. Consolidate PR's for low-quantity, non-priority items over 2-week rather than 1-week period.

Amend current SAMMS procedures so that all nonpriority (other than UMMIPS 1, 2, and 3) requisitions for one or two items are consolidated over a 2-week rather than 1-week period. The multitude of PR's for one or two items of a kind detracts from effective workload productivity in the DSC's. SAMMS is now programmed to scan and consolidate all such nonpriority ("ones and twos") orders for more economical procurements. Amending the

SAMMS program to scan and consolidate over a 2-week period in lieu of the current 1 week would provide even greater economy of scale, reduce duplicate efforts, and increase workload productivity and efficiency.

Recommendation V-10. Encourage use of more indefinite-delivery-type contracts (IDTC) and requirement-type (RTC) contracts for center purchases.

DLA-P should encourage the use of more indefinite-delivery-type contracts (IDTC) and requirement-type contracts (RTC) for hardware center procurements. Since the speed or efficiency of purchasing is of great importance to the supply centers, it is surprising that more open-ended contract instruments are not being used to purchase many standard items. DLA-P should strongly encourage the supply centers to optimize opportunities to enter into IDTC and RTC type contracts. DSC success in using these contract instruments provides ample evidence of the efficiency and effectiveness they offer to hardware centers.

Recommendation V-11. Evaluate accuracy of formula used to compute "acceptable on-hand workload."

Procurement managers are always concerned about the volume of unawarded PR's still on hand. The term "backlog" is applied at DLA when this volume of PR's reaches a "critical" point. A problem in interpretation develops, because the "criticality" of backlog is not perceived by all DSC managers. A further problem that frustrates DSC procurement managers is that once their workload volume reaches "backlog" status, they are not sure what to do about it--primarily because their directorates are generally already working at maximum rate.

The current method of determining "backlog" is through the use of an elaborate formula. As perceived by field activities, the resulting backlog figure is arbitrary and of questionable value. Conceivably, "backlog" should signal management that some critical and positive action is necessary to reverse or amend the

current situation. However, since (1) the "backlog" figure is perceived as arbitrary; (2) PR's are already being processed at the highest possible rate (quality considered); and (3) the procurement managers have no control over the incoming rate of PR's, the value of establishing a backlog and anticipated impact is very uncertain.

Perhaps the magnitude of frustration is best demonstrated by a recent example. One DSC procurement directorate with a backlog recently awarded in 1 month a record number of purchase request line items (PRLI's). However, a record number of new incoming PR's for that month resulted in an increased backlog.

DLA-P needs to re-evaluate the benefit of identifying an acceptable on-hand workload and the anticipated actions of center managers. Perhaps the use of a more simplified approach of determining workload trend would serve the same purpose as the current "backlog." This approach would include starting with the number of PR's "on hand" at the beginning of the month. Subtract the number of PR's awarded and cancelled, and add the number incoming for the same month. The resulting number would show whether the center's PR workload situation in procurement improved or not.

Recommendation V-12. Organize and institute an aggressive and coordinated program to manage delinquent contractors.

Reports indicate that specific contractors are repeatedly delinquent in delivery. (See Exhibit V-1.) In fact, figures show that at the hardware centers, 100 contractors have accounted for almost half the delinquencies. The DSC's and DCAS should organize and institute an aggressive and coordinated program to manage delinquent contractors. A vendor performance measurement system for postaward monitoring should be developed. This should include a series of reliable and effective SAMMS reports to track delinquencies, highlight repeated offenders, and simultaneously code this information for immediate buyer reference. In general,

it appears that the existing F-38 Contract Delinquency Report is useful in meeting DSC needs. However, the F-39 Advance Followup on Contracts Report and F-42 Contractor Performance Summary Report are considered inadequate; in at least one case, a DSC created its own report to satisfy its internal needs.

Since small automated purchases are one-party requests and not binding contracts, punitive action is difficult. Removing contractors from the automated system and providing immediate updated information to buyers are the only available punitive measures.

All DSC's should begin using a series of notices to delinquent contractors. These communications would inform subject contractors, for example, that:

- Their unsatisfactory delivery performance has led to removing "fast pay" provisions from awards.
- Preaward surveys will be initiated prior to large purchase awards to insure capability to deliver on-time.
- Periodic update notices, signifying that delivery performance is or is not improving. In cases where prolonged delinquencies continue, firms should be advised that they are being removed from automated Blanket Purchase Agreement (BPA) and RFQ systems.
- Their performance has improved sufficiently to end previous disciplinary actions, and for example, "fast pay" provisions in awards will be reinstated, the need for preaward surveys will be eliminated, firms eliminated from automated systems will be reinstated.

One of the biggest problems in a program of this nature is obtaining timely reporting data that "direct vendor delivery" (DVD) items have been delivered to customers. Whereas deliveries of stocked items are rapidly reported through SAMMS, the receipt of such data for DVD items is normally delayed. Such data is particularly vital to contract administrators. Thus, some provisions for more effective feedback on DVD items will be required. We suggest the use of the postcard reporting system whereby the customer forwards an acknowledgement of delivery to the DSC by

means of a preaddressed post-card attached to shipping documentation.

EXHIBIT V-1

**PERCENTAGE BY DSC OF TOTAL DELINQUENCIES
ATTRIBUTABLE TO THE 10, 50, AND 100
MOST DELINQUENT CONTRACTORS***

	DCSC	DESC	DGSC	DISC
10 Most Delinquent	16.7	18.7	16.7	9.2
50 Most Delinquent	34.1	41.5	33.7	28.0
100 Most Delinquent	46.7	54.9	44.8	41.2

*DLA Report: An Analysis of Contract Delinquencies
Production Services Branch DLA-P,
November 1980

Recommendation V-13. Conduct information needs analysis to determine center managers' SAMMS report requirements.

In order to resolve the immediate issue of deficient SAMMS reports, a needs analysis should be conducted at each DSC, meeting with procurement managers at all levels to determine their precise reporting requirements. SAMMS reports are considered deficient by DSC managers in providing sufficient quality and timely information to make decisions. Deficiencies range from inadequate information, inflexible formats and timeliness, and an inability to obtain specific data when required on a one-time basis. The results are that some managers use SAMMS reports only sparingly, others generate manual reports, some use none (because adequate reports are not available), while still others are using sources outside of SAMMS to obtain their needed reports. Of the 128 current SAMMS reports, our survey indicates that only 23 are of significant interest to procurement managers. Our survey among procurement managers produced the results presented in Exhibit V-2.

EXHIBIT V-2

SAMMS REPORT MOST OFTEN USED BY PROCUREMENT MANAGERS*

Report Reference	<u>Organizational Level</u>				
	Buying Division	Buying Branch	Buying Section	Post Award	MSO
F30	X	X			X
F33	X	X			
F35	X	X	X		
F36				X	X
F37					X
F38				X	
F39				X	
F42				X	
F44	X				
F46	X	X			X
F48	X				
F56	X				
F57-1	X				
F58	X				X
F59					X
F60	X				
F61	X	X			X
F62	X	X			X
F94	X				
F96					X
F100	X				
F101					X
F108	X				

* NOTE: Results herein are as determined by this particular survey; report references are as listed in DLAM 4715.1, CH3, Vol I, Part 2, Appendix F.

DLA is counting on SAMMS modernization to correct these problems. However, this latter effort will require many years and extensive study to correct and implement a satisfactory reporting system. There is even some question as to whether the current process will enable DLA-P to identify the real reporting needs of DSC procurement managers.

DLA-P could benefit from an extensive needs analysis of management information reports required within the DSC procurement directorates. This should consist of field visits to each DSC and meetings with managers at the director, division, branch and section levels to determine precise manager reporting needs, including:

- Content
- Elements
- Formats
- Timeliness

DSC managers also require improved use of the data base, through on-line capability to access and produce tailored reports or to change elements/formats of existing reports. Lastly, DLA-P should institute a sunset system on continued production of SAMMS reports; reports should be discontinued every two years unless survey results indicate there is sufficient DSC demand. Exhibit V-2 identifies those reports used by procurement managers on a regular basis. All other SAMMS reports are of limited or no value to procurement managers at the centers.

Recommendation V-14. Collect data on supply status code of items received and awarded.

DLA-P should collect data on the supply status code of items received and awarded. In order to understand the backlog, prioritize purchases, and identify problem areas in purchasing, DLA-P should focus attention on the breakdown of DSC stocked, nonstocked, and non-NSN items. During the course of our research, it was surprising that DLA-P could not easily provide a breakdown of the procurement workload using supply status codes.

Supply status codes can tell more about the nature of the work on hand than most other descriptive information.

Recommendation V-15. Review appropriateness of bypassing supply operations when purchasing nonstocked items.

DLA should review the appropriateness of the current procedure of bypassing supply operations when procuring nonstocked items for the services. A major portion of the hardware center workload is sent directly to DSC procurement and purchased for the services. Supply operations gets involved in these nonstocked/non-NSN items only when items become candidates for being stocked. The supply operations directorate should review requests first and deem them "procurable" before the procurement directorate receives the PR.

Recommendation V-16. Encourage centers to understand their workload more completely.

DLA reports do not provide sufficient data for managers to fully understand their workload and their problem areas. For example, the F-35 "Current PR Aging Report" identifies various information regarding the PR but does not contain a simple "reason code" for aging. A breakdown of supply status codes is not available to DLA-P so that if, in fact, less than half of the actions (i.e., direct-ship NSN's and non-NSN's) are causing most of the problems for centers, it would not be easily identifiable.

VI. MANAGEMENT INDICATORS

VI. MANAGEMENT INDICATORS

DLA-P currently uses nine major management indicators to evaluate the effectiveness and efficiency of DSC procurement operations. They are as follows:

- Formal Advertising Rate (%)
- Competition Rate (%)
- PALT Using Small Purchasing Procedures
- PALT Using Large Purchasing Procedures
- Line Item Aging-Total Over 60 Days (%)
- Line Item Aging 60-89 Days (%)
- Line Item Aging 90 and Over (%)
- Contract Delivery Effectiveness Rate (%)
- Contract Delivery Aging--Over 90 Days (% of total delinquencies)

The Coopers & Lybrand study team reviewed the applicability and appropriateness of these indicators and discussed them at length with hardware center managers. Preaward and postaward indicators are important to DLA-P for monitoring the efficiency and effectiveness of C&P directorates, and for the centers themselves for tracking their own strengths and weaknesses. The C&P directorates and staff have adequate and accurate procedures and methods for supplying workload and management data. While the SAMMS data base resources are unattainable or insufficient, C&P directorates have developed their own automated or manual approach to specific data collection and/or display.

Major issues or problems with the DLA-P management indicators stem from the perceived inaccurate portrait of reality they present or from a reaction to the goalsetting process and its outcome. Inaccuracy in management indicators includes an aggregate PALT which incorporates 1-day automated buys with 400- to 500-day-old single-item buys; delivery effectiveness which is really a vendor effectiveness indicator and should be more accurately referred to as on-time shipment; and aging factors (60 and 90 days) which are below normal PALT levels and therefore not aging at all.

An element of this study project was devoted to looking to the private sector and other Federal organizations for exemplary management indicators that could be adapted and adopted by DLA. Unfortunately, most Federal organizations are not near the level of sophistication of DLA in this area. The private sector, however, emphasizes qualitative indicators such as price effectiveness to measure buying proficiency. Quality buying indicators seem to be lacking in all Federal procurement organizations including DLA. Private sector procurement operations force their buyers to challenge the marketplace and be price/cost conscious. Price effectiveness measures used by the private sector include target or standard prices which are compared to actual prices paid to show significant cost savings. This type of measure acknowledges effectiveness in buying and awards individual buyers for maximizing cost savings.

The research findings of our management indicator review can be found in Appendix E. The following recommendations pertain to management indicators used to evaluate the hardware centers.

A. MAJOR OPPORTUNITIES FOR IMPROVEMENT

Recommendation VI-1. Use purchase requests in lieu of line items as a basis for measuring workload.

DLA should consider using purchase requests (PR's) instead of purchase request line items (PRLI's) as the basis for measuring preaward workload. The contracting directorate of DLA and the C&P directorates of the supply centers have traditionally used the line item as the basis for measuring procurement activities while the PR remains the basic unit of work for other elements of DLA and the rest of the government. The major argument in favor of using the line item is that it is the smallest common denominator for measuring buying activity. At the same time, those opposed to using the line item see it as incompatible with what other DLA/DoD elements use and hold that its main purpose is to inflate the perception of DSC workload. There is no real

benefit to measuring the workload by line items; DLA-P should consider using PR's as the measurement base.

Recommendation VI-2. Adopt "on-time shipments" as a management indicator in lieu of delivery effectiveness.

DLA-P should adopt "on-time shipments" as a management indicator in lieu of delivery effectiveness. Delivery effectiveness is a questionable management indicator. It does not identify receipt nor qualify the effectiveness of the contractor's product. The only postaward factor that can be justifiably measured in this regard is on-time shipments. On-time shipments should primarily be used as a vendor performance indicator rather than a DCS management indicator.

(The essence of this recommendation is reflected in Appendix B, Exhibit B-7. From the presentation therein, it would seem that "delivery effectiveness" has been improving throughout the hardware centers for four years. However, given the rather questionable value of such an indicator, the graphic display becomes meaningless, since managers cannot convert the increasing delivery effectiveness to a meaningful conclusion.)

The criteria and formula used to currently compute delivery effectiveness tend to distort the results. First, the system treats all deliverable line items the same, regardless of value (so that a \$1 item is just as important as a \$10,000 item). Secondly, the formula used can lead to negative statistical results, in spite of positive efforts of postaward contract administrators to obtain deliveries of delinquent items.

For example, delivery effectiveness is determined by dividing "contract line items due delivery" into "contract line items delivered." As the statistical data below shows, a decrease in the number of delinquent items can actually produce a lower percentage of delivery effectiveness.

DU SC

CONTRACTING DIVISION III		
No.	Pos.	Series and Grade
1		05 Military
1		1102-13
1		318-5
3		Office Total
69		Division Total

COMM. SERVICES & SUPPLIES BRANCH		
No.	Pos.	Series and Grade
1		1102-12
1		1106-4
31		318-4
24		Office Total
24		Branch Total

FOCUS BRANCH		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
6		1102-9
1		1106-4
10		Branch Total

WOOD PRODUCTS BRANCH		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
4		1102-9
2		1106-4
1		1106-3
11		Branch Total

COMM. ACTIVITIES AND MPR BRANCH		
No.	Pos.	Series and Grade
1		1102-12
1		318-4
2		Office Total
21		Branch Total

Major Procurement Section		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
3		1102-9
3		1106-4
9		Section Total

Small Purchase Section		
No.	Pos.	Series and Grade
1		1102-9
8		1102-7
1		1106-3
2		322-3
12		Section Total

Comm. Activities Section		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
3		1102-9
1		1106-4
7		Section Total

MPR Section		
No.	Pos.	Series and Grade
1		1102-12
3		1102-11
7		1102-9
1		1106-5
12		Section Total

DCSC

CONTRACTS DIVISION II		
No.	Pos.	Series and Grade
1	1	05 Military
1	1	1102-13
1	1	318-5
3		Office Total
114		Division Total

AUTOMATED PHASE I BRANCH		
No.	Pos.	Series and Grade
1	1	04 Military
		318-4
2		Office Total
40		Branch Total

AUTOMATED PHASE II BRANCH		
No.	Pos.	Series and Grade
1	1	1102-11
2	2	1102-9
9		1102-5
11		1102-7
8		1106-4
1		1101-6
33		Branch Total

CONTRACT WRITING BRANCH		
No.	Pos.	Series and Grade
1	1	1102-12
2	2	1102-11
2		1102-9
3		1102-7
2		1106-5
1		322-3
11		Branch Total

NON RSN BRANCH		
No.	Pos.	Series and Grade
1	1	1102-11
2	2	1102-9
15		1102-7
6		1102-5
1		318-4
1		322-3
1		1101-6
27		Branch Total

SIS Processing Section I		
No.	Pos.	Series and Grade
1	1	1102-9
3		1102-7
2		1105-5
3		1106-4
2		1106-3
1		1101-4
12		Section Total

SIS Processing Section II		
No.	Pos.	Series and Grade
1	1	1102-9
3		1102-7
3		1105-5
3		1106-4
3		1106-3
13		Section Total

Post Award Section		
No.	Pos.	Series and Grade
1	1	1102-11
1		1102-9
3		1102-7
3		1106-5
4		1106-3
1		1106-4
13		Section Total

DCSC

CONTRACTS DIVISION I		
No.	Pos.	Series and Grade
1		05 Military
1		1102-14
1		318-5
1		305-3
1		322-3
5		Office Total
183		Division Total

BRANCH D		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
3		1102-9
2		1102-7
1		1102-5
1		1106-4
1		1106-3
11		Branch Total

DCSC

CONTRACTS DIVISION I		
No.	Pos.	Series and Grade
1		05 Military
1		1102-14
1		318-5
1		305-3
1		322-3
5		Office Total
183		Division Total

BRANCH B		
No.	Pos.	Series and Grade
1		04 Military
1		318-4
2		Office Total
53		Branch Total

Section I		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
3		1102-9
7		1102-7
1		1102-5
1		1106-4
1		1106-3
16		Section Total

Section II		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
4		1102-9
7		1102-7
1		1102-5
1		1106-4
1		1106-3
16		Section Total

Section VI		
No.	Pos.	Series and Grade
2		1102-11
4		1102-9
4		1102-7
2		1102-5
1		1106-4
1		1106-3
14		Section Total

Section IV		
No.	Pos.	Series and Grade
2		1102-11
4		1102-9
6		1102-7
1		1102-5
1		1106-4
1		1106-3
15		Section Total

DCSC

CONTRACTS DIVISION I		
No.	Pos.	Series and Grade
1		05 Military
1		1102-14
1		318-5
1		305-3
1		322-3
5		Office Total
183		Division Total

BRANCH C		
No.	Pos.	Series and Grade
1		04 Military
1		318-4
2		Office Total
61		Branch Total

Section I		
No.	Pos.	Series and Grade
2		1102-11
2		1102-9
5		1102-7
2		1102-5
1		1106-3
12		Section Total
Section II		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
3		1102-9
6		1102-7
1		1102-5
2		1106-4
1		1106-3
16		Section Total
Section III		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
4		1102-9
5		1102-7
1		1106-4
1		1106-3
14		Section Total
Section IV		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
4		1102-9
4		1102-7
4		1102-5
1		1106-4
1		1106-3
17		Section Total

DCSC

CONTRACTS DIVISION I		
No.	Pos.	Series and Grade
1	05	Military
1	1102-14	
1	318-5	
1	305-3	
1	322-3	
5	Office Total	
183	Division Total	

BRANCH A		
No.	Pos.	Series and Grade
1	1102-13	
1	318-4	
2	Office Total	
53	Branch Total	

Section I			Section II			Section IV			Section V		
No.	Pos.	Series and Grade	No.	Pos.	Series and Grade	No.	Pos.	Series and Grade	No.	Pos.	Series and Grade
1	1102-12		1	1102-12		1	1102-12		1	1102-12	
2	1102-11		2	1102-11		2	1102-11		1	1102-11	
4	1102-9		2	1102-9		1	1102-9		3	1102-9	
3	1102-7		6	1102-7		6	1102-7		2	1102-7	
2	1102-5		2	1102-5		2	1102-5		2	1102-4	
1	1106-4		1	1106-4		1	1106-4		2	1106-4	
			1	1106-3		1	1106-3				
13	Section Total		15	Section Total		14	Section Total		9	Section Total	

APPENDIX A

**HARDWARE CENTER
ORGANIZATIONAL CHARTS
FOR CONTRACTS DIVISIONS**

representative of special action since these numbers are in range of the normal PALT. To be an effective gauge for management decisionmaking, aging PR's should be segregated by small and large purchases, and by automated and manual purchases.

The following time periods are recommended for measuring aging PR's, shown by category:

<u>Category of PR</u>	<u>Time Period</u>
SASPS I/II	Over 60 days
Manual Purchases, less than \$25,001	Over 100 days Over 150 days Over 200 days
Large Purchases	Over 120 days Over 180 days Over 230 days Over 280 days

PALT should become part of the goal-setting process. A representative list of procurement actions/events, management indicators, and performance goals appears in Appendix B, Exhibit B-8.

B. OTHER OPPORTUNITIES FOR IMPROVEMENT

Recommendation VI-5. Use various measures of central tendency to provide more accurate and meaningful evaluative information in measuring DSC efficiency and effectiveness.

A major problem in measuring small purchase PALT is that distributions are markedly skewed. This is caused by both the automated SASPS I purchases and the 400- to 500-day-old purchase requests for items that are difficult to buy. It may provide a better composite picture of a management indicator like small purchase PALT if median, rather than mean, were used to define the "average."

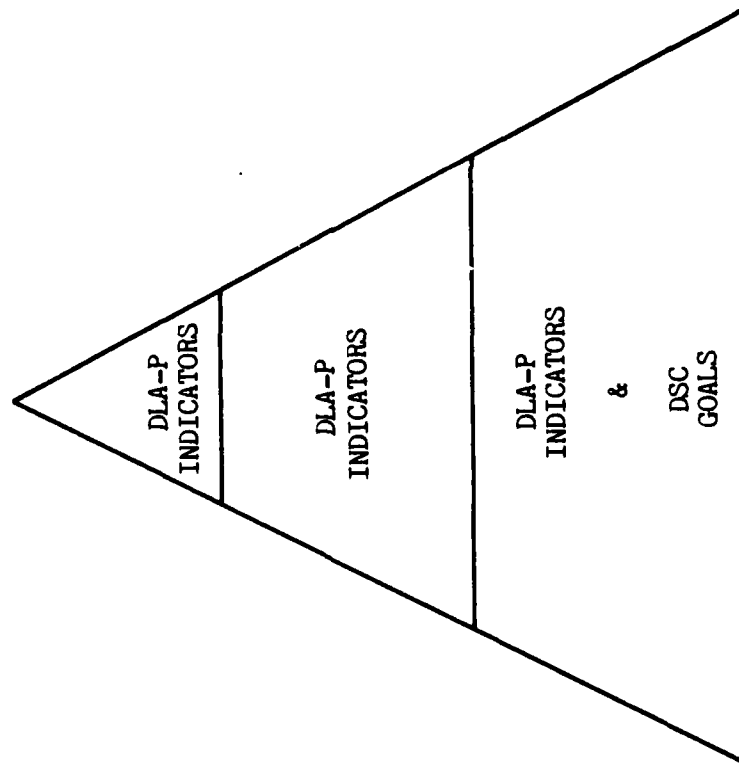
For example, if median were used to measure "average" PALT, extremes would not affect the measurement. If the distribution of PALT days for purchases were not skewed, the mean and median would coincide, but for the hardware centers this does not appear to be the case. Further study regarding the appropriate use of the various measures of central tendency should be pursued by DLA-P.

Recommendation VI-6. Amend time periods at which PR becomes "aging" for both management indicators and performance goals.

DLA-P should amend the period (i.e., 60 and 90 days) used for aging PR's in management indicators and performance goals so that the number of days measured is more commensurate with "typical" procurement lead time. Tracking aging PR's at periods of 60, 60-89, and over 90 days is not management effective; small purchases at 60 days and large purchases at 90 days are not

EXHIBIT VI-1

DLA-P MANAGEMENT INDICATORS AND HARDWARE CENTER GOALS



Stock Availability/Backorder

Measurement of:

PALT (Composite)
Aging
Competition
On-Time Shipments
Delivery Aging

PALT & Proportion of Purchases for:
SASPS I
SASPS II
Autotelex
Buyer Directed
Manual Buys (Small)
Large Purchases
Prioritized Purchases

assigned to "manual" buyers and then awarding the procurement as an "automated" buy.)

Management indicators should enable DLA-P and DSC procurement directors to determine the effectiveness of mission performance. Goals should provide a meaningful and attainable "target" for DSC procurement directorates to work toward accomplishing their procurement mission.

There are a variety of procurement actions to use as management indicators and attainable performance goals. Caution is needed to guard against establishing a performance goal to meet each management indicator. There is some statistical data such as rates of formal advertising and competition that are appropriate for tracking as a management indicator, but not for establishing as a performance goal.

In addition to procurement-related management indicators, there is merit in tying procurement into the overall DLA mission, that of supply. For DLA item managers, the management indicator is 92 percent stock availability. Although procurement directorates are not totally responsible for that goal, they contribute to the attainment of that stock level. Therefore, by using this as one management indicator (not a goal), DLA-P can measure its mission effectiveness.

Exhibit VI-1 illustrates a proposed hierarchy of DLA-P management indicators. The top tier displays the most critical indicators of DLA-P performance. Without a dedicated and responsive procurement workforce, excellent levels of stock availability and back order can not be attained. The middle tier is comprised of DLA-P indicators that can be solely attributed to procurement but are not totally controlled by the actions and efforts of the procurement workforce. Although these indicators should be measured by DLA-P, they should not be used as goals. The lowest tier is made up of those indicators that should be used as both DLA-P management indicators and DSC goals. Because these indicators are more "controllable," their proportion and

descriptions or specifications are routinely inadequate to procure. These factors, coupled with other conditions such as the quality and experience of the staff, current workload, "priority" PR's, and stock reorder levels for items peculiar to that center, all make up the "norms." These norms should influence the goals for each DSC, and be negotiated with the DSC director of procurement.

In some cases, goals are incompatible--for example, striving for PALT (award in the shortest time) and competition, or trying to reduce aging PR's while simultaneously meeting UMMIPS item priorities. Some goals are unattainable. Consider how difficult it has been for DSC's to reach both small and large purchase PALT. Formal advertising goals range from 12 to 23 percent; competition goals range from 53 to 80 percent. What evidence is there that such goals are practically attainable? Sometimes procurement has no direct control over the events that influence a goal, such as with delivery effectiveness, as discussed in Recommendation VI-2.

All goals should be attainable to be effective. It is unreasonable to measure individuals or organizations by factors that are beyond their control. Goals that are not attainable fail to incentivize and motivate people, and may be counter-productive to mission accomplishment.

Perhaps it would be beneficial for DLA-P to reconsider the purpose of performance goals, how these goals are established, and the interpretation of management indicators. Currently management indicators are inadequate as "tools" for management decisionmaking, while performance goals are inappropriately perceived as "ends" unto themselves. (To illustrate the problem of this approach, at one center, SASPS II automated PALT is actually larger than manual small purchase PALT. This has occurred because the center commander wanted more small purchases to be awarded through automation. As a result, SASPS II automated buyers are performing procurement functions usually

DLA-P should define management indicators and develop goals for the buying divisions for the following procurement workload scenarios:

- Manual purchases of \$25,000 or less
- Phase I automated purchases*
- Phase II automated purchases*
- Autotelex purchases
- Buyer-directed RFQ
- Competitive procurements over \$25,000
- Negotiated procurements over \$25,000
- UMMIPS No. 1, 2, 3 (combined)
- Supply management category codes (SMCC) "A", "B", and "C" (combined)

Performance goals for these categories should be negotiated with DSC procurement directors, based upon recent performances. These negotiated goals should be used throughout the year to measure the effectiveness of individual centers. Initially flexibility in adjusting such goals will be necessary, since several of the above categories have never been individually measured.

Recommendation VI-4. Set reasonable, attainable, and negotiated procurement performance goals.

The current procurement performance goals for DSC's are often incompatible, beyond control of procurement staff, and unattainable. Such goals can be demoralizing, greatly reduce worker incentive, and fail to achieve the desired results. To counter this problem, goals for each DSC should be reasonable, attainable, and negotiated.

At each DSC, there are "normal" patterns and trends which influence procurement awards. These may include: specific classes of items that are more difficult to buy because of obsolescence and lack of biddable sources; items that generate more competition than normal; or some items for which technical

* Data readily available through SAMMS.

<u>Month</u>	<u>CLI Due Delivery</u>	<u>CLI Delivered</u>	<u>DLI Delinquent</u>	<u>Delivery Effectiveness</u>
May	25,000	16,000	9,000	64%
June	22,000	13,600	8,400	62%

Furthermore, there is no real measurable link between the efforts of contract administrators and "initial" on-time deliveries (the first time the item is due for delivery). Postaward contract administrators cannot control on-time shipments (nor delivery effectiveness). Generally, in spite of any contract administrator's influence, other factors ultimately determine whether the contractor meets the contractual delivery date. Therefore, on-time shipments should not be designated as a "goal" for DSC's to attain, but should be used as a management indicator of vendor effectiveness.

One problem associated with any measurement of contractor shipment is inadequate reporting, especially of "direct vendor deliveries." This problem, as discussed in Recommendation V-12, requires that DLA develop an effective and timely method of both reporting and machine recording of on-time shipments.

Recommendation VI-3. Develop PALT performance goals and management indicators based on PR priorities rather than aggregate PALT.

In lieu of using an aggregate procurement administrative lead time (PALT) for measuring the efficiency of small and large purchases, performance goals and management indicators should be developed based on the various workload scenarios (e.g., automated, manual, UMMIPS, and SMCC procurements). Using an aggregate PALT for all small and large purchases is often misleading. Lumping all PALT together prevents managers from distinguishing the actual time required to award individual PR categories, such as Phase I and II automation from small manual buys. Furthermore, buying divisions process many critical and other priority PR's effectively and in a timely manner, but these "values" are not recorded.

DESC
SUMMARY OF PERSONNEL

DIRECTORATE OF CONTRACTING & PRODUCTION		
No.	Pos.	Personnel Summary
4		Office Total
445		Directorate Total

CONTRACTS DIVISION			PRODUCTION DIVISION			MANAGEMENT SUPPORT OFFICE			OPERATIONS SUPPORT OFFICE			CONTRACT REVIEW OFFICE		
No.	Pos.	Personnel Summary	No.	Pos.	Personnel Summary	No.	Pos.	Personnel Summary	No.	Pos.	Personnel Summary	No.	Pos.	Personnel Summary
3		Office Total	2		Office Total	1		Office Total	2		Office Total	6		Office Total
60		Commodity Branch A	71		Post Award Branch	17		Plans and Programs Branch	8		Remote Terminal Branch			
51		Commodity Branch B	18		Contract Files Branch	7		Cost and Price Analysis Branch	7		Contract Support Branch			
51		Commodity Branch C	12		Production Management Branch				11		Distribution Branch			
65		Commodity Branch E	8		Industrial Prep. Plan Branch				11		Data Input Control Branch			
8		Procurement Agent Training Branch							8		MLPR/PR Control Branch			
238		Division Total	111		Division Total	25		Division Total	14		Document Typing Branch			
									61		Division Total	6		Division Total

DESC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1	1	05 Military
1	1	1102-14
1	1	318-5
3	1	Office Total
238		Division Total

PROCUREMENT AGENT TRAINING BRANCH		
No.	Pos.	Series & Grade
2	1	1102-9
5	1	1102-5
1	1	1106-4
8		Branch Total

DESC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-14
1		318-5
3		Office Total
238		Division Total

COMMODITY BRANCH A		
No.	Pos.	Series & Grade
1		1102-13
1		318-4
2		Office Total
60		Branch Total

Section No. 1			Section No. 2			Section No. 3			Section No. 4			Section No. 5		
No.	Pos.	Series & Grade	No.	Pos.	Series & Grade	No.	Pos.	Series & Grade	No.	Pos.	Series & Grade	No.	Pos.	Series & Grade
1		04 Military	1		1102-12	1		1102-12	1		1102-12	1		1102-12
1		1102-12	3		1102-11	1		1102-11	1		1102-11	2		1102-11
2		1102-11	4		1102-9	3		1102-9	3		1102-9	1		1102-9
1		1102-9	1		1106-4	5		1102-7	4		1102-7	4		1102-7
2		1102-5				2		1102-5	2		1102-5	3		1102-5
3		1102-7				1		1106-4	1		1106-4	1		1106-4
1		1106-4										1		322-2
11		Section Total	9		Section Total	13		Section Total	12		Section Total	13		Section Total

DESC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-14
1		318-5
3		Office Total
238		Division Total

COMMODITY BRANCH B		
No.	Pos.	Series & Grade
1		1102-13
1		318-4
2		Office Total
51		Branch Total

Section No. 1		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
4		1102-9
3		1102-7
1		1102-5
1		1106-4
12		Section Total

Section No. 2		
No.	Pos.	Series & Grade
5		1102-9
2		1102-7
5		1102-5
2		1106-4
14		Section Total

Section No. 3		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
2		1102-9
4		1102-7
1		1106-1
10		Section Total

Section No. 4		
No.	Pos.	Series & Grade
2		1102-11
5		1102-9
2		1102-7
2		1102-5
1		1106-1
1		Student Aid
13		Section Total

DESC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-14
1		318-5
3		Office Total
238		Division Total

COMMODITY BRANCH C		
No.	Pos.	Series & Grade
1		1102-13
1		318-4
2		Office Total
51		Branch Total

Section No. 1		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
3		1102-9
4		1102-7
1		1106-4
11		Section Total

Section No. 2		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
5		1102-9
3		1102-7
1		1106-4
12		Section Total

Section No. 3		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
3		1102-9
1		1102-7
3		1102-5
10		Section Total

Section No. 4		
No.	Pos.	Series & Grade
1		1102-12
2		1102-11
5		1102-9
2		1102-7
1		1102-5
1		1106-4
12		Section Total

Contracting Lab		
No.	Pos.	Series & Grade
1		1102-9
2		1106-4
3		Section Total

DESC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1	05	Military
1	1	1102-14
1	1	318-5
3		Office Total
238		Division Total

COMMODITY BRANCH E		
No.	Pos.	Series & Grade
1	4	Military
1	1	318-4
2		Office Total
65		Branch Total

Base Contracting Section		
No.	Pos.	Series & Grade
2	1	1102-12
1	1	1910-11
1	1	1102-9
1	1	1102-7
1	1	1102-5
2	1	1106-6
9		Section Total

Automated Contracting Section		
No.	Pos.	Series & Grade
1	1	1102-11
45		Office Total
		Section Total

Special Contracting Section		
No.	Pos.	Series & Grade
1	1	1102-12
1	1	1102-11
1	1	1102-9
2	1	1102-7
1	1	1102-5
2	1	1106-4
8		Section Total

Group A		
No.	Pos.	Series & Grade
1	1	1102-9
2	1	1102-7
2	1	1102-5
1	1	1102-4
6		Group Total

Group B		
No.	Pos.	Series & Grade
1	1	1102-9
3	1	1102-7
2	1	1102-5
2	1	1102-4
8		Group Total

Group C		
No.	Pos.	Series & Grade
1	1	1102-9
5	1	1102-7
1	1	1102-5
7		Group Total

Group D		
No.	Pos.	Series & Grade
1	1	1102-9
2	1	1102-7
4	1	1102-5
1	1	1102-4
8		Group Total

Clerical Group		
No.	Pos.	Series & Grade
1	1	1106-5
2	1	1106-4
3	1	1106-3
2		Student Aid
8		Group Total

Intern. Small Purchase Group		
No.	Pos.	Series & Grade
1	1	1102-9
2	1	1102-7
1	1	1102-4
3	1	1106-4
1		322-3
8		Group Total

DISC

SUMMARY OF PERSONNEL

10 (SECTIONARY OF CONTRACTING & PRODUCTION)	
No.	Personnel Summary
Pos.	Office Total
1976	Directorate Total

CONTRACT SYSTEM OFFICE		MANUFACTURING SUPPORT OFFICE		OPERATIONS SUPPORT OFFICE		COMMODITY DIVISION		SPECIAL CONTRACTS DIVISION		AIRCRAFT SYSTEMS CONTRACTING DIVISION		PRODUCTION DIVISION	
No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary
Pos.	Office Total	Pos.	Office Total	Pos.	Office Total	Pos.	Office Total	Pos.	Office Total	Pos.	Office Total	Pos.	Office Total
6	Policy Procedures Branch	10	Policy Procedures Branch	15	Bld & Distribution Branch	58	Commodity Branch	17	Office Total	12	Aircraft & Engine Supp. Br.	22	Prod. Mt. Branch
8	Cost & Price Analysis Branch	8	Cost & Price Analysis Branch	15	Contracting & Prod. Sys. Br.	57	Commodity Branch	19	Automated Small Purchase	18	Fleet & Ground Equip. Supp. Branch	65	Prod. Award Branch
13	Plans & Program Branch	13	Plans & Program Branch	16	Prod. Automation Ctl. Br.	57	Commodity Branch	22	Special Contracts Branch				
5	Division Total	34	Division Total	32	Division Total	175	Division Total	17	Contract Prop. & Ctl. Br.	38	Division Total	90	Division Total

DISC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-13
1		318-4
2		Office Total
175		Branch Total

COMMODITY BRANCH - FEB		
No.	Pos.	Series & Grade
1		1102-13
1		318-4
2		Office Total
57		Branch Total

Commodity Section FEBB		
No.	Pos.	Series & Grade
1		1102-12
4		1102-11
12		1102-9
3		1102-7
2		1106-6
22		Section Total

Commodity Section FEBA		
No.	Pos.	Series & Grade
1		1102-12
4		1102-11
12		1102-9
3		1102-7
2		1106-6
1		0099-5
23		Section Total

Contract Prep. & Control Section		
No.	Pos.	Series & Grade
1		1106-6
4		1106-4
5		1106-3
10		Section Total

DISC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-13
1		318-4
2		Office Total
175		Branch Total

COMMUNITY BRANCH PEA		
No.	Pos.	Series & Grade
1		1102-13
1		318-4
2		Office Total
58		Branch Total

Contract Prep. & Control Section		
No.	Pos.	Series & Grade
1		1106-6
4		1106-4
5		1106-3
10		Section Total

Commodity Section-PEAA		
No.	Pos.	Series & Grade
1		1102-12
4		1102-11
13		1102-9
2		1102-7
2		1106-6
1		0099-5
23		Section Total

Commodity Section-PEAB		
No.	Pos.	Series & Grade
1		1102-12
4		1102-11
12		1102-9
3		1102-7
2		1106-6
1		0099-5
23		Section Total

DISC

CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1		05 Military
1		1102-13
1		318-4
2		Office Total
175		Branch Total

COMMODITY BRANCH-PEC		
No.	Pos.	Series & Grade
1		04 Military
1		318-4
2		Office Total
57		Branch Total

Commodity Section PECB		
No.	Pos.	Series & Grade
1		1102-12
4		1102-11
12		1102-9
3		1102-7
2		1106-6
22		Section Total

Commodity Section PECA		
No.	Pos.	Series & Grade
1		1102-12
1		03 Military
4		1102-11
12		1102-9
3		1102-7
2		1106-6
1		0099-5
22		Section Total

Contract Prep. & Control Section		
No.	Pos.	Series & Grade
1		1106-6
4		1106-4
5		1106-3
10		Section Total

DISC

SPECIAL CONTRACTS DIVISION		
No.	Pos.	Series & Grade
1	1	05 Military
	1	1102-12
	1	318-5
3		Office Total
78		Division Total

AUTOMATED SMALL PURCHASE BRANCH		
No.	Pos.	Series & Grade
1	1	03 Military
2	2	1102-9
14	14	1102-7
17	2	1106-4
	19	Branch Total

AUTOMATED SMALL PURCHASE BRANCH		
No.	Pos.	Series & Grade
1	1	1102-11
2	2	1102-9
14	14	1102-7
2	2	1106-4
	19	Branch Total

SPECIAL CONTRACTS BRANCH		
No.	Pos.	Series & Grade
1	1	1102-11
4	4	1102-9
12	12	1102-7
1	1	1106-5
2	2	1106-4
1	1	1105-6
1	1	1106-3
22		Branch Total

CONTRACT PREPARATION AND CONTROL BRANCH		
No.	Pos.	Series & Grade
1	1	1106-6
3	3	1106-5
5	5	1106-4
8	8	1106-3
17		Branch Total

DISC

WEAPONS SYSTEM CONTRACTING DIVISION		
No.	Pos.	Series & Grade
1	05	Military
1	318-5	
2		Office Total
38		Division Total

AIRCRAFT & ENGINE SUPPORT BRANCH		
No.	Pos.	Series & Grade
1	1102-13	
1		Office Total
18		Branch Total

FLEET & GROUND EQUIP. SUPPORT BRANCH		
No.	Pos.	Series & Grade
1	1102-13	
1		Office Total
18		Branch Total

Aircraft Support Section		
No.	Pos.	Series & Grade
1	1102-12	
2	1102-11	
3	1102-9	
1	1102-6	
1	1102-4	
8		Section Total

Engine Support Section		
No.	Pos.	Series & Grade
1	1102-12	
2	1102-11	
3	1102-9	
1	1102-6	
1	1106-6	
1	1106-4	
9		Section Total

Fleet Support Section		
No.	Pos.	Series & Grade
1	1102-12	
2	1102-11	
3	1102-9	
1	1106-6	
1	1106-4	
8		Section Total

Ground Equipment Support Section		
No.	Pos.	Series & Grade
1	1102-12	
2	1102-11	
3	1102-9	
1	1106-6	
1	1106-4	
1	1106-3	
9		Section Total

DASH:
SUMMARY OF PERSONNEL

INSTRUMENTS OF CONTRACTING & PRODUCTION

No.	Personnel Summary
8	Office Total
475	Directorate Total

CONTRACTS REVIEW OFFICE		MANAGEMENT SUPPORT OFFICE		OPERATIONS SUPPORT OFFICE		PRODUCTION DIVISION		CONTRACT DIVISION I		CONTRACTS DIVISION II	
No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary	No.	Personnel Summary
5	Office Total	18	Office Total	3	Office Total	7	Office Total	5	Office Total	3	Office Total
		11	Plans, Programs, & Analysis Branch	19	Solicitation Branch	9	Industrial Mt. Branch	71	Contracts Branch	177	Contracts Branch
		19	Systems & Procurement Branch	13	Edit & Coding Branch	31	Post Award Branch 1	13	Base Support Branch	17	SPR Phase 1 Branch
		20	Cost & Price Analysis Branch	13	Contract Preparation Branch	123	Post Award Branch 2	13	SPUR Branch	37	Educational Supplies Branch
				15	Data Control Branch	16	File Branch				
				7	Procurement Distribution Branch						
				16	Document Distribution Branch						
5	Division Total	54	Division Total	86	Division Total	86	Division Total	102	Division Total	134	Division Total

DCSC

CONTRACTS DIVISION I		
No.	Pos.	Series and Grade
1		05 Military
1		1102-13
2		1102-11
1		318-5
5		Office Total
102		Division Total

BASE SUPPORT BRANCH		
No.	Pos.	Series and Grade
1		1102-12
1		1102-11
3		1102-9
1		1102-7
1		1105-6
2		1105-5
3		1106-4
1		322-1
13		Branch Total

CONTRACTS BRANCH		
No.	Pos.	Series and Grade
1		05 Military
1		1102-13
2		1102-11
1		318-5
5		Office Total
71		Branch Total

SPUR BRANCH		
No.	Pos.	Series and Grade
1		1102-11
7		1102-9
2		1102-7
1		1106-4
2		1106-3
13		Branch Total

Electronical Components and Hardware Section		
No.	Pos.	Series and Grade
1		03 Military
3		1102-11
5		1102-9
6		1102-7
1		1106-5
1		1106-4
2		1106-3
1		322-2
19		Section Total

Electronical Control and Instruction Section		
No.	Pos.	Series and Grade
1		1102-12
1		1102-11
5		1102-9
5		1102-7
2		1106-5
1		1106-4
1		1106-3
16		Section Total

Photo and Fabricated Materials Section		
No.	Pos.	Series and Grade
1		1102-12
2		1102-11
4		1102-9
5		1102-7
2		1102-5
1		1102-4
1		1102-3
16		Section Total

Refrigeration and Food Service Section		
No.	Pos.	Series and Grade
1		1102-12
3		1102-11
5		1102-9
5		1102-7
1		1102-5
1		1106-4
2		1106-3
18		Section Total

AD-A159 755

EVALUATION OF CONTRACTING AND PRODUCTION ACTIVITIES AT: 2/2
THE DEFENSE LOGIS. (U) COOPERS AND LYBRAND WASHINGTON
DC M J TASHJIAN ET AL. 01 MAR 84 DLA600-83-C-5001

UNCLASSIFIED

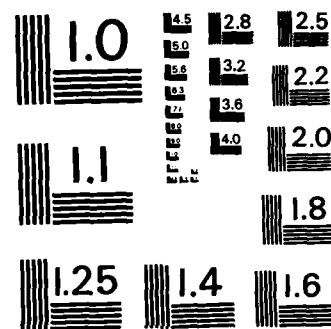
F/G 15/5

NL

END

FILMFO

©TAC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

DSAC

CONTRACTS DIVISION		
No.	Series & Grade	
1	05 Military	
1	1102-13	
1	1102-5	
3	Office Total	
14	Division Total	

CONTRACTS BRANCH		
No.	Series & Grade	
1	1102-13	
1	1102-5	
2	Office Total	
77	Division Total	

EDUCATIONAL SUPPLIES BRANCH		
No.	Series & Grade	
1	1102-12	
2	1102-4	
3	Office Total	
37	Division Total	

EXP. PLANT & BRANCH		
No.	Series & Grade	
1	05 Military	
2	1102-9	
7	1102-7	
4	1102-4	
17	Branch Total	

Pre-Board Section		
No.	Series & Grade	
1	1102-11	
3	1102-9	
11	1102-7	
6	1102-4	
21	Section Total	

Post-Board Section		
No.	Series & Grade	
1	1102-9	
8	1102-7	
2	1102-4	
2	1102-3	
13	Section Total	

Electronical Assembly & Lamp Section		
No.	Series & Grade	
1	1102-12	
3	1102-11	
6	1102-9	
5	1102-7	
2	1102-5	
19	Section Total	

Electronical Equipment Section		
No.	Series & Grade	
1	1102-12	
2	1102-11	
6	1102-9	
4	1102-7	
2	1102-5	
1	1102-4	
17	Section Total	

Chemical & Industrial Mechanical Section		
No.	Series & Grade	
1	1102-12	
2	1102-11	
6	1102-9	
5	1102-7	
2	1102-5	
2	1102-4	
20	Section Total	

Tools & Mechanical Equipment Section		
No.	Series & Grade	
1	1102-12	
3	1102-11	
6	1102-9	
5	1102-7	
2	1102-5	
1	1102-4	
19	Section Total	

APPENDIX B

SUPPORTING DATA

EXHIBIT B-1
PROCUREMENT ACTIONS AWARDED
BY DOLLAR CATEGORY AND CENTER

DEFENSE LOGISTICS AGENCY
HARDWARE SUPPLY CENTERS

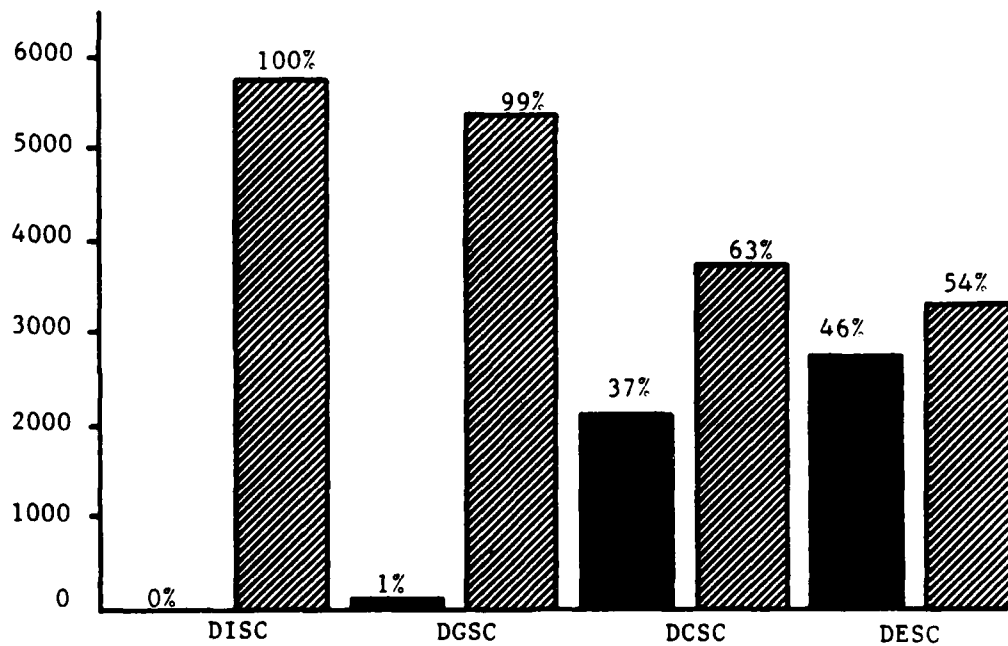
CENTER	Under \$25,000		Under \$100,000		Over \$100,000		PERCENTAGE OF TOTAL AWARD ACTIONS	
	Actions	\$ Value (millions)	Actions	\$ Value (millions)	Actions	\$ Value (millions)	Under \$25,000	Under \$100,000
DESC	143,225	\$300,297	146,713	\$468,815	579	\$156,743	97.2%	99.6%
DCSC	166,886	248,636	170,705	431,457	976	255,581	97.2%	99.4%
DISC	142,713	306,450	145,233	417,397	338	68,384	98.0%	99.8%
DCSC	353,312	303,124	357,718	511,962	689	201,861	98.6%	99.8%
TOTAL	806,136	\$1,158,507	820,369	\$1,829,631	2,582	\$682,569	98.0%	99.7%

TOTAL ACTIONS 822,951
TOTAL VALUE \$2,512,200,000

* For the period October 1, 1981 to September 30, 1982

Source: Procurement Monthly Report by Award &
Category September 1982

EXHIBIT B-2
CENTER/DCAS CONTRACT ADMINISTRATION
AS OF OCTOBER, 1982



CENTER [Solid Black Box]
DCAS [Hatched Box]

EXHIBIT B-3

TRENDS IN ADMINISTRATION

OF PROCUREMENT AWARDS*

NUMBER ADMINISTERED BY CENTER VS. DCAS

Page 1 of 2

TRENDS IN ADMINISTRATION LOCAL ADMINISTRATION VS. DCAS

Number of Active Contracts
PO's, DO's, BPA's, BOA's

	Oct '79		Apr '80		Oct '80		Apr '81		Oct '81		Apr '82		Oct '82	
	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active
DCSC														
Contracts	DCAS 3,406(73%)	4,697	3,257(73%)	4,457	3,444(71%)	4,822	3,713(70%)	5,319	720(67%)	5,545	3,806(65%)	5,894	3,700(61%)	5,850
	Local 1,291(27%)		1,200(27%)		1,378(29%)		1,606(30%)		1,825(33%)		2,088(35%)		2,150(37%)	
P.O.'s	DCAS 9,878(29%)	34,342	9,119(28%)	32,395	8,580(27%)	33,287	9,025(25%)	36,161	9,879(26%)	38,265	8,881(24%)	36,947	10,068(25%)	39,506
	Local 24,464(71%)		23,276(72%)		24,707(73%)		27,136(75%)		28,386(74%)		28,066(76%)		29,438(75%)	
D.O.'s	DCAS 1,170(7%)	17,262	608(3%)	17,786	647(3%)	20,672	492(1%)	36,359	252(1%)	28,267	187(1%)	31,880	188(1%)	24,452
	Local 16,092(93%)		17,178(97%)		20,025(97%)		35,867(99%)		28,015(99%)		31,693(99%)		24,264(99%)	
BPA/BOA's	DCAS 436(6%)	7,858	333(5%)	7,107	337(4%)	9,083	402(4%)	10,159	424(5%)	7,892	405(5%)	8,407	413(5%)	7,822
	Local 7,422(94%)		6,774(95%)		8,746(96%)		9,757(96%)		7,468(95%)		8,002(95%)		7,409(95%)	
DESC														
Contracts	DCAS 2,204(60%)	3,662	2,096(53%)	3,921	2,185(50%)	4,391	2,357(47%)	5,066	2,690(47%)	5,768	3,165(49%)	6,404	3,227(54%)	5,938
	Local 1,458(40%)		1,825(47%)		2,206(50%)		2,709(53%)		3,078(53%)		3,239(51%)		2,716(46%)	
P.O.'s	DCAS 3,955(10%)	39,630	4,487(10%)	47,199	4,509(8%)	53,926	4,486(8%)	53,463	4,459(8%)	55,998	4,635(8%)	56,758	5,025(9%)	58,563
	Local 35,675(90%)		42,712(90%)		49,417(92%)		48,977(92%)		51,539(92%)		52,123(92%)		53,538(91%)	
D.O.'s	DCAS 118(32%)	364	67(17%)	389	44(14%)	325	45(16%)	282	79(26%)	309	56(18%)	311	268(100%)	268
	Local 246(68%)		322(83%)		281(86%)		237(84%)		230(74%)		255(82%)		667(62%)	
BPA/BOA's	DCAS 866(8%)	11,360	703(6%)	11,914	771(5%)	17,093	712(5%)	14,557	775(5%)	15,286	710(6%)	12,558	667(62%)	11,203
	Local 10,494(92%)		11,211(94%)		16,320(95%)		13,845(95%)		14,511(95%)		11,848(94%)		10,536(94%)	

* Awards include Active Contracts, Purchase Orders, Delivery Orders, Basic Ordering Agreements, and Blanket Purchase Agreements.

TRENDS IN ADMINISTRATION
LOCAL ADMINISTRATION VS. DCAS

Number of Active Contracts
PO's, DO's, BPA's, BOA's

	Oct '79		Apr '80		Oct '80		Apr '81		Oct '81		Apr '82		Oct '82	
	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active	# Actions	Total Active
DCSC														
Contracts	DCAS	2,837(99%)	2,859	2,983(99%)	3,013	3,741(99%)	4,356(99%)	4,413	4,732(99%)	5,215(99%)	5,184(99%)	5,292	5,184(99%)	5,250
	Local	22(1%)	30(1%)	41(1%)	57(1%)	72(1%)	57(1%)	60(1%)	60(1%)	77(1%)	66(1%)	66(1%)	66(1%)	66(1%)
P.O.'s	DCAS	3,463(14%)	24,497	3,549(14%)	26,050	3,796(14%)	4,265(14%)	29,972	4,416(14%)	4,542(14%)	4,877(15%)	33,265	4,877(15%)	32,151
	Local	21,034(86%)	22,501(86%)	22,501(86%)	23,212(86%)	23,212(86%)	25,707(86%)	26,404(86%)	26,404(86%)	28,723(86%)	27,274(85%)	28,723(86%)	27,274(85%)	27,274(85%)
DO's	DCAS	846(31%)	2,741	738(27%)	2,701	795(27%)	936(40%)	2,323	914(38%)	1,002(37%)	1,030(40%)	2,717	1,030(40%)	2,586
	Local	1,895(69%)	1,963(73%)	1,963(73%)	2,947	2,152(73%)	1,387(60%)	2,376	1,462(62%)	1,715(63%)	1,556(60%)	2,717	1,556(60%)	2,586
BPA/BOA's	DCAS	337(5%)	1,054	303(5%)	6,453	239(3%)	193(3%)	7,537	134(1%)	99(1%)	110(1%)	12,549	110(1%)	8,793
	Local	6,697(95%)	6,150(95%)	6,150(95%)	7,883(97%)	7,883(97%)	7,344(97%)	7,537	10,441(99%)	12,450(99%)	8,683(99%)	12,549	8,683(99%)	8,793
DISC														
Contracts	DCAS	3,608(100%)	3,608	4,386(100%)	4,386	5,361(100%)	5,817(100%)	5,817	6,615(100%)	6,796(100%)	5,947(100%)	6,796	5,947(100%)	5,947
	Local	---	---	---	---	---	---	---	---	---	---	---	---	---
P.O.'s	DCAS	9,046(18%)	49,005	10,514(18%)	56,895	11,275(17%)	11,552(15%)	75,407	12,358(17%)	12,808(19%)	13,372(23%)	66,107	13,372(23%)	58,782
	Local	39,959(82%)	46,381(82%)	46,381(82%)	55,548(83%)	55,548(83%)	63,855(85%)	60,259(83%)	60,259(83%)	53,299(81%)	45,410(77%)	53,299(81%)	45,410(77%)	45,410(77%)
DO's	DCAS	816(100%)	816	828(100%)	828	800(100%)	820(100%)	820	948(100%)	796(100%)	804(100%)	796	804(100%)	804
	Local	---	---	---	---	---	---	---	---	---	---	---	---	---
BPA/BOA	DCAS	1,996(11%)	18,498	1,589(10%)	15,753	1,263(9%)	894(6%)	11,218	528(5%)	386(4%)	217(3%)	9,486	217(3%)	8,593
	Local	16,502(89%)	14,164(90%)	14,164(90%)	12,541(91%)	12,541(91%)	10,324(92%)	9,824	9,296(95%)	9,100(96%)	8,376(97%)	9,486	8,376(97%)	8,593

EXHIBIT B-4

HARDWARE CENTER PROCUREMENT ACTIONS

CANCELLED OR WITHDRAWN

NOVEMBER 1981 - OCTOBER 1982

PURCHASE REQUESTS CANCELLED OR WITHDRAWN Period of November 1981 - October 1982

<u>Center</u>	<u>Number PRs Cancelled</u>	<u>Number PRs Received</u>	<u>Cancellation Percentage</u>
DCSC	SAMMS 62,871	SAMMS 444,159	14.2%
DESC	SAMMS 30,504	SAMMS 312,149	9.8%
DGSC	SAMMS 23,639	SAMMS 259,379	9.1%
DISC	SAMMS 18,112	SAMMS 304,007	6.0%
TOTAL	<u>135,126</u>	<u>1,319,694</u>	<u>10.2%</u>

EXHIBIT B-5

CENTRALIZED WARRANTING PROCEDURES

NASA PROCUREMENT NOTICE 81-32

THE NASA CONTRACTING OFFICER WARRANT PROGRAM

1. **OBJECTIVE:** The objective of the NASA Contracting Officer Warrant Program is to ensure that only those officials who are fully qualified to obligate the government for the expenditure of public funds for the procurement of supplies and/or services are appointed as contracting officers when an organizational need occurs.
2. **DEFINITIONS:** The following definitions apply to this Notice:
 - a. **Appointing Authority:** Any person who has been delegated the authority to appoint contracting officers in accordance with the NASA Procurement Regulation (NPR) 1.403, NASA Management Instructions (NMI) 5101.8 and 5101.24, and installation management instructions. The appointing authority will determine the validity of the need, whether the candidate is qualified to be warranted and at what level the appointment should be made.
 - b. **Contracting Officer:** Any person who, by appointment in accordance with the NPR, is authorized to enter into and administer contracts and make determinations and findings with respect thereto, or with any part of such authority. The term does not include the authorized representative of the contracting officer acting within the limits of the contracting officer's authority.
 - c. **Warrant Limitations:** Limitations which, in addition to the NPR, laws, Executive Orders, NMI's and other applicable regulations, are imposed on the authority of contracting officers either by delegation or actions of the appointing authority and which will be set forth in the Certificate of Appointment (NASA Form 1350). These limitations may include, but are not limited to, dollar obligation ceilings, warranting levels as described below, requirements for prior reviews, or approvals.
 - d. **Contracting Officer Warranting Levels:** The delegation of procurement authority shall indicate the contracting officers warranting level.
 - (1) **Basic Level:** Applies to personnel in the GS-1102 or GS-1105 series only who have signature authority for small purchases, orders placed under Federal Supply

Schedule contracts, other mandatory sources, or blanket purchase agreements.

- (2) Intermediate Level: Applies to those in the GS-1102 series only who have been delegated the authority to execute contracts and contract modifications for up to a maximum of \$500,000.
- (3) Senior Level: Applies to all personnel in the GS-1102 series only who have been delegated contracting authority to execute contracts and contract modifications which exceed \$500,000.

3. SELECTION AND APPOINTMENT OF CONTRACTING OFFICERS: NASA contracting officers shall be appointed only in those instances in which a valid organizational need for warranted personnel can be demonstrated. Factors to be considered in assessing the need for a contracting officer appointment include volume of actions, complexity of work, and organizational structure.

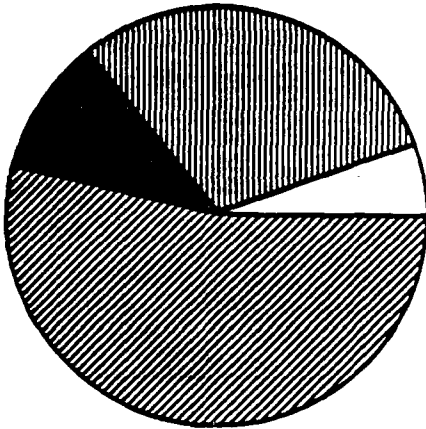
Once the organizational need is determined, the supervisor will nominate a contracting officer candidate. At the request of the supervisor, the candidate will prepare a Contracting Officer Warrant Program Qualifications Statement, as described in Attachment A. The supervisor will review this statement to determine the candidate's ability to perform the functions required to meet the organizational need. The supervisor will then complete the Request for Appointment of a Contracting Officer, as described in Attachment B, justifying the validity of the organizational need and verifying the contracting officer candidate's qualifications. This document will be signed by the candidate's supervisor and submitted through appropriate organizational channels to the appointing authority. If additional information is required by the appointing authority, the application will be returned with a request for further explanation or supporting data.

In the event that the appointing authority determines that there is not an organizational need for a contracting officer, the candidate will be notified of this decision. In the event that it is determined that the candidate does not meet the qualification standards and an interim appointment, as described in paragraph 6, will not be granted, the candidate will be provided with a written explanation for the reasons therefore. If approved, or if an interim appointment is granted, the appointing authority shall issue a Certificate of Appointment (NASA Form 1350) in accordance with NPR 1.403-2.

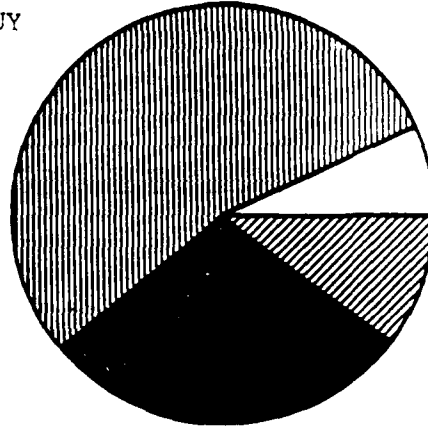
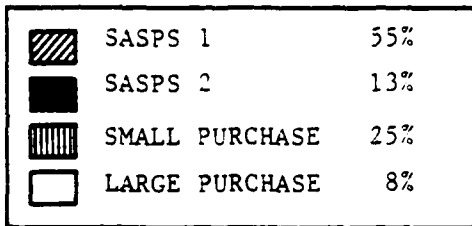
EXHIBIT B-6

COMPARISON OF SASPS I AND II USE AT FOUR HARDWARE CENTERS

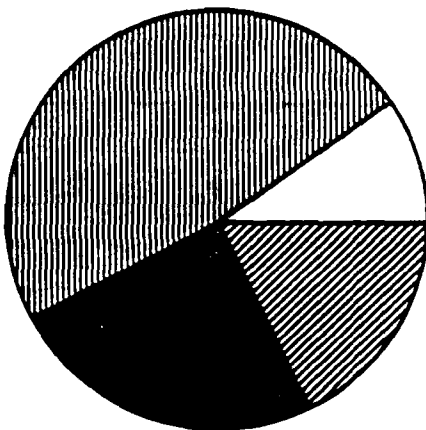
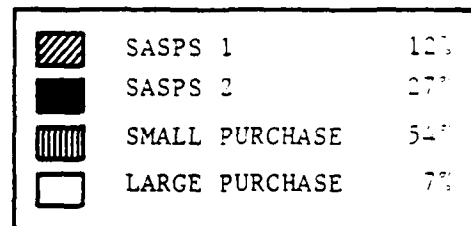
AWARDS BY TYPE OF BUY



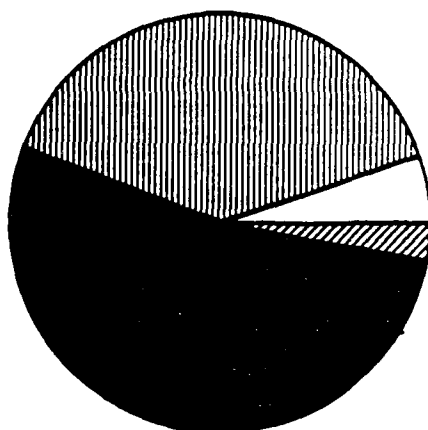
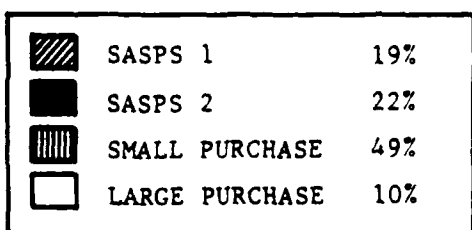
DCSC



DESC



DGSC



DISC

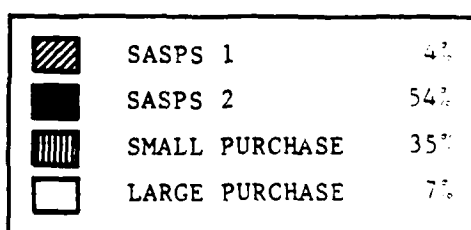
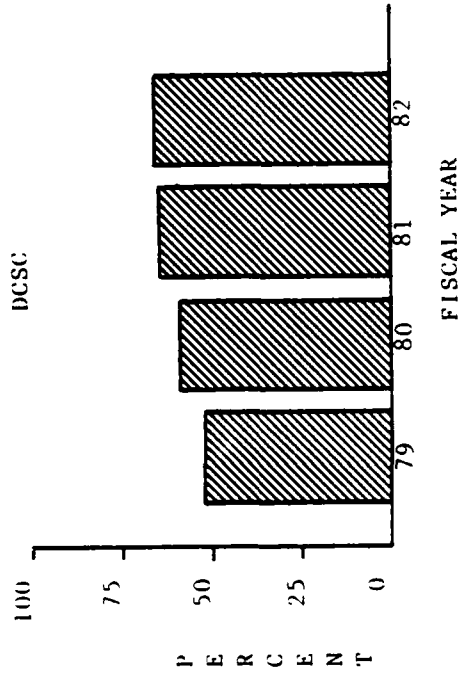
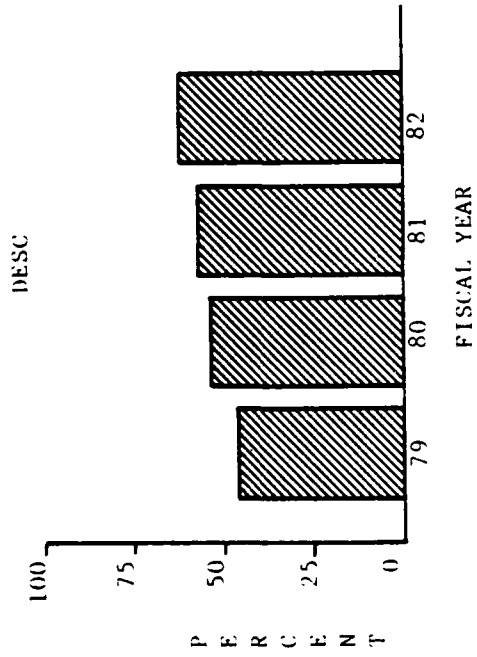


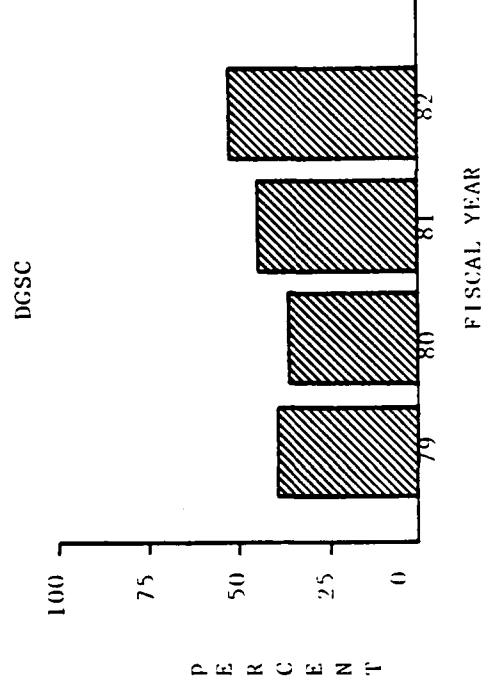
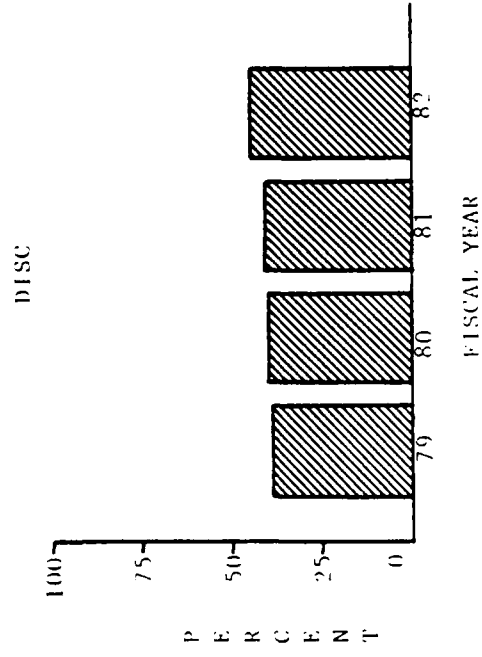
EXHIBIT B-7

HARDWARE SUPPLY CENTERS

CONTRACTOR DELIVERY EFFECTIVENESS



CONTRACTOR DELIVERY EFFECTIVENESS



CONTRACTOR DELIVERY EFFECTIVENESS

CONTRACTOR DELIVERY EFFECTIVENESS

EXHIBIT B-8

REPRESENTATIVE LIST OF PROCUREMENT ACTIONS/EVENTS, MANAGEMENT INDICATORS, AND PERFORMANCE GOALS

<u>Procurement Action/ Event</u>	<u>Establish as a DLA-P & DSC Management Indicator</u>	<u>Establish as a DSC Performance Goal</u>
Number of and \$ amount of PR's awarded, broken down by:		
• All PR's	X	
• SASPS I	X	
• SASPS II	X	
• Manual buys:	X	
. 0-\$25,000	X	
. \$25,001-\$100,000	X	
. over \$100,000	X	
• UMMIPS 1, 2, 3	X	
• SMCC A, B, C	X	
• CIT's	X	
DSC/DLA-wide stock availability	X	
PALT		
• SASPS I	X	X
• SASPS II	X	X
• Autotelex	X	X
• Buyer directed	X	X
• Manual buys:		
. 0-25,000	X	X
. \$25,001-\$100,000	X	X
. over \$100,000	X	X
• UMMIPS 1, 2, 3	X	X
• SMCC A, B, C	X	X
Aging PR's		
• SASPS I/II over 60 days	X	X
• Manual purchase less than \$25,001:		
. over 100 days	X	X
. over 150 days	X	X
. over 200 days	X	X
• Large purchase, over \$25,001:		
. over 120 days	X	X
. over 180 days	X	X
. over 230 days	X	X
. over 280 days	X	X
On-time shipments	X	
Various delinquent delivery lists, by contractor, showing DLA/DCAS management actions	X	

EVALUATION STATEMENT

PROTOTYPE SECTION CHIEF POSITION

SUPERVISORY PROCUREMENT AGENT, GS-1102-12

This prototype position description represents the typical section chief position recommended for "buying" sections within DLA centers.

The evaluation is based upon the current position classification standards (dated February 1969) for the Contract and Procurement Series, GS-1102, and Part II of the Supervisory Grade-Evaluation Guide.

SERIES:

These positions should be classified in the Contract and Procurement Series, GS-1102. The series definition is:

"This series includes positions involving work concerned with (1) obtaining contractual agreements through negotiation with private concerns, educational institutions, and nonprofit organizations to furnish services, supplies, equipment, or other materials to the Government; (2) assuring compliance with the terms of contracts and resolving problems concerning the obligations of either the Government or private concerns; (3) analyzing negotiations and settling contractor claims and proposals in contract termination actions; (4) examining and evaluating contract price proposals; (5) purchasing supplies, services, equipment, or other materials by formally advertised bid and negotiated procurement procedures; (6) planning, establishing or reviewing procurement programs, policies or procedures; (7) formulating policies, establishing procedures and performing services for small business in contracting and procurement; or (8) providing staff advisory services in one or more of the specializations in this occupation. The work requires a knowledge of business and industrial practices; market trends and conditions; relationships among costs of production, marketing, and distribution; and procurement and contracting policies and methods."

11. Participating with the branch chief and other section chiefs within the branch in the planning of work, setting of branch guidelines and standard practices, and improving the quality and effectiveness of the workforce.
12. Serving as contracting officer for purchases requiring special management attention or exceeding the warrants of subordinate staff.

The incumbent is assisted in the control, direction, and review of the work, and in the training of the employees by one or more procurement agents who also performs work leader functions. The incumbent supervises these senior buyers both technically and administratively. Adjustment of the workload, both among employees within the section and among the various sections within the branch, requires considerable attention. Although some types of workload cycles are relatively predictable, many are not. For example, many individual items within a single employee's assignment or within a section may peak at the same time because of outside events. Given the number of items handled by a section, these peaks and combinations of peaks shift frequently and with little warning. The incumbent must make or participate in many decisions to shift work or bring additional staff into the section temporarily.

SUPERVISORY CONTROLS:

The incumbent works under the general supervision of a branch chief or deputy branch chief. The supervisor or higher level authority sets the general outlines of the work to be performed by the section and conducts quality control reviews of selected completed work to insure that required policies, procedures, and practices are being followed. Work that may set broad precedents or be especially controversial is given a technical review by the supervisor prior to formal completion.

PROTOTYPE POSITION DESCRIPTIONS

Section Chief

DUTIES:

The incumbent serves as Section Chief for a commodity section within the Procurement Directorate of the _____ Supply Center. The Section includes from 12 to 20 employees. Major duties include:

1. Continuously monitoring the status of procurement actions within the section and anticipating workload projected for the coming weeks.
2. Arranging adjustments in the distribution of work between sections with other section chiefs within the same branch, and occasionally outside the branch.
3. Planning and scheduling the distribution of work including the setting of priorities for individual assignments.
4. Reviewing the work of subordinates.
5. Planning, directing, and implementing the training and development of employees.
6. Evaluating the performance of employees.
7. Recommending promotions and reassignments for employees within the section.
8. Advising employees concerning general administrative matters, procurement methods and approaches in general, and the handling of specific procurement actions.
9. Hearing and resolving complaints and other issues of concern to employees within the section, or participating in the efforts of higher level managers to address such issues.
10. Enforcing discipline within the section, including effecting warnings and reprimands and recommending action in more serious cases.

APPENDIX D

PROTOTYPE POSITION DESCRIPTIONS

"adequate documentation" was of equal importance to management as "effective contractor negotiation." The managers and employees we interviewed generally described their job elements in relative importance to successful buying. However, relative weights have not been assigned to job elements to reflect management's prioritization.

positions have not been dealing with small purchases. The greatest impact is therefore in the middle, around the GS-7 and GS-9 levels.

Some small purchases are just as difficult as, or more difficult than, some large purchases. The difficulty and complexity of the procedure used to make a purchase is only part of the overall difficulty for the buyer.

In some cases, the fundamental difficulties of understanding the item to be bought and the practices of the manufacturers are far greater than understanding the procedures, large or small. Because of this, the classification and staffing effects, even at GS-7 and GS-9, are not in direct proportion to the overall decrease in "large purchase" workload.

4. Performance Standards

Management's employee appraisal methodology at the hardware centers generally follows a management-by-objectives system approach. Under this system, performance is measured directly by comparing the results produced by an employee with the results he or she is being paid to produce. This is an appropriate approach to performance evaluation by the centers; however, improvement is needed.

Job elements selected for appraisal were generally consistent with the work tasks, activities and duties contained in individual position descriptions. Similar job elements have been selected for measurement by each center. A majority of these job elements focused upon the goals (procurement administrative lead time, Equal Employment and Affirmative Action Programs, etc.) established by DLA. Perhaps the most notable omission was quality of the procurement relative to the price paid for the item. The C&L project team did not identify any job elements that sufficiently addressed this aspect of performance. Indeed, the thrust of most job elements was in the areas of timeliness, quality of documentation, and workload levels. Secondly, in most cases, job elements were given equal weight, suggesting that

say which action will be a GS-7 or GS-9 by the time work is completed.

Time spent on a large purchase is greater than time spent on a small purchase. DLA's own SPD standards show that the ratio of time of large vs. small is approximately 8:1. Thus, our view is that DLA's current workload distribution of types of purchases is adequate in terms of classification and staffing requirements. The following example illustrates:

- A section of 15 people: 1 supervisor, 2 clericals, and 12 buyers.
- A small purchase: large purchase workload ratio of 95:1.
- A small purchase: large purchase time-spent ratio of 1:8.

In such a section, each buyer ideally handles 8 percent of the workload, and due to the time-spent ratio, 41 percent of the time required will be for large purchases, and 59 percent of the time for small purchases. In other words, five buyers could spend full time on large purchases.

The same workload might sensibly be distributed to 10 buyers, each spending half time on large purchases and half on small purchases as team leader duties.

(c) Raising of small purchase dollar ceiling -- its effects on the grade mix

Although buying under small purchase procedures tends to be easier than buying under large purchase procedures, the classification and staffing implications of raising the dollar value boundary between the two procedures are much smaller than they might at first appear.

At the lowest and highest grades, there is little or no issue. Except for developmental positions, the lowest grade positions have not been dealing with large purchases. Except for staff position concerned with systemic issues, the highest grade

Several approaches can be used, separately or together, to gather information concerning the number of actions of different types for classification and staffing decisions. For example, considerable workload information is already available in a computerized data base through form DD 350. This document provides a general idea of the difficulty of individual or groups of procurement actions. The number of actions having characteristics or combinations of characteristics of grades 9 and 11 work (e.g., competitive vs. noncompetitive; multiyear; subject to the Service Contract Act; subject to Davis-Bacon; definitized contracts; consultant; and set-asides) can be counted in various formats by computer.

As another example, the classification staff at DCSC has devised a format for conducting static surveys of workload for staffing and classification purposes. This would require more staff time because it is an "additional" survey rather than a report from an established data base, but it would be tailored to specific classification issues.

(b) Distribution of Work

Finding the "number" of actions of each level of difficulty is only one step in determining the best mix of grades. For classification and staffing purposes, the time spent by an individual on difficult work is more important than the number of types of action completed by the individual.

If, for example, 50 percent of the actions completed by an organization are GS-7-type actions and 50 percent are GS-9-type actions, considerably more than 50 percent of the positions should be GS-9 positions. The GS-7 actions can be completed more quickly; more time would be spent by the group on GS-9 actions.

The distribution of work will generally be imperfect. For a given quarter, more GS-9 work may come in than GS-7 work, and the staff on hand must be adequate to respond to a "richer" mix of work. Additionally, the assignment of work will always be imperfect. When a request comes in, it is not always possible to

- . Knowledge of the commodities (including the basic practices of the manufacturers and vendors who make and sell them).
- Contract directorates at the centers should be organized in ways that strengthen and proliferate this knowledge as much as is practically possible.
- In large, complex, interlocking systems, there is a permanent danger that both management and employees will lose sight of the fundamental purposes of the organization and become preoccupied with "systems" issues at the expense of the real mission.
- Choosing performance criteria for organizations and individuals is of special importance.

3. Workload and Grade Mix

Determining the best mix of grades for a given workload requires applying considerable judgment to a series of local questions and situations.

Guidelines regarding the "best grade mix," or even the "maximum supportable grade average," must therefore be broad and flexible and allow adjustments in the mix to take place more slowly and less frequently than changes in workload.

(a) Workload Estimation

The considerations that apply to staffing for peaks and valleys have a bearing on a number of classification questions. However, even if the "best mix" of grades for today could be established with precision, management still would have to anticipate future workload, and consider the cost, administrative energy, and lead time required to recruit new staff or reduce existing staff. It is disruptive and costly to change staffing levels for small changes in workload, or even for large but temporary changes. Beyond that, good judgment dictates that the approaches used when staff reductions are warranted should be as fair and painless as managers can arrange. To be effective over the long haul, people need time to adjust to changes.

journals, and vendor referrals. Thus, in such procurements additional time is required to assess availability of vendors, vendor capabilities, and price reasonableness.

The process of negotiating the price--via telephone or in person--is the essence of the skill requirements of the procurement occupation. To look at a price and be able to know it is reasonable for the government or to be able to negotiate a better price requires a knowledge of all aspects of negotiation, the commodity's procurement history, and industry conditions.

Detailed knowledge of specifications of commodities is not required since the buyers are not technicians, but a firm grounding in the characteristics and terminology of the commodity is a definite requirement for effective negotiations. Buyers will spend a lot of time getting to know the major vendor for a particular commodity group.

2. Organization of Work

Our preliminary staffing recommendations are based upon several fundamental design considerations which apply to management of the defense supply hardware centers.

- Centers are large and deal with highly complex and interrelated acquisition and supply systems. Large interlocking systems and organizations such as these demand that first attention be given to dependability.
- The centers do such a volume of business that even small mistakes or minor laxity can produce unnecessary costs that would be considered huge in any context outside military procurement. All reasonable efforts to protect against such failings are therefore likely to be worth the cost and effort.
- Two basic types of buyer knowledge contribute directly to system dependability, timeliness of actions, and lower cost. They are:
 - . Knowledge of the inner workings and flexibilities of systems and procedures.

- Issue appropriate purchase orders or other delivery documents under BPA, BOA, IPA, etc.
- Determine responsibility and responsiveness of contractors.
- Determine need for preaward surveys.
- Execute and award contracts; obligate government funds.
- Advise contractors on procedures and delivery schedules.
- Process contract modifications.
- Maintain appropriate SAMMS contract files.

(b) Skills

The skill requirements of DLA procurement personnel are, in essence, knowledge of and ability to process formal and informal procurements and to effect contractual actions at a fair and reasonable price. These actions require:

- Determining or locating sources of supply.
- Determining the most effective method of procurement.
- Analyzing price reasonability.
- Meeting and negotiating with a diversity of individuals in DLA or in industry.
- Interpreting and applying various contractual terms and conditions available to the government.
- Understanding transportation and packaging requirements.

The major differentiation between lower and higher grades are complexity of procurement instruments, regulations, and procedures; complexity of cash and price analysis; duration of negotiations; and, lastly, dollar amount of purchase. Specialized use, obsolete or out-of-production commodity procurement may require extensive research in contract history files, trade

- Small purchase - automated phases I and II
- Small purchase - manual
- Large purchase - manual

In general, the duties of this occupation are performed chiefly in response to the size and priority of purchase. Purchasing methods include procedures for:

- Requirements placed under a BOA or indefinite delivery type contract.
- Sole-source or competitive advertised solicitation (IFB).
- Sole-source or competitive negotiated solicitation (RFP).

Automated purchase functions carry additional responsibilities and include duties and skills associated with handling computer-assisted procedures. A list of typical duties for procurement follows:

- Assist in developing contracting plan for major procurements.
- Review purchase requests for accuracy and completeness; review for, or make, corrections.
- Review sources of supply.
- Review recent purchase history for vendor and pricing data.
- Determine method of purchasing.
- Validate sole-source and other set-aside justifications.
- Determine applicability of other contract clauses.
- Prepare solicitation.
- Receive, review, and analyze contractor quotations for reasonableness of price and compliance to specifications.
- Negotiate sole-source or competitive purchase.

STAFFING AND PERSONNEL ANALYSIS

Position Analysis 1102 and 1105 series

1. Position Description

The procurement personnel of the defense supply hardware centers support the purchase requirements for DLA operations, military customer requirements, and other agency program requirements. As such, a buyer's requirements may range from purchase of hardware, spare parts for weapons, complicated machinery, construction, repair, or electrical supplies, and specialized items manufactured to order. DLA procurement personnel also apply the requirements of the government's socioeconomic programs, such as the Small and Disadvantaged Business program, in their purchases.

(a) Duties

The purchasing duties of the occupation are performed in response to requirements generated by other directorates at the centers. The initial instruments, called purchase requests (PR), usually include detailed descriptive data of the commodity item required, such as item name, part number, specifications, and/or drawings. Available in automated data bases is a purchase history of that item that includes recent prices and suppliers.

DLA purchase operations are characterized by a high volume of PR's being handled each day. The high volume of small purchase procurements (under \$25,000) has enabled DLA to develop an automated purchases program, including automated or telephone orders to suppliers or manufacturers.

Two general dimensions of work specialization are possible at DLA: by commodity group and/or by size/type of purchase. Two centers have a predominant commodity orientation to the procurement function, and two centers are organized primarily by size/type of purchase, namely:

APPENDIX C

STAFFING AND PERSONNEL ANALYSIS

The prototype position description fits the intent of example 5 of the series definition.

TITLE:

This position should be titled Supervisory Procurement Agent. Pages 3 and 4 of the standard state:

"In the procurement specialization (covered by Part III of this standard), the titles are:

- "Procurement Agent: Applies to either (a) employees who buy supplies, services, equipment, or material using formally advertised bid and negotiated procurement methods, or (b) training and developmental positions at grades GS-5 and GS-7.
- "Procurement Officer: Applies to employees who have responsibility for managing a procurement program of an agency or activity.

"For supervisory positions, add the prefix "supervisory" to the basic title, except in the case of Procurement Officer positions. Supervisory positions are classified by reference to the Supervisory Grade-Evaluation Guide, Part III."

The position meets the definition of procurement agent.

GRADE:

Part II of the Supervisory Grade-Evaluation Guide requires that the grade of the position be based upon four factors described in the Guide followed by a comprehensive evaluation.

Factor I -- Base Level of Work Supervised

The base level of work supervised is GS-9.

The Guide states that the base level of work is the grade of the highest level of nonsupervisory work under the direct or indirect supervision of the position being evaluated. To be credited as the base level of work, a grade must:

- Represent a significant portion of the total substantive work of the immediate unit in which it appears. (This means the work constitutes more than half of the work of at least two of the full-time positions supervised; and about 25 percent or more

of the professional, technical, or administrative positions engaged in that work are at least at that level.)

- Require of the supervisor substantial and recurring use of technical skills of the kind typically needed for supervising work at that level.

To be used as the base level of work the grade must not be based on a degree of extraordinary independence or freedom from supervision. The base level should not be based on positions with grades which depend primarily upon a sharing of the supervisor's responsibility for planning, reviewing, or coordinating work; or upon the "impact on the job" of the particular incumbent.

The GS-11 positions described elsewhere in this report may not be used as the base level of work because they represent too small a proportion of the section's work. If they represented a larger portion, they would be appropriate for establishing base level. Although they share in the supervisor's responsibility, they also perform considerable nonsupervisory work at the GS-11 level and require the supervisor's technical and administrative supervision.

Factor II -- Nature and Extent of Supervisory Responsibility

The position fully meets the definition of Degree B and has some of the characteristics of Degree A. It is fundamentally a Degree B position.

- Degree B covers a broad range of supervisory responsibilities over a small to moderate number of employees (e.g., 5 to 12), but at least 3 are engaged in substantive professional, technical or administrative work.

The prototype position description describes sections with 12 to 20 employees, including clerical positions.

- Degree B requires at least three of the first four, and six of the eight following duties and responsibilities:

1. "Planning work to be accomplished by subordinates. Setting priorities and preparing schedules for completion of work.
2. "Assigning work to subordinates based on priorities, selective consideration of the difficulty and the requirements of the assignments, and the capabilities of the employees.
3. "Evaluating performance of subordinates.
4. "Giving advice, counsel, or instruction to individual employees on both work and administrative matters.
5. "Interviewing candidates for positions in his unit. Making recommendations for appointment, promotion, or reassignment involving such positions.
6. "Hearing and resolving complaints from employees. Referring group grievances and the more serious complaints not resolved to higher level supervisors.
7. "Effecting minor disciplinary measures such as warnings and reprimands. Recommending action in more serious cases.
8. "Identifying developmental and training needs of employees. Providing or making provision for such development and training."

The prototype position description involves all eight duties and responsibilities.

- . Degree A positions involve direct and indirect supervision of a moderate to fairly sizable number of employees (e.g., 15 to 30) engaged in substantive professional, technical or administrative work. They are characterized by all of the following:
 - "The need to use some subordinates in guiding and controlling the work;
 - "Especially significant responsibilities in dealing with officials of other units or organizations;
 - "Important responsibilities in advising higher supervisory and management officials not covered by this guide;

- "Clearly greater personnel management responsibilities than those typical of Degree B;
- "Direction of a sizable work operation."

Although the position meets some of the aspects of the Degree A definition, it is more appropriately placed at Degree B. It requires: using one or more subordinates to assist in guiding and controlling the work; negotiating with other section chiefs to coordinate the balancing of workload; and, in some cases, involves supervising the number of positions shown in the Degree A range. It does not, however, supervise two or more full supervisory positions, and lacks several of the other responsibilities listed under Degree A in the Guide (e.g., recommending selections for supervisory positions, evaluating subordinate supervisors, hearing group grievances).

Factor III -- Management Aspects

The position has none of the characteristic responsibilities described under this factor. It is fundamentally concerned with the internal operations of the section as established by higher authority and has none of the responsibilities for changing or shaping the basic content of programs and organizations as described under this factor.

Factor IV -- Special Additional Elements Affecting Supervisory Work

This factor measures three elements: (1) changing work situations; (2) variety; and, (3) special technical demand.

Element 1 - The element, Changing Work Situations, considers the degree to which the supervisor faces special demands due to frequent changes in the volume of work, the kinds or substance of work, and/or deadlines set for completion of work. The Guide states:

"To credit this element all, or substantially all, of the following conditions should be present:

- (a) "The time (approximate date) of such changes cannot be accurately predicted;
- (b) "The changes substantially affect resources needed, and those resources cannot be accurately estimated;
- (c) "The changing work situations require frequent and substantial reprogramming, rescheduling, and/or reassignment of work;
- (d) "The incumbent makes, or participates in making, many decisions as to impact of changing priorities; as to which work to defer in order to comply with new urgencies; as to whether to farm out work or secure employees by temporary detail; or comparable decisions;
- (e) "The changes require almost constant attention to work progress, and to adjustments in plans and schedules;
- (f) "The situations are such that they demand of the incumbent such qualities as exceptional adaptability, special skills in planning ability to act quickly, and ability to withstand considerable and continuing pressure."

This prototype description covers numerous individual positions. Many of these positions would meet the criteria described under this element at any one time, and most, if not all, would meet it for prolonged periods. This is true for several reasons.

- 1. Our recommended organization design places a significant number of positions under the supervision of the first full supervisory level. The supervisor therefore has more items and assignments that might vary within the section.
- 2. We have recommended that the prototype position have responsibility for coordinating adjustments in workload with other sections (a common and intelligent practice among the existing positions). This means that the incumbent's section can be affected by fluctuations in other units, even if the basic work assigned to his or her section is fairly stable itself.
- 3. The work, by its very nature, involves a high volume of complex individual actions, each subject to a great many outside forces. User demands or decisions to shift large categories of items to DLA

responsibility can change with little warning at the section level. Manufacturing problems can develop for many reasons including labor unrest and strikes affecting a sole source supplier of many items.

The overall effect is to require the section chief to be highly disciplined in tracking work, adjusting workload through assignment changes within the section, and negotiating the shifting of work between sections.

Element 2 - The element, Variety, can be credited when a supervisor directs the work of two or more "markedly different specialized areas" of work classifiable at or above the GS-9 level," and meets certain other conditions.

These elements cannot be credited for these positions.

Element 3 - The element, Special Technical Demand, is designed to deal with situations in which the supervisor is required to direct the work of positions above the "base level of work."

To be credited with special technical demand, a position must meet the following conditions:

- (a) "There is at least one subordinate full-time position, at a level above the base level of work, whose incumbent performs, as a major part of his work, nonsupervisory substantive work for which the incumbent of the position being evaluated is technically responsible.
- (b) "The nonsupervisory substantive work concerned actually imposes on the supervisory position being evaluated a technical ability and knowledge requirement significantly higher than that needed to review work at the base level.

"Subordinate positions considered in connection with this element could be either supervisory or nonsupervisory. However, it is only the nonsupervisory work performed by subordinates of the position being evaluated that enters into the evaluation under this element."

Our recommended organization design calls for one or more GS-11 positions within each section. Although these positions are also to perform working leader duties, their grades are based upon nonsupervisory GS-11 work as well. The section chief is required to supervise all of the work of these GS-11 positions both technically and administratively.

This prototype section chief position meets the above criteria for crediting "special technical demand."

COMPREHENSIVE EVALUATION AND FINAL GRADE DETERMINATION:

We recommend that section chief positions such as the prototype described here be classified as GS-12.

Positions meeting Degree B of Factor II are most typically graded one grade above the base level of work supervised. In this case, the base level of work is GS-9, and the "tentative" grade of the position is therefore GS-11. The Guide goes on to say, however, that positions may be classified two grades above the base level of work if significant strengthening conditions are identified which are not substantially offset by weakening conditions.

To begin with, the prototype positions have exceptional fundamental strength of Degree B positions.

- The size of the sections to be supervised will often exceed the range typical of Degree B and fall within the range typical of Degree A.
- Buying sections of the size proposed will absolutely have to have some working leader positions to be effectively directed and controlled.
- All section chief positions fitting the prototype description will meet the criteria for crediting "special technical demand," and many, perhaps all, will meet the requirements for "changing work situations."

The prototype section chief positions have no particular weakening conditions to offset these clearly demonstrable strengths. For example, they lack "significant managerial

aspects" as defined under Factor II, but this is accounted for by not crediting such elements under Factor II. Supervision over the prototype positions is consistent with the typical pattern of supervision described in the Guide.

The prototype section chief positions may therefore be classified as Supervisory Purchasing Agent, GS-1102-12.

EVALUATION STATEMENT

PROTOTYPE POSITION DESCRIPTION

PROCUREMENT AGENT, GS-1102-11

This prototype position description represents the typical GS-11 Procurement Agent recommended for "buying" sections within DLA Centers.

The evaluation is based upon the current position classification standard (dated February 1969) for the Contract and Procurement Series, GS-1102. The grade level, based primarily upon the nonsupervisory work of the position, is consistent with the criteria in the most recent draft of the proposed GS-1102 FES standard issued recently by the U.S. Office of Personnel Management. The Work Leader Grade-Evaluation Guide was not used to establish the proposed grade. It is intended for positions involved with one-grade interval work only.

SERIES:

These positions should be classified in the Contract and Procurement Series, GS-1102. The series definition is:

This series includes positions involving work concerned with (1) obtaining contractual agreements through negotiation with private concerns, educational institutions, and nonprofit organizations to furnish services, supplies, equipment, or other materials to the Government; (2) assuring compliance with the terms of contracts and resolving problems concerning the obligations of either the Government or private concerns; (3) analyzing negotiations and settling contractor claims and proposals in contract termination actions; (4) examining and evaluating contract price proposals; (5) purchasing supplies, services, equipment, or other materials by formally advertised bid and negotiated procurement procedures; (6) planning, establishing or reviewing procurement programs, policies, or procedures; (7) formulating policies, establishing procedures and performing services for small business in contracting and procurement; or (8) providing staff advisory service in one or more of the specializations of this occupation. The work requires a knowledge of business and industrial practices; market trends and conditions; relationships

among costs of production, marketing, and distribution; and procurement and contracting policies and methods.

The prototype position description fits the intent of example 5 of the series definition.

TITLE:

This position should be titled Procurement Agent. Page 4 of the standard states:

"In the procurement specialization (covered by Part III of this standard), the titles are -

- "Procurement Agent: Applies to either (a) employees who buy supplies, services, equipment, or material using formally advertised bid and negotiated procurement methods, or (b) training and developmental positions at grades GS-5 and GS-7.
- "Procurement Officer: Applies to employees who have responsibility for managing a procurement program of an agency or activity."

The position meets the definition of procurement agent.

GRADE:

The current classification standard describes the characteristics of each grade under two headings - "Assignment characteristics" and "Level of Responsibility." Positions at different grades often have many individual duties in common. This evaluation discusses some of the characteristics of the GS-7, 9, and 11 levels to give an idea of the trend of increasing duties and responsibilities intended by the standard as a whole.

At GS-7 (under Part III of the standard), assignments have few complexities. For most assignments, work is reviewed in process and upon completion. The supervisor reviews the recommendations of the GS-7 to insure adequate analysis, sound judgments, and adequate justification for recommendations.

Assignments at GS-9:

"Involve more specialized procurements and more independence ... Employees at grade GS-9 usually perform all aspects of procurement transactions from initiation to

recommending awards. ... Items procured are of a specialized nature. Problems are caused by complex specifications, limited market sources, and close price bidding.

"The employee at GS-9 must deal with specialized items which are manufactured to specification for a special purpose. Such items may be common in the trade but are not in general use by the public. The specifications are complex and may include physical, chemical, electrical, or other properties. There may be specified methods of testing and special performance requirements.

"Procurements assigned may be complicated by the need to develop new sources of supply to ensure greater price competition. The employee often makes purchases for a number of installations including overseas activities. He must analyze industry distribution patterns and practices, as well as transportation factors in determining the most advantageous proposals."

Some positions at this level are concerned with developing or revising large consolidated procurement contracts. Such assignments require continuing responsibility for establishing long-term indefinite delivery contracts. These procurements meet the consolidated requirements of a large agency or agencies. In these situations, the GS-9 procurement agent either has responsibility for a small number of items or services or he works with a higher-grade procurement specialist on the total transaction. Typical of these assignments is the responsibility for a group of items which are part of a major contract or schedule. The higher-grade procurement agent retains basic responsibility for these procurements.

Level of responsibility

"The significant distinction from the nature of supervision received at the GS-7 level is that GS-9 employees normally perform the procurement assignments described at this level from time of receipt of the purchase request to recommendation for award with considerable independence. ...

"The supervisor reviews recommendations for awards and supporting documents and soundness of judgment, adequacy of analysis and adherence to policies and procedures. ..."

Assignments at GS-11:

"Exceed those at GS-9 in scope and complexity in that they often involve -

- "Procurement transactions to meet the consolidated requirements of the agency or agencies.
- "Manufacturing or modification of items to Government specifications.
- "Coordination with technical offices and other groups in each phase of the transaction process."

Assignments at the GS-11 level have characteristics such as the following:

1. "Items are of special or unique design. They must be manufactured or constructed under close control to meet tight specifications. ...
2. "Assignments often require review of the market to determine the availability of the item or services. Prior procurements do not serve as guides because of obsolescence of previous items, and changes in manufacturing processes.
3. "Unfavorable market conditions, such as frequent price changes, unstable supplies of materials, changing labor markets, reluctant suppliers, require constant review and determination of most advantageous method of procurement.
4. "... [A]gents at this level coordinate procurement planning and execution within the buying agency. Contracts must be maintained with other contract, procurement and price analysis personnel, small business representatives, planning, accounting, technical, transportation specialists, and legal counsel.
5. "Transactions are often complicated by features such as negotiations concerning components and spare parts, use of Government-furnished property, inspection and testing requirements, ownership of patents, and payment of royalties.
6. "Individual procurement may be for quantities needed to satisfy the requirements of an agency or agencies for specific items for a stated period of time. ... These procurements involve analysis of industrial distribution patterns, merchandising practices, and transportation factors in relation to diverse delivery points, and varying amounts of items needed in the agency or agencies

at different times and in different locations. Procurement actions involve developing schedules to be incorporated in invitations for bid and final contracts.

Level of responsibility

"... The supervisor gives guidance for planning unusual or significant procurements and in interpreting complex regulations. The procurement agent exercises independent judgment and initiative, sets the priorities of work to be accomplished on a day-to-day basis, and develops the approach to each case. His work proceeds without review up to the point of either award, if appropriate, or recommendation for award. Technical review includes an examination of awards recommended, the completeness of the transactions, and any impact on future procurements. At that point, his actions are reviewed from the standpoint of policy considerations and implications for the procurement program.

"... He may recommend cancelling invitations to bid, readvertising, or negotiating when full coverage is not obtained within the industry, when bids are not responsive, or when offers are unreasonable. He assures that firms in disaster or distressed labor areas have been given opportunity to share in the procurement. He works with small business specialists to determine appropriate procurements for small business."

The position described in the prototype position description as a combination senior procurement agent and working leader meets the criteria shown above for the GS-11 level both in type of assignment and level of responsibility. Closer supervision would be impractical because of such considerations as the volume of procurement actions to be carried out, the number of issues associated with each action, the volume of paperwork required by each action, the number of steps involved in each action, the number of personal contacts, and the demand for the organized management of time involved in each action.

PROTOTYPE POSITION DESCRIPTION

SENIOR PROCUREMENT AGENT AND WORKING LEADER

DUTIES:

The incumbent serves as a senior procurement agent and working leader for a commodity section within the _____ Center. Assignments include formal advertising and negotiation activities involved in the procurement of supplies or equipment to meet the consolidated requirements of various Defense organizations. The incumbent personally performs assignments involving special difficulties such as: items which are modified or designed for special purposes and which are characterized by multiple specifications, highly contested specifications, or special testing and sampling requirements; purchase begun by lower level staff which have developed in unusual controversy over such issues as the acceptability of alternative offers; items with records of past procurement difficulties and rigid specifications; and negotiations with sole source vendors whose dealings with the Center have been especially confrontive.

Major duties include:

1. Analyzing purchase requests and planning, coordinating, and executing procurement action.

This includes such duties as: insuring that all needed and useful information is available; locating and encouraging quality competition and developing new sources of supply; and insuring that all requirements are stated clearly and unambiguously, and all competitors understand the requirements.

2. Analyzing bids and proposals and making or recommending awards.

This includes such duties as: determining responsiveness and responsibility of vendors; coordinating the technical acceptance of alternative proposals, substitutions, or changes; negotiating prices and delivery dates; evaluating the completed procurement file; and approving or recommending approval of the award.

APPENDIX E

MANAGEMENT INDICATORS RESEARCH

PHYSICAL DEMANDS - Level 8-1 - 5 Points

The work involves no special physical demands.

WORK ENVIRONMENT - Level 9-1 - 5 Points

The work is performed in an office.

TOTAL POINTS -- 990

include procurement regulations, DLA directives, rulings by the Office of the General Counsel, precedent cases, and local procedures. The incumbent works in strict adherence to the guidelines, consulting others for authorization for any changes.

COMPLEXITY - Level 4-2 - 75 Points

Assignments include varied related tasks involving the practical application of contracting procedures and basic techniques. The assignments involve routine, detailed work requiring the incumbent to recognize and distinguish among various different types of straightforward procurement problems and solutions.

SCOPE AND EFFECT - Level 5-2 - 75 Points

The work has two basic purposes: to orient the trainee to higher level contract specialist work, and to accomplish routine procurement actions. The work involves the execution of specific rules, regulations, and procedures, and may comprise a complete segment of an assignment or project of broader scope.

The work affects the accuracy, reliability, and acceptability of the section's work.

PERSONAL CONTACTS - Level 6-1 - 10 Points

Contacts are primarily with higher graded specialists within the section, although there are many routine contacts with contractors' representatives, with technical staff within the center, and with other center staff.

PURPOSE OF CONTACTS - Level 7-1 - 20 Points

Contacts are to provide or obtain straightforward information concerning the items to be purchased, prices, and delivery dates. Contacts for more complex purposes are generally followed closely by a higher level specialist.

- Contacting contractors' representatives or personnel from other Government agencies to obtain cost, price, or schedule information.

KNOWLEDGE REQUIRED BY THE POSITION - Level 1-5 - 750 Points

Knowledge of the procedures required to carry out simple procurement actions or to perform uncomplicated assignments associated with procurement actions assigned to higher graded specialists.

Ability to read and understand procurement manuals and regulations, and to learn and follow procedures described in manuals.

Ability to learn and understand the needs of the "customer" and the business and production practices of the suppliers as they apply to effective procurement practices.

Ability to communicate clearly both orally and in writing, and to deal effectively with people in gathering information and explaining requirements.

Ability to work in an organized way and manage personal time effectively.

SUPERVISORY CONTROLS - Level 2-1 - 25 Points

A higher graded specialist or the supervisor assigns work with specific instructions. The incumbent follows instructions and consults a higher graded specialist or the supervisor on all matters not covered by instructions. The work is closely controlled, both through the structure of the work itself and by the supervisor. Work is often checked in progress and is reviewed upon completion for technical accuracy, completeness, and conformance to instructions.

GUIDELINES - Level 3-1 - 25 Points

Assignments involve work for which very specific procedures are available and directly applicable. Overall guidelines

PROTOTYPE POSITION DESCRIPTION

TRAINEE PROCUREMENT AGENT, GS-1102-5

DUTIES:

The incumbent serves as a trainee procurement agent for a buying section within the _____ Center. Assignments include both automated and nonautomated procurements associated with formal advertising and negotiation activities involved in the procurement of supplies or equipment to meet the consolidated requirements of various defense organizations. Assignments involve acquisition of uncomplicated items which are readily available from various known sources and which are well-documented and readily identified.

The incumbent receives classroom and on-the-job training in the needs of DLA "customers," in the business and production practices of suppliers, and in the practical application of procurement procedures and techniques. The incumbent may be assigned to various sections over time to gain an understanding of the variety of problems associated with different classes of items and of the importance of understanding the "commodity" being purchased.

In addition to carrying out uncomplicated purchases, the incumbent assists higher level contract specialists by performing tasks such as:

- Reviewing procurement requests for completeness;
- Preparing documentation and summaries for procurement actions;
- Analyzing prices based on readily available information;
- Attending contract negotiation meetings along with higher grade specialists to become familiar with the negotiation process;
- Preparing replies to correspondence dealing with straightforward matters; and

PURPOSE OF CONTACTS - Level 7-2 - 50 points

Contacts are for coordinating procurement approaches with other center staff, obtaining information from supply sources, clarifying procurement requirements, resolving misunderstandings, and similar purposes.

PHYSICAL DEMANDS - Level 8-1 - 5 Points

The position includes no special physical demands.

WORK ENVIRONMENT - Level 9-1 - 5 Points

The work is performed in an office.

TOTAL POINTS - 1920

problems facing suppliers, negotiating with suppliers, planning and organizing the work and interpreting the guidelines as they apply to specific cases or problems.

COMPLEXITY - Level 4-3 - 150 Points

Assignments require use of advertised and negotiated procurement actions and market analysis to evaluate prices and determine availability of supplies and sources. The incumbent's work covers the full range of preaward contracting activities. Assignments require planning and carrying out the procuring of specialized items or services. Changes in the item or market conditions frequently require adaptation of the procurement plan. The incumbent makes substantive analyses of procurement requirements, market conditions, and problems which arise. Although any individual problem may arise concerning assigned procurement actions, actions at this level are not characterized by the problems listed in the GS-11 prototype position description.

SCOPE AND EFFECT - Level 5-3 - 150 Points

The purpose of the work is to plan and carry out procurements of specific specialized items or services to meet the requirements of various defense organizations. The work results in the provision of items and services meeting the needs of defense organizations at the best available prices. The work affects the adequacy of supply support.

PERSONAL CONTACTS - Level 6-3 - 60 Points

Contacts are with contractors, manufacturers, suppliers, distributors, salespeople, owners of small businesses, and with other center staff. The incumbent is responsible for making contacts with potential supply sources and establishing sound working relationships. Contacts within the center include the small business specialists, technical offices, and others.

Knowledge of negotiation techniques and skill in negotiating to deal with vendors or manufacturers in resolving such problems as the need to reduce cost, lengthy delivery schedules, or the need to negotiate with sole-source suppliers.

Ability to remain highly organized in performance of such duties as: insuring that case files are carefully and clearly documented, managing time effectively in coordinating the work of other specialists, and monitoring the progress of all assigned work.

SUPERVISORY CONTROLS - Level 2-3 - 275 points

The supervisor assigns the work, usually by assigning a block of commodities to the incumbent. Objectives and overall priorities are assigned in general terms and occasionally specific actions are designated as priorities. The supervisor or higher graded specialist may provide assistance on new or unusual assignments or on assignments requiring unusual amounts of coordination with others. The incumbent works independently within the area of assignment and is responsible for developing and coordinating the procurement package up to and sometimes including award. Work is reviewed for overall soundness of approach, completeness of documentation, compliance with policies and procedures, and productivity. The specific methods used in planning and accomplishing the work are not usually reviewed in detail.

GUIDELINES - Level 3-3 - 275 Points

Guidelines include procurement regulations, DLA policies, system procedures and formats, Comptroller General decisions, specifications, bidders' lists, precedent procurement actions, commercial catalogs, and similar documents. The guidelines provide examples and set limits on available choices, but do not deal with the details associated with individual procurement actions. The incumbent is responsible for understanding the essential features of the item to be purchased, recognizing the

2. Analyzing bids and proposals and making or recommending awards.

This includes such duties as: determining responsiveness and responsibility of vendors; coordinating the technical acceptance of alternative proposals, substitutions, or changes; negotiating prices and delivery dates; evaluating the completed procurement file; and approving or recommending approval of the award.

KNOWLEDGE REQUIRED BY THE POSITION - Level 1-6 - 950 Points

Knowledge of the requirements and flexibilities of applicable procurement regulations sufficient to allow the incumbent to obtain specialized items or services. These are items which may be common in defense or industrial environments, but which are not generally used by the public. Specifications may be complex and market sources may be limited.

Knowledge of the commodities to be procured (and their industries) or ability to gather knowledge quickly concerning unfamiliar items sufficient to allow the incumbent to perform such tasks as: identifying problem procurements at early stages; identifying sources of quality competition; recognizing the realistic manufacturing and marketing choices available to vendors; negotiating prices and delivery dates with vendors; and recognizing when the best practical compromise on price and delivery date has been reached.

Knowledge of the various supply and procurement systems and how they operate to allow the incumbent to: identify paperwork problems within these systems that might delay or harm the quality of assigned procurement action; work productively; and document actions clearly.

Knowledge of cost and price analysis techniques sufficient to perform various computations relative to item costs, packaging, delivery charges, and transportation costs to determine the best buy for the Government.

PROTOTYPE POSITION DESCRIPTION

PROCUREMENT AGENT, GS-1102-9

DUTIES:

The incumbent serves as a procurement agent for a buying section within the _____ Center. Assignments may include both automated and nonautomated procurements associated with formal advertising and negotiation activities involved in the procurement of supplies or equipment to meet the consolidated requirements of various defense organizations.

Assignments involve acquisition of specialized items, e.g., repair parts, components of specialized equipment, kitchen equipment specifically designed for shipboard use, special purpose valves, special purpose electric and electronic equipment, protective services, technical services, and medical supplies and equipment.

At any one time, the incumbent's assignments typically concentrate on a few classes of commodities, although assignments may change often.

Major duties include:

1. Analyzing purchase requests and planning, coordinating, and executing the procurement action.

This includes such duties as: insuring that all needed and useful information is available; locating and encouraging quality competition and developing new sources of supply; and insuring that all requirements are stated clearly and unambiguously, and all competitors understand the requirements.

WORK ENVIRONMENT - Level 9-1 - 5 Points

The work is performed in an office setting, although there may be occasional visits to contractors' facilities.

TOTAL POINTS -- 2615

encountered include: the need to modify items to Government specifications; multiple specifications, testing requirements, bid and preproduction samples; lack of prior item procurement experience; numerous and hard-to-assess alternative offers; ambiguously stated specifications; and similar problems.

SCOPE AND EFFECT - Level 5-4 - 225 Points

The purpose of the work is to plan and carry out large volume procurements to meet the consolidated requirements of various defense organizations. The work includes analyzing the market to determine the availability of items and the quality of competition; issuing clear, unambiguous solicitations; coordinating the assessment of alternative offers; assessing the responsiveness and responsibilities of offerors; insuring the integrity and completeness of the overall procurement action; and making or recommending the award.

PERSONAL CONTACTS - Level 6-3 - 60 Points

Contacts include: private industry representatives and individual contractors and manufacturers; and co-workers such as technicians, small business representatives, attorneys, price analysts, auditors, transportation specialists, and managers.

PURPOSE OF CONTACTS - Level 7-3 - 120 Points

Contacts are to: negotiate prices and terms to establish agreements that are in the best interest of the Government; persuade quality competitors to increase competition; gather information from various industry sources to gauge availability of items; and to provide information to potential suppliers concerning specific requirements.

PHYSICAL DEMANDS - Level 8-1 - 5 Points

The work requires no special physical demands.

Ability to remain highly organized in performance of such duties as: insuring that voluminous case files are carefully and clearly documented, managing time effectively in coordinating the work of other specialists, and monitoring the progress of all assigned work.

SUPERVISORY CONTROLS - Levels 2-4 - 450 Points

The section supervisor sets the general area of assignment, the overall objectives of the work, and the resources available. The incumbent and supervisor together develop the schedules and deadlines. The incumbent plans and carries out the assignment, resolves most conflicts personally, coordinates the work with others as necessary, and keeps the supervisor informed of progress and potential controversies.

Completed work is reviewed for overall soundness and effectiveness, and routine quality control reviews are made by the supervisor and various reviewers outside the section.

GUIDELINES - Level 3-3 - 275 Points

Guidelines include procurement regulations, DLA policies, system procedures and formats, Comptroller General decisions, specifications, bidders lists, precedent procurement actions, commercial catalogs and similar documents. The guidelines provide examples and set limits on available choices, but do not deal with the details associated with individual procurement actions. The incumbent is responsible for understanding the essential features of the item to be purchased, recognizing the problems facing suppliers, negotiating with suppliers, planning and organizing the work and interpreting the guidelines as they apply to specific cases or problems.

COMPLEXITY - Level 4-4 - 225 Points

Assignments require use of advertised and negotiated procurement actions and market analysis to evaluate prices and determine availability of supplies and sources. Complexities

3. Serving as a work leader.

As work leader, (team leader) the incumbent assists the section chief by performing such duties as: instructing lower level purchasing agents; assisting them with new or unusual problems; rejecting work not meeting quality requirements; reviewing and approving awards within delegated authority; and monitoring and reporting the status of procurement actions and estimating completion times.

KNOWLEDGE REQUIRED BY THE POSITION - Level 1-7 - 1250 Points

Knowledge of the requirements and flexibilities of applicable procurement regulations sufficient to allow the incumbent to plan the approach to complex or problem procurement actions and assess the acceptability of final awards.

Knowledge of the commodities to be procured (and their industries) or ability to gather knowledge quickly concerning unfamiliar commodities sufficient to allow the incumbent to perform such tasks as: identifying problem procurement actions involving specialized items; identifying sources of quality competition; recognizing the realistic manufacturing and marketing choices available to vendors; negotiating prices and delivery dates with vendors; and recognizing when the best practical compromise on price and delivery date has been reached.

Knowledge of the various supply and procurement systems and how they operate to allow the incumbent to: identify paperwork problems within these systems that might delay or harm the quality of assigned procurement actions; work productively; and document actions clearly.

Knowledge of cost and price analysis techniques sufficient to perform various computations relative to item costs, packaging, delivery charges, and transportation costs to determine the best buy for the Government.

Knowledge of negotiation techniques and skill in negotiating to deal with vendors or manufacturers in resolving such problems as the need to reduce costs, lengthy delivery schedules, or the need to negotiate with sole source suppliers.

DLA-P

MANAGEMENT INDICATORS RESEARCH

PRIVATE SECTOR PURCHASING COMPARISON

1. 1979 MSU Study on Purchasing Performance: Measurement and Control, by Robert Monczka, Phillip Carter and John Hoagland (according to National Association of Purchasing Management -- one of better studies available)
 - . Findings based on extensive interviews with approximately 250 purchasing people. Identified and evaluated methods for measuring the performance of purchasing departments in private and public organizations.
 - . Thirteen private organizations examined; 4 Federal agencies examined.
 - .. Industries covered - aerospace, auto, appliance, chemical, computer, electronics
 - .. Federal organizations:
 - ... headquarters public sector agency - responsible for items contained on national schedule (GSA).
 - ... agency within DoD -- maintains distribution system for items needed to maintain operational equipment worldwide.
 - ... purchasing department reported to base commander. Part of DoD; provides support for various types of operating equipment.
 - . Various indicators (measurements) researched included:
 - .. Price effectiveness
 - .. Cost savings
 - .. Workload (in, current, completed)
 - .. Administration and control
 - .. Efficiency (included time needed to process requisitions through purchasing)
 - .. Material flow control
 - .. Vendor performance
 - .. Procurement planning and research
 - .. Competition

a. Price Effectiveness Measures

Individual measures used included (1) actual vs. planned purchase price comparisons; (2) actual purchase price(s) compared to a market index; and (3) comparisons of actual-to-actual purchase price for individual and aggregated items between operating plants within an organization.

Measure #1 is most frequently used. One level of measurement used was actual-to-plan variances for purchases at the line-item level. (This could then be aggregated into major purchase product groups.) Ten of the 17 organizations measured purchase expenditures at the major purchase and line-item level.

Below are examples of purchase price variance calculations, units of measure, and how these variances are reported:

Measurements/Calculations

1. Purchase price variance = Actual price - Planned price
2. Purchase price variance percentage = $\frac{\text{Actual price} - \text{Planned price}}{\text{Planned price}}$
3. Total purchase price variance = (Actual price - Planned price x Purchase quantity or Estimated annual volume)
4. Current year dollar impact of purchase price variance = (Actual price - Planned price) x (Estimated annual volume x Percentage of requirements remaining)

Units of Measure

- (1) Dollars
- (2) Percentages

Reported by:

- (1) Purchase item
- (2) Commodity or family group
- (3) Product
- (4) Project
- (5) Location
- (6) Buyer
- (7) Management group
- (8) Vendor

Measure #2 is used to provide information about the relationship of actual prices to published market price by commodity. Comparisons of indices provided information about how the organization was performing compared to the market and indications about the direction and extent of future price changes.

Developing a Purchase Price Index

<u>Purchased item</u>	<u>Purchase price</u>	<u>Annual Quantity</u>	<u>Annual Value of Purchases</u>	<u>Percentage of Annual Value of Purchases</u>
#1	\$1.00	100	\$100	5
#2	2.00	150	300	15
#3	3.00	100	300	15
#4	4.00	200	800	40
#5	5.00	100	500	25
			<u>\$2,000</u>	<u>100</u>

$$\begin{aligned}
 \text{Base period price} &= \$1 \times .05 + \$2 \times .15 + \$3 \times .15 \\
 &\quad + \$4 \times .4 + \$5 \times .25 \\
 &= \$0.05 + \$0.30 + \$0.45 + \$1.60 + \$1.25 \\
 &= \$3.65 = 100 \text{ (base period price index)}
 \end{aligned}$$

Index based on
selected items from
wholesale price index

<u>Company index - actual</u>	<u>Wholesale price index</u>	<u>reflecting actual purchases</u>
September 105	115	125
October 110	120	140

In this example, weights are assigned to each of the purchased items based on the annual value of purchases in the base year. The base period price index is calculated by multiplying the purchase price for each item by weighting factor. In this case the base period price is \$3.65 and the index is 100. Rates of change in the indices or between the indices are calculated by dividing the current index by the base or desired preceding period index.

- . Benefits of using price effectiveness indicators include:
 - .. Identifies which purchase prices are escalating most by commodity, by part, and by vendor against plan, and on an absolute basis.
 - .. Forces buyers to challenge marketplace and be price/cost conscious.

- .. Alerts management if design or quantity changes will significantly affect price and price variance.
- .. Identifies opportunities for price reductions. By comparing actual to plan and evaluating the reasons for the most significant variances, significant cost reduction opportunities may be uncovered.
- .. Provides information to evaluate buyer price forecasting accuracy and supply market knowledge. In addition, use of this measure may force development of better supply market knowledge within purchasing.
- .. Enables better management of buyers.
- .. Measures managers' and buyers' purchase price performance by program and by part numbers.
- .. Provides an incentive to perform.
- .. Insures the appropriateness of purchase quantities ordered from multiple vendors.
- . Limitations may include:
 - .. Difficulty in comparing groups because purchase price plans may be set at different times during the planning period. Some groups have longer planning horizons, making price forecasting more difficult.
 - .. Effort required in purchasing to establish the purchasing plan. The time and effort spent could be used for other purchasing activities.
 - .. Impact of highly inflationary or declining supply markets for which planning was not adequate.
 - .. Physical impossibility of revising purchase price plans for all line items purchased.
- . Considerations in developing and using price effectiveness measures include:
 - .. Level of detail in the purchase operating plan (i.e., line-item vs. aggregate). Line-item seemed to be preferred to better manage and identify unfavorable trends.
 - .. Method of measuring purchase price variance from plan should be measured in absolute dollars and on a percentage basis. Measurement without quantity considered provided an absolute difference from plan.

b. Cost Savings Indicators

Cost savings indicators fall into three categories: (1) cost reduction; (2) cost avoidance; and (3) ROI (based on cost reductions obtained). Cost reduction requires the purchase price to be lower than the last price paid. Cost avoidance considers difference between price paid and a higher price that might have been paid had purchasing not obtained the lower price. ROI is calculated with and without cost reduction to measure and report purchasing's contribution to profit.

Below are examples of cost savings measurements:

Cost Reduction

- (1) Unit cost reduction in dollars = Old unit price - New unit price.
- (2) Annual or quantity dollar cost reduction = (Old unit price - New unit price) x Annual or purchase quantity.
- (3) Cost reduction variance from budget or target = Actual cost reduction (unit or annual) - Budgeted cost reduction (unit or annual).

Cost Avoidance

- (1) Unit cost avoidance in dollars = Vendor requested unit cost - Actual unit cost.
- (2) Annual or quantity cost avoidance in dollars = (Vendor requested unit cost - Actual unit cost) x Annual or buy quantity.
- (3) Cost avoidance variance from budget or target = Annual cost avoidance (unit or annual) - Budgeted cost avoidance (unit or annual).
- (4) Vendor requested unit cost = Average of quoted prices; highest quoted prices.

Units of Measure

- (1) Dollars
- (2) Percentage

Summaries by:

Buyer
Management Group
Purchasing Department
Commodity Group

Location
Purchase Item
Project

How reported:

Monthly
Year-to-Date

A planned and deliberate action must be made by purchasing resulting in the reduction of a cost to quality as cost savings.

Various methods of achieving purchasing savings include:

- . Alternate Material--Revision of specification or design, substitution of lower cost or lower waste materials, or less expensive model that satisfies the performance specification.
- . Changed quantity--Going from spot to annual requirement, partial to total requirements, adjustment to economic order quantities, quantities giving better discount, consolidation of needs of multiple users (area coordination).
- . Avoidance of Industrywide Price Increase--Negotiated delay or avoidance of industrywide price increase.
- . Negotiated Price Reduction--Cost reduction as a result of direct negotiation of offered price.
- . Use of Previously Negotiated Option--The option results in a lower cost or the avoidance of higher cost that would have resulted had the option not have been available.
- . Spare Parts--Negotiation of lower cost of spare parts manufactured with the major equipment; purchase from primary manufacturer instead of distributor; purchase from new manufacturer rather than original equipment manufacturer.
- . Avoidance of Escalation--Use of previously negotiated terms that avoided an escalation of costs.
- . Examples of reductions that would not qualify for savings are:
 - .. Price decrease voluntarily offered by vendor.

- .. Choice of the lower of two or more bids resulting from routine RFQ.
- . Benefits of using the cost savings indicators include:
 - .. Focuses continuous attention on product cost reduction.
 - .. Provides information about how cost is being reduced.
 - .. Identifies unfavorable cost trends and stimulates analysis of causes.
 - .. Provides exposure to other functions and to top management about purchasing cost savings.
 - .. Provides information about cost reduction work yet to be done on projects.
 - .. Provides stimulus to get cost savings reporting completed by buyers.
 - .. Provides information for personnel appraisal.
- . Limitations seen in using cost savings measures:
 - .. Credit given only for unit price decrease, not substitute material, and so forth.
 - .. Different set of cost savings rules at different locations.
 - .. Credibility--funny money.
 - .. Subjective in terms of definitions of what is cost reduction/avoidance.
 - .. Unrealistic cost saving categories, for example, \$25 cost savings on samples for a \$.50 part.
 - .. Estimated usage incorrect.
 - .. Windfall savings which are not due to purchasing effort.
 - .. Buyers must report savings, which is time consuming.
 - .. Manually generated reports.
 - .. Time required to report savings.
 - .. Concepts and measures are not accepted by other levels of management.

- . Considerations in using these measures should include:

- .. Factors must be clearly defined.
- .. Careful consideration should be given to the quantities on which cost savings are calculated. An example, purchased items may be cancelled shortly after the cost savings were credited, resulting in an overstatement unless cost savings revised.

c. Workload Indicators

At least one of the three following categories was used by the groups studied: (1) workload - in (new); (2) workload - current (backlog); and (3) workload completed. It appears the most effective approach to establishing personnel levels may fall between the approach of budget revision and detailed times standards.

- . Workload - in -- Among items counted were purchase orders/requisitions received; urgent PO/requisitions received; number of protests received (Government only); purchase change notices received; pricing requests received. Counts were used to explain or identify changes (i.e., increase in workload received would increase PALT, if workforce size and efficiency stayed the same).
- . Workload - current -- Most common counts were open PO/requisitions on hand, line items (to be purchased) and open purchase orders. One formula used to measure current workload follows: work-in-process (in days) =

Line items to be purchased

<u>Cumulative line items purchased</u>		Number of
Cumulative worker hours/8	x	Authorized Persons

- . Workload - completed -- Measures used in this category include PO's placed, line items purchased, dollar value of purchases placed, contracts written, and pricing proposals written. Government agencies subdivided into more specific categories such as advertised procurement, two-step, source selection, small purchase procedures, negotiated procurements under \$XXXXXX, unpriced BOA order issuance, change orders, unpriced BOA's.

. Benefits:

- .. Identification of work effort (personnel, section, group and department).
- .. Identification of need to place open requisitions.
- .. Indication of buyer workload and performance.

- .. Spot trends in overtime.
- .. Set performance standards for buyers.
- .. Set work priorities.
- .. Transfer personnel (add or shift) to meet workload requirements--workload balancing.
- .. Identify age of workload.
- .. Trend analysis period to period (historical).
- .. Plan future workload.
- .. Visibility of work-in-process.
- .. Review number placed and released (purchase orders).

. Limitations:

- .. Errors in reports, updated incorrectly.
- .. Does not reflect changing complexity of buys.
- .. Cannot tell actual buyer activity (that is, what the buyer has been doing during the reporting period).
- .. Not all purchased items are included on reports (validity).
- .. Status not always complete.
- .. Does not show work on purchase order already completed--only completed purchase orders.
- .. Does not really reflect what people are doing from year to year because of changing nature of buys.

d. Administrative and Control Indicators

Several organizations used methods for translating projected purchasing workload into a specific head count. The major feature of one method--Models of Buyers--establishes a standard workload per buyer, based on historical performance and/or time studies. The projected workload is then divided by the standard to calculate the total number of buyers required. The projected number of buyers is multiplied by another ratio to get the number of secretarial/clerical workers needed. Then a fixed number of managers and other staff is added to the previous head count.

- . Benefits:
 - .. Planning number of people needed.
 - .. Planning type of people needed.
 - .. Planning when people will be needed.
 - .. Selling the staffing budget to higher management.
- . Limitations:
 - .. Lack of good, time-phased measure for workload.
 - .. Lack of good data for standard setting.
 - .. Model may indicate a reduction in staff beyond the limits of good management -- may cut into needed nucleus of staff.
 - .. Accurate workload forecasting is difficult.
- . Considerations:
 - .. Detailed time standards did not appear to yield projected benefits; created problems with personnel and created a heavy administrative budget.

e. Efficiency Indicators

Many measures of efficiency are used, ranging from a simple two-factor model to a multifactor model.

Most common two-factor measures include:

- . Purchase order per buyer
- . Line items per buyer
- . Dollars committed per buyer
- . Change notices per buyer
- . Contracts written per buyer
- . Average open dollar commitment per buyer
- . Worker hours per line item
- . Worker hours per PO
- . Worker hours per contract
- . Adm. dollar per PO

- . Adm. dollar per contract
- . Adm. dollar per purchase dollar

DoD used a labor efficiency ratio of $PE = \frac{\text{Earned Hours}}{\text{Actual Hours}}$

Various standards were set and work counts performed; PE was reported in a variety of ways. Typically, PE's would be reported starting with the work center and then aggregated to larger units or the whole department.

The study indicated that a private sector measured efficiency but tracked as a group and looked for significant concurrent trends. However, the Government used the measures as part of the formal management process.

PALT - generally defined as the elapsed time for arrival of purchase requisition in the purchasing department until placement of the requisition with a vendor. Several approaches were taken in reporting and controlling PALT.

It was found that longer administrative lead times, the higher volume of paperwork, and the greater number of sign-offs required in government generally made PALT more difficult to control.

On the next page are examples of how PALT was reported.

f. Material Flow Control

These measures are concerned with the flow from vendors to buying organization. Measures classified as open orders, open orders-past due, orders needed immediately and measurement of how well buyers are doing meeting due dates.

Most common use of measures is to expedite materials that are past due and to maintain the orderly flow of materials to keep shortages from occurring.

. Benefits:

- .. Expediting when purchased items are behind schedule.
- .. Tracking down items recorded as received but not yet available for use.
- .. Evaluating vendors.

. Limitations:

- .. Change in due/need date.

EXHIBIT E-1

PLANNED LEAD TIME CHART

<i>Cwlr</i>	<i>Receipt in purchasing</i>	<i>Buyer assigned</i>	<i>Cycle selected</i>	<i>Distribution of solicitation</i>	<i>Acceptable bid compiled</i>	<i>Contract draft compiled</i>	<i>Contract finished</i>	<i>Final distribution</i>	<i>Total days</i>
1 Advertisised procurement	0	5	8	8	30	17	20	2	90
2 Two-step procurement	0	5	8	20	60	86	19	2	200
3 Source selection	0	8	8	18	50	48	65	3	200
4 Small purchase procedures	0	2	6		24	2	14	2	50
5 Negotiated procurement under \$100,000	0	5	8	10	30	20	25	2	100
6 Negotiated procurement over \$100,000	0	8	8	10	43	55	39	2	165
8 Negotiated procurement over \$2 million	0	8	8	10	43	55	54	2	180
F Letter contract issuance	0	4	8			5	41	2	60
J Class IV safety modification coverage	0	4	8			2	14	2	30
K Unpriced BOA order issuance	0	4	8			2	14	2	30
L Automated delivery order	0								
M Delivery order, pre-priced order call issuance	0	4	8			2	9	2	25
N PR generated contract mod	0	4	8			12	34	2	60
S Change order issuance (indefinite)	0	4	8			2	9	2	25

EXHIBIT E-2 **MONTHLY PALT PERFORMANCE REPORT**

<i>Cycle</i>	<i>Number of actions</i>	<i>Standard days</i>	<i>Average days</i>	<i>Percentage of total awards</i>	<i>Number delinquent</i>	<i>Percentage delinquent</i>
Advertised	597	90	103	1.20	331	55.44
Two step	6	200	294	0.01	5	83.33
Source selection	1	200	176	0.002	0	—
Small purchases	34,636	50	47	69.47	10,306	29.76
Negotiated < \$100,000	10,769	100	91	21.60	3,391	31.49
Negotiated > \$100,000						
< \$2 million	1,180	165	151	2.37	447	37.88
Negotiated > \$2 million	91	180	186	0.18	48	52.75
Letter contract	18	60	39	0.04	4	22.22
Unpriced BOA order	139	30	26	0.28	36	25.90
Class IV safety modification	7	30	42	0.01	2	28.57
Automated delivery order	166	10	9	0.33	61	36.75
Delivery order, pre-priced order call issuance	<u>2,250</u>	25	20	4.51	<u>1,138</u>	50.57
Total	49,860				15,069	30.22

EXHIBIT E-3

PALT PERFORMANCE REPORT

Code	Code	Standard	Actions	Average	Weighted average standard	Weighted average standard	Weight actual minus weight standard	Percentage of action by site
Advertised procurement	1	090	0	0	0	0	0	0
Two-step procurement	2	200	0	0	0	0	0	0
Source selection	3	290	0	0	0	0	0	0
Small purchase procedures	4	030	9	34.67	11.54	8.00	3.54-	23.08
Negotiated procurement under \$100,000	5	100	18	84.36	46.15	39.02	7.13-	46.15
Negotiated procurement over \$100,000	6	165	1	135.00	4.22	3.46	.76-	2.56
Negotiated procurement over \$2 million	8	180	1	243.00	4.61	6.22	1.61	2.56
Letter contract issuance	F	060	0	0	0	0	0	0
Unpriced BOA order issuance	K	030	0	0	0	0	0	0
Class IV safety PCD coverage	J	030	0	0	0	0	0	0
Automatic delivery order issuance	L	010	0	0	0	0	0	0
Delivery order, pre-priced order call issuance	M	025	3	24.67	1.92	1.90	.02-	7.69
PR generated contract modification	N	060	1	48.00	1.54	1.23	.31-	2.56
Change order issuance (indefinite)	S	025	0	0	0	0	0	0
NC-PR contract modification < Buyer PPC prepared	C	025	3	10.00	1.92	.77	1.15-	7.69
NC-PR contract modification < PPC prepared	T	025	2	16.50	1.28	.85	.43-	5.13
Modification for provisioned items order	P	010	1	8.00	.26	.20	.06-	2.56
Basic contractual agreement	A	055	0	0	0	0	0	0
Miscellaneous J041 system input	Z	005	0	0	0	0	0	0
Letter contract confirmation	W	180	0	0	0	0	0	0
Change order confirmation	X	180	0	0	0	0	0	0
Unpriced BOA order confirmation	Y	150	0	0	0	0	0	0
Totals			39		73.44	61.65	11.79-	

Exhibit 8
PALT Performance Report

4. Private Sector - Government Pay Comparisons

Although a compensation survey was not part of this contract's scope of work, Coopers & Lybrand received information from the Office of Personnel Management comparing private sector contracting and procurement compensation with the General Schedule.

The following charts depict the information obtained from OPM. No position analysis was made, thus accurate comparisons of public-private sector pay are not possible, since job titles, position responsibilities, and impact of decisions could vary greatly. The charts below, however, allow for the general conclusion that public sector salaries are low in comparison to the private sector contracting and procurement career areas:

<u>PRIVATE SECTOR*</u> (Median Salary Ranges)		<u>GENERAL SCHEDULE</u> (Salary Range)	
	<u>Contracting</u>	<u>Procurement</u>	
onsupervisory	\$22,200-\$33,300	\$17,760-\$26,160	GS5-GS9 \$13,369-\$26,331
irst Level			
Supervisory	\$28,000-\$41,700	\$26,100-\$38,900	GS11-GS12 \$24,508-\$38,185
id Management	\$35,400-\$53,100	\$35,400-\$53,100	GS13-GS14 \$34,930-\$53,661
<u>Contracting involves</u>		<u>Procurement involves</u>	
policy formulation		source selection	
establishment of prices		cost analyses	
delivery of proposals		negotiations	
negotiations		purchasing agreements	
cost analyses		evaluating vendor performance	
re-negotiation		reviewing subcontracts	

* Collected for OPM by Cole, Warren & Long Inc.

8. Measuring the Purchasing Man: TREND, by Victor Pooler,
Journal of Purchasing, Nov. 1973.

A new concept being used for measuring purchasing management is the Total Recognition of Environmental and Numerical Development or (TREND). There are three distinct steps for measurement: (1) conceptual; (2) behavioral; and (3) resultant.

Step 1 Conceptual	Step 2 Behavioral	Step 3 Resultant
How the purchasing manager perceives his job. What motivates him.	What the purchasing manager actually does.	Lower prices paid, efficient buying group, good vendor relations, good internal relations, good savings records, etc.

This concept measures purchasing performance for results and recommends or shows how improvement can be made. An example is given that savings appear to be low, and it is recognized that the buyers may not understand cost analysis or that it is a learning curve problem. A buyer development course might be started and staff meetings held. The TREND process or planning, acting, measuring and then feedback to repeat the cycle should mean improvement.

The TREND philosophy is summarized below:

1. Purchasing can and should be measured.
2. Comparison with other purchasing operations is not the answer.
3. The trend of performance today vs. past performance is the best measure.
4. Measurements should be made in the three basic areas of TREND.
5. Measurements should be in quantitative terms.
6. Accomplishments should be reported in terms of their total efforts in the agency or organization.

7. Measuring Purchasing Effectiveness, Richard Orbell, Journal of Purchasing and Materials Management, Summer 1960.

- . Indicators of purchasing efficiency include:
 - .. Dollar purchases
 - .. Number of purchase orders
 - .. Number of purchasing employees
 - .. Ratio of purchasing to company total
- . Objective measures of purchasing include:
 - .. Cost savings
 - .. On-time delivery of incoming materials
 - .. Operating expenses
 - .. Quality of material
 - .. Cost of material purchased vs. standard cost
 - .. Dollar value of materials on order
 - .. Cancellation charges paid
- . Cost savings most difficult to quantify in meaningful terms.
- . Delivery performance is one of the key elements of evaluating the performance of a purchasing department as well as quality of the material.

An example of a report showing delivery performance follows:

Total No. of Shipments Received	Quantity Received Early	Quantity Received on Time + 3 days from Specified delivery date	Quantity Rec'd 4 - 14 days late
565	18 - 3%	350 - 62%	112 - 20%

Quantity Rec'd. 15-30 days late	No. of Lots Rec'd	No. of Lots Rejected	No. of Lots Not Usable as Rec'd
85 - 15%	565	47 - 8%	18 - 3%

- . Actual vs. Standard Costs

This indicator is good measure of purchasing effectiveness. An example of a price variance report follows:

Commodity	Purchased @ Std. Cost	Purchases at Actual Prices Paid	+/- Variance	Percent
Castings	83,010	85,069	2,059	2

buyer, work hours per contract, administrative dollars per purchase order, administrative dollars per contract and administrative dollars per purchase dollar.

PALT is another measure used. Lead time is tracked with an emphasis on keeping it below a standard.

5. Material flow measures report open purchase orders and their delivery due dates, past-due orders, rush orders, individual buyer and vendor performance against due dates.
6. Socio-economic performance measures include purchase dollars placed with small/minority-owned businesses, and labor-surplus areas.
7. Planning and forecasting measures used are the number of procurement plans established per year; price forecasting accuracy, lead time forecasting accuracy and the number of make or buy studies.
8. Competition measures include purchase dollars awarded through formal advertising, number of bids solicited and received, purchase dollars awarded sole-source, and number of second sources developed.
9. Inventory efficiency and effectiveness measures include stock turnover by commodity group (times per year); stockouts as a percentage of requests for stock items, value of issues. Inspection efficiency measures include dollar value of items inspected per man-hour, dollar value of items inspected as a percentage of purchase value and dollar value of defective incoming material.
10. Stores efficiency measures include line-item transactions per storekeeper man-hour and average time lapsed in filling a request for a normally stocked item.
11. Transportation expense and effectiveness measures are dollar cost of premium transportation, priority shipments, transit time and reliability of carrier and incidence of shipment loss.
12. Standardization and specification savings measures include dollar value of items acquired covered by standards as a percentage of total dollar value purchases and number of standard specifications developed within a buying group against man-hours expended.

6. Public Purchasing and Materials Management, by Harry Robert Page.

In two studies sponsored and funded by the National Science Foundation, 14 elements were found susceptible to quantitative measurement:

1. Price effectiveness was measured at various levels: the departmental level, the buying group level and the item level. Other measures include comparison of actual purchase costs to market.
2. Cost savings measures included indicators of both cost reduction and cost avoidance. Cost reduction--new unit cost lower than old one on the line-item basis. Cost avoidance--loosely defined example, buying at a price lower than the average price quoted.
3. Workload and work force adequacy measures included:
 - . Workload-in--Includes purchase requisitions received, number of protests received, number of pricing requests received. Measures should be reviewed regularly by management to help predict changes. For example, an increase in workload-in could lead to a corresponding increase in purchasing's administrative lead time if workforce size remained the same.
 - . Workload-current--Consists of counts of the backlog of work in department. Common counts are purchase orders on-hand, line-items to be processed on hand and convert workload into number of days if work at standard rate.
 - . Workload-completed--Measures include purchase orders placed, line items placed, dollars placed, contracts written and price proposals written. Most common technique to plan size of workforce is to establish a standard workload per buyer, based on historical performance of time studies. Projected workload is then divided by the standard to calculate total number of buyers. This projection is then multiplied by another ratio to get projected administrative employees needed. Another technique is to set standards in terms of hour per document and to establish how much time a buyer spends in buying activity each week. This time is then translated into a standard number of documents per year per buyer and the necessary number of buyers established.
4. Purchasing-out efficiency measures related outputs, such as line items placed to inputs, such as buyer hours expended. Common two-factor measures are purchase order per buyer, line items per buyer, dollars committed per buyer, change notices per buyer, contracts written per

.. Vendor Performance measures include (1) percentage of late deliveries by supplier; (2) percentage of orders on which incorrect materials shipped; (3) percentage of orders on which incorrect quantities were shipped; (4) percentage of orders on which split shipments were made; and (5) the quality of transportation service offered by various carriers can be appraised by maintaining a record of transit times and damaged shipments.

.. Coordination measures used to determine how successfully the purchasing department coordinates its efforts with other departments/organizations, usually involves the use of a periodic survey.

. Procurement Efficiency

General measurements used to reflect efficiency include:

- .. Number of PO's issued per period and per day.
- .. Total dollars committed per period.
- .. Average number of dollars expended per PO. Per buying group. (When used in conjunction with average number of purchase orders issued per day, this statistic can assist in planning workloads and staffing requirements, as operating conditions of change.)
- .. Number of blanket orders released during a period.
- .. Number of orders placed against long-term contracts.
- .. Number of rush orders issued during the period.
- .. Number of change orders issued during the period.
- .. Purchasing processing report (percentage of purchase requests processed in 1 day, 2 days, etc.).
- .. Department operating costs report (using these cost data, operating cost per PO and operating cost per dollar expended can be computed).

. Personnel Efficiency

- .. Performance standards for clerical jobs.
- .. Daily record of absences.
- .. Computation of employee turnover rate using

$$\frac{\text{Monthly Number of Terminations}}{\text{Average Total \# of Employees}} \times 100$$

5. Purchasing and Materials Management, by Lamar Lee, Jr.

This text states that the nature of purchasing prohibits the use of direct measurement of purchasing performance. Most measurements focus on indirect indicators of accomplishment. Secondary factors that can be measured (quality and price paid) determine trends.

A basic evaluation approach includes three features: (1) a qualitative assessment of managerial responsibilities; (2) buying proficiency; and (3) purchasing efficiency.

- . Managerial Effort--A management audit of the purchasing operation should be performed as various factors control the potential of a purchasing department's performance (indirect indicators).
- . Buying Proficiency--Measures used to provide a basis for appraising and controlling buying proficiency include:
 - .. Time factor measures used are: (1) percentage of overdue orders; (2) percentage of stockouts caused by late deliveries; and (3) number of production stoppages caused by late deliveries.
 - .. Quantity Measures used in evaluating support effectiveness are (1) percentage of stock out caused by underbuying; (2) underbuying; (3) report of "dead stock" materials resulting from overbuying; and (4) a chart showing target and actual inventory levels in the aggregate and by major material classification (useful when supplemented with a chart showing inventory turnover rates)--annual material useage + average inventory for the same material classifications. When used together, these charts point up imbalances between inventory carrying costs and material acquisition costs.
 - .. Price Paid for Materials measures used are (1) target or standard prices can be charted against actually paid prices to show significant differences (can develop "price paid" indices vs. commodity price indices); (2) cost savings, activities can be charted from such activities as value analysis, vendor suggestions, packaging improvements, change of vendors, etc.; and (3) a report of the percentage of PO's issued without firm prices.
 - .. Material quality measures involve the percentage or number of delivered materials rejected by inspection.

4. Purchasing Handbook, by George Aljian

Measures used in evaluating purchasing performance are given below:

- . Efficiency--Ratios used as measures include (1) purchasing department operation costs/dollar purchases; (2) purchasing employees/total employees; and (3) purchasing cost reduction/total purchases.
- . Cost reduction, cost avoidance--Measures must be accurately defined and should not be confused with savings accrued through normal operations.
- . Cost per order--Study reveals that inefficient purchasing should result in a lower cost per order and should not be considered a meaningful indicator but may be used as a trend indicator.
- . Comparison of purchases with budget and operating costs.
- . Order placing by comparison of price adjustments, change orders, and returned goods with total orders placed for a given period.

3. Purchasing Management, by J. F. Westing, I. V. Fine, Gary Zenz.

This text identifies the following evaluation criteria for measuring overall purchasing performance.

- . Cost purchase comparison--relates the dollar volume of purchases to the dollar cost of operation.

$$\text{Ratio} = \frac{\text{Annual Cost of Operating the Purchasing Department}}{\text{Dollar Volume of Annual Purchases}}$$

Used to evaluate a department's overtime, provided that its responsibilities have remained fairly constant.

Limitation: measures total department performance not points of strength or weakness.

- . Cost per order

$$\text{Ratio} = \frac{\text{Total Purchasing Department Costs}}{\text{Number of Orders Placed}}$$

Not very useful as organizations buy open-end and annual contracts.

Variations in cost ratios: Costs/PO; dollars/buyer; costs/requisition; dollars/requisition; active item/buyer.

- . Quality Criteria -- Measured in terms of the number of rejections of incoming shipments.
- . Quantity Criteria -- Different ways - (1) amount of "down time" resulting from a shortage of materials; (2) amount of rescheduling of production due to lack of materials. Also number of emergency and rush orders processed is a measure of the efficiency.

Problem area of how to evaluate purchasing performance: usually involves comparison of one of four possible standards: (1) past performance; (2) budgeted performance; (3) performance of departments in other companies; or (4) a norm of performance.

- . Cost Reduction--Problem is determining actual savings in cost. Evaluation of purchasing performance then consists of comparing actual costs with a standard cost for the period under evaluation.

2. Purchasing Agent's Desk Book, by Robert Janson

A list of key management indicators is listed to illustrate that the ways and means of measurement vary widely, but include:

1. Quotations obtained (multiple per buyer per day) average (cost savings).
2. Not priced PO.
3. Rejected invoices to be processed (workload).
4. Requisitions older than 5 days (workload).
5. Material price to variation standard (price).
6. Price increases (cost savings).
7. Labor contracts expiring next month.
8. Wholesale price index trend vs. organizational price index (cost savings).
9. Cost savings reduction (total).
10. Requisition placed within 3 days (workload).
11. Past due PO (workload).
12. Receiving reports late (more than 24 hours).
13. Make or buy variance (procurement planning).
14. Rejections due to quality (vendor performance).
15. Blanket orders not price changes.
16. Blanket orders with annual price data.
17. Purchase made by other department.
18. Unsatisfactory vendor delivery per material order.
19. Cost to make a \$1 purchase.
20. Orders placed via multiple RFQ or negotiations (cost savings).

EXHIBIT E-4

PURCHASING MEASURING BY RESEARCH SITE

	Aerospace	Appliance	Automotive	Chemical	Chemical	Chemical	Electronics	Aerospace	Computer	Aerospace	Electronics	Appliance	Computer	Public	Public	Public	Public
Purchasing measure categories	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11	#12	#13	#14	#15	#16	#17
Price effectiveness	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Cost savings	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Workload-in	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
-current	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
-completed	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Administration and control	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Efficiency	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vendor quality	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
delivery	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Material flow control	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Regulatory/societal/environmental	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Procurement planning and	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
research	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Competition	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Inventory	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Transportation	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Purchasing procedure audits	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

NOTE: Asterisks indicate some purchasing measures in use in the purchasing department.

Purchasing Performance

1. Measures Identified as Most Useful:

- . Actual-to-plan and actual-to-market price effectiveness measures.
- . Cost reduction measures (if desired).
- . Administrative and control measures.
- . Inventory measures if part of purchasing responsibility.
- . Material flow control to insure an adequate and timely flow of purchased items from vendors.
- . Vendor characteristics -- such as annual purchases from vendors.
- . Workload measures.

. Limitations:

- .. No differentiation between high- and low-risk purchases.
- .. Lack of comparison between plant and industry performance.

h. Procurement Planning and Research

Various indicators were used to provide data regarding how much of certain types of planning activities were done or how accurate the planning efforts were. These measures included number of make-buy studies, price-forecasting accuracy (actual to forecast), number of procurement plans established per year, etc.

Key issues in using these measures are (1) what should be contained in a procurement plan; (2) how a purchase price forecast can be developed; and (3) how a purchase lead time forecast can be developed.

These indicators were found to be relatively new to organizations.

i. Competition Indicators

Measures used to evaluate how well purchasing was taking advantage of (1) purchase dollars on annual contracts; (2) amount and percentage of annual purchases placed with sole source; (3) competitive awards percentage; and (4) formal advertised awards percentage.

j. Inventory

Only a few organizations studied used inventory measures on a regular basis.

k. Summary of Analysis:

- . Price effectiveness and administrative and control measures were the highest rated, on average.
- . Cost saving and efficiency were lowest rated because of poor definition.
- . No significant systematic difference between public and private ratings except for comparisons year-to-year and challenge of performance standards. In both cases, the private sector rated the measures higher than did those in the public sector.

. Limitations identified with the efficiency measures include:

.. Standards difficult to develop, mix of work complexity makes standards inappropriate, standards do not relate to cost, quality or delivery lead time and the system does not measure individual performance.

.. Partial shipments not closed out.

. Improvements Suggested

.. Include lead-time cycle for each part.

.. Graph the report.

.. Show total order quantity.

.. List all open orders.

. Considerations:

Major questions were how to determine the real need date, who establishes date and who can change it. Another question whether to expedite against a need date or a vendor promise date.

g. Vendor Performance Measures

These measures were used in 8 of the 17 organizations reviewed. They included units, shipments or dollars accepted/rejected per time period, percentage of units, shipments or dollars accepted/rejected against total received per unit of time, a vendor index of the total dollars (price plus cost of quality problems) required to obtain one dollar's worth of acceptable purchased items and quality index.

. Benefits:

.. Measures vendor performance.

.. Indicators of buyers' performance.

.. Vendor selection.

.. Control of purchase order placement with poor vendors.

.. Means of insuring quality suppliers.

.. Reduction of inspection.

.. Use as a negotiating tool.

APPENDIX F

DLA-P PROCUREMENT WORKFORCE COMPARED
TO THE PROCUREMENT WORKFORCE OF OTHER
FEDERAL ORGANIZATIONS

EXHIBIT F-1

GS 1102 CONTRACT AND PROCUREMENT MANPOWER DISTRIBUTION IN FEDERAL AGENCIES COMPARED TO DLA-P

GS-1102 MANPOWER BY AGENCY													
DLA-P*	USAF	ARMY	OSD**	NAVY	GSA	NASA	HHS	INT	USDA	DOE	DOT	OTHER	TOTAL
GS 5 - GS 8	618	537	568	365	117	97	78	67	65	42	63	176	2793
GS 9 - GS 10	898	873	601	454	135	92	87	108	90	33	82	290	3743
GS 11- GS 12	1863	1863	1681	1143	407	298	220	261	306	143	187	388	8760
GM13+	<u>725</u>	<u>647</u>	<u>389</u>	<u>493</u>	<u>227</u>	<u>252</u>	<u>182</u>	<u>117</u>	<u>61</u>	<u>256</u>	<u>158</u>	<u>303</u>	<u>3810</u>
TOTAL	4104	3920	3239	2455	886	739	567	553	522	474	490	1157	19106
PERCENT OF AGENCY TOTAL													
GS 6 - GS 8	15	14	18	15	13	13	14	12	12	9	13	15	15
GS 9 - GS 10	22	22	19	18	15	12	15	20	17	7	17	25	20
GS 11- GS 12	45	48	52	47	46	40	39	47	59	30	38	34	46
GM 13+	<u>18</u>	<u>17</u>	<u>12</u>	<u>20</u>	<u>26</u>	<u>34</u>	<u>32</u>	<u>21</u>	<u>12</u>	<u>54</u>	<u>32</u>	<u>26</u>	<u>20</u>
	100	100	100	100	100	100	100	100	100	100	100	100	100

* DLA-P includes DLA-P headquarters and the six Defense Supply Centers

** OSD includes DLA-P and all other elements of the Office of the Secretary of Defense

Source: All Federal Agencies - Federal Acquisition Institute, Procurement Workforce Demographics, FY 1980. DLA-P
Civilian Position and Pay Management Division, Defense Logistics Agency, FY 1983.

EXHIBIT F-2

GS 1102 CONTRACT & PROCUREMENT MANPOWER DISTRIBUTION
IN DLA-P HEADQUARTERS AND THE SIX DEFENSE SUPPLY
CENTERS

GS 1102 MANPOWER BY CENTER								
	DLA-P HQ	DCSC	DESC	DGSC	DISC	DPSC	DFSC	TOTAL
GS 5 - GS 8	1	166	97	106	73	64	6	517
GS 9 - GS 10	0	93	80	70	104	39	10	396
GS 11 - GS 12	4	104	71	74	61	273	90	677
GM 13+	<u>22</u>	<u>10</u>	<u>11</u>	<u>8</u>	<u>11</u>	<u>31</u>	<u>29</u>	<u>122</u>
TOTAL	27	373	259	258	249	411	135	1708

PERCENT OF CENTER TOTAL								
GS 5 - GS 8	4	45	37	41	29	17	4	30
GS 9 - GS 10	0	25	31	27	42	9	7	23
GS 11 - GS 12	15	28	27	29	24	66	67	40
GM 13+	<u>81</u>	<u>3</u>	<u>4</u>	<u>3</u>	<u>4</u>	<u>8</u>	<u>21</u>	<u>7</u>
	100	100	100	100	100	100	100	100

EXHIBIT F-3

PROCUREMENT WORKFORCE OF OTHER FEDERAL AGENCIES AS OF 9/30/81

<u>Agency</u>	<u>Total Procurement Population</u>	<u>Percent of Population in 1102 Series</u>	<u>Percent of Population in 1105 Series</u>
Dept. of State	26	88.5%	11.5%
Dept. of Treasury	265	42.3%	57.7%
U.S. Army	7,332	61.9%	38.1%
U.S. Navy	5,087	53.3%	46.7%
U.S. Air Force	6,711	64.6%	35.4%
DOE	596	83.7%	16.3%
GSA	1,185	76.5%	23.5%
NASA	883	82.1%	17.9%
Dept. of Justice	171	72.5%	27.5%
Dept. of Interior	987	58.6%	41.4%
USDA	1,017	53.6%	46.4%
Dept. of Commerce	167	64.7%	35.3%
Dept. of Labor	126	63.5%	36.5%
HHS	873	67.6%	32.4%
DHUD	115	73.0%	27.0%
DOT	704	69.9%	30.1%
EPA	173	72.8%	27.2%
SBA	159	83.6%	16.4%

SOURCE:

Federal Acquisition Institute

ANALYSIS

Professional personnel assigned to procurement activities in government are classified in the Office of Personnel Management's (OPM) occupational series GS-1102 entitled "Contract and Procurement." Exhibit F-1, GS-1102 Distribution In Federal Agencies depicts the number of full-time GS-1102 personnel assigned to the major Federal agencies. These data indicate that when compared to the DLA-P workforce, the Federal grade distribution is significantly different. For example, at the low end of the grade distribution, GS 5-8, the relative proportion of manpower in DLA-P is more than double any other Federal agency. Thirty percent of all DLA-P procurement professionals are at the GS 5-8 level compared to a Federal workforce average of 15 percent. An even more striking disparity exists at the highest grade level. The management levels of GS 13 and above consist of only seven percent of the total DLA-P workforce. This compared to a Federal procurement workforce average of 20 percent at the GS 13 and above level. The services average approximately 18 percent at the GS 13+ level and USDA appears closest to DLA-P with 12 percent of its workforce at the GS 13 and above level.

The middle range of the DLA-P workforce distribution is basically consistent with the other Federal organizations. However, due to the skewed nature of the DLA-P workforce distribution, at the extremes it appears the journeyman level for DLA-P is GS 9 compared to the GS 11 journeyman level for the rest of the Federal procurement workforce. Finally, the DLA-P workforce represents between 9 and 10 percent of the entire Federal procurement workforce and does have a significant impact on the workforce grade distribution.

Exhibit F-2, GS-1102 Distribution in DLA-P and the DSC's, illustrates the grade levels of procurement workforce of DLA-P. The most striking data in this exhibit is the difference between the hardware center distributions and those of DPSC and DFSC.

Also, even among the hardware centers, there is more disparity than anticipated. Of the hardware centers, DISC appears to have the most "normal" distribution of grades between the GS 5 to 12 level. DCSC on the other hand has 45 percent of its workforce at the GS 5-7 level compared to only 29 percent at the same level at DISC. This difference is probably due to the strong SASPS Phase I operation at DCSC. All hardware centers have between three and four percent of their workforce at the management (i.e., GS 13+) level. At both DPSC and DFSC, the journeyman level is probably a high GS 11 while at the hardware centers it is between a GS 7 and 9. At both DPSC and DFSC, the vast majority of procurement staff, 74 percent and 86 percent respectively, are at the GS 11 level or above. The only difference between the grade distributions of DPSC and DFSC are at the extremes. At the lowest grade level, DPSC has 17 percent of its procurement workforce compared to 4 percent for DFSC at that level. The highest grade levels are populated with 8 percent of the DPSC procurement personnel and 21 percent of DFSC's procurement workforce is at the GS 13 and above level.

APPENDIX G

ACRONYMS & TERMINOLOGY

LIST OF ACRONYMS

ACO	Administrative Contracting Officer
BOA	Basic Ordering Agreement
BPA	Blanket Purchase Agreement
CBD	Commerce Business Daily
CIT	Consumable Item Transfer
CLI	Contract Line Item
C&P	Contracting & Production Directorate
DCAS	Defense Contract Administration Services
DCASMA	Defense Contract Administration Services Region Management Area
DCASR	Defense Contract Administration Services Region
DCSC	Defense Construction Supply Center
DESC	Defense Electronics Supply Center
DFSC	Defense Fuel Supply Center
DGSC	Defense General Supply Center
DISC	Defense Industrial Supply Center
DLA	Defense Logistics Agency
DLA-P	Defense Logistics Agency Directorate of Contracting
DLAM	Defense Logistics Agency Manual
DLA-PPR	Policy Branch, Contracts Division, Directorate of Contracting, Headquarters DLA-P
DO	Delivery Order
DOD	Department of Defense
DPSC	Defense Personnel Support Center
DSC	Defense Supply Center
DVD	Direct Vendor Delivery
EOQ	Economics Ordering Quantities
F-39	Report Advance Follow-up on Contracts Report
F-38	Report Contract Delinquency Report
F-33-2	Report "Monthly Status of Purchase Requests"
F-96	Report "Active/Cancelled Purchase Requests List"
FOIA	Freedom of Information Act
F-42	Report Contractor Performance Summary Report
IDTC	Indefinite Delivery-Type Contract
IM	Inventory Manager
MIPR	Military Interdepartmental Purchase Request
MSO	Management Support Office
NORS	Not Operational Ready Supply
NSN	National Stock Number
OSO	Operations Support Office

PALT	Procurement Administrative Leadtime
PCO	Procuring Contracting Officer
PERS	Performance Evaluation Reporting System
PIIN	Procurement Instrument Identification Number
PO	Purchase Order
PR	Purchase Request
PRLI	Purchase Request Line Item
QPL	Qualified Products List
Reason Codes	(Explanation of Cause)
RFP	Request for Proposal
RFQ	Request for Quotation
ROID	Report of Item Delivery
RTC	Requirements - Type Contract
SASPS I & II	SAMMS Automated Small Purchase System .
SAMMS	Standard Automated Material Management System
SF	Standard Form
SMCC	Selective Management Category Code
SSC	Supply Status Code
UMMIPS	Uniform Material Movement & Issue Priority System

END

FILMED

11-85

DTIC