Audit Report

OFFICE OF THE INSPECTOR GENERAL

APPLICATION CONTROLS OVER SELECTED PORTIONS OF THE STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SYSTEM

Report No. 95-023 November 4, 1994

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Department of Defense

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Acronyms

AAA	Army Audit Agency
ACF-2	Access Control Facility - 2
COBOL	Common Business Oriented Language
DAO	Defense Accounting Office
DBOF	Defense Business Operations Fund
DFAS	Defense Finance and Accounting Service
GAO	General Accounting Office
OMB	Office of Management and Budget
SAILS	Standard Army Intermediate Level Supply
SARSS	Standard Army Retail Supply System
STARFIARS	Standard Army Financial Inventory Accounting and Reporting System

November 4, 1994

MEMORANDUM FOR DIRECTOR, DEFENSE FINANCE AND ACCOUNTING SERVICE
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Application Controls Over Selected Portions of the Standard Army Intermediate Level Supply System (Report No. 95-023)

We are providing this final report for your review and comments. The audit was made in support of audits of the FY 1993 Defense Business Operations Fund financial statements. We received comments on a draft of this report from the Deputy Chief of Staff for Logistics, Department of the Army; the Deputy Director for Business Funds, Defense Finance and Accounting Service; and the Commander, U.S. Army Information Systems Software Development Center - Washington. All comments were considered in preparing the final report.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, we request the Army provide additional comments on Recommendations A.1., B.1., and C.1.b. and the Defense Finance and Accounting Service provide additional comments on Recommendations A.2. and B.2., by January 6, 1995. The courtesies extended to the audit staff are appreciated. If you have any questions about this audit, please contact Mr. F. Jay Lane, Program Director, at (703) 604-9140 (DSN 664-9140), or Mr. Kent E. Shaw, Project Manager, at (703) 604-9152 (DSN 664-9152). Appendix D lists the distribution of this report. The audit team members are listed inside the back cover.

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Deputy Assistant Inspector General
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Office of the Inspector General, Department of Defense

Report No. 95-023 **November 4, 1994**
(Project No. 3FG-2020)

APPLICATION CONTROLS OVER SELECTED PORTIONS OF THE STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SYSTEM

EXECUTIVE SUMMARY

Introduction. The Army Supply Management business area of the Defense Business Operations Fund manages inventories held for sale valued at $13.4 billion. The Standard Army Intermediate Level Supply (SAILS) system is an automated system used to manage about $2.2 billion of the $13.4 billion. Another automated system, the Standard Army Financial Inventory Accounting and Reporting System (STARFIARS), is used by the Defense Finance and Accounting Service to generate financial statements from transactions captured by the SAILS system.

Objectives. The primary objective of the audit was to assess selected elements of the Application Change Testing and Evaluation program for the SAILS system and that program's interface with the STARFIARS financial information system. The secondary objective was to assess related internal controls.

Audit Results. The audit identified a need for improvements in reconciliations of inventory balances, management of in-transit inventories, and computer security.

o On-hand retail inventory balances maintained by the SAILS system were not being reconciled with the general ledger on-hand inventory balances maintained by STARFIARS. That lack of reconciliation resulted in a $75.3 million inventory imbalance between the two systems (Finding A).

o Visibility was not maintained over in-transit inventories valued at $141.1 million, and manual controls designed to minimize in-transit inventories were ineffective. Sixty-one percent of those inventories had been in-transit for over 90 days. Ineffective controls over in-transit inventory reduced the availability of Defense Business Operations (DBOF) funds and may also result in erroneous financial statements (Finding B).

o Controls over access to the SAILS system and STARFIARS software were inadequate. A Terminal Area Security Officer had not been appointed at the SAILS system's central design activity, and documentation for STARFIARS software testing was unavailable. An edit program for the SAILS system needed to be updated to reflect changes in the software. Weak controls over system access and computer security personnel can expose the computer system to abuse and manipulation (Finding C).

Internal Controls. The audit identified material internal control weaknesses. Controls were not adequate to safeguard in-transit inventory items or critical computer software and data. Part II addresses those weaknesses. As part of our audit, we assessed management's implementation of the DoD Internal Management Control Program. Part I discusses the details of that program and the internal controls assessed.

Potential Benefits of Audit. We could not quantify the potential monetary benefits of this audit. However, implementing our recommendations will improve reporting for financial statements, controls over critical software, and prevention of unauthorized access and changes to that software. See Appendix B for details.

Summary of Recommendations. We made recommendations to bring about improvements in reconciliations between the SAILS system and STARFIARS, management of in-transit inventory items, and security over key data files; to appoint a Terminal Area Security Officer at the SAILS system's central design activity; and to provide additional training for the Information Systems Security Officer.

Management Comments. We received comments from the Deputy Chief of Staff for Logistics, Department of the Army; the Deputy Director for Business Funds, Defense Finance and Accounting Service; and the Commander, U.S. Army Information Systems Software Development Center - Washington. Management generally agreed with our recommendations. See Part II for a full discussion of management's comments and Part IV for the complete text of those comments. Additional comments are requested from the Director, Defense Finance and Accounting Service; Deputy Chief of Staff for Logistics, Department of the Army; and the Commander, Software Development Center - Washington, Department of the Army. Those comments should be provided by January 6, 1995.

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This report was prepared by the Financial Management Directorate, Office of the Assistant Inspector General for Auditing, Department of Defense.

Part I - Introduction

Background

The Army Supply Management business area of the Defense Business Operations Fund (DBOF) manages inventories held for sale valued at $13.4 billion. The Standard Army Intermediate Level Supply (SAILS) system is an automated system used to manage retail inventories valued at about $2.2 billion of the $13.4 billion. The remaining $11.2 billion in inventories is managed by a number of other systems throughout the Army. Another automated system, the Standard Army Financial Inventory Accounting and Reporting System (STARFIARS), is used by the Defense Finance and Accounting Service (DFAS) to generate financial statements from transactions captured by the SAILS system.

The DBOF Army Supply Management business area consists of eight retail divisions and one wholesale division under the Deputy Chief of Staff for Logistics, Department of the Army, and sells inventories to Army components on a cost-reimbursable basis. Seven of the retail divisions are organized by command, and one is organized by function. The retail supply divisions of the Army Supply Management business area are the U.S. Army Forces Command; U.S. Army, Europe; U.S. Army Training and Doctrine Command; U.S. Army, Pacific; Eighth U.S. Army, Korea; U.S. Army Southern Command; U.S. Army Materiel Command; and Defense Supply Service - Washington. Figure 1 shows the value of the inventories managed by the eight retail divisions.

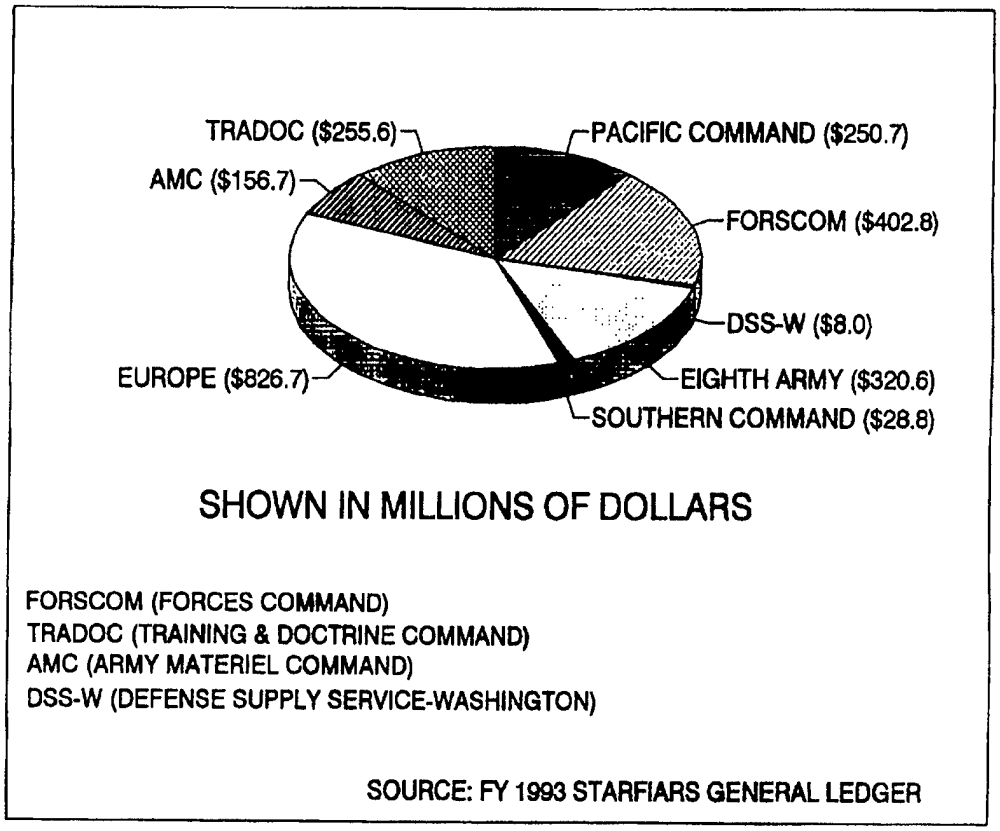

Figure 1. Inventories Managed by the Eight Army Retail Supply Management Divisions

The SAILS system performs logistical ordering, supply, and inventory management for the Army's retail supply activities. The SAILS system is used at 55 Army locations worldwide to manage inventories of repair parts, industrial supplies, general supplies, ground support supplies, clothing, packaged petroleum (for example, containers of motor oil), and bulk petroleum. The system acts as a middleman, ordering supplies from the depot level to replenish retail-level warehouse stock. The SAILS system also maintains inventory records and processes retail-level transactions into the Army's financial information systems. The SAILS system was developed in 1971 and consists of about 500,000 lines of Common Business Oriented Language (COBOL) code. The U.S. Army Information Systems Software Development Center - Lee, Fort Lee, Virginia, is the central design activity for the SAILS system.

STARFIARS performs the financial accounting and reporting functions at most Army installations worldwide. STARFIARS uses transactions captured by the SAILS system and applies them to a general ledger maintained by STARFIARS.

STARFIARS processes about 40 million inventory transactions each month at 65 Army installations. STARFIARS was designed as a module of the SAILS system, but became a separate system in 1973. STARFIARS consists of about 200,000 lines of COBOL code. The DFAS Indianapolis Center is the central design activity for STARFIARS. Figure 2 shows the interrelationships among the SAILS system, STARFIARS, and the Army's Standard Finance System. The Standard Finance System processes disbursements and collections for the Army Supply Management business area.

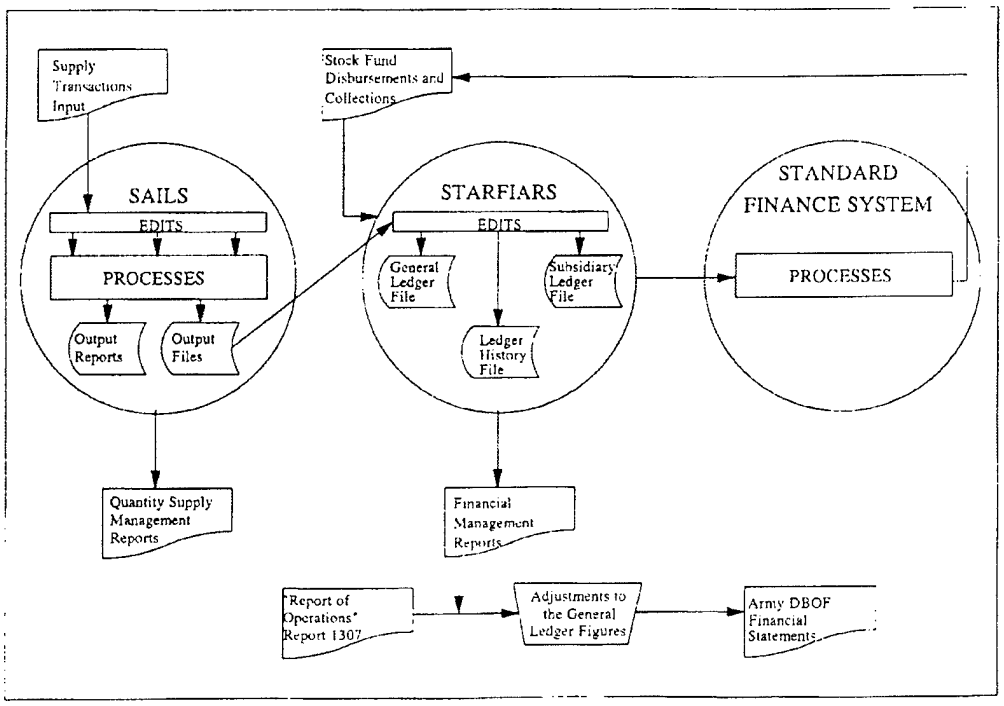

Figure 2. Processing Procedures for Army Retail Inventory

Public Law 102-190, the "Chief Financial Officers Act of 1990," requires DoD to prepare and audit, on an annual basis, financial statements for funds such as the DBOF and its components. The goals of the Act are to improve the effectiveness of the Federal Government's general and financial management practices; to improve accounting, financial management, and internal control systems; and to provide reliable, timely, and consistent financial information for use in the financing, management, and evaluation of Federal programs. Both the SAILS system and STARFIARS must produce accurate and reliable financial information for the Army Supply Management business area and the overall DBOF financial statements.

The Army and DFAS are gradually replacing the SAILS system and STARFIARS with new systems. The U.S. Army Information Systems Software Development Center - Lee was developing a system called the Standard Army Retail Supply System (SARSS) to replace existing wholesale and retail inventory systems. SARSS is still in the development phase; however, its SARSS-Objective module, which was designed to replace the SAILS system, has been implemented at Fort Bragg, North Carolina; Fort Stewart, South Carolina; and U.S. Army installations in the Panama Canal Zone. Those sites, however, continue to use the SAILS system on a parallel basis. SARSS-Objective is targeted for Army-wide implementation by FY 1999.

The DFAS Indianapolis Center was also developing a new system, STARFIARS-Modernization, to replace STARFIARS. The new system was written in the Ada programming language and used a database interface. Ada is a programming language that was designed by DoD to improve the reliability, portability, and maintainability of software, while reducing a system's life-cycle costs.

At the time of our audit, the DFAS Indianapolis Center was testing software acceptance at Fort Knox, Kentucky. About $1.9 million was budgeted for the development of STARFIARS-Modernization.

The U.S. Army Strategic Logistics Agency, Alexandria, Virginia, was also developing another system, the Single Stock Fund Initiative, as a possible alternative to STARFIARS-Modernization. The Single Stock Fund Initiative attempts to combine logistics and financial functions and provide direct interaction between retail and wholesale functions. At the time of our audit, the Army was implementing and testing the Single Stock Fund Initiative at Fort Hood, Texas. Development costs were about $13.4 million.

We did not review STARFIARS-Modernization or the Single Stock Fund Initiative. The DBOF Corporate Board has formed a committee to determine whether one of those two systems or another system will be selected as the migratory system for DoD-wide financial reporting. The committee plans to complete its recommendations to the DBOF Corporate Board by November 10, 1994.

Objectives

The original objectives of the audit were to assess the completeness, accuracy, and reliability of the SAILS system; to determine whether the system satisfies General Accounting Office (GAO) requirements and DoD standards; and to assess internal controls over the system. On March 2, 1994, we modified the

Application Change Testing and Evaluation program for the SAILS system, and the program's interface with financial information systems such as STARFIARS. An application change, testing, and evaluation program includes the policies, procedures, and processes that an organization uses to modify application and interface software, including the testing and evaluation of the modifications.

Our secondary objective was to assess related internal controls.

Scope and Methodology

Time Period, Standards, and Locations. We performed this financial-related audit from July 1993 through April 1994 in support of audits of the FY 1993 DBOF financial statements. We evaluated selected management controls to determine whether software change controls at the SAILS system and STARFIARS central design activities were adequate to ensure the reliability of computer-processed data generated by the systems. We also analyzed data from the SAILS system's operational sites to determine whether management was complying with key requirements of the SAILS system's operational criteria, and to measure weaknesses in compliance with those criteria. Finally, we reviewed security policies and access to the systems, programs, and data.

This audit focused on software development at the central design activities for both the SAILS system and STARFIARS. We obtained information on the 2 systems and made data calls and site visits at 42 of the 65 STARFIARS operational sites. Appendix C lists the organizations we visited or contacted. The audit was made in accordance with auditing standards issued by the Comptroller General of the United States as implemented by the Inspector General, DoD. We did not use statistical sampling procedures to conduct this audit.

Computer-Processed Data. We relied on data generated by the SAILS system and STARFIARS. Although we identified weaknesses that affected the reliability of the computer-processed data, we determined that the data were sufficiently reliable to support our audit conclusions. To test the reliability of data, we reviewed selected general and application controls of the SAILS system and STARFIARS.

Internal Controls

Controls Assessed. We reviewed internal controls over the interface between the SAILS system and STARFIARS; inventories that had been in-transit for excessive periods; and selected general and application controls over the SAILS system and STARFIARS, including controls over application software, computer security, and edit routines. Office of Management and Budget (OMB) Circular No. A-123 requires each Federal agency to establish a program to identify significant internal control weaknesses. The Department of the Army and DFAS had performed the reviews required by DoD Directive 5010.38, "Internal Management Control Program," April 14, 1987.

DFAS Statement of Assurance. The DFAS Annual Statement of Assurance for FY 1993 reported 31 uncorrected material internal control weaknesses in the DBOF accounting system. The following weaknesses were relevant to our audit:

o Computer security weaknesses at the DFAS Indianapolis Center included a lack of controls over operating system software and the distribution of source code, and a lack of contingency resources. We also identified problems with computer security; see Finding C.

o Staffing shortages in the DFAS Indianapolis Center's quality assurance program had impaired that Center's ability to evaluate procedural effectiveness and internal controls.

Statement of Assurance from the U.S. Army Information System Software Development Center - Lee. The FY 1993 Annual Statement of Assurance for the U.S. Army Information Systems Software Development Center - Lee identified one material weakness. The Software Development Center was not complying with regulatory guidance for testing the Army's automation software under development. The U.S. Army Information Systems Engineering Command's Internal Review Office had identified the weakness in 1992, and had recommended a number of corrective actions. At the time of our review, all corrective actions had been taken.

Material Internal Control Weaknesses Identified. The audit identified material internal control weaknesses as defined by DoD Directive 5010.38. Controls were in place, but were not implemented effectively. Specifically, the Army's implementation of internal management controls did not effectively safeguard in-transit assets against waste, loss, unauthorized use, and misappropriation (Finding B). Management controls over computer security were not adequate to prevent unauthorized tampering with critical management software and data (Finding C). Recommendations B.1., C.1., C.2., and C.3. in this report, if implemented, will correct the weaknesses. A copy of the final

report will be provided to the senior officials responsible for internal controls in the Department of the Army and DFAS.

Benefits of Audit. We could not quantify the potential monetary benefits that will result from correcting the material internal control weaknesses. Other benefits are explained in Appendix B, "Summary of Potential Benefits Resulting From Audit."

Prior Audits and Other Reviews

Two GAO audit reports and one Army Audit Agency report identified reportable conditions similar to those we identified. All of the reports indicated that problems exist in financial and inventory management.

GAO Reports. GAO Report No. GAO/AIMD-94-12 (OSD Case No. 9276-D), "Financial Management: Strong Leadership Needed to Improve Army's Financial Accountability," December 1993, stated that weak data processing controls place financial systems data at risk. The GAO recommended that the Assistant Secretary of Defense (Command, Control, Communications and Intelligence) issue detailed procedures or implement existing security policies. DoD concurred with the recommendation.

GAO Report No. GAO/NSIAD-90-53 (OSD Case No. 8159), "Army Inventory: A Single Supply System Would Enhance Inventory Management and Readiness," January 1990, stated that the Army had problems with redistributing excess inventory from the retail to the wholesale system, and that Army commands did not always report excess inventory. The GAO recommended that the Army establish a single supply system and make inventory data available throughout that system, and that item managers be authorized to redistribute inventory. DoD concurred with all recommendations.

Army Audit Agency Report. The Army Audit Agency (AAA) issued Report No. NR 94-470, "Defense Business Operations Fund Army FY 1993 Financial Statements," on June 30, 1994. Because the balances in Inventories Held for Sale, Net, did not include inventory located at retail activities and included some inventory items that were not part of the DBOF, the AAA issued a disclaimer of opinion on the financial statements. Weaknesses included the following.

o Because wholesale activities had not correctly recorded the receipts for inventory in-transit from procurement, the validity of those amounts could not be ensured.

o Because insufficient research was conducted on rejected transactions, accurate balances for inventory on hand could not be assured.

o Wholesale and retail activities adjusted financial records to match logistical records without researching imbalances to identify the causes.

o Weaknesses existed in internal controls over materials returned for credit, separation of duties, and audit trails for about $1.6 billion in disbursements.

The AAA reviewed wholesale inventory and its operations; however, the problems with wholesale inventories in-transit are similar to the problems we identified with retail inventories in-transit. See Finding B for details.

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Part II - Findings and Recommendations

Finding A. Reconciliation of Inventory Balances

Unreconciled net differences existed between inventory balances maintained by the Standard Army Intermediate Level Supply (SAILS) system and the Standard Army Financial Inventory Accounting and Reporting System (STARFIARS). The differences totaled $75.3 million, and the gross amount of errors was $135 million. Those conditions occurred because 38 (91 percent) of the 42 Defense Accounting Offices (DAOs) we reviewed were not performing the required reconciliations between the two systems. As a result, the imbalances materially affected the accuracy of management and financial reports at the retail inventory level.

Background

Because the SAILS system and STARFIARS maintain separate master files that are not integrated, manual reconciliations must be done monthly. Reconciliations are needed both to balance the on-hand retail inventory maintained by the SAILS system with the inventory in the general ledger, and to ensure that both systems show accurate balances. To aid in reconciling the two systems, STARFIARS produces two monthly reports:

o Report No. ALF-42A, "ABF [Availability Balance File] Price Extension and Reconciliation GL [General Ledger] Error List," which identifies all open inventory items that have negative on-hand balances; and

o Report No. ALF-42B, "ABF Price Extension and Reconciliation," which shows differences between the SAILS system and STARFIARS balances and the categories of materiel for those differences.

Army Technical Manual 38-C08-1-1, "Standard Army Financial Inventory Accounting and Reporting Systems, Financial Management Functions," April 1989, gives the procedures for manual reconciliations. The technical manual states that logistics and accounting personnel must work together to reconcile the two systems and that the DAO at each supply installation has overall responsibility for the monthly reconciliations.

Reconciliations

To test the reconciliation process, we asked DAOs supporting the Army's supply installations to provide us with copies of the reconciliation reports for September 30, 1993. We received responses from DAOs at 42 of the 65 STARFIARS sites surveyed. We then summarized the differences between the SAILS system and STARFIARS. As shown in Appendix A, several installations had large differences in on-hand inventory balances between the two systems. For example, the SAILS system showed an on-hand balance of $20.7 million for the 5th Corps Finance Group, Germany, while STARFIARS showed an on-hand balance of $4.4 million, a difference of $16.3 million. At Fort Stewart, Georgia, the difference between the two systems was $10.0 million, and at the 75th Theater Finance Command, Korea, the difference was $19.4 million.

We visited or contacted six installations to discuss the reconciliation process with employees in the DAOs who processed the ALF-42B reconciliation reports. We also spoke with employees in the Directorate of Logistics at six installations and the DFAS Indianapolis Center. The activities we contacted were not performing reconciliations because:

o budget cuts had reduced staff,

o employees in the logistics offices lacked experience because of early retirements and reductions in force, and

o employees at the DAOs and in the DFAS Indianapolis Center's Directorate of Logistics did not have the technical proficiency needed to identify problems with the SAILS system and STARFIARS.

Such unreconciled differences result in inaccurate information being provided to decisionmakers. Also, if the differences between the two systems are material, they should be disclosed in the footnotes to the financial statements of the Army Supply Management business area.

Conclusion

STARFIARS and SAILS data must be reconciled to ensure the accuracy of the two systems until replacement systems eliminate the need for reconciliation. Material discrepancies between the two systems should be disclosed in a footnote to the financial statements for the Army DBOF Supply Management business area.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Director, Defense Finance and Accounting Service, and the Deputy Chief of Staff for Logistics, Department of the Army:

a. Resolve the inconsistencies between inventory balances maintained by the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply system.

(1) Direct the Defense Accounting Offices to perform the required reconciliations.

(2) Monitor the status of reconciliations to ensure that they are performed monthly.

(3) Train employees at the Defense Accounting Offices in the most efficient methods of performing reconciliations.

b. Use integrated databases for the replacement systems for the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply system, in order to eliminate the need to reconcile inventory balances between the two systems.

DFAS Concurred in Principle. The DFAS Deputy Director for Business Funds concurred in principle with the recommendation. The Deputy Director stated that both the STARFIARS and the SAILS systems were old, and that STARFIARS probably will not be selected as an interim migratory system to support the DBOF. The SAILS system is a logistics management system and is not controlled by DFAS. Resources are not available to revise noninterim migratory financial systems, and limited personnel resources make extensive manual operations cost-prohibitive. The selection criteria for interim migratory systems require integrated databases, and DFAS is working to ensure the integration of its interim financial systems with the standard logistics system being developed by the Joint Logistics Systems Center. Fully integrating the standard finance and logistics systems will eliminate the need to reconcile inventory and financial records. DFAS will make every effort to minimize imbalances until interim migratory systems are selected, integrated with logistics systems, and implemented at DFAS sites.

Audit Response to DFAS Comments. We agree that selection of migratory systems, with integrated databases shared by accounting and logistics personnel, would eliminate the need for manual reconciliations. In the interim, however,

manual reconciliations between the SAILS and STARFIARS are necessary to ensure that financial reporting is as accurate as possible. We request that DFAS provide revised comments on this recommendation, giving a specific plan of action and a proposed completion date.

Comments from the Deputy Chief of Staff for Logistics, Department of the Army. Management stated that no Army response was necessary for Recommendation 3.a. In response to Recommendation 3.b., the Deputy Chief of Staff stated that the Army will not have an integrated system to replace the present systems; however, the Army's Total Distribution Plan will implement or improve the interactive relationships between combat service support systems.

Audit Response to Comments from Deputy Chief of Staff for Logistics, Department of the Army. The comments from the Deputy Chief of Staff for Logistics were nonresponsive. We recommended that the Director, Defense Finance and Accounting Service, and the Deputy Chief of Staff for Logistics resolve the inconsistencies between inventory balances maintained by the STARFIARS and the SAILS systems. Although the Deputy Chief of Staff for Logistics stated that no response was required, the Department of the Army should work with the Defense Finance and Accounting Service to resolve these differences. Interactive relationships between systems may help reduce imbalances; however, this solution does not address current imbalances, which could affect the accuracy of the Army DBOF Supply Management business area's financial statements.

We request that the Deputy Chief of Staff for Logistics, Department of the Army, reconsider his response to Recommendations A.1.a and A.1.b. and provide revised comments in response to our final audit report.

2. We recommend that the Director, Defense Finance and Accounting Service Indianapolis Center, disclose any material discrepancies in inventory balances between the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply system in a footnote to the financial statements of the Defense Business Operations Fund Army Supply Management business area.

Comments from the DFAS. DFAS concurred in principle with the recommendation, stating that the systems we audited are older systems and are not expected to become an interim migratory system for DBOF support. Based on prior audits, a number of systems change requests have been initiated to accumulate data in financial systems. Competing priorities, however, have prevented the completion of these systems change requests. Accumulating and reporting the information necessary to produce footnotes to financial statements would require adding a manual function. Also, the net aggregate amount of differences between inventory balances in STARFIARS and the SAILS system

does not exceed the 3-percent threshold in the GAO audit manual[1] for disclosure of material discrepancies in footnotes.

Audit Response. The DFAS comments were potentially responsive to our recommendation. In response to the final report, we request that DFAS provide supporting information for their assertion that materiality thresholds are not exceeded. We are concerned that the net aggregate differences between the systems may not be reflective of whether material discrepancies exist, and that reporting of the gross differences may be required.

[1]"GAO Financial Audit Manual" (GAO/AFMD-12.19.5A), June 1992.

Finding B. Inventory Paid-in-Transit

The value of in-transit inventories was overstated and included inventory items that had been in-transit since 1990. About $88 million of the $141.1 million of in-transit inventories had been in-transit for more than 90 days. That condition was caused by customers' failure to promptly return their receipts after they received the items they had ordered, and the SAILS system's inability to provide item managers with sufficient information to promptly research and resolve in-transit items. As a result, the Army DBOF Supply Management business area was delayed in receiving reimbursements for in-transit items, and overstated the value of inventories on its financial statements.

The Army is working to improve controls over in-transit inventory items, but its initiatives will take time to develop. Better controls are needed in the interim.

Background

When a customer's requisition is entered into the SAILS system, the system generates DD Form 1348-1, "DoD Single Line Item Release/Receipt Document," for use as a receipting document. If an item is not on hand at the installation, the SAILS system also generates a purchase request to order the item from an Army wholesale depot or local supplier. When the purchase request has been processed at the wholesale level and a Material Release Order has been issued, the SAILS system is notified that the requested item has reached shipping status. STARFIARS may then pay for the item using the DBOF appropriation, or may wait until the receipt is processed. If the depot is paid before the customer receives the item, STARFIARS places the inventory into a "paid-in-transit" general ledger account.

The facility or location where the inventory items are received determines who is responsibile for generating the receipt and forwarding it to the document control and files section of the supply installation. When the receipt has been processed by the SAILS system and recorded in STARFIARS, the inventory is removed from the paid-in-transit general ledger account and placed in the on-hand inventory account. The customer's appropriation is charged and the DBOF appropriation is reimbursed only after the receipt is processed.

Paid-in-Transit Items

As of September 30, 1993, the total value of paid-in-transit items totaled $141.1 million for the 42 Army retail supply activities reviewed. Sixty-three percent of the dollar value of paid-in-transit items, a total of $88 million, was more than 90 days old. By December 31, 1993, the value of paid-in-transit items more than 90 days old for the 42 retail supply activities had increased to $110.3 million. Some of the paid-in-transit items dated back to FY 1990.

Supply item managers at installations told us that the primary reason for the accumulation of paid-in-transit items was that customers failed to return their receipts promptly. Managers said that because of limited personnel resources, they could not conduct adequate research to determine whether the paid-in-transit items had actually been received. We believe that this research was more difficult because the SAILS system did not give item managers basic information, such as whether the item had actually been shipped and the name of the carrier.

Because customers generally were not billed until they acknowledged receipt of the inventory items, the old paid-in-transit items unnecessarily reduced the funds available to the DBOF. Furthermore, the old paid-in-transit items were still shown as inventories of the Army's Supply Management business area, although they may have been shipped to customers. Thus, inventory balances on the financial statements for the Army's Supply Management business area may have been overstated or counted twice.

Long-Term Corrective Action

The Army's Strategic Logistics Agency has initiated two projects, the Automated Manifest System and the Single Stock Fund System. In the future, these systems may reduce the outstanding balance of paid-in-transit items and allow better visibility of inventory items-in-transit.

Automated Manifest System. The Automated Manifest System is part of the "In-Transit Visibility" program, which the Army is implementing at several installations. That system will allow automated tracking of inventory items-in-transit from the wholesale level to the installation level. The system requires vendors to attach identification cards to each item being shipped. At each shipping point, the identification cards will be scanned and the item's location will be sent via satellite to a central data base. The database will track the location of each item as it is shipped, delivered, and received. At

installation level, identification cards will be scanned again, and files in logistics systems will be automatically updated to show that the customer has received the item.

Single Stock Fund Initiative. The Single Stock Fund Initiative is being implemented at Fort Hood, Texas. It is both a financial system and a logistics system, and is being considered as a migratory system to replace STARFIARS.

Under STARFIARS, DBOF is not used to purchase inventory from wholesale sources. Instead, the customer's funds are committed when the customer requests an item. When the item reaches shipping status, DBOF pays the vendor, and the customer reimburses DBOF after the receipt has been processed.

In the Single Stock Fund Initiative, the vendor will charge the customer directly. This method will not place any additional restrictions on an installation's funds, since the customer's funds will have been committed and will no longer be available for any other use.

Interim Improvements Needed

Several years may be needed to fully develop and implement the new systems, and their effectiveness is unknown at this time. Therefore, we believe that the use of an automated feature of the SAILS system, called pseudo-receipts, could significantly reduce the number of items in-transit. With the pseudo-receipts feature, the customer is automatically charged for the item after the item has been in shipping status (or in-transit) for a specified period of time.

The SAILS system uses four code tables to control the pseudo-receipting process. The code tables determine when automated followup to the customers should take place, and whether a pseudo-receipt should be generated. Although regulations state the minimum number of days that must elapse before an item can be pseudo-receipted, there is no requirement that a pseudo-receipt must be generated within a maximum number of days.

Conclusion

The Army is taking long-term corrective actions to provide better visibility and control over in-transit inventory items. However, short-term solutions are needed to reimburse DBOF more promptly and reduce the number of inventory

items that are in-transit for excessive periods of time. Better use of the pseudo-receipts feature of the SAILS system could provide the needed short-term improvement.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Deputy Chief of Staff for Logistics, Department of the Army, in order to ensure prompt reimbursement of the Defense Business Operations Fund, establish uniform criteria for its supply installations to use in automating the receipting process for paid-in-transit items. Specifically, we recommend that the Standard Army Intermediate Level Supply system's code tables be modified so that items not reported lost or stolen within an established time frame are automatically pseudo-receipted. If a customer states that the item was never received, the command that shipped the item should be charged.

Comments from the Deputy Chief of Staff for Logistics, Department of the Army. Management stated that the retail supply and inventory management processes, including the pseudo-receipt feature, was being examined by study groups that are rewriting Army Regulation 710-2. January 1996 is the milestone for completing the rewrite of Army Regulation 710-2 and making changes to logistics systems.

Audit Response. Although management's comments suggest that appropriate long-term measures are being taken to comply with our recommendation, short-term changes are needed in the interim. The SAILS system's code tables should be modified so that items not reported as lost or stolen within an established time frame are automatically psuedo-receipted.

We request that the Deputy Chief of Staff for Logistics, Department of the Army, reconsider our recommendation and provide revised comments on this final report, concurring or nonconcurring with our recommendations. If management concurs, the comments should include the estimated dates for completion of planned actions.

2. We recommend that the Director, Defense Finance and Accounting Service Indianapolis Center, disclose, in footnotes to the financial statements of the Defense Business Operations Fund Army Supply Management business area, the total value of inventories paid-in-transit that are more than 90 days old, if the amounts are considered material.

Comments from the DFAS. DFAS concurred in principle with the recommendation, but stated that accumulating data manually is not cost-effective because support systems are old, DFAS plans to replace the support systems, and resources are limited.

As noted in the DFAS comments on Recommendation A.2., the amount of DBOF inventory in-transit does not exceed the 3-percent threshold in the GAO audit manual[2] for disclosure of material discrepancies in footnotes.

Audit Response. Management's comments are potentially responsive. If DFAS has determined that in-transit inventories are below the required materiality thresholds for financial reporting, we agree that disclosure is not required. We request that DFAS provide supporting information for their assertion that materiality thresholds are not exceeded. If in-transit inventories exceed materiality thresholds in the future, appropriate footnotes will be required. Since the DBOF Army Supply Management Business Area combines wholesale and retail inventories for reporting purposes, both wholesale and retail in-transit inventories should be considered when determining materiality thresholds.

[2]"GAO Financial Audit Manual" (GAO/AFMD-12.19.5A), June 1992.

Finding C. Access Controls and Software Development Procedures

Controls over access to application software and software development for SAILS and STARFIARS needed improvement. Specifically:

o access to SAILS and STARFIARS software was granted to users who had no specific need for it;

o a Terminal Area Security Officer had not been appointed for the SAILS system;

o testing of software changes for STARFIARS was not documented; and

o SAILS software did not perform the edits needed to detect and reject erroneous data.

The weaknesses in access controls occurred because the Information Systems Security Officer had not received adequate training, and therefore had not fully implemented the available features of the computer system security software. The previous Terminal Area Security Officer for the SAILS system had retired and had not been replaced. Software testing was not documented because outdated Army procedures instead of more comprehensive DFAS procedures were followed. Edits to detect and reject erroneous data were not being done because edit code tables were not updated when the SAILS system's software was changed. Collectively, those weaknesses could compromise the two systems and could result in processing of erroneous data, and creating an environment conducive to abuse and manipulation.

Background

Computers used by the central design activities to maintain both the STARFIARS and SAILS systems reside at the Multi-functional Information Processing Activity, Letterkenny Army Depot, Chambersburg, Pennsylvania. The central design activities use a telecommunications network to access the computers. The Information Systems Security Officer for the computers

is assigned to the U.S. Army Information Systems Software Center's Software Development Center - Washington (the Software Development Center - Washington), Fairfax, Virginia. The Information Systems Software Center is under the command of the U.S. Army Information Systems Engineering Command, Fort Huachuca, Arizona.

Security Controls. Army Regulation 380-19, "Information Systems Security," August 1, 1990, lists the requirements for computer security and the responsibilities of the Information Systems Security Officer. One of those responsibilities is to manage access controls for the system. System access is to be retired when a user has been transferred to other duties, reassigned, retired, discharged, or otherwise separated. Sound computer security practices require security officers to limit software access to personnel who have a bona fide need to use the software, and to restrict access capabilities (that is, read-only or read/write access) to the work requirements of those personnel.

The Information Systems Security Officer for both the SAILS system and STARFIARS uses a proprietary software package, Access Control Facility-2 (ACF-2), to control access to the mainframe computer. The software operates continuously to validate authorization before allowing access, and denies access when the request is invalid. Attempts at access by invalid users are security violations, and can be recorded for subsequent reporting and review. If ACF-2 permits a user to access a system, the user is restricted to the resources that he or she is authorized to access. ACF-2 monitors access from all points of entry, including terminals and batch processing submissions. ACF-2 uses software tables, developed by the Information Systems Security Officer, to determine which users are authorized to access the computer system and the levels or types of access that each will have.

Edit Features. Edit features are normally built into application software to screen transaction data for accuracy. Typically, edit features reject erroneous data and generate reports that show why the data were rejected, so that users can correct the errors and resubmit the data. Edit features can be built into the application software or can compare input data with tables of valid codes. Well-designed edit features are necessary for adequate controls over the accuracy and reliability of data.

Office of Management and Budget (OMB) Circular A-130, "Management of Federal Information Sources," December 24, 1985, requires Federal agencies to ensure that data files, computer programs, and equipment are secured against unauthorized changes, unauthorized disclosure and use, and destruction.

Access to Software Libraries

The software libraries for both the SAILS system and STARFIARS were exposed to unauthorized access because the security officer had not managed system access controls effectively and had not been trained to use the ACF-2 computer security software. The software libraries are data files that contain program source codes, job control language, and executable programs for the computer systems. We could not readily determine whether unauthorized users had accessed the libraries.

Computer Access Controls. Our review of controls over access to the computer showed that six employees other than the Information Systems Security Officer had read/write access to the ACF-2 security software used to protect the systems. Four employees were systems programmers who needed read/write access in order to to transfer computer functions from the Software Development Center - Washington to Letterkenny Army Depot, Chambersburg, Pennsylvania. (This transfer was ongoing during our audit.) One employee was the Information Systems Security Officer at Letterkenny Army Depot, who also needed access to support the transfer of computer functions to Letterkenny. The fifth employee did not need read/write access. Granting read/write access to the six employees facilitated the transfer of computer functions at the expense of security controls over the SAILS system and STARFIARS software.

In addition, 10 employees at the Software Development Center - Washington had read/write access to the STARFIARS software. Seven of those employees worked in the quality assurance division, two were applications programmers, and one was the Information Systems Security Officer. None of those employees needed read/write access to STARFIARS at the time of our audit.

Similarly, seven employees from the SAILS system design activity had read/write access to almost all SAILS system software. Five of those employees, including the system librarian, worked in the quality assurance division. One employee was an applications programmer, and another performed the independent verification and validation of the most recent SAILS system change package in early 1994. Granting read/write access to the applications programmer eliminated the separation of duties between software programmers and employees who tested the software for quality assurance. The applications programmer no longer needed access because the testing had been completed. Only the system librarian should have been granted read/write access.

Other problems with the ACF-2 access control tables affected the SAILS system's production software. At least four employees who no longer worked with the SAILS system had access. One user identification number in the access control table was no longer assigned to a user. One employee who had left

military service on February 25, 1994, still had read access. Two employees had more than one user identification code.

Although the ACF-2 software capability can record, or log, any attempts at improper access or access to sensitive files, the security log feature was not being used. Therefore, the security officer could not readily detect any improper access to the system or review access to sensitive files.

Generally, applications programmers should not have access to production libraries; such access exposes software to unauthorized changes. The SAILS system's software libraries should be controlled by the system librarian to ensure that only those routines scheduled for modification are changed. Figure 3 shows an access matrix that could serve as a guide for proper access controls and separation of duties for a central design activity.

Software \ Group		Application Users	Application Programmers	System Programmers	System Operators	Quality Assurance Team	Security Officer
Application Data	Prod	Yes (1)	No	No	No	No	No
	Test	No	Yes (1)	No	No	Yes (1)	No
Applications Program Libraries	Prod	No	Yes (1)	No	No	Yes (1)	No
	Test	No	Yes (1)	No	No	Yes (1)	No
Job Libraries	Prod	No	No	Restrict (3)	Restrict (4)	Restrict (3)	Restrict (2)
	Test	No	Yes (1)	Restrict (3)	Yes (1)	Restrict (3)	Restrict (3)
System Level	Utilities	No	Restrict (2)	Yes (1)	No	No	Restrict (2)
	Libraries	No	No	Yes (1)	No	No	Restrict (3)
Security	Controls	No	No	No	No	No	Restrict (2)

(1) Access is allowed but should be restricted to need to know.
(2) Use of sensitive utilities should be logged by security system.
(3) All access should be logged by security system.
(4) Access should be limited to execution and job scheduling.

Figure 3. Sample Access Controls Matrix

Security Officer Training. The weaknesses in access controls occurred because the Information Systems Security Officer:

o had not designed the access tables for ACF-2 to prevent unauthorized access,

o had not reviewed the existing access tables since his appointment as security officer in 1991,

o had not ensured that personnel who had left the department were dropped from the access list, and

o had not restricted access to conform to employees' work requirements.

Those weaknesses were caused by the Information Systems Security Officer's unfamiliarity with the ACF-2 security software. The Information Systems Security Officer told us that he had received minimal training on the ACF-2 package; funding shortages had prevented further training.

Terminal Area Security Officer for SAILS

A Terminal Area Security Officer for the SAILS system's central design activity had not been assigned as required. Army Regulation 380-19 requires the Information Systems Security Officer to ensure that Terminal Area Security Officers are appointed for each terminal or contiguous group of terminals that is not under the direct control of the Information Systems Security Officer. The Terminal Area Security Officer is responsible for issuing written instructions on computer security, managing access controls to terminals, monitoring local compliance with security procedures, and reporting actual or suspected security violations to the Information Systems Security Officer. The previous Terminal Area Security Officer had retired in September 1993. During our audit, managers at the SAILS system's central design activity were initiating corrective action to appoint a Terminal Area Security Officer.

Documentation for Software Testing

Because test plans were not developed for interim changes to the STARFIARS software, the software may contain undetected errors. Documented testing plans and results were not available for 16 interim software changes to

STARFIARS. DFAS Headquarters had developed detailed procedures for software management, as outlined in "Configuration Management Systems Change Request Regulation," DFAS Regulation 7920.3-R, July 1992. However, the STARFIARS software was not tested in accordance with those procedures. Instead, personnel used Army regulations that had been in effect before DFAS was given responsibility for STARFIARS. When viewed individually, the lack of documented test plans seemed insignificant. However, because STARFIARS software is used for significant financial calculations, the lack of formal test plans and results for 16 consecutive interim changes increased the risk that the software may contain errors. The interim software changes were made during a 3-year period.

Edit Programs

Because of an oversight, personnel at the Central Design Activity had not updated an edit table used by the SAILS system. The edit table, which identified erroneous data, should have been updated to reflect changes in the SAILS system. We could not determine how long the outdated edit table had been used or whether its use had resulted in data errors. We brought this weakness to the attention of the functional proponent for the SAILS system. Management corrected the problem immediately; therefore, we are not making a recommendation regarding edit programs.

Conclusion

Better controls were needed over access to the SAILS and STARFIARS systems. The Information Systems Security Officer at the Software Development Center - Washington had not received adequate training in the use of security software. Access controls over software libraries and security software were inadequate. A Terminal Area Security Officer had not been appointed at the SAILS central design activity, and documentation for STARFIARS software testing was unavailable.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Director, Software Development Center - Washington:

a. Provide additional security training to the Information Systems Security Officer at the Software Development Center - Washington, to include training on the Access Control Facility-2 security software.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation. He stated that a request to train the Information Systems Security Officer on the Access Control Facility-2 security software had been submitted to the Center's training coordinator, and that additional training would also be requested.

b. Limit access to software libraries for the Standard Army Intermediate Level Supply System and the Standard Army Financial Inventory Accounting and Reporting System to personnel whose duties require such access, in a manner that provides adequate separation of duties.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation. He stated that management would evaluate users' requirements for continued access to the SAILS and STARFIARS systems, and would use the ACF-2 security software to protect software libraries. He also stated that in order to eliminate unauthorized access in the future, the Software Development Center - Washington would coordinate these efforts with the Terminal Area Security Officer.

Audit Response. Although the comments from the Software Development Center - Washington were responsive, planned completion dates for corrective actions were not provided. We request that the Software Development Center - Washington provide planned completion dates in response to our final report.

c. Limit access to the Access Control Facility-2 security software to personnel who are responsible for computer security.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation and stated that normal access has been restored for the systems programmers who had special access to the ACF-2 security system during the transfer of computer functions. For the applications programmers who work in

quality assurance, access has also been limited. These actions were completed in July 1994.

d. Review prior access to the production libraries and Access Control Facility-2 software for the Standard Army Intermediate Level Supply System and the Standard Army Financial Inventory Accounting and Reporting System, to determine whether any users have had improper access to these systems and how unauthorized access may have affected the system's integrity.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation and stated that in July 1994, the Center's Information Systems Security Officer and ACF-2 administrator had reviewed both systems' production libraries for unusual updates to data.

e. Activate the security log feature of the ACF-2 security software and require the Information Systems Security Officer to review the log for attempts to improperly access the system and use sensitive files.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation and stated that security reports are now being generated and are reviewed daily by the Center's Information Systems Security Officer.

f. Verify that a Terminal Area Security Officer has been appointed at the U.S. Army Information Systems Software Development Center - Lee, Fort Lee, Virginia, as required by Army Regulation 380-19, "Information Systems Security," August 1, 1990.

Comments from Software Development Center - Washington. The Commander, Software Development Center - Washington, concurred with the recommendation and stated that a Terminal Area Security Officer was appointed on August 29, 1994.

2. We recommend that the Director, Defense Finance and Accounting Service Indianapolis Center, Fort Benjamin Harrison, Indiana, develop procedures and controls for its software development staff to verify the adequacy of documentation of all software testing plans and results for the Standard Army Financial Inventory Accounting and Reporting System.

Comments from DFAS. The Deputy Director for Business Funds, DFAS, concurred with the recommendation and stated that current DFAS guidance provides the procedures and controls we recommended. All future tests will be the subject of formal test plans developed in compliance with the DFAS guidance. All such plans and their results will be maintained for audit purposes.

The functional proponent for STARFIARS had written verification that the 16 interim change packages referred to in the audit report were tested and validated by system users. Interim change packages are operationally validated as follows:

o A description of the corrective action in the change package is sent to the test site.

o The code for the interim change is sent to a user, who tests the changes.

o The lead site tests the change and informs the proponent of the results.

o Depending on the test results, the change package is revised to correct any deficiencies or is released for implementation by all users.

Audit Response. The comments from the Deputy Director for Business Funds, DFAS, were responsive. We were aware that the functional proponent for STARFIARS had written verification that the 16 interim changes had been operationally tested. However, we did not believe that the tests constituted an adequate quality assurance review of the changes. Also, the tests had not been conducted in accordance with DFAS guidance. Therefore, a more formal testing process is warranted, as proposed by management. Since all future software changes will include formal test plans, as the DFAS comments stated, we consider the corrective action for this recommendation to be complete.

Part III - Additional Information

Appendix A. Variances Reported Between the SAILS System and STARFIARS

The variances below were shown on the ALF-42B, "ABF Price Extension and Reconciliation" reports, dated September 30, 1993, that were provided in response to a data call.

Installation	SAILS System On-Hand Inventory Balance	STARFIARS On-Hand Inventory Balance	STARFIARS Overstated	STARFIARS Understated
175th Theater Finance Command, Korea	$90,820,452.29	$ 110,223,862.00	$ 19,403,409.71	—
45th Finance Support Group, Germany	446,819,495.55	501,264,377.67	54,444,882.12	—
5th Corps Finance Group, Germany	20,755,702.52	4,369,263.72	—	$ 16,386,438.80
7th Corps Regional Finance Accounting Office, Germany	2,480,019.42	2,645,573.00	165,553.58	—
7th Medical Command, Germany	44,587,734.48	44,653,861.86	66,127.38	—
Carlisle Barracks, PA*	N/A	N/A	N/A	N/A
Finance and Accounting Office, Japan*	N/A	N/A	N/A	N/A
Fort Belvoir, VA	2,000,647.45	1,855,318.62	—	145,328.83
Fort Benjamin Harrison, IN	79,319.73	419,964.62	340,644.89	—
Fort Benning, GA	4,542,671.27	4,067,234.96	—	475,436.31
Fort Bliss, TX	33,781,000.00	33,781,000.00	—	—
Fort Bragg, NC	5,723,219.39	5,723,219.39	—	—
Fort Clayton, Panama*	N/A	N/A	N/A	N/A
Fort Devens, MA	654,436.99	598,277.33	—	56,159.66
Fort Dix, NJ	4,935,781.35	4,863,503.23	—	72,278.12
Fort Drum, NY	9,518,499.97	13,069,168.26	3,550,668.29	—
Fort Eustis, VA	6,180,930.41	6,930,729.93	749,799.52	—
Fort George G. Meade, MD	3,905,336.29	9,469,183.24	5,563,846.95	—
Fort Gordon, GA	3,749,143.17	3,749,143.17	—	—
Fort Huachuca, AZ	3,980,260.79	3,969,669.87	—	10,590.92
Fort Irwin, CA	13,784,389.46	10,145,578.49	—	3,638,810.97
Fort Jackson, SC*	N/A	N/A	N/A	N/A
Fort Leonard Wood, MO	2,119,447.29	2,189,391.11	69,943.82	—
Fort Lewis, WA	5,849,626.36	12,414,926.05	6,565,299.69	—
Fort Leavenworth, KS	1,049,477.04	1,035,803.38	—	13,673.66
Fort Lee, VA	711,136.03	789,258.27	78,122.24	—

Appendix A. Variances Reported Between the SAILS System and STARFIARS

Installation		SAILS System On-Hand Inventory Balance	STARFIARS On-Hand Inventory Balance	STARFIARS Overstated	STARFIARS Understated
Fort McClellan, AL		$ 1,334,153.13	$ 1,510,606.99	$ 176,453.86	—
Fort McCoy, WI		5,383,943.85	5,383,943.85	—	—
Fort Ord, CA		6,919,984.80	5,463,602.01	—	$1,456,382.79
Fort Polk, LA		12,807,782.73	14,314,709.91	1,506,927.18	—
Fort Richardson, AK		7,164,337.96	7,571,864.81	407,526.85	—
Fort Riley, KS		19,325,095.22	19,608,392.72	283,297.50	—
Fort Ritchie, MD		4,774,208.78	4,632,862.83	—	141,345.95
Fort Rucker, AL		1,444,565.04	2,276,168.18	831,603.14	—
Fort Sam Houston, TX		1,669,468.21	2,420,991.9	751,523.69	—
Fort Shafter, HI		12,930,957.19	11,163,421.91	—	1,767,535.28
Fort Sill, OK		17,379,686.68	16,568,770.23	—	810,916.45
Fort Stewart, GA		22,380,578.61	32,435,264.65	10,054,686.04	—
Presidio of San Francisco, CA*		N/A	N/A	N/A	N/A
Subsistence Finance Accounting Office Europe, Germany*		N/A	N/A	N/A	N/A
West Point Military Academy, NY		256,821.00	257,792.11	971.11	—
Unknown Installation**		933,598.28	(3,822,912.39)	—	4,756,510.67
Totals	$ 822,733,908.73	$ 898,013,787.88	$ 105,011,287.56	$ 29,731,408.41	
Net Difference Between SAILS System and STARFIARS					$ 75,279,879.15

*The ALF-42B "Price Extension and Reconciliation" report was not available.

**The installation name was not provided.

Appendix B. Summary of Potential Benefits Resulting From Audit

Recommendation Reference	Description of Benefit	Type of Benefit
A.1., A.2.	Data Accuracy. Improved accuracy in reporting of inventory balances.	Nonmonetary
B.1.	Internal Controls. Improved controls over in-transit inventories.	Nonmonetary
B.2.	Data Accuracy. Full disclosure of in-transit inventories on financial statements.	Nonmonetary
C.1.a, C.1.b., C.1.c., C.1.d., C.1.e., C.1.f.	Internal Controls. Improved controls over access to computer terminals.	Nonmonetary
C.2.	Internal Controls. Improved controls over system testing procedures.	Nonmonetary

Appendix C. Organizations Visited or Contacted

Office of the Secretary of Defense

Assistant Deputy Under Secretary of Defense for Logistics (Logistics Systems Development), Washington, DC

Department of the Army

Headquarters, U.S. Army Forces Command, Fort McPherson, GA
U.S. Army Training and Doctrine Command, Fort Monroe, VA
- U.S. Army Air Defense Artillery Center, Fort Bliss, TX
- U.S. Army Aviation Center, Fort Rucker, AL
- U.S. Army Garrison, Fort Belvoir, VA

U.S. Army Information Systems Command, Fort Huachuca, AZ
- U.S. Army Information Systems Software Development Center Lee, Fort Lee, VA

U.S. Army Strategic Logistics Agency, Alexandria, VA
U.S. Army Information Systems Engineering Command, Fort Huachuca, AZ
U.S. Army Audit Agency, Alexandria, VA

Defense Agencies

Defense Finance and Accounting Service Center, Indianapolis, IN
- Defense Accounting Office, Fort Bliss, TX
- Defense Accounting Office, Fort Rucker, AL
- Defense Accounting Office, Fort Lee, VA
- Defense Accounting Office, Fort Belvoir, VA

Defense Information Systems Agency, Arlington, VA

Other Defense Organizations

U.S. Joint Logistics Systems Center, Dayton, OH

Non-Defense Federal Organizations

U.S. General Accounting Office, Washington, DC
Federal Accounting Standards Advisory Board, Washington, DC

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)
Assistant Secretary of Defense (Command, Control, Communications and Intelligence)

Department of the Army

Secretary of the Army
Deputy Chief of Staff for Logistics, Supply Policy Division
Commander, U.S. Army Forces Command, Fort McPherson, GA
Commander, U.S. Army Training and Doctrine Command, Fort Monroe, VA
  Commander, U.S. Army Air Defense Artillery Center, Fort Bliss, TX
  Commander, U.S. Army Aviation Center, Fort Rucker, AL
  Commander, U.S. Army Garrison, Fort Belvoir, VA
Commander, U.S. Army Information Systems Command, Fort Huachuca, AZ
  Commander, U.S. Army Information Systems Software Development Center - Lee, Fort Lee, VA
Commander, U.S. Army Information Systems Engineering Command, Fort Huachuca, AZ
  Commander, U.S. Army Information Systems Software Center, Fort Belvoir, VA
    Washington Development Center, Fort Belvoir, VA
Director, U.S. Army Strategic Logistics Agency, Alexandria, VA
Auditor General, U.S. Army Audit Agency

Defense Agencies

Director, Defense Finance and Accounting Service
  Director, Defense Finance and Accounting Service Indianapolis Center
    Director, Defense Accounting Office, Fort Bliss, TX
    Director, Defense Accounting Office, Fort Rucker, AL
    Director, Defense Accounting Office, Fort Lee, VA
    Director, Defense Accounting Office, Fort Belvoir, VA

Non-Defense Organizations

Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, U.S. General Accounting Office

Chairman and Ranking Minority Member of Each of the Following Congressional Committees and Subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Subcommittee on Force Requirements and Personnel, Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Subcommittee on Military Forces and Personnel, Committee on Armed Services
House Committee on Government Operations
House Subcommittee on Legislation and National Security, Committee on Government Operations

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Part IV - Management Comments

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR LOGISTICS
500 ARMY PENTAGON
WASHINGTON, DC 20310-0500

DALO-SMP

13 SEP 1994

MEMORANDUM THRU

DIRECTOR OF THE ARMY STAFF

ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, LOGISTICS AND ENVIRONMENT)

FOR DIRECTOR OF FINANCIAL MANAGEMENT, OFFICE OF THE INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Army Report of Applications Controls Over Selected Portions of the Standard Army Intermediate Level Supply System (Project No. 3FG-2020)--INFORMATION MEMORANDUM

1. This is in reference to HQ, USAAA memorandum of 8 July 1994 (Tab A) which asked the ODCSLOG to respond to your memorandum of 30 June 1994 (Encl to Tab A). Your memorandum asked that ODCSLOG provide comments and a statement of corrective action to be taken.

2. This is an interim reply. Activities outside ODCSLOG will be tasked for final reply information. The final reply is expected to be forwarded on 7 October 1994. Replies in those areas for which ODCSLOG has staff responsibility are at Tab B.

FOR THE DEPUTY CHIEF OF STAFF FOR LOGISTICS:

2 Encls

JOHN J. CUSICK
Major General, GS
Director of Supply
and Maintenance

CF:
HQDA, VCSA, DCSLOG, SAAG-PRF-A,
SAIG-PA, DALO-ZXA

CDR, AMC

SAILE - Concur, Mr. Croom/6975727 (by conference)
DFAS - Noted, Mr. Dare/DSN 699-3041 (by phone)
USAISC - Noted. Mr. Fitzpatrick/DSN 879-2514 (by phone)

Mr. Stinson/X46756

Responses
to
Office of the Inspector General
Department of Defense
Draft of a Proposed Audit Report,
"Application Controls Over Selected Portions of the
Standard Army Intermediate Level Supply System"
Project Number 3FG-2020,
dated June 30, 1994

Finding A. Reconciliation of Inventory Balances

Unreconciled net differences exited between inventory balances maintained by the Standard Army Intermediate Level Supply System (SAILS) and the Standard Army Financial Inventory Accounting and Reporting System (STARFIARS). The differences totaled $75.3 million, and the gross amount of errors was $135 million. Those conditions occurred because 38 (91 percent) of the 42 Defense Accounting Offices (DAOs) we reviewed were not performing the required reconciliations between the two systems. As a result, the imbalances materially affected the accuracy of management and financial reports at the retail inventory level.

Recommendation 1:

We recommend that the Director, Defense Finance and Accounting Service, and the Deputy Chief of Staff for Logistics, Department of the Army:

a. Resolve the inconsistencies between inventory balances maintained by the STARFIARS and the SAILS system. Efforts should:

(1) Direct the Defense Accounting Offices to perform the required reconciliations.

(2) Monitor the status of reconciliations to ensure that they are performed monthly.

(3) Train employees at the Defense Accounting Offices in the most efficient methods of performing reconciliations.

ODCSLOG Response: No Army response required.

b. Use integrated data bases for their replacement systems for the STARFIARS and the SAILS system, in order to eliminate the need to reconcile inventory balances between the two systems.

ODCSLOG Response:

The SAILS near-term replacement Standard Army Management Information System (STAMIS) - Standard Army Retail Supply System-Objective (SARSS-O) - is not planned to be integrated with STARFIARS; however, it is an interactive system. It is more efficient in providing essential, timely data exchange to and from STARFIARS. As mentioned in this report, the Army is testing the Single Stock Fund concept that extends the wholesale stock fund down to the installation or equivalent level. This will eliminate the need for retail Defense Business Operating Fund (DBOF) accounting and reporting at the retail level. The Army will not have an integrated system to replace the present systems; however, the Army's Total Distribution Plan will integrate all efforts to implement or improve the interactive relationships between all Combat Service Support systems.

Recommendation 2: No Army response required.

FINDING B. Inventory Paid-in-Transit

The values of in-transit inventories were overstated and included inventory items that had been in an in-transit status since 1990. About $88.0 million of the $141.1 million in-transit inventories has been in an in-transit status for more than 90 days. That condition was primarily caused by failure of the customers to promptly return the receiving documents upon receipt of the inventory items and the SAILS system's inability to provide sufficient information to item managers for rapid research and resolution. As a result, the Army DBOF supply business area incurred delays in reimbursements for those items and overstated the value of the inventories on its financial statements.

While the Army has initiatives to improve controls over "in-transit" inventory items, the initiatives will take time to develop. Better controls are needed in the interim.

Recommendation 1:

We recommend that the Deputy Chief of Staff for Logistics, Department of the Army, establish uniform criteria to be used by its supply installations to automate the receipting process for paid-in-transit items to ensure replenishment of the DBOF. Specifically, we recommend the SAILS system code tables be modified so that items not reported lost or stolen within an established timeframe are automatically pseudo-receipted. In cases when the customer replies that the item was never received, the shipping command should be charged for the item.

ODCSLOG Response: Noted. The entire retail supply and inventory management paradigm, to include repair parts requirements and management, is being segmented into processes and worked during the Army Regulation 710-2 rewrite by internal velocity management and individual process area study groups. The pseudo-receipt process will be an integral part of the review. Under the Standard Army Retail Supply System-Objective pseudo-receipting will not exist. The milestone for completion of Army Regulation 710-2 rewrite and logistical STAMIS change is Jan 96.

Recommendation 2: No Army response required.

FINDING C. Access Controls and Software Development Procedures

Controls over access to application software and software development for SAILS and STARFIARS needed improvement. Specifically,:

o Access to the SAILS and STARFIARS software was allowed to users who had no specific need for that access.

o A SAILS system Terminal Area Security Officer was not in place.

o Testing of software changes for STARFIARS was not documented.

o Needed edits to direct and reject erroneous data were not being done by SAILS system software.

The access control weaknesses occurred because the Information Systems Security Officer, due to a lack of training, had not fully implemented the available features of the computer system security software. The SAILS System Terminal Area Security Officer was not in place because the previous officer had retired and no new officer had been assigned to replace him. Software testing was not documented due to neglect. Edits to detect and reject erroneous data were not being done because the edit code tables were not updated as changes were made to the SAILS system software. Collectively, those weaknesses described could result in compromise of the two systems and processing of erroneous data, which could provide an environment conducive to fraudulent acts.

Recommendation 1:

We recommend that the Director, Washington Development Center:

a. Provide additional security training to the Washington Development Center Information Systems Security Officer to include training on the Access Control Facility-2 (ACF-2) security software.

b. Limit access to software libraries for the SAILS system and the STARFIARS to personnel whose duties require such action in a manner that would provide adequate separation of duties.

c. Limit access to the ACF-2 security software to those personnel that have computer security responsibilities.

d. Review prior access to the SAILS system and the STARFIARS production libraries and ACF-2 to determine if any improper access to these systems have been made and to determine the effects of the unauthorized access on the integrity of the system.

e. Activate the security logging feature of the ACF-2 security system and require its security officer to review the log for attempts at improper access to the system and usage of sensitive files.

f. Verify that a Terminal Area Security Officer has been appointed at the Systems Design Center at Fort Lee as required by Army Regulation 380-19, "Information Systems Security," August 1, 1990.

ODCSLOG Response: Obtaining/awaiting input from USAISC.

Recommendation 2:

We recommend that the Director, Defense Finance and Accounting Service-Indianapolis Center, develop procedures and controls for its software development staff to verify the adequacy of documentation of all software test plans and testing results for the STARFIARS.

ODCSLOG Response: No Army response required.

DEFENSE FINANCE AND ACCOUNTING SERVICE

1931 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VA 22240-5291

AUG 31 1994

DFAS-HQ/AB

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL, DOD
(ATTN: DIRECTOR, FINANCIAL MANAGEMENT)

SUBJECT: DoD Draft Report, "Application Controls Over Selected Portions of the Standard Army Intermediate Level Supply System," dated June 30, 1994 (Project Code 3FG-2020)

Your memorandum of June 30, 1994, provided the subject draft report for review and comment. We have reviewed the report, and our comments are included in the attachment.

If additional information is required, my point of contact is Mr. Ron Bishop, DFAS-HQ/AB, at (703) 607-0741.

Daniel Turner
Deputy Director for Business Funds

Attachment

Draft Report
APPLICATION CONTROLS OVER SELECTED PORTIONS OF
THE STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SYSTEM
PROJECT CODE 3FG-2020

- Recommendation A.1: We recommend that the Director, Defense Finance and Accounting Service, and the Deputy Chief of Staff for Logistics, Department of the Army:

  a. Resolve the inconsistencies between inventory balances maintained by the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply System. Efforts should:

  (1) Direct the Defense Accounting Offices to perform the required reconciliations.

  (2) Monitor the status of reconciliations to ensure that they are performed monthly.

  (3) Train employees at the Defense Accounting Offices in the most efficient methods of performing reconciliations.

  b. Use integrated data bases for their replacement systems for the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply System, in order to eliminate the need to reconcile inventory balances between the two systems.

- DFAS Response: Concur in principle. The systems audited, Standard Army Financial Inventory Accounting and Reporting System (STARFIARS) and the Standard Army Intermediate Level Supply System (SAILS) are older systems. The financial system, STARFIARS, is not expected to become an interim migratory system to support the DBOF, and SAILS system, a logistics management system, is not under DFAS functional control. Resources are not available to revise non-interim migratory financial systems, and already constrained personnel resources make extensive manual operations cost prohibitive. Interim migratory systems selection criteria requires integrated data bases, and efforts are in process to ensure integration of our interim financial systems with the Joint Logistics Systems Center standard logistics system development efforts. A full integration of the standard finance and logistics systems will eliminate the need for inventory and financial record reconciliations. In the interim, DFAS will make every effort to minimize these type of imbalances pending interim migratory systems selection, their integration with logistics systems, and implementation at DFAS support sites.

Attachment

Draft Report
APPLICATION CONTROLS OVER SELECTED PORTIONS OF
THE STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SYSTEM
PROJECT CODE 3FG-2020

- Recommendation A.2: We recommend that the Director, Defense Finance and Accounting Service - Indianapolis Center, disclose any material discrepancies in inventory balances between the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply System in a footnote to the financial statements of the Army Defense Business Operations Fund Supply Management Business Area.

- DFAS Response: Concur in principle. As noted for recommendation A.1., the systems audited are older systems not expected to become an interim migratory system DFAS will use to support the DBOF. Based upon prior audits, systems change requests have been initiated, for some time, to accumulate this data in financial systems. Competing priorities, however, have prevented their completion. In order to accumulate and report the information necessary to produce footnotes to financial statements would require an added manual function. Also, the net aggregated amount of differences between the Standard Army Financial Inventory Accounting and Reporting System and the Standard Army Intermediate Level Supply System inventory balances does not exceed the three percent materiality threshold used by the General Accounting Office in their audit manual for material footnote disclosures.

- Recommendation B.2: We recommend that the Director, Defense Finance and Accounting Service - Indianapolis Center, disclose, in a footnote to the Army Supply Management financial statements, the total inventories paid in transit that are more than 90 days old, if the amounts are considered material.

- DFAS Response: Concur in principle. As noted for prior recommendations, the age of the support systems, their anticipated replacement, and constrained resources prevent a cost effective manual data accumulation process. As for the inventory differences, the amount of inventory in transit for DBOF did not exceed the three percent materiality threshold used by the General Accounting Office in their audit manual for material footnote disclosures.

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Draft Report
APPLICATION CONTROLS OVER SELECTED PORTIONS OF
THE STANDARD ARMY INTERMEDIATE LEVEL SUPPLY SYSTEM
PROJECT CODE 3FG-2020

- Recommendation C.2: We recommend that the Director, Defense Finance and Accounting Service - Indianapolis Center, develop procedures and controls for its software development staff to verify the adequacy of documentation of all software test plans and testing results for its Standard Army Financial Inventory Accounting and Reporting System.

- DFAS Response: Concur. Current DFAS guidance provides the procedures and controls recommended. All future tests will be the subject of formal test plans formulated in compliance with the DFAS guidance. All such plans, and their results will be maintained for audit. The functional proponent for the Standard Army Financial Inventory Accounting and Reporting System does have, on file, written verification that the 16 "interim" change packages referred to in the audit report were tested and validated by users of the system. "Interim" change packages are operationally validated as follows:

  a. A version description of the corrective action in the change package is sent to the test site.

  b. The code for the "interim" change is sent to a production user, who tests the changes.

  c. The "lead site" tests the change and informs the proponent of the results.

  d. Depending upon the test results, the change package is either revised to correct any deficiencies or released for implementation by all users.

  Action is considered complete.

3

DEPARTMENT OF THE ARMY
US ARMY INFORMATION SYSTEMS SOFTWARE DEVELOPMENT CENTER-WASHINGTON
FORT BELVOIR, VIRGINIA 22060-5456

REPLY TO
ATTENTION OF

ASQB-IWC 1 September 1994

MEMORANDUM FOR Department of Defense Inspector General, 400 Army Navy Drive, Arlington, Virginia 22202-2884

SUBJECT: DRAFT Audit report on Application Controls Over Selected Portions for the Standard Army Intermediate Level Supply System (Project No.3FG-2020)

1. SDC-W reviewed the subject audit report and our comments concerning the findings and recommendations are in enclosure 1.

2. We will continue to aggressively pursue all corrective actions until they are all completed.

3. Findings have been coordinated through the ISC Command Group and the Office of Inspector General.

4. Please direct questions regarding planned actions for SDC-W, to Mr. Edward Salseda, DSN 235-9933.

Enclosure
as

David A. Wallen
DAVID A. WALLEN
Colonel, AD
Commanding

SOFTWARE DEVELOPMENT CENTER - WASHINGTON COMMENTS

Finding C. Access Controls and Software Development Procedures.

Recommendation 1a: Provide additional security training to the Washington Development center Information system Security Officer incudes training on the Access Control Facility-2 (ACF2) security software.

Position: Concur

Planned action: Training request for ACF2 training has been submitted to SDC-W training coordinator and other addition computer security will also be requested

Recommendation 1b: Limit access to software libraries for the Standard Army Intermediate Level Supply system and the Standard Army Financial Inventory Account and Reporting System to personnel whose duties require such access in a manner that would provide adequate separation of duties.

Position: Concur

Planned action: Evaluating users requirements for continued access to the SAILS (ALS) and STARFIARS (ALF) systems using the SIC proponent codes used in the ACF2 to protect software libraries. Coordinate with the Terminal Area Security Officer (TASOs) to eliminate future unauthorized access.

Recommendation 1c: Limit access to the Access Control Facility 2 security software to those personnel that have computer security responsibilities.

Position: Concur

Action taken: The System programmers given special access to the ACF2 system during the transfer of computer function have had their access returned to normal system programmer access. The quality assurance application programmers have had their access limited. This was completed in July 94

Recommendation 1d: Review prior access to the Standard Army Intermediate level Supply System and the Standard Army Financial Inventory Accounting and Reporting System production libraries and the Access Control Facility-2 to determine if any improper access to these systems have been made and to determine the effects of the unauthorized access on the integrity of the system.

Position: Concur

Actions taken: The SDC-W ISSO/ACF2 administrator made a review of the systems SYS2 production libraries for unusual data set record updates in July 94.

Planned action: Continued reviewing the daily ACF2 report for invalid password and authority log and the dataset access journal logging records in this report. No report of unauthorized access or compromise of integrity has been noted.

Recommendation 1e: Activate the security logging feature of the ACF2 security software and require its security officer to review the log for attempts at improper access to the system and usage of sensitive files.

Position: Concur

Planned action: Daily ACF2 security report with the password and authority log is currently in place and reviewed daily by SDC-W ISSO/ACF2 administrator.

Recommendation 1f: Verify that a Terminal Area Security Officer has been appointed at the Systems Design Center at Fort Lee as required by Army Regulation 380-19, Information Systems Security, August 1, 1990.

Position: Concur

Action taken: Appointment made by Chief of Plans and Operations, SDC-L, CPT Ward Mason, 29 Aug 94.

Audit Team Members

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INTERNET DOCUMENT INFORMATION FORM

A . Report Title: Application Controls Over Selected Portions of the Standard Army Intermediate Level Supply System

B. DATE Report Downloaded From the Internet: 03/10/99

C. Report's Point of Contact: (Name, Organization, Address, Office Symbol, & Ph #): **OAIG-AUD (ATTN: AFTS Audit Suggestions)**
Inspector General, Department of Defense
400 Army Navy Drive (Room 801)
Arlington, VA 22202-2884

D. Currently Applicable Classification Level: Unclassified

E. Distribution Statement A: Approved for Public Release

F. The foregoing information was compiled and provided by:
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