Audit Report

OFFICE OF THE INSPECTOR GENERAL

MILITARY DEPARTMENT REQUIREMENTS FOR CURRENTLY PROCURED WHOLESALE INVENTORIES FOR CONSUMABLE ITEMS

Report Number 91-106 **June 28, 1991**

Department of Defense

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

June 28, 1991

MEMORANDUM FOR ASSISTANT SECRETARY OF DEFENSE (PRODUCTION AND LOGISTICS)
ASSISTANT SECRETARY OF THE ARMY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Report on the Audit of Military Department Requirements for Currently Procured Wholesale Inventories of Consumable Items (Report No. 91-106)

This is the final report on the Audit of Military Department Requirements for Currently Procured Wholesale Inventories of Consumable Items for your information and use. We made the audit from August 1989 through July 1990. The audit objective was to determine if the quantities of consumable items to be bought on forthcoming procurements at 13 Military Department wholesale inventory control points (ICP's) that manage spare and repair parts, were warranted by anticipated requirements. We also evaluated internal controls over the validation of requirements before the initiation of a purchase request and before DoD funds were obligated. During FY 1989, the 13 ICP's managed about 1.1 million consumable items, valued at about $13.1 billion. This is one of three audits we planned on requirements for current procurements by DoD wholesale inventory management activities. We issued Report No. 91-037 on requirements for consumable items managed by the Defense Logistics Agency in January 1991 and our audit on requirements for repairable items managed by the Military Departments is in process. DoD has scheduled the transfer of management of most of the consumable items currently managed by the Military Departments to the Defense Logistics Agency.

In August 1989, the 13 ICP's were in the process of procuring approximately $3.5 billion of stock for 77,650 consumable line items. Our review focused on 9,960 of those line items, valued at $2.6 billion, which involved procurements valued at over $50,000 for each line item. Most of the materiel being procured by the 13 ICP's was warranted. However, the requirements determination and purchase execution processes needed improvement. Significant quantities of materiel on purchase requests at the ICP's were unreasonable and would result in premature or unnecessary investments in inventory. The results of the audit are summarized in the following paragraphs,

and the details, audit recommendations, and management comments are contained in Part II of this report.

The ICP's initiated, or continued, purchase requests for supplies in excess of authorized stockage objectives. Based on sample results, we estimated that about $378.9 million of the $2.6 billion of purchases in-process (14.5 percent) was for unreasonable supply quantities. Purchases of unreasonable quantities of materiel were not consistent with DoD's Inventory Reduction Plan initiatives to minimize supply system costs and reduce wholesale inventories. Management officials at the ICP's promptly initiated action to curtail purchases valued at $21.5 million while the audit was in progress.

We recommended that the Assistant Secretary of Defense (Production and Logistics) and the Military Departments' logistics activities provide policy guidance and specific instructions for intensive management of items, provide specific instructions for verification of requirements and supervisory approval of purchase decisions, direct the implementation of statistically based quality control tests of purchase decisions, revise policies that impede the reduction of purchases when requirements decline, expand oversight of the ICP's operation, and modify automated systems that report, accumulate, and retain demand data (page 5).

The audit identified internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. There was no definitive guidance for and control over the verification of requirements data before the initiation of purchases. Also, there were weaknesses in guidance to ensure adequate supervisory review of purchase requests and there were no quality control checks to evaluate supervisory approval of purchases. In addition, the Air Force Logistics Command did not perform periodic tests of data in automated data systems to ensure that accurate data were provided and used in the automated requirements computation system. Also, the Army Materiel Command did not maintain oversight of the ICP's implementation of DoD and Army policies for computing stockage objectives. Finally, the Military Departments did not maintain adequate oversight of the ICP's document retention policies and practices. Recommendations in this report, if implemented, will correct the weaknesses. We estimated that $220.9 million in monetary benefits could be achieved by implementing the recommendations. A copy of this report will be provided to the senior officials responsible for internal controls within each of the Military Departments.

A draft of this report was provided to the addressees for comments on February 11, 1991. Comments were received from the Principal Deputy Assistant Secretary of Defense (Production and Logistics) on April 19, 1991. Comments were received from the Air Force Deputy Chief of Staff (Logistics) on April 8, 1991. Appendixes C and D, respectively, contain complete texts of the management comments.

Comments were received from the Navy on June 11, 1991, 60 days past the comment deadline. Therefore, Navy's comments will be considered as a reply to the final report.

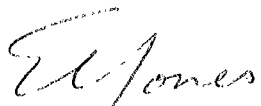
The Principal Deputy Assistant Secretary of Defense (Production and Logistics) concurred with the intent of Recommendation 1. and proposed including guidance for intensive review of requirements in the planned DoD Regulation 4140.1-R. The proposed action appears to satisfy the intent of the recommendation. We ask that the Principal Deputy Assistant Secretary of Defense (Production and Logistics) provide a copy of the specific guidance for intensive management in responding to this final report. The Air Force concurred with Recommendations 2.a., 4.a., and 4.f., and provided its schedule for issuing implementing guidance. We consider the Air Force's comments to be responsive. The Air Force concurred with the intent of Recommendations 2.b., 2.c., 4.b., 4.d., and 4.e. However, we do not consider the actions proposed in the Air Force response to these recommendations to be sufficient. We consider the recommendations still valid for the reasons discussed in Part II of the report and request that the Air Force reconsider its position and provide comments in response to this final report. The Air Force nonconcurred with Recommendation 2.d. For the reasons discussed in Part II of the report, we consider the recommendation still valid and request that the Air Force reconsider its opinion and provide comments in response to this final report. The Air Force provided additional data concerning demand coding by the Exchangeable Production System. As a result, we revised the finding and Recommendation 4.c. and request Air Force comments to the revised recommendation.

On February 11, 1991, a draft of this report was provided to the Assistant Secretary of the Army (Financial Management). As of June 20, 1991, the Army had not responded to the draft report. We request that the Army respond to the final report, indicating concurrence or nonconcurrence with the finding, recommendations, and internal control weaknesses described in this report. As required by DoD Directive 7650.3, the comments should indicate concurrence or nonconcurrence in the finding and each recommendation addressed to you. If you concur, describe the corrective actions taken or planned, the completion dates for actions already taken, and the estimated dates for completion of

planned actions. If you nonconcur, please state your specific reasons. If appropriate, you may propose alternative methods for accomplishing desired improvements. We also ask that your comments indicate concurrence or nonconcurrence with the internal control weaknesses described above.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Accordingly, final comments on the unresolved issues in this report must be provided within 60 days of the date of this report. We request that the Military Departments provide final comments on the reduction of purchases identified in Appendix B, and the estimated monetary benefits of $228.8 million, identified in Appendix E of this report. Potential monetary benefits are subject to resolution in the event of nonconcurrence or failure to comment.

The courtesies extended to the staff during the audit are appreciated. A list of the Audit Team Members is in Appendix H. Please contact Mr. James Helfrich, Program Director or Mr. Joel Chaney, Project Manager, at our Columbus office at (614) 238-4141 (DSN 850-4141) if you have any questions concerning the final report. Copies of the final report are being distributed to the activities listed in Appendix I.



Edward R. Jones
Deputy Assistant Inspector General
for Auditing

Enclosures

cc:
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force

REPORT ON THE AUDIT OF MILITARY DEPARTMENT REQUIREMENTS FOR CURRENTLY PROCURED WHOLESALE INVENTORIES OF CONSUMABLE ITEMS

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Prepared by:
Logistics Support Directorate
Project No. 9LE-0064

REPORT ON THE AUDIT OF MILITARY DEPARTMENT REQUIREMENTS FOR CURRENTLY PROCURED WHOLESALE INVENTORIES OF CONSUMABLE ITEMS

PART I - INTRODUCTION

Background

The Military Departments have 13 major inventory control points (ICP's) that provide logistics support to military customers to maximize the operational readiness of weapon systems and supply availability while at the same time maintain a minimum investment in inventory. In August 1989, the Military Departments' ICP's managed approximately 1.1 million consumable line items for which wholesale inventories valued at $13.1 billion were held.

In August 1989, the ICP's were in the process of procuring approximately $3.5 billion of stock for 77,650 consumable line items. The procurement process at the ICP's generally begins when the automated requirements computation system determines that the assets on hand and due in for an item have dropped to or below the item's reorder point. The automated system recommends the purchase of a quantity of materiel sufficient to refill the item's stockage objective. The inventory manager reviews the requirements computation and other relevant data to verify the accuracy of the computation and, when appropriate, initiates a purchase request. The purchase request, as approved by supervisory personnel, serves as the authorization for the procurement organization to buy the materiel.

In July 1990, DoD approved a plan to transfer the management of most of the Military Departments' managed consumable line items to the Defense Logistics Agency. The transfer was scheduled to commence in March 1991 and is to be completed in September 1994.

Objectives and Scope

The objectives of the audit were to determine whether quantities of consumable items to be bought on forthcoming procurements by the Military Departments' wholesale ICP's were warranted by anticipated requirements and whether internal management controls over the determination of those procurement requirements were effective. Specifically, we examined requirements' documents at the time the purchase was initiated to evaluate the basis for the procurement decisions; and we evaluated requirements data at the time of our review to determine whether requirements supported continuation of the procurement. To determine whether the requirements forecasts were reasonable, we reviewed the accuracy of demand rates, the propriety of nondemand based (additive) requirements, and the accuracy of on hand asset and due in asset balances. In addition, we selectively reviewed other requirements data and factors that affected the requirements forecast, such as administrative and production lead times and program change factors.

We did not evaluate or question purchase quantities that were based on the Military Departments' arbitrary economic order quantity floors. On June 27, 1989, the Assistant Secretary of Defense (Production and Logistics) issued a memorandum directing the Military Departments to discontinue the use of arbitrary economic order quantity floors and to reestablish the use of economic order quantity methods outlined in DoD Instruction 4140.39. We limited our review because the Military Departments had not fully implemented the changes in their automated requirements computation systems to accomplish the revision of DoD policy.

In August 1989, we obtained data on active purchases from each of the Military Departments' 13 ICP's. At that time, the ICP's had initiated procurements valued at approximately $3.5 billion for about 77,650 consumable line items. Our initial analysis indicated that 10,502 items, which involved procurements valued at over $50,000 for each item, accounted for 84 percent of the value of procurements in process. We selected for detailed review a sample of 304 items managed by 6 of the 13 ICP's (see Appendix A). The sample was a multistage sample with stratification at each stage and elements chosen randomly within each stratum.

This economy and efficiency audit was made from August 1989 through July 1990 in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD, and accordingly included such tests of internal controls as were considered necessary. Activities visited or contacted during the audit are shown in Appendix G.

Internal Controls

We evaluated internal controls used to ensure that the Military Departments' ICP's were purchasing only those quantities of supplies needed to satisfy authorized requirements, as defined by DoD policy. Accordingly, we reviewed the Military Departments' policy and implementing guidance related to the determination of spare and repair part requirements that was intended to ensure that unnecessary investments in wholesale consumable inventories did not occur. In addition, we reviewed the adequacy of supervisory review and approval of procurement decisions that was a primary method of internal control. Our review identified material internal management control deficiencies as defined by DoD Directive 5010.38. The Military Departments had not established definitive guidance for verification of requirements data before the initiation of purchases and for supervisory review of those purchase decisions. The Air Force Logistics Command did not periodically test data in its automated requirements computation systems to ensure that accurate requirements data were provided and used in the computation of procurement requirements. The Army Materiel Command did not maintain effective oversight of the ICP's implementation of DoD

and Military Department policies when implementation of the policy was delegated to the ICP's. Details are provided in Part II of this report.

Prior Audit Coverage

During the last 3 years, the Office of the Inspector General, DoD; the General Accounting Office; and the Military Departments' audit agencies completed reviews related to specific aspects of logistics management functions. In January 1991, we issued Report No. 91-037 on requirements for consumable items managed by the Defense Logistics Agency and currently have an audit in process on requirements for repairable items managed by the Military Departments. Appendix F summarizes other audits that addressed management processes and controls over the acquisition of wholesale inventories or addressed the development of requirements data that affected managers' decisions for the acquisition of materiel.

Other Matters of Interest

During the audit we discussed our conclusions on excessive purchases with item managers and officials at the ICP's. As a result, the ICP's curtailed or reduced purchases valued at approximately $21.5 million. For 37 items, purchases valued at $13.5 million that were in the audit sample and purchases valued at $1.0 million that were outside the audit sample were curtailed. For 5 items that were not in the audit sample, purchases valued at $7.0 million were reduced or canceled. In addition, during our review, the ICP's initiated actions to curtail purchases, valued at $11.7 million, for 27 of the sampled items primarily because of funding reductions or reduced requirements.

Appendix B identifies the items involving purchase requests that we classified as excessive and actions that were taken to curtail those purchases.

PART II - FINDING AND RECOMMENDATIONS

Premature and Unnecessary Purchases of Consumable Item Inventories

FINDING

The Military Departments' inventory control points (ICP's) prematurely or unnecessarily initiated purchase requests to acquire wholesale inventory of consumable items and did not promptly curtail purchases in-process in response to indicated reductions in future requirements. These conditions occurred because the Military Departments' policies or the ICP's implementation of those policies did not comply with DoD guidance that was intended to minimize investment in wholesale inventory; the Army Materiel Command did not provide oversight of the ICP's implementation of policy; the Air Force data systems did not provide accurate requirements data to the Air Force's automated requirements computation system; guidance for item manager verification of requirements data was inadequate and not enforced; and supervisory personnel did not exercise effective oversight of item managers' decisions to buy or to continue the purchase of materiel. As a result, of the $2.6 billion of materiel that the ICP's were purchasing (contracts not yet awarded in August 1989), we estimated that materiel valued at $378.9 million (14.5 percent) exceeded current requirements. We estimated that purchases valued at $209.0 million were premature and that purchases valued at $169.9 million were unnecessary. We estimated that the avoidable costs associated with holding these premature and unnecessary procurements were $220.9 million.

DISCUSSION OF DETAILS

Background. The ICP's ability to maximize operational readiness or supply availability while minimizing inventory investment is dependent on its ability to accurately forecast when procurement actions should be initiated and how much materiel should be procured. The ICP's utilized automated requirements computation systems to facilitate those determinations. The automated systems used a variety of forecasting techniques to develop requirements factors, such as the historic demand rate and demand variability, to estimate future requirements. The automated systems computed inventory levels and monitored asset positions to propose when a purchase needed to be initiated and what quantity should be purchased.

DoD Directive 4140.59, "Determination of Requirements for Secondary Items After the Demand Development Period," June 13, 1988, establishes DoD stockage policies for wholesale level inventories and prescribes procedures for determining a stockage objective quantity. For demand based consumable items, the stockage objective quantity is equal to the sum of the safety level, production lead time, administrative lead time, and procurement cycle. The stockage objective also includes any

protectable war reserve stocks and planned program requirements. The Directive provides that demand based items may be procured when assets on hand and on order are equal to or less than the sum of the safety level, lead time, and applicable protectable war reserve and planned program requirements.

DoD Instruction 4140.55, "Procurement Lead Times for Secondary Items," December 9, 1985, establishes policy and prescribes uniform guidelines for defining and developing procurement lead times used in the determination of requirements. Procurement lead time is comprised of administrative lead time and production lead time. Administrative lead time begins when an item's wholesale asset level drops to or below the reorder point and ends on the date the contractual instrument is executed. The production lead time begins when administrative lead time is completed and ends when receipt of significant deliveries is confirmed by the storage activities.

DoD Instruction 4140.39, "Procurement Cycles and Safety Levels of Supply for Secondary Items," July 17, 1970, provides policy and computation guidance for calculating procurement cycle and safety level requirements. The objective of the policy is to minimize the total variable cost to order and hold inventory. The instruction defines the types of operating costs that should be considered in developing the cost to order and cost to hold inventory, and requires annual verification of those costs.

In July 1990, DoD canceled DoD Instruction 4140.33, "Grouping of Secondary Items for Supply Management Purposes," June 12, 1968. This instruction established uniform criteria for grouping secondary items to be accorded varying degrees of management intensity in the supply management process. The Instruction provided that intensified management would normally be determined by dollar value of predicted demand. However, management intensity could also vary based on monetary inventory value or item criticality/essentiality. While the dollar value thresholds prescribed in the instruction were outdated, we believe that the management principles defined by this instruction remain valid. As it related to the determination of procurement requirements and approval of those requirements, the instruction envisioned applying greater management resources to verify requirements when the value of the purchase was increased.

The Military Departments established supply management policies and practices based on DoD Instruction 4140.33. The Military Departments' policies, in some cases, defined requirements verification procedures for intensively managed items. In addition, each of the Military Department's implementing guidance prescribed varying approval levels for the item manager's decisions based on the extended value of the procurement action.

On December 13, 1989, the Assistant Secretary of Defense (Production and Logistics) issued a memorandum, "Contract Terminations of Secondary Items No Longer Needed." This

memorandum specified that "It is DoD policy to reduce or cancel orders (purchase requests) prior to contract award and to consider reducing or terminating contracts after award when changes in mission, consumption factors, etc., make all or a part of the material ordered unneeded. The ICP's should establish procedures to manage, monitor, and audit termination actions within the activity. The procedures should provide for appropriate records to ensure accountability of termination decisions and the coordination of termination actions across functions. Termination decisions should be reached and implemented in a timely manner."

Prior to the issuance of the DoD policy, each of the Military Departments established policy for the continued surveillance of quantities being procured to ensure that when requirements decreased, unnecessary purchases would be prevented. The Military Departments' automated requirements computation systems were programmed to generate a notice to the item manager recommending the reduction of the purchase request quantity when the procurement requirement decreased significantly. The Military Departments' guidance required item managers to verify data used in the requirement computation to ensure that the system computed reduction was accurate and, when economically justified, initiate an amendment to the purchase request. Supervisory approval of the item manager's decision to either continue or reduce the purchase request quantity was also required by the Military Departments' guidance.

Evaluation of Active Purchases. As of August 1989, the Military Departments' ICP's were procuring materiel valued at $3.5 billion for 77,650 consumable line items. By limiting our review to procurements valued at $50,000 or more, we sampled from a universe of 9,960 line items valued at $2.6 billion. Based on our sample results, we estimated that excessive quantities of materiel valued at $378.9 million were being procured for 2,550 of those line items. We estimated that of the $378.9 million, $209.0 was premature and $169.9 was unnecessary. The criteria used to determine if an item was premature or unnecessary are discussed in Appendix A. Our estimate was based on the evaluation of active purchase requests for 304 sampled line items valued at $378.4 million.

Materiel was being prematurely or unnecessarily purchased for 83 of 304 sampled line items for which results were projectable and for 5 other sampled items whose purchases were initiated after August 1989 and accordingly were excluded from the statistical projection. We attributed the premature and unnecessary purchases for the 88 line items to four general causes: noncompliance with DoD and Military Department policy (21 items), automated system deficiencies (9 items), inadequate guidance for and oversight of requirements determination (46 items), and continuation of purchases when requirements decreased (12 items).

Based on the sample size used, we cannot project the above attributes to the universe of 9,960 consumable line items with a 90- or 95-percent confidence level and the tight precision required by our auditing standards. However, one can use the specific results as indicators of magnitude. To illustrate, if 9 of the 88 unreasonable purchases (approximately 10 percent) were caused by automated system deficiencies and we statistically projected that there were 2,550 unreasonable purchases in the universe of 9,960 line items; this indicates that about 10 percent of the 2,550 unreasonable purchases were caused by automated system deficiencies.

Noncompliance with DoD and Departmental Policy. For 21 of the 88 line items with premature and unnecessary purchases, the excessive purchases resulted principally because the Military Departments' policy or the ICP's implementation of that policy was inappropriate. The Army Materiel Command (AMC), in particular, delegated authority to interpret and implement DoD policy to its ICP's. However, the ICP's did not always effectively implement the policy and the AMC did not effectively monitor the ICP's implementation. The following paragraphs discuss the specific policies and programs that were inappropriate.

Implementation of Policy on Initiation of Purchases. Materiel was being prematurely and unnecessarily procured for 13 items because the U.S. Army Communications-Electronics Command (CECOM) implemented a program of initiating procurements that did not comply with DoD and Army policy. In addition, the CECOM's program circumvented internal controls of the Army's Commodity Command Standard System that were intended to ensure that purchase requests were reduced or canceled when requirements decreased after the purchase was initiated.

Army policy, as promulgated by Army Regulation 710-1, "Centralized Inventory Management of the Army Supply Systems," February 1, 1988, generally implemented the DoD policy related to the computation of the stockage objective quantity and reorder point. The AMC, which is primarily responsible for implementation of the regulation, established the Commodity Command Standard System. Within the Commodity Command Standard System, the Army developed an automated requirements computation system known as the Requirements Determination and Execution System. The Requirements Determination and Execution System (the Requirements System) was designed to provide a standard logistics management system, including a uniform system of internal controls, over the implementation of Army policy.

Army Regulation 710-1 authorized the AMC to use alternative procurement methods to offset long lead times and to acquire materiel as quickly and economically as possible. These procurement methods included the negotiation of option clauses to contracts for current requirements, the use of indefinite delivery type contracts and multiyear contracts, and the use of quantity discount procedures in solicitations. The AMC emphasized the use of option type contracts for secondary items, because option contracts reduce the administrative cost and time to reorder materiel in future years.

Army Regulation 710-1 required reviews of items with contract options to ensure that partial or full option quantities were exercised, when appropriate. The regulation directed that a decision not to use either the full or partial option quantity required approval by the Director or Deputy Director of Supply. To implement the alternative procurement methods, the regulation authorized deviation from the normal stockage policy (procurement based on reorder levels and the stockage objective quantity) when significant price discounts could be obtained by procuring larger quantities, and when increased procurement quantities were essential to attract bidders.

The CECOM implemented an aggressive "buy ahead program" that exceeded the constraints and intent of the Army policy. The CECOM's guidance for this program directed item managers to initiate purchase requests using requirements forecasts from budget stratification products. These purchase requests were initiated up to 18 months before items would have reached the reorder point. The CECOM's implementing guidance should have but did not exclude items with unstable demand patterns or limited demand history. In addition, the CECOM's program encouraged the initiation of purchase requests to exercise contract options even though assets on hand and due in exceeded the stockage objective and was not warranted by Army policy.

The CECOM did not establish an internal control system to ensure that the purchase requests would be adjusted or canceled if requirements changed or did not materialize at the forecasted rate. The Requirements System, as programmed, recommended the reduction of purchase requests that significantly exceeded the stockage objective quantity. To circumvent the Requirements System's recommended terminations, management included invalid additive requirements in the computation and increased those additive requirements if normal requirements decreased.

For example, on November 26, 1986, an item manager initiated an unfunded purchase request to exercise a contract option for 198 circuit card assemblies (National Stock Number [NSN] 5999-01-130-4209), valued at $1,106,033. The manager did not retain requirements data supporting that purchase decision. Documents

indicated that as early as January 27, 1987, the Requirements System recommended cancellation of the purchase, but the recommended cancellation action was not implemented because the item was a part of the "buy ahead program." In May 1989, the Requirements System again recommended that the purchase be canceled. The recommended action was not implemented and invalid requirements were input into the Requirements System to restrain further cutback notices. Funds were committed to the purchase request on August 7, 1989; and on October 10, 1989, CECOM exercised the option for 198 circuit card assemblies.

At the time the contract option was awarded, assets on hand and due in from earlier procurements (890 units) exceeded the stockage objective for the item by approximately 600 units. We requested that CECOM reevaluate requirements for the item, and CECOM officials determined that there was no foreseeable need for the assets during the remaining life of the weapons system (weapons system phase out is scheduled for 2004). On June 14, 1990, CECOM terminated the contract for the Government's convenience.

In another example, an item manager initiated a purchase request for 100 photographic cassettes (NSN 6760-01-063-1597) in May 1988. The Requirements System did not recommend a purchase at that time. The photographic cassettes should not have been considered for the "buy ahead program" because the cassette must be stored at 0 degrees fahrenheit to avoid shelf life constraints. In August 1988, the item manager input invalid additive requirements to the Requirements System to constrain the Requirements System from recommending termination of the purchase. On February 27, 1989, the item manager amended the purchase request to increase the quantity being procured to 150 cassettes valued at $480,485. At that time assets on hand exceeded the valid stockage objective for the item. Based on the demand rate for the item, a purchase request need not have been initiated until June 1990. The purchase request, as amended, for 150 cassettes, represented approximately 43 months of unneeded stock. Based on the results of our review, CECOM deleted the invalid additive requirements of 126 cassettes from the Requirements System. The deletion of the requirements prompted the Requirements System to recommend reduction of the purchase request by 95 cassettes in April 1990; however, CECOM did not follow the recommendations to reduce the purchase quantities and a contract was awarded on June 15, 1990.

Implementation of DoD Policy on Serviceable Returns. Materiel was being prematurely procured for four items because the AMC had not directed uniform implementation of the DoD policy on serviceable returns, and it did not oversee the Army ICP's implementation of the DoD policy.

DoD Directive 4140.59 specifies that when the wholesale manager authorizes the return of serviceable materiel, returned assets shall be considered in determining future requirements. The Directive states that "In requirements computation systems that consider customer requisitions as demands, demand data rates shall be adjusted for returns." "Returned assets shall be used as a basis for adjusting future requirements on an item by item basis, not as across-the-board averages or universally applied factors. The adjustment of individual item demand by serviceable returns shall not be constrained to a percentage of demand."

The AMC's Requirements System was programmed to permit constraint of the adjustment of the demand rate for serviceable returns. Furthermore, the AMC authorized each of its ICP's to independently establish the percentage of demands that would be offset by serviceable returns, and AMC did not maintain effective oversight of the policy implemented by the ICP's.

At the time the sampled purchase requests were initiated, the U.S. Army Tank and Automotive Command (TACOM) had elected to offset no demands for serviceable returns with the exception of parts for a few weapons systems. For example, TACOM initiated a purchase request for 3,247 wheel spindles (NSN 2530-01-203-5745), valued at $1,045,534, on October 26, 1988. The spindle was used primarily by field level maintenance activities in the repair of the high mobility multi-purpose wheeled vehicle. At the time of the buy decision, the stockage objective was overstated by approximately 1,000 units because serviceable returns were not used to adjust requirements. Serviceable returns increased after October 1988. In September 1989, TACOM still did not adjust the demand rate for serviceable returns. Serviceable returns for the spindle averaged 37 percent of the demands. As a result, in September 1989, TACOM was prematurely procuring 1,419 spindles valued at $456,918. In September 1989, the AMC directed the Army ICP's to adjust the demand rate, up to 20 percent, for serviceable returns. (The AMC instructions did not implement the intent of the DoD policy because the instructions constrained the demand rate to a percentage of demands.) In January 1990, TACOM increased the demand rate adjustment percentage for serviceable returns from 20 to 50 percent, which should have caused a reduction in the purchase quantity. The Requirements System recommended reduction of the purchase quantity on January 24 and March 6, 1990, and on March 30, 1990, the item manager reduced the purchase request quantity by 1,238 spindles, valued at $398,636.

Implementation of Policy for Computing Procurement Cycle Requirements. Materiel was being prematurely procured for three items because TACOM used erroneous data to compute procurement cycle requirements. The AMC allowed each of the Army ICP's to independently develop the cost to order and the cost to hold inventory and did not exercise oversight of the costs developed by the ICP's.

During FY's 1988 and 1989, the cost to order developed by TACOM was overstated because TACOM included acquisition costs related to principal end items in the computation of the variable cost to order. We found no evidence that the cost to order developed by TACOM was reviewed and approved by the AMC. Principal end items, such as ships, aircraft, tanks and vehicles, are specifically excluded from the provisions of DoD Instruction 4140.39. Army Regulation 710-1, however, does not instruct Army personnel to exclude acquisition costs for principal end items. Because acquisition costs are significantly higher for principal end items, TACOM's variable cost to order was overstated, which lengthened procurement cycles. The effect on the computation of procurement cycles was especially significant for items having a lower value of annual demand. In some cases, the excessive procurement cycle requirements caused the Requirements System to recommend excessive procurements, and in other cases the system did not recommend reductions to active purchases.

For example, TACOM initiated a purchase request for 87,190 bolts (NSN 5306-01-185-0159), valued at $68,008, in September 1988. A contract for the bolts was awarded on November 6, 1989. The Requirements System would not have recommended the quantity that was purchased if the procurement cycle requirement had been computed using an appropriate cost to order. We estimated that 54,473 bolts, valued at $42,489, were procured in excess of the stockage objective.

We are making no specific recommendations related to the cost to procure. During our audit, we questioned TACOM's cost to procure; and in March 1990, TACOM excluded the acquisition cost for principal end items from the cost to procure secondary items.

Implementation of DoD Policy on Administrative Lead Time. Materiel was being prematurely procured for one item because Air Force Logistics Command (AFLC) policy for determining the administrative lead time related to items on requirement type contracts did not implement the intent of DoD policy.

DoD policy authorized the Military Departments to use multiyear indefinite delivery type contracts and basic ordering agreements to procure spare and repair parts. While the time required to initially award these types of contracts is longer than the typical fixed quantity procurement action, the multiyear contracts permit follow-on orders to be awarded in 60 to 90 days after purchase initiation. Theoretically, the reduction in administrative lead time resulting from the use of these contracts would allow the Military Departments to reduce their investment in wholesale inventories.

AFLC Regulation 57-6, "Requirement Procedures for Economic Order Quantity Items," provides policy for determining administrative lead time. This policy, however, was inadequate because it did

not result in reduced investments for items awarded on multiyear catalog type contracts. The AFLC's policy specified that "In the case of requirements contracts, or other such contracts that provide for subsequent procurement options, administrative lead time is based on the time required to establish the basic contract and not that required to exercise options."

In September 1986, the San Antonio Air Logistics Center (San Antonio ALC) "froze" administrative lead time for items on catalog type contracts at the time required to award the basic contracts. This policy was not applied to other types of multiyear contracts awarded by either the Oklahoma City Air Logistics Center (Oklamoma City ALC) or the San Antonio ALC. As a result of the administrative lead time policy, an item manager at the San Antonio ALC initiated a purchase request for 5,264 vane assemblies (NSN 2840-00-421-8135), valued at $970,629, using an administrative lead time of 461 days. The 461 days represented the administrative lead time that was incurred to establish the basic catalog contract for this item. We recomputed requirements for the item using the average administrative lead time for the five most recent orders against the catalog contract, 108 days, and estimated that only 495 of the vane assemblies were needed. The remaining 4,769 vane assemblies, valued at $879,356, were being purchased prematurely.

Automated System Deficiencies. For 9 of the 88 items with excess purchases, the item managers' procurement decisions were affected by systemic deficiencies in the Air Force Economic Order Quantity Buy/Budget Computation System (D062 System) and other automated systems that accumulated requirements data for, or provided data to, the D062 System. Item managers relied on the erroneous data and initiated purchase requests for materiel that exceeded the authorized stockage objective.

Increasingly, item managers were relying on requirements data accumulated and summarized by automated requirements computation systems. In fact, DoD Instruction 4140.33 directed that items managed under medium and low management intensity principles should employ maximum use of computers and place greater reliance on automated data. However, the personnel responsible for the design and programming of the Air Force's D062 System were not adequately involved in either the design or day-to-day revision and maintenance of automated systems that provide data to the D062 System.

Air Force Demand Accumulation System. The Air Force D062 System developed erroneous demand rates to forecast requirements. The erroneous demand rates caused item managers to prematurely initiate procurements for six items. Accurate demand data are critical to the D062 System's forecast of buy and budget requirements. However, the Air Force did not maintain an automated demand history file that identified all demand and

return transactions used to develop the demand rate. Rather, the D062 System accumulated a demand summary for the current and past eight quarters based on weekly transaction tapes provided by the Stock Control and Distribution System (SC&D System) and the Retail Stock Control Data Central Material Locator System. These systems are the responsibility of the AFLC. Our review indicated that AFLC managers had not completely tested either the data these systems provided or the accumulation of demand data by the D062 System to ensure that the D062 System was accurately forecasting requirements.

We selectively reviewed demand rates used to forecast requirements levels and procurement quantities. The demand rate for 22 of 27 items reviewed was overstated because the D062 System's demand summary was not adjusted when the requisitioning activity canceled requisitions and because the D062 System's demand accumulation process duplicated the count of demands when the SC&D System reported amended shipping orders. The demand rate for 12 of the 22 items overstated the computed stockage level by over 6 months of forecast demand. We did not classify the purchase request for 6 of the 12 items as excessive because, at the time of our review, on hand and due in assets for the 6 items no longer exceeded the computed stockage level.

The SC&D System was not programmed to report requisition cancellation transactions to the D062 System, and as a result, requisition cancellations were not used to reduce demand rates. The Memorandum of Agreement for System Interfaces between the SC&D System and D062 System, dated November 4, 1980, did not require the SC&D System to provide requisition cancellations. AFLC identified this condition in March 1989 and the condition was corrected on August 26, 1989. However, the D062 demand summary was not and could not be corrected by automated means because the Air Force did not maintain a detailed demand history in an automated file. The erroneous demand summary and demand rate will remain overstated until September 1991, at which time the system will have accumulated an eight quarter demand base that reflects cancellations. Although AFLC was aware that requisition cancellations were not being processed to the demand summary, AFLC had not issued interim guidance requiring item managers to verify and correct the D062 demand rate before initiating significant procurements.

For example, the Oklahoma City ALC was procuring 1,000 transducers (NSN 6610-01-083-3442), valued at $2,929,865. This item was used principally by Air Force field level activities in the maintenance of A-10 aircraft. As of January 15, 1990, requirements for the transducer were forecasted based on the 592 demands recorded in the D062 demand summary. However, 171 of the 592 demands were canceled before the system change was implemented. As a result, the annual demand rate for the transducer was overstated by approximately 80 units. We

estimated that procurement of 298 of the 1,000 transducers, valued at $873,099, exceeded the stockage objective.

Another systemic deficiency caused the D062 System to count some demands more than once during the accumulation of the demand summary. The transactions that the SC&D System reported to the D062 System included both the requisition and referral order when the demand originated, and amended shipping instructions for requisitions that were in backorder status. The D062 System could not recognize that a demand associated with an amended shipping instruction had been previously counted and included in the demand summary because the D062 System did not retain a detailed history of demand transactions.

For example, on August 23, 1989, an item manager initiated a purchase request for 11,976 vanes (NSN 2840-00-945-3256), valued at approximately $709,000. This vane was installed in the J-79 Engine. With the phasedown of the F-4 Aircraft, Military Assistance Program activities were the primary source of demands for the vane. The D062 System forecasted requirements for the vane based, primarily, on demands for 16,060 vanes from Military Assistance Program activities. However, demand related transaction documents in the SC&D System and the Supply Assistance Management Informations System, which identified all requisitions from Military Assistance Program activities, substantiated only 9,472 of the 16,060 demands. The remaining 6,588 demands in the D062 System's demand summary resulted from the duplicate counting of demands. As a result, the stockage objective for the item was overstated by approximately 28 months of demand. The entire purchase request quantity was premature.

In February 1990, we provided AFLC managers with the interim results of our review and recommended that AFLC establish procedures for item managers to verify and correct the D062 System demand summary; issue guidance to the air logistics centers requiring them to verify and correct the demand summary before initiating purchase requests or awarding contracts for materiel valued at more than $200,000; and direct system design personnel to identify and correct the underlying systemic deficiencies.

The AFLC implemented a system change on April 10, 1990, to eliminate the duplicate counting of Military Assistance Program demands. On July 1, 1990, AFLC issued guidance for the verification of the demand summary and instructed the air logistics centers to require item managers to verify the demand summary before initiating a purchase request or awarding a contract valued at more than $1 million. The AFLC elected to limit the verification to items requiring high intensity management under DoD Instruction 4140.33, because of the extensive manual effort required to verify the demand summary.

Because AFLC automated systems maintain only a 90-day detail demand history that the item manager can access, the item managers will need to obtain and review microfiche products to verify older demands. We considered the AFLC actions to be responsive and are making no further recommendations related to item manager verification of the demand summary. However, we are making a recommendation related to the retention of an automated demand history to provide item managers with detail demand data needed to analyze and verify demand data used in the requirement computation and to identify atypical demands. We are also making a recommendation to require the periodic testing of the automated demand accumulation system to ensure that the automated systems implement Air Force policies.

Air Force Logistics Command Exchangeable Production System. Materiel was being prematurely or unnecessarily procured for three items because guidance in AFLC Manual 66-411, "Exchangeable Production System (Users Manual)," did not clearly describe procedures for the assignment of nonrecurring demand codes to requisitions emanating from the Exchangeable Production System. The manual identified a demand code field in the data entry guide/format but did not provide any instructions on when the operator should enter a demand code. Consequently, operating personnel did not enter the appropriate demand code into the system.

Air Force depot maintenance activities generated requisitions by entering data in the Exchangeable Production System. The System minimized the amount of data that maintenance personnel had to enter to create a requisition. One of the data elements that could be entered was a demand code, but if none was entered the system generated a requisition in which the demand code field was left blank. An Air Force supply activity receiving a requisition with a blank demand code field treats the demand as a recurring demand and considers it in determining the quantity of inventory that should be acquired/maintained to satisfy future demands. If a requisition contains a nonrecurring demand code, the supply activity generally does not consider the requisition quantity in stocking inventory for future requirements. For three items in our sample, nonrecurring demand codes should have been entered into the Exchangeable Production System, but were not. Consequently, the supply activities considered the requisitions as recurring requirements and inappropriately purchased or maintained unnecessary inventory of those items.

For example, the Oklahoma City ALC awarded a contract for 58 body assemblies (NSN 2915-00-728-9562PQ) valued at $74,960 on November 15, 1989. The demand rate for the body assembly, approximately 18 per year, was based primarily on receiving 39 demands from the local depot maintenance activity. The depot maintenance activity's records indicated that during the 2-year demand base period only three body assemblies were used in the

recurring maintenance program. The remaining assemblies were requisitioned to accomplish a nonrecurring modification work order for upgrade of the TF30-P-103 engine to the TF30-P-109 configuration. The blank demand code in the requisitions generated by the Exchangeable Production System caused the D062 System to consider those demands as recurring and therefore, the D062 System overstated the forecasted annual demand rate by approximately 16.5 units. In addition, the demands caused the Retail Stock Control Data Central Materiel Locator System to establish and maintain a special retail stock level in support of the maintenance activity. Since the modification program was completed, the retail stock level was unnecessarily withholding 28 assets from the wholesale item manager. Assets on hand and due in from a previous contract would be sufficient to support routine maintenance operations for 40 years. The purchase of the 58 assemblies was unnecessary. The item manager initiated action to terminate the contract for the 58 assemblies on April 13, 1990, but the contract was not terminated because estimated termination costs exceeded 80 percent of the contract price.

Inadequate Guidance for and Oversight of Requirement Determination. For 46 of the 88 items with excess purchases, the item managers initiated purchase requests for quantities that exceeded the authorized stockage objective, principally because either the Military Departments' guidance for item manager verification of requirements did not specify verification techniques or the item manager did not comply with the guidance, and because supervisory personnel did not effectively review the item managers' procurement decisions.

The Military Departments' policies and procedural guidance implementing DoD Instruction 4140.33 required item managers to verify selected data used to forecast requirements. The Military Departments' policies also required supervisory approval of item manager decisions at varying management levels based on the value of the purchase. In addition, several ICP's established an independent group to review the highest value purchases. However, our audit disclosed that the existing procedures and controls were not effective, and there was no independent statistically based quality control program to evaluate the propriety of purchase decisions and the adequacy of supervisory review and approval of those decisions. Twenty-seven of the 46 items reviewed involved purchase requests that required supervisory approval by at least three management levels and as many as six levels. However, management approved these 27 procurements without either discerning that the quantities were excessive or requiring additional verification by the item manager to ensure that the quantities were appropriate. The unverified requirements data that caused the quantities being procured to be excessive are discussed in the following paragraphs.

Verification of Abnormal Demands. Materiel was being prematurely and unnecessarily procured for 11 items because item managers did not verify atypical demands or abnormal demand patterns, as required by DoD and Military Department policy. The results discussed in these paragraphs do not include the demands erroneously coded as recurring demands by the Air Force's Exchangeable Production System (see page 16).

DoD Directive 4140.59 provides that demand forecasting techniques shall identify and shall exclude atypical data that unduly influence forecasts. Military Department policies have historically required item managers of intensively managed items to validate abnormally large demands and to review abnormal demand trends. These policies recognize that substantial investments in inventory are usually made for intensively managed items. This warrants increased manager effort to verify the basis of the requirements forecast to minimize inventory investment. The Military Departments' implementing instructions and procedures did not ensure that the item manager would identify and evaluate atypical demands in making decisions on quantities to buy. The automated requirements computation systems used by the Army and Air Force were not programmed to analyze demands to identify abnormal demands and demand trends. The absence of such an automated program did not preclude a review but neither did it facilitate a review by the item manager. The Navy's automated requirements computation system was programmed to analyze demand trends and to exclude demands related to abnormal demand trends from the requirements forecast. However, item managers at the Navy ICP's were authorized to forecast requirements using four or eight quarter demand averages, instead of the system computed demand rate. These demand averages included the abnormal demands that the system was programmed to exclude.

We selectively reviewed the sampled items to identify abnormal demands and demand patterns and the activities that submitted the related requisitions. We contacted those activities and learned that demands for nonrecurring programs or purposes were erroneously coded as recurring demands and included in demand rates used to forecast buy requirements.

For example, the Ships Parts Control Center was procuring 303 infrared lenses (NSN 5850-01-114-6387), valued at $346,892, to support a transmitting set. Between November 7 and December 26, 1988, the Ships Parts Control Center received 15 requisitions for a total of 30 infrared lenses from the Naval Electronics System Engineering Center. Demands during this period were significantly greater than normal; however, the item manager did not verify the purpose of those demands. The Naval Electronics System Engineering Center requisitioned the infrared lenses to fill shipboard allowances of Aegis Class ships to be constructed during the following 3-year period. DoD and Navy

guidance define requisitions for allowance materiel as nonrecurring demands. We computed requirements as of November 30, 1989, excluding the nonrecurring demands and estimated that 131 of the 303 lenses, valued at $149,976, being procured were in excess of the stockage objective. In March 1990, the item manager reduced the purchase request to 139 lenses because the demand rate had continued to decline.

While we recognize that the requisitioning activities did not comply with DoD and Military Departments' policy and guidance for demand coding of the requisitions, we do not believe that the item managers are alleviated from the responsibliity to verify abnormal demands.

Verification of Program Ratio. Materiel was being prematurely procured for two items at the Oklahoma City ALC because item managers assigned an incorrect peacetime program ratio to items when they computed the procurement requirement. The peacetime program ratio measured the change, increase or decrease, in the future program for the end item in relation to the historic program of the end item (flying hours, engine hours, etc.). The AFLC developed peacetime program ratios based on flying hour programs, which were intended to predict increased demands at field level maintenance activities due to increased flight operations. The Oklahoma City ALC developed peacetime program ratios for engine overhaul programs. The engine overhaul program ratios were intended to predict increased usage of repair parts due to planned increases in the depot level overhaul program.

Item managers incorrectly used the engine overhaul program ratio for the F110-100 engine instead of the flying hour program ratio for the F-16 aircraft in developing procurement requirements for the two items. Both items were used primarily in the field level maintenance of the aircraft. This caused an overstatement of requirements and precipitated premature purchases. For example, the Oklahoma City ALC was procuring 684 thermocouplings (NSN 6685-01-194-3797), valued at $454,860, based principally on application of the engine overhaul program ratio. Had the item manager correctly used the flying hour program ratio or developed and used a weighted program ratio, the procurement for the 684 thermocouplings would not have been initiated. We determined that the 684 thermocouplings were in excess of the stockage objective. The contract for the thermocouplings was terminated when we brought the error to the manager's attention.

Verification of Administrative and Production Lead Times. Materiel was being prematurely procured for four items, because item managers at the Oklahoma City and San Antonio ALC's used administrative and production lead times in the requirements computation that were not representative of the lead times that would be expected on future procurements.

DoD Directive 4140.59 provides that lead time forecasting techniques shall identify and shall exclude atypical data that unduly influence forecasts. AFLC Regulation 57-6 provided guidance for establishing the administrative lead time and production lead time used to forecast requirements. Generally, lead times were based on the lead times experienced on the latest routine procurement. However, the regulation required item managers to adjust those lead times when the most recent routine acquisition was not realistic. The regulation, however, did not provide guidance defining abnormal lead times or procedures for evaluating lead times. In addition, the Air Force's automated requirement computation system was not programmed to analyze lead times and to identify and refer potentially abnormal lead times to the item manager for evaluation.

The previous procurements on which the administrative lead times were based were abnormal because of actions such as the return of the purchase request by the procuring activity for rework by the manager, reassignment of the procurement to a different buyer, and amendment of the procurement quantity after the initial solicitation. Neither the item managers nor their supervisors analyzed those lead times to determine if they were representative.

For example, the San Antonio ALC was procuring 1,865 parts kits (NSN 2995-01-138-2302), valued at $1,148,691, to support the overhaul of the Ven Power Unit of the T-38 aircraft. The item manager computed the buy requirement based on an administrative lead time of 603 days, which was the actual time for award of the previous contract. However, our review of the contract file showed abnormal delays of 310 days of administrative lead time related to that contract: a total of 184 days were due to the return of the purchase request to the item manager for preparation of the justification and approval; and a total of 126 days were caused by a quantity amendment for which the contractor required additional time to revise the original bid. We estimated that 409 parts kits, valued at $251,911, were being prematurely procured because of excessive lead time. The item manager reduced the purchase by 224 parts kits.

Verification of Asset Balances. Materiel was being prematurely and unnecessarily procured for four items, because item managers did not verify the quantity of serviceable assets on hand and due in from previous procurement actions and for "family related items" when reviewing the requirements computation. Item managers relied on on hand and due in asset balances recorded in the automated inventory system, and those asset balances were not always accurate.

For example, the Oklahoma City ALC initiated a purchase request for 38 electronic modules (NSN 5905-01-271-9161), valued at $494,853, in March 1989. The system generated requirements

computation for the module did not identify 18 assets due in on a purchase request that was initiated in September 1988, and 2 assets due in on an initial provision purchase. These assets due in were recorded in the item manager's manual procurement history (AFLC Form 318) and should have been used to offset the purchase quantity. In addition, the estimated replacement rate used to compute nondemand based requirements for the module was excessive. When we brought these conditions to the attention of the item manager, the purchase request was canceled.

Verification of Nondemand Based Requirements. Materiel was being prematurely and unnecessarily procured for 17 items because item managers erroneously computed nondemand based requirements or did not effectively verify requirements data provided by other activities. The automated requirements computation systems for each of the Military Departments permit the inclusion of estimated requirements when historic demand rates are considered insufficient to support new programs or increases in existing programs. In some cases, the item manager computed nondemand based requirements with information provided by program managers and equipment technicians. In other cases, a separate ICP activity or a field activity computed the requirement and provided the requirement to the item manager. Deficiencies in each of the Military Departments are discussed below.

Army. The TACOM and the CECOM were prematurely procuring materiel for eight items. Item managers either did not comply with the provisions of DoD Instruction 4140.42, "Determination of Requirements for Item Spare and Repair Parts Through the Demand Development Period," July 28, 1987, when computing nondemand based requirements for secondary items during the demand development period or they did not cancel purchase requests when item requirements were canceled because of design changes. In addition, an item manager did not verify and challenge an erroneous requirements estimate provided by a field activity.

Army Regulation 700-18, "Provisioning of US Army Equipment," implemented the DoD Instruction, above. The Army Regulation defined the demand development period as the 2-year period after Initial Operating Capability of a weapons system and provided guidance for computing requirements during the demand development period. This guidance established conservative stockage policies during the demand development period to protect against obsolesence due to design changes and erroneous engineering estimates. However, item managers at Army ICP's did not always compute requirements for items during the demand development period using the criteria specified by the Army Regulation.

For example, the CECOM initiated a purchase of 116 circuit card assemblies (NSN 5999-01-232-5006), valued at $327,709, on September 22, 1987. The purchase request was intended to support continued fielding of a tactical computer terminal. The demand development period for the computer terminal started in May 1986. Because no demands for the assembly had been received by September 1987, the item manager used the estimated attrition demand rate developed during provisioning of the system. The requirement computation, based on a CECOM-developed formula, however, did not comply with DoD and Army policy for computing requirements during the demand development period. DoD Instruction 4140.42 specifies the use of a time weighted average monthly program based on the end item fielding schedule. Instead, the CECOM formula used the final population density of the end item. DoD Instruction 4140.42 also provides that during the demand development period, requirements be computed using a 3-month procurement cycle. The CECOM formula used a 12-month procurement cycle, which caused more inventory to be bought. In addition, CECOM's formula did not adjust the procurement quantity by 45 assemblies due in from a previous procurement action. Between February 1988 and the start of our review in November 1989, the Army's Requirements System recommended reduction of the purchase five times. CECOM did not take action.

By November 1989 CECOM still had not received any demands for the assembly and the 45 assets, previously due in, had been received. At that time, the demand development period was completed and approximately one-half of the end items were fielded. In our opinion, the procurement was unnecessary at that time. CECOM did not cancel the purchase request, and a contract for the 116 circuit card assemblies was awarded on February 1, 1990.

Navy. Materiel was being prematurely procured for one item because an item manager adjusted the requirement forecast for erroneous planned program requirements provided by a field activity. The item manager initiated purchase requests for 70,048 wire splicer kits (NSN 1355-01-152-1328), valued at $259,178. The item manager's requirements forecast was increased based on planned program requirements for the MK-48 Torpedo submitted by a principal user of the kit, Naval Weapon Station - Keyport. The item manager requested the weapon station to validate the requirement. The weapon station responded that the requirement was valid but did not provide the formulas and data needed to establish the reasonableness of the estimate. As demands did not materialize at the rates forecasted by the weapon station, we requested that the item manager reevaluate the nondemand based requirement. The item manager developed a program change factor based on past and planned firing programs for the MK-48 Torpedo, recomputed the requirement, and reduced the purchase requests by 49,794 kits, valued at $184,238.

Air Force. Item managers at the Oklahoma City and San Antonio ALC's computed excessive nondemand based requirements for eight items. The excessive requirements typically resulted from either the use of erroneous data, such as quantity per assembly or estimated replacement rate, or the use of an erroneous computation formula.

For example, the Oklahoma City ALC initiated a purchase for 695 bellcranks (NSN 2840-01-200-9108), valued at $657,296, in September 1988. The item manager computed the requirement using two bellcranks per bellcrank support assembly (the next higher assembly). Technical manuals for the support assembly indicated that there was only one bellcrank installed in each support assembly. At the time of our review, we estimated that 636 of the 695 bellcranks, valued at $601,497, exceeded the stockage objective. The Oklahoma City ALC terminated the contract at no cost to the Government when we brought this condition to the attention of the managers.

In other cases, the basis for the nondemand based requirement was not appropriate. For example, the San Antonio ALC was procuring 805 installation kits (NSN 1730-01-140-9987), valued at $2,254,314. The kit is used in conversion of the MJ-1A bomb loader from gasoline to diesel engine. The San Antonio ALC was managing the modification program based on gradual attrition of the gasoline engine and had not established a fixed schedule for replacement of the gasoline engines with diesel engines. The modification program was forecasted to extend over a number of years. The item manager included nondemand based (additive) requirements of 796 kits in the computation. The additive requirements represented the total number of kits needed to complete the conversion of the bomb loaders. The item manager indicated that the purchase request was initiated for the total kit requirement to take advantage of price breaks. However, the San Antonio ALC did not solicit alternative quantities to determine whether manufacturers would offer price breaks or whether the procurement would be economic considering the cost to hold the kits over a long period of years versus the cost to order.

The San Antonio ALC also did not coordinate the kit requirement with the procurement of the diesel engines. The San Antonio ALC was managing the gasoline and diesel engines as reparable items and procuring 142 diesel engines to support Air Force activities until September 1992. We concluded, based on February 1990 requirements, that the purchase of the 805 kits would result in the unnecessary acquisition of 581 kits, valued at $1,627,026. The procurement should have been limited to quantities needed to fill backorders and to support the engine procurement. In June 1990, the ALC reduced the purchase request to 74 kits to support the backorders at that time. The ALC advised us that future purchases of the kit will be coordinated with the engine procurement plan.

Verification of Requirements Data When Management Methods or Managing Activities Changed. Materiel was being prematurely or unnecessarily procured for two items because item managers did not verify requirements data when management of the item was transferred from reparable to consumable management principals or when management of the item was transferred between DoD activities.

For example, the Defense Industrial Supply Center (the Supply Center) transferred management of an axial compressor disk (NSN 2840-00-737-8951), to the Aviation Supply Office (ASO) in October 1988. The Supply Center had received two demands for the disk between 1985 and 1988. Accordingly, the Supply Center managed the item using numeric stockage objective criteria. DoD Instruction 4140.59 permits numeric stockage of an item because of military mission essentiality even when the probability of demand is low. The ASO item manager incorrectly input the Supply Center's numeric stockage objective quantity (3 each) to the ASO requirements computation as the quarterly forecast demand rate. In July 1989, the ASO item manager initiated a purchase request for 34 disks, valued at $115,356. In November 1989, the purchase was increased to 50 disks, valued at $395,000, when the manufacturer cited a minimum production of 50 disks.

In computing the requirement, the item manager did not verify the Supply Center's requirement data and did not ascertain the number of assets available to offset those requirements. Records provided by the Supply Center indicated that no demands had been received during the 12 months before the management transfer. Further, the Supply Center's records indicated that 13 disks were on hand in October 1988. ASO records, however, did not account for those disks. Using the records the Supply Center provided to ASO, we contacted the storage activities and found that ownership of six disks was not transferred to ASO. When we informed the item manager that the demand rate was erroneous and that additional assets were available, the item manager terminated the contract.

Verification of Potential Savings Before Award of Quantity Discount Procurements. Materiel was being prematurely and unnecessarily procured for six items because item managers at the Oklahoma City and San Antonio ALC's approved the acquisition of discount procurement quantities that were not cost-effective to the Government and were not justified for noneconomic reasons.

AFLC Regulation 57-6 provided guidance for initiating purchase requests using quantity discount procedures and for determining which quantity to select at contract award. The regulation provided for supervisory review and approval of the original procurement decision and the alternative quantities solicited, but did not provide for approval of the ultimate quantity

selection by the same management personnel. The regulation recognized that requirements could increase after a purchase request was initiated; therefore, it permitted the item manager to select a quantity greater than the economically justified quantity rather than processing an additional purchase request. In addition, the AFLC provided an automated model to compute the alternative cost of the quantities solicited based on the results of the contract solicitation. Item managers, however, did not comply with the guidance but elected to award contracts for the largest quantity solicited even though that quantity was not justified.

For example, the San Antonio ALC awarded a contract for 4,148 bearings (NSN 3110-00-938-1974), valued at $2,115,480. The purchase request was originally initiated for 1,766 bearings, valued at $1,233,109, and the bid solicitation asked for prices on three different quantities: 1,766 bearings, 2,957 bearings and 4,148 bearings to determine if contractors would offer quantity discounts. The successful bidder did not offer a price break for the larger quantities solicited; a unit price of $510 was offered for each of the three quantities solicited. The item manager's decision to award the contract for 4,148 bearings was not justified on either an economic or noneconomic basis. Of the 4,148 bearings, 1,868, with a value of $952,680, were in excess of the stockage objective for the item and represented premature investment in inventory. The item manager's decision to buy the 4,148 bearings was approved at the branch level, although purchases valued at more than $1 million are normally approved by the division chief.

Continuation of Purchases When Requirements Decreased. For 12 of the 88 items with excess purchases, requirements decreased after the purchase request was initiated, but the Military Departments' ICP's did not take prompt action to reduce or cancel the purchase. For 19 of the other 76 items for which other causes of excessive purchases were discussed earlier in this report, the Military Departments' automated requirements computation systems recommended reductions of the purchase requests. However, the excessive purchases were not reduced, primarily because ICP management did not stress purchase request reduction and supervisory oversight of item managers' decisions was not adequate.

The automated requirements computations system in each of the Military Departments functions as the principal internal control to ensure that potentially excessive purchases are identified and curtailed, when appropriate. The item managers did not always respond to the internal control system in a timely or effective manner. For example, an item manager received a notice recommending reduction of a purchase for electron tubes (NSN 5960-01-074-1030), in June 1989. A purchase of 17 tubes valued at $1,360,000 was in process. Demands had declined for

the electron tube and the automated requirements computation system recommended a reduction of four tubes, valued at $320,000. The item manager did not initiate action and there was no evidence of supervisory review of the manager's decision. Our review indicated that the purchase request should have been reduced by 14 tubes, valued at $1,120,000, because demands were declining and the weapon system was being phased out. The electron tube is used only in the AN/SLQ17 electronic receiver. In September 1988, the Navy had established a plan to replace the AN/SLQ17 receiver with the AN/SLQ32 electronic receiver. This plan provided for replacement of the AN/SLQ17 receiver by July 1993. The item manager should have but did not consider the effect of the planned phase-out when the automated system identified the potential excessive purchase condition. The item manager canceled the purchase in January 1990, after the demand rate declined further.

Implementation of the policy for reduction of active purchases varied widely among the ICP's. For example, the ASO had an aggressive program for monitoring the continuing need for the purchase. Although the ASO automated system only generated notices on a quarterly cycle, item managers reviewed those notices and initiated action to reduce the purchase quantity. Based on the September 1989 review cycle, item managers reduced the purchase for 11 of the 61 sampled items. (We classified 3 of these 11 purchases as excessive because the quarterly cycle did not result in timely action.) On the other extreme, management at the CECOM did not establish an effective program. Before the start of our audit field work, the Army's Requirements System had recommended reductions for 13 of the 21 items that involved excessive purchases. At the time of audit, item managers had not reduced any of those purchases.

We generally attributed the lack of action on recommended reductions to management's emphasis on supply availability goals and obligation rates and to ineffective supervisory oversight of item manager decisions. The lack of emphasis given to reductions of active purchases by Army ICP's was also evidenced by policy set forth in the AMC Supplement to the Federal Acquisition Regulation. This policy, which impeded the manager's ability to make reductions, provided that ". . . changes (other than option exercise) which adjust quantity by plus or minus 25% of the quantity contained in a synopsis, solicitation, or contract shall not be accepted and processed as part of the same procurement action unless such changes are approved by both the Director/Deputy Director of P&P [Procurement and Production] and the chief or deputy of the cognizant requirements organization. Cancellation of solicitations and contracts are subject to this restriction."

The Military Departments' automated requirements computation systems did not recommend reductions for 57 of the sampled items

discussed earlier in this report. The capability of the automated system to identify potentially excessive procurements is constrained by the accuracy of the requirements data for the item. If the item manager did not identify and correct erroneous data in the system before the initiation of a purchase, that data often remain incorrect for an extended period. While Military Departments' policies required periodic verification of requirements data, typically performed during budget stratification reviews, these reviews did not appear to be more effective than the review before initiation of the purchase. The erroneous requirements data were not identified and corrected.

On December 13, 1989, the Assistant Secretary of Defense (Production and Logistics) issued guidance on the reduction of excessive purchases. In addition, starting in December 1989, the Military Departments and ICP's implemented measures to conserve funds because of reductions in expenditure authority. These measures included across-the-board reductions in safety level and procurement cycle requirements, and reductions of active procurements or deferral of recommended procurements for specific weapon systems or classes of items.

By the end of our audit field work, the ICP's were generally placing greater emphasis on the review of recommended reductions. However, our review indicated that many excessive purchases were not identified by the automated systems, and even when identified, an unacceptable rate of excessive purchases were not reduced. Greater management attention and oversight is needed.

Other Internal Control Deficiencies. Item managers initiated 417 purchase requests for the 304 sample items. Requirements data and documentation supporting the procurement decision were not retained by item managers for 105 of those 417 purchase requests. The lack of documentation made it difficult for inventory managers and supervisors to provide the rationale for procurement decisions. The lack of documentation also significantly increased the audit effort required to determine the underlying cause of some excessive procurements. We were unable to form an opinion on the reasonableness of procurements for five items, because documentation supporting those decisions was not retained.

"Standards for Internal Controls in the Federal Government," General Accounting Office, 1983, required that the basis for transactions, such as a purchase request, be clearly documented and that the documentation be available for examination by persons responsible for verifying the transaction.

In recent audit reports, the General Accounting Office reported that item managers at several Army and Navy ICP's had not complied with ICP policies for retention of requirements data because the guidance on document retention was fragmented and misunderstood (Appendix F).

DoD and the Military Departments concurred with the findings and initiated actions to implement the GAO recommendations. Because the actions were not fully implemented at the time of our review, we could not form an opinion on either the adequacy of the proposed actions or the Military Departments and ICP's implementation of the action. Accordingly, we are making no additional recommendations concerning the retention of requirements data and documentation.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Assistant Secretary of Defense (Production and Logistics) either reissue DoD Instruction 4140.33, or include the guidance that establishes DoD policy for supply management grouping of secondary items and the criteria for intensive management of secondary items, including spare and repair parts, in another DoD instruction.

2. We recommend that the Commander, Army Materiel Command; the Commander, Naval Supply Systems Command; and the Commander, Air Force Logistics Command:

a. Revise guidance for verification of requirements before the initiation of purchase requests and before the award of contracts. The guidance should specify criteria, such as the value of the purchase or intensity of item management, for selecting and performing expanded verification of requirements data and include procedures and techniques for verifying the various elements of requirements data.

b. Issue guidance that identifies specific factors that either should be or must be evaluated in the supervisory review and approval of procurement decisions.

c. Direct the inventory control points to establish a statistically based quality control program to provide for the independent evaluation of item manager's purchase decisions and the supervisory review and approval of those purchases.

d. Report the material internal control weaknesses and the action taken to correct those weaknesses, in accordance with DoD Directive 5010.38.

3. We recommend that the Commander, Army Materiel Command:

a. Make periodic reviews of inventory control points to confirm that the inventory control points effectively implement the DoD and the Military Departments' policies, such as the DoD serviceable returns policy and the Army policy for using alternative procurement methods, when implementation of the policy has been delegated to the inventory control points.

b. Modify the automated requirements computation system to analyze demand data and to identify and refer potentially abnormal demands and demand trends to item managers for evaluation.

c. Revise policy in the Army Materiel Command supplement to the Federal Acquisition Regulation to discontinue the requirement for the contracting function coapproval of procurement reduction if the proposed reduction preceeds contract award.

4. We recommend that the Commander, Air Force Logistics Command:

a. Revise Air Force Logistics Command Regulation 57-6 guidance for estimating administrative lead times for items on multiyear procurement instruments, and guidance for determining whether lead time estimates from previous procurement actions are representative and reasonable.

b. Establish an automated system for retention of a 2-year demand history; and require systems design personnel to periodically test the accuracy of demand rates used in the Economic Order Quantity Requirements Determination System.

c. Issue guidance to Air Logistics Center maintenance activities to clarify and reiterate proper materiel ordering procedures and accurate demand coding of requisitions for input to the Exchangeable Production System.

d. Modify the automated requirements computation system to analyze demand data and to identify and refer potentially abnormal demands and demand trends to item managers for evaluation.

e. Modify the automated requirements computation system to analyze leadtimes and refer potentially abnormal leadtimes to item managers for evaluation.

f. Revise guidance to require supervisory approval of item manager's decisions to award quantity discount procurement contracts.

MANAGEMENT COMMENTS AND AUDIT RESPONSE

A draft of this report was provided to the addressees on February 11, 1991. As of June 20, 1991, we had not received comments from the Army. We request that the Army provide comments in accordance with DoD Directive 7650.3 in response to the final report. The Navy's comments were received too late to be included in this report; and will be considered as a response to the final report. The Office of the Assistant Secretary of Defense (Production and Logistics) and the Air Force responded to the draft report and their comments are summarized below.

Principal Deputy Assistant Secretary of Defense (Production and Logistics) Comments to Recommendation 1. The Principal Deputy concurred with the intent of the recommendation. The Principal Deputy stated that the new DoD 4140.1-R, due out for coordination and comment by May 1991, includes guidance that is responsive to this recommendation, because it provides guidelines for intensive review of requirements before contract award. The full text of the Principal Deputy's comments is in Appendix C.

Audit Reponse. The actions proposed by the Principal Deputy could satisfy the intent of the recommendation. However, we request that the Principal Deputy provide us a copy of the proposed guidance on intensive management in response to the final report.

Air Force Comments on Recommendation 2.a. The Air Force concurred and indicated that Air Force Logistics Command Regulation 57-6 will be revised to include the recommended guidance as well as expanded criteria for verifying requirements data. The estimated completion date is December 31, 1991.

Audit Response. The Air Force's comments are generally responsive and planned actions satisfy the intent of the recommendation. We request a copy of the revised guidance when it is issued.

Air Force Comments on Recommendation 2.b. The Air Force concurred with the intent of the recommendation, but did not believe that additional guidance was necessary. The Air Force felt that existing guidance in Air Force Logistics Command Regulation 57-19 was adequate. The Air Force did indicate that the Air Force Logistics Command will reemphasize to the inventory managers the importance of compliance with this guidance during the April and May 1991 item managers' reviews and workshops.

Audit Response. The Air Force's reemphasis should be helpful but we do not believe it will be sufficient. We agree that Air Force Logistics Command Regulation 57-19 provides direction for supervisory review and approval of purchase decisions. However, that direction did not preclude or minimize excessive purchase. The audit disclosed that ineffective supervisory oversight contributed to excessive purchase related to 46 of the 307 sampled items (15 percent). The cited Air Force guidance is too broad; it does not provide specific criteria or procedures for selecting items and performing more extensive reviews of their requirements when procurements are in process. The guidance does not direct supervisory attention to requirements data and factors that pose the greatest risk for unnecessary purchases. Accordingly, we request the Air Force to reconsider its position on this recommendation when responding to the final report.

Air Force Comments on Recommendation 2.c. The Air Force concurred with the intent of the recommendation, but indicated that an existing program satisfied the intent of the recommendation. That program provides for independent evaluation of item manager purchase decisions, and is conducted quarterly on a random sampling basis. Recent restructuring placed implementation of the program at the directorate level. The Air Force also stated that a policy letter is being prepared that instructs management to "eliminate, reduce, and streamline item management and management reviews" by emphasizing building quality into the process rather than conducting external reviews. The estimated completion date for the policy letter was May 31, 1991.

Audit Response. Building quality into the process is a worthwhile goal. However, we also believe that an independent statistically based program for evaluating the procurement process is one of the necessary components of an effective internal control program. Such a program could provide the Air Force with assurance that operating personnel have implemented requirements' policy and guidance and that quality is being built into the process. A statistically-based evaluation could be used to measure the overall accuracy or reasonableness of Air Force purchase decisions and could identify requirements data and factors that need closer scrutiny during the item manager and supervisory review processes. Accordingly, we request that the Air Force reconsider its position on this recommendation when responding to the final report.

Air Force Comments on Recommendation 2.d. The Air Force nonconcurred with the recommendation because it does not believe the discrepancies found constitute an internal control weakness material enough to warrant inclusion in the annual report to the Secretary of Defense. In addition, the Air Force believes that actions that are being taken and planned to identify and resolve problems with data systems that feed the requirements computation system (Project Scrub), to revise policy and implementing guidance (Air Force Logistics Command Regulation 57-4), and to emphasize accuracy in the requirements determination before contract award (Pacer Trim) are adequate to ensure compliance with the audit recommendations.

Audit Response. We do not share the Air Force's view that the discrepancies found do not constitute internal control deficiencies that warrant inclusion in the annual report to the Secretary of Defense. DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987, provides the criteria for assessing materiality of internal control weaknesses. Two of the criteria are that problems should appear in more than one DoD Component and that the problems should amount to $2 million or more. As shown in this report, the problems were observed in the Army, Navy, and Air Force and involved avoidable costs in excess of $200 million. Accordingly, we concluded that the internal control weakness was material and should be reported. The Air Force should include in its report,

actions that are in process or planned to resolve the internal control weaknesses.

Air Force Comments on Recommendation 4.a. The Air Force concurred with the recommendation and indicated that definitive policy on estimating administrative lead times for multiyear procurement will be disseminated to the ALC's as an interim change to Air Force Logistics Command Regulations 57-6 and 57-4. The estimated completion date is September 30, 1991.

Audit Response. The actions proposed by the Air Force meet the intent of the recommendation. We request a copy of the interim change when it is issued.

Air Force Comments on Recommendation 4.b. The Air Force concurred with the intent of the recommendation. The Air Force indicated, however, that the Stock Control and Distribution System does not have the memory capacity to keep 2 years of transaction history on-line, and in the absence of on-line data, the process of testing demand rates is labor intensive. Therefore, the Air Force Logistics Command will issue directions to the item managers requiring periodic reviews of demands for selected items and system reconciliation to provide accuracy checks of demands used in the requirements computation system.

Audit Response. We concluded that the proposed alternative procedures for periodic reconciliation could be a satisfactory interim means of testing and validating the reasonableness of the summary demand data used in the requirements system. However, we could not evaluate the proposed reconciliation because the Air Force did not provide information describing the proposed reconciliation, such as the basis for selecting items for the reconciliation and the scope and frequency of the reconciliation. The Air Force response was not satisfactory with respect to maintenance of the 2-year demand history. The lack of a 2-year demand history limits the item manager's ability to effectively analyze demand data. The item manager cannot readily identify specific demand transactions or the activities that had a major impact on demands and cannot readily evaluate the influence that those demands should have on future requirements. The existing process, a labor intensive review of microfiche records, does not facilitate item manager evaluation of historic demand data. We request that the Air Force reconsider its position and provide comments in response to this final report.

Air Force Comments on Recommendation 4.c. The Air Force concurred with the intent of our draft report recommendation to "modify the Exchangeable Production System to permit appropriate coding of demands on requisitions." However, the Air Force stated that the draft audit report incorrectly indicated that the Exchangeable Production System was programmed to automatically code all outgoing requisitions as recurring demands, and provided additional information to demonstrate that demands (requisitions) can be coded as nonrecurring on an exception basis. The Air

Force Logistics Command proposed issuing interim policy and operational guidance on demand coding to ALC maintenance activities to reiterate proper materiel ordering procedures. The estimated completion date for the interim policy was May 31, 1991.

Audit Response. The actions proposed by the Air Force satisfy the intent of the draft report recommendation. We have revised the finding and recommendation and accordingly, request Air Force's comments to the revised recommendation.

Air Force Comments to Recommendations 4.d. and 4.e. The Air Force concurred with the intent of the recommendations. The response suggested, however, that since Defense Management Review Decision 926 directs the management transfer of the majority of consumable items to the Defense Logistics Agency within 3 years, a system modification may not be feasible. As an alternative or interim action, the Air Force plans to instruct its item managers to perform analysis of demands and lead times to identify abnormal demands and lead times before initiating action based on the requirements computation.

Audit Response. We request that the Air Force perform a feasibility analysis for modifying the requirements system. The Defense Management Review Decision 926 may not result in the transfer of all consumable items to the Defense Logistics Agency and the Air Force may retain management for a significant number of critical and complex items. Regarding the Air Force's alternative action to instruct its item managers, we concluded that the proposed guidance could constitute an effective interim management action until a system change can be implemented. However, we could not evaluate those actions because the Air Force did not provide copies of the instructional material. Accordingly, we request that the Air Force provide a copy of the instructional material as part of its response to the final report.

Air Force Comments on Recommendation 4.f. The Air Force concurred with the intent of the recommendation and indicated that interim policy guidance will be issued to emphasize the need for additional supervisory review when the buy quantity changes from that submitted on the original purchase request. The estimated completion date was May 31, 1991.

Audit Response. The actions proposed by the Air Force satisfy the intent of the recommendation. We request that the Air Force provide a copy of the interim policy guidance in response to the final report.

STATISTICAL SAMPLING PLAN AND RESULTS

Procurements in process were recorded in computer files at the Military Departments' wholesale inventory control points (ICP's). The ICP's provided us with computer tapes identifying procurement actions that had been initiated, but for which a contract had not been awarded as of August 1989. The Army and Air Force activities procured consumable items with stock fund monies. Therefore, we extracted procurement actions for national stock numbered items funded by the Military Departments' Stock Fund appropriations. The Navy activities, however, procured both reparable and consumable items using stock fund monies. Accordingly, we extracted procurement actions for national stock numbered items coded as consumable (includes field level reparables). As of August 1989, the wholesale management activities had procurements in process for 77,644 items, valued at $3.5 billion.

We limited our review to a sample universe of 10,502 items involving active purchase requests, valued at $2.9 billion. Our analysis of the procurements in process indicated that the 10,502 items with procurements valued at $50,000 or more represented less than 15 percent of the items being procured but accounted for approximately 84 percent of the value of the procurements. In addition, the Military Departments' inventory management policies generally required greater management intensity for those items, assigned higher graded inventory management personnel to those items, and required supervisory approval of the procurements at higher management levels.

We used a multistage sampling plan that incorporated stratified sampling methodologies. Our initial sample was 326 items, with purchase requests valued at $467.3 million, that were initiated by six of the Department ICP's. The sample was drawn from a universe of 10,502 items with purchases in process, valued at $2.9 billion. We adjusted the sample universe to 9,960 items involving purchases valued at $2.6 billion, to reflect corrections of the quantity or unit price assigned to a purchase, to recognize quantity reductions that were in process at the time we obtained the sample universe, and to exclude items that were managed using depot level reparable management techniques but procured with stock fund monies. Adjustments for similar reasons to our initial sample of 326 items resulted in a final audit sample of 304 items involving purchases valued at $378.4 million. The sample results were projected with a 95-percent confidence level and a sampling precision of +/- 11 percent for dollars.

We estimated that materiel valued at $378.9 million was being purchased, which exceeded authorized stockage objectives. Of the $378.9 million, we estimated that $209.0 million was premature and $169.9 million was unnecessary. We classified procurement of

items as premature if the quantity exceeded the stockage objective by more than 6 months of forecast demands. The value of the premature purchase, however, was the value of materiel in excess of the stockage objective up to 5 years of forecast demand. The quantities being procured in excess of 5 years of forecast demand were classifed as unnecessary.

The audit tests were designed to evaluate the active purchases as of August 1989 and render an opinion on the reasonableness of the quantities being procured at that time in relation to stockage policies and objectives. Our estimates in this report have been adjusted downward to fully recognize reduction of excessive purchases which the ICP's effected on their own initiative after August 1989, but before our audit field work was completed in June 1990. The ICP's actions resulted primarily from funding reductions and force structure changes which reduced forecasted requirements. These ICP actions reduced the audit projection of excessive purchases by about $86 million.

The costs associated with the premature and unnecessary procurements were $220.9 million. This consisted of $169.9 million of unnecessary purchases and $51.0 million in holding costs related to the premature purchase. We estimated the holding costs for the premature purchases using the annual holding cost rate developed by each of the Military Departments, with one exception. We adjusted the holding cost rate if the Military Departments' rate was not based on the DoD prescribed cost of capital of 10 percent.

The sample universe and statistical projections of premature and unnecessary purchases and the costs associated with those purchases are summarized below for each Military Department.

Sample Universe and Projections of Audit Results
($ Million)

Military Department	Audit Universe Value	Statistical Projections: Value of Premature Purchases	Statistical Projections: Holding Cost of Premature Purchases	Statistical Projections: Value of Unnecessary Purchases	Total of Holding Cost of Premature and Value of Unnecessary Purchases
Army	$ 903.294	$ 92.307	$20.510	$ 91.629	$112.139
Navy	804.928	10.002	3.923	15.645	19.568
Air Force	910.518	106.670	26.630	62.612	89.242
Total	$2,618.740	$208.979	$51.063	$169.886	$220.949

STATISTICAL SAMPLING PLAN (continued)

The items reviewed and excessive purchases are summarized below for each inventory control point.

Summary of Items Reviewed and Excessive Purchases by Inventory Control Point

Inventory Control Point	Items Reviewed		Excessive Purchases	
	Number of Items	Extended Value ($ million)	Number of Items	Extended Value ($ million)
Army				
Communications-Electronics Command	50	$ 75.980	21	$12.036
Tank and Automotive Command	50	72.993	13	3.283
Navy				
Aviation Supply Office	61	66.008	7	3.008
Ships Parts Control Center	41	68.376	5	1.960
Air Force				
Oklahoma City Air Logistics Center	46	41.352	18	8.484
San Antonio Air Logistics Center	56	53.728	19	7.184
Total	304	$378.437	83 *	$35.955 *

* For 14 of the 83 items, excessive purchases valued at $7.978 million were not used in the audit projections, because the inventory control points curtailed the purchases during our review.

SUMMARY OF ITEMS INVOLVING EXCESSIVE PURCHASES

National Stock Number	Excessive Purchase Quantity	Excessive Purchase Value	Purchase Reductions: In Response to Audit Quantity	In Response to Audit Value	ICP Self Initiated Quantity	ICP Self Initiated Value
Army						
1615-01-112-5904	619	$ 5,058,747 [1/]	619	$ 5,058,747	0	$ 0
5830-01-082-0804	10,500	1,483,755	0	0	0	0
5895-01-122-2907	808	1,680,104	648	1,172,232	0	0
5999-01-130-4209	198	1,106,033	198	404,118	0	0
5820-00-893-1323	13,893	1,986,699	9,000	1,287,000	0	0
6145-01-155-4258	44,614	1,539,183	0	0	0	0
5975-01-235-1962	285	625,413	240	526,495	0	0
6760-01-063-1597	124	397,201	0	0	0	0
5985-01-124-5430	4,840	646,624	4,840	646,624	0	0
5855-01-242-2570	822	185,176	0	0	0	0
5985-00-089-8988	328	186,110	166	94,190	0	0
6140-01-046-1116	337	203,885	0	0	0	0
7510-01-256-0035	20,970	171,934	0	0	0	0
5840-01-052-3855	127	448,342	0	0	0	0
6615-01-087-1821	76	262,690	76	262,690	0	0
5895-01-044-9844	369	292,986	0	0	0	0
5999-01-232-5006	116	327,709	0	0	0	0
5840-01-082-3676	42	105,720	42	105,720	0	0
5820-01-136-3771	20	97,260	20	97,260	0	0
5975-01-144-5979	100	109,136	100	109,136	0	0
5995-01-108-3648	4,500	283,950 [2/]	3,500	220,850	0	0
5855-01-247-7350	706	54,221	706	54,221	0	0
2910-01-160-0613	2,083	880,942	0	0	0	0
2530-01-203-5745	1,419	456,918	0	0	1,238	398,636
2920-01-031-9027	6,196	1,414,616	0	0	0	0
2590-00-870-9956	36	656,290	0	0	44	802,132
5306-01-185-0159	54,473	42,489	0	0	0	0
6220-01-219-7620	407	149,544	0	0	199	73,119

Footnotes are on the last page of Appendix B.

SUMMARY OF ITEMS INVOLVING EXCESSIVE PURCHASES (continued)

National Stock Number	Excessive Purchase Quantity	Excessive Purchase Value	Purchase Reductions: In Response to Audit Quantity	In Response to Audit Value	ICP Self Initiated Quantity	ICP Self Initiated Value
Army (continued)						
2950-00-999-5022	107	$ 55,747	105	$ 54,705	0	$ 0
5945-01-268-3577	137	81,652	147	87,612	0	0
2930-01-108-5220	42	25,326	0	0	0	0
2520-01-092-6390	28	79,246	0	0	0	0
4810-01-193-1871	44	73,656	44	73,656	0	0
5930-01-287-3965	642	97,584	0	0	643	97,736
6635-00-900-8563	173	92,688	173	92,688	0	0
3040-01-192-1742	33	57,310	0	0	33	57,310
Army Total		$21,416,886		$10,347,944		$ 1,428,933
Navy						
1620-01-144-2807	150	$ 1,475,472	0	$ 0	150	$ 1,475,472
1660-00-006-7950	153	1,100,376	0	0	79	568,168
1680-01-285-4647	17	75,501	21	93,266	0	0
4920-01-189-8957	37	155,520	0	0	26	109,284
5315-01-137-7357	62	61,876	0	0	77	76,846
1730-01-065-8545	113	44,917 [2/]	0	0	0	0
2840-00-737-8951	50	395,000 [2/]	50	395,000	0	0
5840-01-101-6854	88	458,480	0	0	128	666,880
5960-01-074-1030	14	1,120,000	0	0	17	1,360,000
1355-01-152-1328	45,767	169,338	49,794	184,238	0	0
5850-01-114-6387	131	149,977	64	73,271	100	114,486
4470-01-041-5096	41	62,693	0	0	41	62,693
1440-01-040-2335	4	800 [1/]	4	800	0	0
Navy Total		$ 5,269,950		$ 746,575		$ 4,433,829

Footnotes are on the last page of Appendix B.

SUMMARY OF ITEMS INVOLVING EXCESSIVE PURCHASES (continued)

National Stock Number	Excessive Purchase Quantity	Excessive Purchase Value	Purchase Reductions: In Response to Audit Quantity	In Response to Audit Value	ICP Self Initiated Quantity	ICP Self Initiated Value
Air Force						
2840-00-078-0996	245	$ 222,297	0	$ 0	1,691	$ 1,479,955
2840-00-945-3256	15,199	823,260 2/	0	0	11,976	667,303
2840-01-124-0764	14	247,915	0	0	34	602,079
2840-01-282-5896	39,657	2,847,373	39,657	2,847,373	0	0
2925-01-190-9352	3,540	1,267,816	0	0	0	0
6610-01-083-3442	298	873,100	298	873,100	0	0
5905-01-271-9161	38	494,853	38	494,853	0	0
3120-01-258-5422	9,047	191,082	0	0	0	0
2840-00-136-5907	293	266,630 2/	0	0	0	0
1560-01-164-5988	80	403,941	67	338,300	13	65,640
6685-01-194-3797	684	454,860	684	422,028	0	0
1560-00-724-9018	1,217	179,057	0	0	1,602	235,702
2840-01-200-9108	636	601,497	695	89,655	0	0
5930-00-407-4409	143	92,592 3/	85	55,037	0	0
6150-01-238-7831	96	102,671	96	71,040	0	0
6615-01-116-9429	118	102,190	80	69,282	33	28,579
5930-01-253-8023	26	55,826	0	0	22	47,237
5826-00-413-1003	29	88,598	29	80,823	0	0
1560-00-676-0821	9	27,000 3/	9	27,000	0	0
2915-00-728-9562	58	74,960	0	0	0	0
1560-01-215-7588	10	115,734 1/	10	115,734	0	0
1560-01-034-9635	7	29,105 1/	7	29,105	0	0
1730-01-140-9987	581	1,627,027	581	1,627,027	150	420,058
2915-00-371-2306	129	993,853	0	0	155	1,194,165
8475-01-210-8509	21,093	529,012	0	0	22,174	556,124
2840-00-421-8135	4,769	879,356	0	0	0	0
2995-01-138-2302	409	251,911	0	0	224	137,966
5962-01-235-2379	75	240,059	0	0	0	0

Footnotes are on the last page of Appendix B.

SUMMARY OF ITEMS INVOLVING EXCESSIVE PURCHASES (continued)

National Stock Number	Excessive Purchase Quantity	Excessive Purchase Value	Purchase Reductions: In Response to Audit Quantity	Purchase Reductions: In Response to Audit Value	Purchase Reductions: ICP Self Initiated Quantity	Purchase Reductions: ICP Self Initiated Value
Air Force (continued)						
2915-00-284-2526	898	$ 909,539 3/	0	$ 0	0	$ 0
2835-01-094-0967	457	605,996	0	0	0	0
3110-00-938-1974	1,868	952,680 3/	0	0	0	0
3110-00-399-0117	1,309	718,641 2/	1,464	803,736	0	0
8475-01-210-8508	1,548	38,824	0	0	3,932	98,615
3040-01-271-9107	5,441	436,531 2/	5,441	436,531	0	0
1560-01-077-4135	241	332,735	22	30,375	209	288,564
1680-01-084-5041	887	81,167	611	48,886	1,252	100,110
3110-01-203-1700	27	630,750	0	0	0	0
1680-00-222-2528	133	84,556	133	84,556	0	0
3120-00-767-8342	1,111	25,664	0	0	0	0
3010-01-004-2982	660	135,326	660	135,326	0	0
5306-01-251-8743	90,593	57,083 2/	0	0	0	0
2840-01-251-3631	2,033	54,464	0	0	0	0
4920-01-099-3203	13	70,528	0	0	0	0
1730-01-140-9986	621	1,754,350 1/	621	1,754,350	0	0
Air Force Total		$20,972,409		$10,434,117		$ 5,922,097
GRAND TOTAL		$47,659,245		$21,528,636		$11,784,859

1/ Item was either reviewed during the audit survey and not as part of the sample universe or was reviewed because the item related to a sampled item.

2/ Sampled item for which the excessive purchase quantity related to at least one purchase request quantity that was in the sample universe and at least one purchase request quantity that was not in the sample universe.

3/ Sampled item for which the excessive purchase quantity was related to a purchase request that was not in the sample universe

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON, D C 20301-8000

PRODUCTION AND
LOGISTICS

(L/SD)

April 18, 1991

MEMORANDUM FOR DOD INSPECTOR GENERAL

SUBJECT: Draft Report on the Audit of Military Department Requirements for Currently Procured Wholesale Inventories of Consumable Items (Project No. 9LE-0064)

The subject draft report contains one recommendation for the Assistant Secretary of Defense (Production and Logistics):

"RECOMMENDATIONS FOR CORRECTIVE ACTION"

"1. We recommend that the Assistant Secretary of Defense (Production and Logistics) either reissue DoD Instruction 4140.33, or include the guidance that establishes DoD policy for supply management grouping of secondary items and the criteria for intensive management of secondary items, including spare and repair parts, in another DoD instruction."

The Assistant Secretary of Defense (Production and Logistics) (ASD(P&L)) concurs with the intent of the recommendation. The new DoD 4140.1-R, due out for coordination and comment by May 1991, includes guidance under "Termination of Contracts for Secondary Items" which is responsive to this recommendation in the context of the findings of the draft report.

Specifically, Inventory Control Points (ICPs) are directed to identify items above requirements during all phases of solicitation and contract award; request cancellation or reduction of orders prior to contract award where inventory management reviews disclose that items on order are above requirements; and give particular emphasis to the validation of requirements data that were used as the basis for orders exceeding $25,000. This dollar threshold is used since it is the limit for small purchase procedures. Orders exceeding this level fall under time-consuming contracting procedures that increase the risk of changes in requirements reducing the need for on-order materiel.

We regard the proposed guidance as responsive to the draft report recommendation, since it will provide guidelines for intensive review of requirements prior to contract award. Reinstatement of DoDI 4140.33 is not appropriate since the dollar thresholds for varying degrees of general management intensity contained in that Instruction were arbitrary and not appropriate for all types of secondary items. In contrast, the $25,000 threshold proposed for intensive review and validation of requirements in the draft DoD 4140.1-R is based on a statutory threshold applicable to all types of procurements.

Should you require further information, Tom Carter may be reached on 697-5216.

David J. Berteau
Principal Deputy

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON, D.C. 20330

0 3 APR 1991

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING
OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

SUBJECT: DoD(IG) Draft Report of Audit, Military Department Requirements For Currently Procured Wholesale Inventories of Consumable Items, February 11, 1991, (Project No. 9LE-0064) - INFORMATION MEMORANDUM

This is in reply to your memorandum for Assistant Secretary of the Air Force (Financial Management and Comptroller) requesting comments on the findings and recommendations made in subject report.

We have reviewed the report and have provided our comments on the attached. We appreciate the opportunity to reply to your draft report.

[illegible], Jr., Lt Gen, USAF

1 Atch
Management Comments

RECOMMENDATION 2.a. Revise guidance for verification of requirements before the initiation of purchase requests and before the award of contracts. The guidance should specify criteria, such as the value of the purchase or intensity of item management, for selecting and performing expanded verification of requirements data and include procedures and techniques for verifying the various elements of requirements data.

MANAGEMENT COMMENTS: Concur. AFLCR 57-6 contains direction for verification of all requirements before the initiation of purchase requests and requires item managers to maintain backup documentation for all buy decisions. As a part of AFLC's Project "Pacer Trim", which is their implementation of the DoD Inventory Reduction Plan, a 26 April 1990 letter from HQ AFLC to the Air Logistics Centers (ALCs) directed inventory managers and contracting officers to revalidate buy quantities prior to contract award. This direction applies to all high intensity items, system management grouping codes "P" and "M" (items with dollar value of annual demands greater than $2500), and all urgent or emergency buys. AFLCR 57-6 will be revised to include this guidance as well as expanded criteria for verifying requirements data. Estimated completion date is 31 December 1991.

RECOMMENDATION 2.b. Issue guidance that identifies specific factors that either should be or must be evaluated in the supervisory review and approval of procurement decisions.

MANAGEMENT COMMENTS: Concur with intent. Guidance exists in AFLCR 57-19 which clearly specifies that all assets, requirements, special codes, and factors must be verified before procurement decisions are made and that documentation must be maintained. The regulation also specifies the levels of supervisory review based on dollar value of a buy. AFLC will re-emphasize to the inventory managers the importance of compliance with this guidance during the April-May 1991 item management reviews and workshops.

RECOMMENDATION 2.c. Direct the inventory control points to establish a statistically based quality control program to provide for the independent evaluation of item manager's purchase decisions and the supervisory review and approval of those purchases.

MANAGEMENT COMMENTS: Concur with intent. Independent evaluation of item manager purchase decisions is conducted quarterly on a random sampling basis at each ALC. Recent restructuring into Product Directorates (PD) places this responsibility at the directorate level. The item requirements determination process action team (PAT), established May 1990, is preparing a policy letter which instructs the PDs to "eliminate, reduce, and

streamline item management and management reviews" by emphasizing building quality into the process rather than conducting external reviews. Estimated completion date 31 May 1991.

RECOMMENDATION 2.D. Report the material internal control weaknesses and the action taken to correct those weaknesses, in accordance with DoD Directive 5010.38.

MANAGEMENT COMMENTS: Nonconcur. The Draft Report cites the following material weaknesses: no tests were performed to ensure the accuracy of data provided and used in the requirements computation system; there was insufficient guidance for verification of requirements before purchases; and there were inadequate supervisory reviews and quality control checks. In May 1990, HQ AFLC initiated "Project Scrub" to identify and resolve problems with data systems that feed the requirements computation systems. "Project Scrub" is a front-end edit capability to detect data anomalies before they are passed to the requirements systems. The process has already resulted in the resolution of several data errors, and should significantly enhance item managers' ability to make more accurate and timely requirements decisions. We believe this action combined with the existing guidance and planned revisions to AFLCR 57-6, in addition to the emphasis being placed on accuracy of requirements in AFLC's Pacer Trim program, is adequate to assure compliance with the recommendations in this audit. We do not believe the discrepancies found constitute an internal control weakness material enough to warrant inclusion in the annual report to the Secretary of Defense.

RECOMMENDATION 4.A. Revise Air Force Logistics Command Regulation 57-6 guidance for estimating administrative lead times for items on multiyear procurement instruments, and guidance for determining whether lead time estimates from previous procurement actions are representative and reasonable.

MANAGEMENT COMMENTS: Concur. Definitive policy on estimating administrative lead times for multiyear procurements will be disseminated to the ALCs as an interim change to AFLCR 57-6 and AFLCR 57-4. Estimated completion date is 30 September 1991.

RECOMMENDATION 4.B. Establish an automated system for retention of a 2-year demand history. Require systems design personnel to periodically test the accuracy of demand rates used in the Economic Order Quantity Requirements Determination System.

MANAGEMENT COMMENTS: Concur with intent. Item managers currently can verify 2 years of demands via a special history interrogation. This process is labor intensive as the D035A (Stock Control and Distribution System) active requisition control file contains transactions with a file close date less than 30 days old. This system does not have the memory capacity to keep 2 years of transaction history on-line. HQ AFLC will

issue direction to D062 item managers requiring periodic review of demands for selected items by matching/validating D062 demands with those in D035A. This system reconciliation will provide accuracy checks of the demands used in the requirements computation system. Estimated completion date 30 June 1991.

RECOMMENDATION 4.C. Modify the Exchangeable Production System to permit appropriate coding of demands on requisitions.

MANAGEMENT COMMENTS: Concur with intent. The audit incorrectly states that the Exchangeable Production System (EPS) was programmed to automatically code all outgoing requisitions as recurring demands. EPS automatically assigns a "N" (non-recurring) code to requisitions when modification kits or local manufacture items are ordered. However, due to the volume of recurring material requisitions (approximately 90%), other non-recurring transactions are coded by exception. HQ AFLC will issue an interim policy letter to ALC maintenance activities to reiterate proper material ordering procedures and explain the appropriate assignment of recurring/non-recurring demand codes. The direction will also emphasize the importance of validation of requests by material control personnel to ensure accurate demand data is passed to other Air Force interfacing systems. Estimated completion date is 31 May 1991. This change will be incorporated into the next rewrite of AFLCR 66-53.

RECOMMENDATION 4.D. Modify the automated requirements computation system to analyze demand data and to identify and refer potentially abnormal demands and demand trends to item managers for evaluation.

MANAGEMENT COMMENTS: Concur with intent. DMRD 926 directs the management transfer of the majority of consumable items to DLA within 3 years; thus a system modification may not be feasible. Since the average buy occurs every 2 years, more than 4 years worth of history would need to be maintained in order for the D062 system to analyze these trends. As a part of the April 1991 D062 workshop, item managers will be instructed on the review and evaluation of demand trends prior to initiation of procurement or termination actions.

RECOMMENDATION 4.E. Modify the automated requirements computation system to analyze leadtimes and refer potentially abnormal leadtimes to item managers for evaluation.

MANAGEMENT COMMENTS: Concur with intent. Not enough history is maintained in D062 to perform this analysis, and with the DMRD 926 management transfer of the majority of consumable items to DLA within 3 years, a system modification may not be feasible. The April 1991 D062 workshop will also cover instruction to item managers on reviews of leadtimes prior to initiation of any actions taken from the requirements computation notices.

RECOMMENDATION 4.F. Revise guidance to require supervisory approval of item manager's decisions to award quantity discount procurement contracts.

MANAGEMENT COMMENTS: Concur with intent. AFLCR 57-6, Chapter 12 specifies which items are candidates for the quantity discount program, and the level of supervisory approval required. Additional quantity discount guidance was contained in the 26 April 1990 letter referenced in the management comments to 2.a above. Interim policy guidance will be issued to the ALCs to emphasize the need for additional supervisory review when the buy quantity changes from that initially submitted on the original purchase request. Estimated completion date 31 May 1991.

POTENTIAL MONETARY BENEFITS: Concur with intent. We agree there are potential monetary benefits and other benefits associated with the items reviewed in the audit, but are unable to accurately quantify the actual benefits at this time.

SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM AUDIT

Recommendation Reference	Description of Benefits	Amount and/or Type of Benefit
Recommendations 1. through 4.	Economy and Efficiency	Funds Put to Better Use
	Avoid unnecessary or premature purchases of wholesale inventory by Military Departments' inventory control points.	About $220.9 million of stock fund monies invested in wholesale inventories could be used more efficiently by avoiding unnecessary and premature purchase of wholesale inventory stocks. The $220.9 million consists of $169.9 million for materiel that would not be needed for more than 5 years after the maximum order period (unnecessary buys) and $51.0 million in carrying cost relating to the premature purchase of $209.0 million of materiel by the Military Departments' stock fund. The reduction or cancellation of purchase requests we reviewed, which were outside the audit sample and for which results are not reflected in the above cost savings, avoided investment of $7.9 million in wholesale inventories. Those monies were made available for more efficient inventory investments.

PRIOR AUDIT COVERAGE

DoD Inspector General Report No. 90-010, "Summary Report on the Audits of Contract Terminations," November 21, 1989, summarized the results and status of actions the Military Departments were taking to implement the recommendations for three audits on contract terminations: Report No. 89-063, "Contract Terminations at Army Inventory Control Points," March 29, 1989; Report No. 88-153, "Contract Terminations at the Navy Aviation Supply Office," May 23, 1988; and General Accounting Office (GAO) Report No. GAO/NSIAD-87-141 (OSD Case No. 7242), "Military Procurement: Air Force Should Terminate More Contracts for On-Order Excess Spare Parts," August 12, 1987. Report No. 90-010 concluded that the Military Departments' inventory control points made uneconomical termination decisions. The main reason for the uneconomical decisions was the lack of policies and procedures on how to make decisions. The report recommended that the DoD establish specific policies and procedures related to contract terminations. On December 13, 1989, the Assistant Secretary of Defense (Production and Logistics) issued guidance for termination of contracts when secondary items are no longer needed.

GAO Report No. NSIAD-89-196 (OSD Case 8011), "Military Logistics: Buying Army Spares Too Soon Creates Excess Stocks and Increases Costs, "August 1989, reported that the U.S. Army Tank and Automotive Comand and the U.S. Army Missile Command regularly initiated purchases of procurement appropriation-funded spares in advance of the reorder point and for quantities in excess of authorized requirement. GAO also reported deficiencies in the internal control system at the Tank-Automotive Command. GAO recommended that the Army Materiel Command reinforce the need to comply with Army Regulation 710-1 relative to premature and excessive purchases and that the Army Materiel Command perform periodic management reviews to confirm that Army buying commands comply with procedures for cancelling or reducing unnecessary purchases, and for supervisory review and approval of item manager decisions, and that the buying commands have consolidated guidance for retention of documents supporting repair, procurement and cutback decisions and emphasized that guidance to the involved staff. The Army concurred with the findings and recommendations and specified actions that had been or would be taken to implement the recommendations.

GAO Report No. NSIAD-90-68 (OSD Case 8219), "Army Inventory: Growth in Inventories that Exceed Requirements," March 1990, reported that inventories in excess of current requirements at the U.S. Army Aviation System Command had grown, in part, because demand forecasts often did not materialize and the data base that computed requirements contained erroneous information. GAO also

reported that timely and aggressive actions could have reduced the procurement of unneeded items. GAO recommended that the Army Materiel Command reemphasize to item managers the need to be more responsive to changes in forecast demands and to update and correct the data base that computes requirements and that the Army Materiel Command establish a systematic approach to aggressively cancelling or reducing planned procurements when items are not needed to meet current requirements. The DoD concurred with the findings and recommendations and reported specific actions that the Army Materiel Command had taken or would take to implement the recommendations.

GAO Report No. NSIAD-90-111 (OSD Case 8216), "Defense Inventory: Growth in Navy Ship and Submarine Parts," March 1990, reported that the Ships Parts Control Center did not retain documents supporting purchases after the materiel was received. As a result, GAO could not determine why an item had unrequired stock for over 50 percent of the items reviewed. GAO recommended that the Secretary of the Navy require item managers to retain summary data on major items showing the basis for each item's most recent procurement and events affecting the item. DoD concurred with the recommendation. DoD stated that the long term solution for efficiently archiving records lies with automated data processing modernization efforts. Implementation of the modernized system is planned in FY 1994. In the interim, the Navy will explore the feasibility of implementing a manual system by FY 1991.

Army Audit Agency Report No. S089-9, "Audit of Secondary Item Supply Management, U.S. Army Missile Command Redstone Arsenal, Alabama," March 17, 1989, reported that both unsupported manually generated and extended requirements were entered into the automated supply management systems to prevent the systems from recommending the reduction of planned purchases. The audit agency recommended that the Missile Command review all manually generated and extended requirements and delete those that could not be supported, and when cost-effective, cancel purchases. The Missile Command generally agreed with the findings and recommendations. The Missile Command instructed item managers to review the manually generated and extended requirements and remove invalid requirements. In addition, the Missile Command issued guidance on the use of manually generated and extended requirements.

Army Audit Agency Report No. MW89-7, "Requirements Determination and Execution System," U.S. Army Armament, Munitions, and Chemical Command, December 30, 1988, reported that extended requirements were used to justify unneeded buys, procurement lead times were frequently inaccurate and unsupported, and program

change factors were inaccurate. The audit agency recommended that the Command issue instructions and guidance to item managers for verification of the inaccurate requirements data and require greater supervisory oversight of item managers. The Command generally agreed with the findings and implemented the recommended actions.

DoD Inspector General Report No. 88-020, "Report on the Audit of Minimum Economic Order Quantities," October 8, 1987, reported that Military Department policies to implement minimum annual economic order quantity instead of normal economic order quantities was not cost-effective. The cost to carry the increased inventory was approximately $150.0 million. The report recommended limiting the use of minimum procurement cycles. On June 27, 1989, the Assistant Secretary of Defense (Production and Logistics) issued guidance that reestablished the policy of using economic order quantities (EOQ) methods.

GAO Report No. NSIAD 88-64 (OSD Case No. 7355), "Economic Order Quantity and Items Essentiality Need More Consideration," January 1988, reported that the Navy could reduce the cost of ordering and holding inventory by ordering the economic order quantity rather than a 1-year supply. In addition, GAO reported that the Navy could reduce the potential for increasing its stocks beyond current needs by revising policies on the use of the acceptable risk of running out of stock and mission essentiality in computing safety levels. GAO recommended that the Navy use econommic order quantity except when it can be shown that other factors offset the cost or benefit of doing so. GAO also recommended that the Navy expand the use of item and mission essentiality coding in the computation of safety levels. DoD nonconcurred with the recommendation to use the economic order quanity. However, DoD later issued guidance reestablishing economic order quantity principals. DoD stated that the Navy intended to use item essentiality to compute requirements. The Aviation Supply Office will use the codes after a review of the reasonableness of the codes is completed and system modernization efforts are completed.

Naval Audit Service Report No. 048-N-89, "Audit of Selected Planned Program Requirements for Non-Aviation Materiel," May 1989, disclosed that the Ships Parts Control Center did not effectively manage planned program requirements. Unneeded and invalid Planned Program Requirements overstated requirements for some items, and could have caused inflated budgets and unnecessary procurements of spare parts. The Ships Parts Control Center agreed to take actions to correct the deficiencies.

Air Force Audit Agency Report No. 410-0-1, "Review of Administrative Leadtimes in the EOQ Buy Computation (D062) System, Kelly Air Force Base, Texas," October 1989, reported that the administrative lead times were in excess of normal or realistic administrative processing time. The audit agency recommended that the Director of Materiel Management establish guidelines for item managers to evaluate the reasonableness of administrative lead times. The San Antonio Air Logistics Center issued the guidelines in September 1989.

GAO Report No. B-233787, a letter report, was issued to the Army Materiel Command on February 14, 1990. The letter disclosed that at three Army commands, purchases were initiated prematurely and in greater-than-authorized quantities. Specifically, the report addressed noncompliance with Army regulations related to ordering before the reorder point and ordering quantities greater than the authorized stockage objective. The Army concurred with the need for improvement. The Army stated that commanders would be directed to ensure that unauthorized purchases do not occur and that compliance reviews would be conducted.

Air Force Audit Agency Report No. 9126121, "Economic Order Quantity Buy/Budget Computation System," September 4, 1990, reported that selected elements used in the requirement computation were not accurate or appropriate. The Air Force Logistics Command had not implemented a DoD directed policy to stop using the Air Force Logistics Command 12-month minimum buy policy. Also, item managers did not accurately compute quantitative requirements. The report indicated that management officials agreed with the audit results and recommendations, and that corrective actions taken or planned were responsive.

ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Assistant Secretary of Defense (Production and Logistics), Supply Management Policy, Washington, DC

Department of the Army

Headquarters, Deputy Chief of Staff (Logistics), Supply Policy, Washington, DC
Headquarters, Army Materiel Command, Washington, DC
U.S. Army Aviation Systems Command, St. Louis, MO
U.S. Army Materiel Command, Systems Integrated Management Activity, St. Louis, MO
Corpus Christi Army Depot, Corpus Christi, TX
U.S. Army Communications-Electronics Command, Fort Monmouth, NJ
U.S. Army Tank and Automotive Command, Warren, MI
U.S. Army Ammunition and Chemical Command, Rock Island, IL
U.S. Army Depot Systems Command, Chambersburg, PA
U.S. Army Inventory Research Office, Philadelphia, PA

Department of the Navy

Headquarters, Naval Sea Systems Command, Washington, DC
Headquarters, Naval Supply Systems Command, Washington, DC
Naval Aviation Supply Office, Philadelphia, PA
Ships Parts Control Center, Mechanicsburg, PA
Fleet Materiel Support Office, Mechanicsburg, PA
Naval Air Engineering Center, Lakehurst, NJ
Naval Air Rework Facility, Alameda, CA
Naval Air Rework Facility, Norfolk, VA
Naval Air Rework Facility, Oakland, CA
Naval Electronics Systems Engineering Center, St. Inigoes, MD
Naval Ordnance Station, Louisville, KY
Naval Air Station, Keflavik, Iceland
Naval Air Station, Meridian, MS
Naval Air Station, Chase Field, Beeville, TX
Naval Shipyard, Charleston, SC
Naval Shipyard, Mare Island, CA
Naval Supply Center, Charleston, SC
Naval Supply Center, Jacksonville, FL
Naval Supply Center, Norfolk, VA
Naval Supply Center, Oakland, CA
Naval Supply Center, Pensacola, FL
Naval Supply Center, San Diego, CA
Naval Surface Warfare Center, Dahlgren, VA
Navy Publications and Forms Center, Philadelphia, PA
Naval Aviation Depot, Cherry Point, NC
Naval Audit Service, Arlington, VA

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U.S.S. Bellau Wood
U.S.S. Constellation
U.S.S. Coral Sea
U.S.S. Yellowstone

Department of the Air Force

Headquarters, Deputy Chief of Staff (Logistics and Engineering), Washington, DC
Headquarters, Air Force Logistics Command, Dayton, OH
Oklahoma City Air Logistics Center, Tinker Air Force Base, OK
Air Force Audit Agency, Dayton, OH
Air Force Audit Agency, Kelly Air Force Base, TX
San Antonio Air Logistics Center, Kelly Air Force Base, TX
Ogden Air Logistics Center, Hill Air Force Base, UT
Sacramento Air Logistics Center, McClellan Air Force Base, CA
Warner Robins Air Logistics Center, Robins Air Force Base, GA
Randolph Air Force Base, San Antonio, TX
Dyess Air Force Base, Abilene, TX

Defense Logistics Agency

Defense Construction Supply Center, Columbus, OH
Defense Reutilization and Marketing Service, Battle Creek, MI
Defense Depot, Memphis, TN

Contractor

Rockwell International, Palmdale, CA
Teledyne-Neosho, Neosho, MI
Boeing Aircraft Company, Abilene, TX
Lucas-Aerospace, Utica, NY
Kearfott, Wayne, NJ
Garrett, Phoenix, AZ
Bath Iron Works Corporation, Bath, ME
Ingalls Shipbuilding Division, Pascagoula, MS
National Steel and Shipbuilding Corporation, San Diego, CA
Pratt and Whitney Corporation, West Palm Beach, FL
Rolls Royce Corporation, Cherry Point, NC

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