

*Audit*



*Report*

STATUS OF YEAR 2000 COMPLIANCE AT THE  
DEFENSE COMMISSARY AGENCY

Report No. 99-179

June 7, 1999

Office of the Inspector General  
Department of Defense

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**Acronym**

DeCA

Defense Commissary Agency



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

June 7, 1999

MEMORANDUM FOR DIRECTOR, DEFENSE COMMISSARY AGENCY

SUBJECT: Audit Report on Status of Year 2000 Compliance at the Defense  
Commissary Agency (Report No. 99-179)

We are providing this report for information and use. We considered management comments on a draft of this report when preparing the final report.

The Defense Commissary Agency comments conformed to the requirements of DoD Directive 7650.3; therefore, additional comments are not required.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. Charles M. Santoni at (703) 604-9051 (DSN 664-9051) (csantoni@dodig.osd.mil) or Mr. Robert L. Shaffer at (703) 604-9043 (DSN 664-9043) (rshaffer@dodig.osd.mil). See Appendix B for the report distribution. The audit team members are listed inside the back cover.

A handwritten signature in black ink that reads "Robert J. Lieberman".

Robert J. Lieberman  
Assistant Inspector General  
for Auditing



## Office of the Inspector General, DoD

Report No. 99-179  
(Project No. 9AL-0083)

June 7, 1999

### Status of Year 2000 Compliance at the Defense Commissary Agency

#### Executive Summary

**Introduction.** This report is one in a series being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge. The Deputy Secretary of Defense requested this audit of the Defense Commissary Agency.

**Objectives.** Our objective was to evaluate whether the Defense Commissary Agency was adequately planning for and managing year 2000 risks to avoid undue disruption to its mission. Specifically, we reviewed year 2000 risk assessments, testing, and contingency plans for Defense Commissary Agency mission-critical systems and infrastructure equipment.

**Results.** The Defense Commissary Agency was making progress in its year 2000 conversion effort, but more could be done to minimize the risk. The Defense Commissary Agency target certification date of October 31, 1999, for the Defense Commissary Agency Interim Business System may not allow sufficient time to correct unexpected errors, changes, and delays in solving year 2000 issues. In addition, as of April 9, 1999, the Defense Commissary Agency had identified the compliance status of only 1,822 (55 percent) of 3,285 vendor models of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices. Also, the contingency plan for the Defense Commissary Agency Interim Business System was inadequate, and the contingency plan for the infrastructure equipment was incomplete. As a result, the Defense Commissary Agency increased its risk. For details of the audit results, see the Finding section of the report.

**Summary of Recommendations.** We recommend that the Director, Defense Commissary Agency, expand contingency plans to delineate alternative operational procedures if the DeCA Interim Business System or infrastructure equipment experience system failures as a result of the year 2000. We also recommend that the contingency plans be tested to ensure that the alternative procedures are realistic and executable.

**Management Comments.** The Executive Director for Support, Defense Commissary Agency (the Executive Director) concurred and stated that the Defense Commissary Agency has expanded the contingency plans to delineate alternative operational procedures if the Defense Commissary Agency Interim Business System and infrastructure equipment experience system failures because of year 2000. The Defense Commissary Agency is in the process of developing a handbook on contingency plans

for the infrastructure equipment within the commissaries. Also, the Defense Commissary Agency is currently testing or planning to test the contingency plans to ensure the alternative procedures are realistic and executable. The Executive Director stated that the Defense Commissary Agency has made significant progress in lowering the year 2000 risk associated with evaluating the compliance status of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices. As of May 10, 1999, the Defense Commissary Agency identified the compliance status of 79 percent of the vendor models of infrastructure equipment. The target completion date for all ongoing tasks is October 1999. See the Finding section of the report for a discussion of the management comments and the Management Comment section of the report for a complete text of the comments.

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## Background

**Executive Order No. 13073.** Because of the potential failure of computers to run or function throughout the Government, the President issued Executive Order No. 13073, "Year 2000 Conversion," February 4, 1998. The executive order makes it policy that Federal agencies ensure that no critical Federal program experiences disruption because of the year 2000 computing problem. The Executive Order also requires the head of each agency to ensure that efforts to address the year 2000 computing problem receive the highest priority.

**DoD Year 2000 Management Plan.** The DoD Year 2000 Management Plan, (DoD Management Plan) provides the overall DoD strategy and guidance to inventory, prioritize, fix, or retire systems, and to monitor their progress. DoD Components are responsible for implementing the five-phase, year 2000 management process described in the DoD Management Plan. The target date to make mission-critical systems year 2000 compliant was December 31, 1998. Systems that were still noncompliant after that date were to be considered high risk. The Office of Management and Budget target date was March 31, 1999.

**Defense Commissary Agency.** The Defense Commissary Agency (DeCA) mission is to provide an efficient and effective worldwide system of commissaries for the resale of groceries and household supplies at the lowest practical price to members of the military Services, their families, and other authorized patrons, while maintaining high standards for the quality of facilities, products, and services. DeCA reports to the Under Secretary of Defense for Personnel and Readiness. Part of the DeCA mission is to promote positive morale among its patrons in support of personnel retention and combat readiness. The DeCA operates approximately 294 commissaries in 4 regional areas worldwide. To operate the 294 commissaries, DeCA relies heavily on a network of business systems.

The DeCA designated four mission-critical business systems whose functions are required to ensure that the groceries can be purchased and sold, shelves can be stocked, and vendors can be paid. Specifically, the four mission-critical systems are the DeCA Interim Business System, the Point of Sale – Modernization (Point of Sale System), the Standard Automated Voucher Examination System, and the DeCA Automatic Coupons System. DoD reported those systems as mission critical to the Office of Management and Budget.

## Objectives

The Deputy Secretary of Defense requested this audit. The overall audit objective was to evaluate whether DeCA adequately planned for and managed the year 2000 risk to avoid undue disruption to its mission. Specifically, we reviewed the year 2000 risk assessments, testing, and contingency plans for DeCA mission-critical systems and infrastructure equipment. See Appendix A for a discussion of the audit scope, methodology and prior audit coverage.

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## **Status of Year 2000 Compliance**

The Defense Commissary Agency was making progress in its year 2000 conversion, but more could be done to minimize risk. The Defense Commissary Agency target certification date of October 31, 1999, for the Defense Commissary Agency Interim Business System may not allow sufficient time to correct unexpected errors, changes, and delays in solving year 2000 issues. In addition, as of April 9, 1999, the Defense Commissary Agency had identified the compliance status of only 1,822 (55 percent) of its 3,285 vendor models of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices. Also, the contingency plan for the Defense Commissary Agency Interim Business System was inadequate, and the contingency plan for the infrastructure equipment was incomplete.

These conditions occurred because DeCA did not focus on a centralized management strategy described in the DoD Management Plan until May 1998; cancelled the acquisition of the replacement system for the DeCA Interim Business System; and decided to modernize the DeCA Interim Business System before making it year 2000 compliant. DeCA also experienced contractual disputes and a lack of resource availability.

As a result, the delay in starting the renovation of DeCA mission-critical systems and infrastructure equipment has increased risk. The DeCA must therefore intensively manage the remaining year 2000 conversion tasks and take additional action to minimize risk.

## **Identification of Year 2000 Deficiencies and Corrective Actions**

Using the DoD definition of mission-critical, DeCA designated the Standard Automated Voucher Examination System, the DeCA Interim Business System, the DeCA Automatic Coupons System, and the Point of Sale System as mission critical. The systems are needed for DeCA to operate the commissaries (purchase, stock, and sell groceries and pay vendors). DeCA had certified one of the systems, the Standard Automated Voucher Examination System, as year 2000 compliant before DoD defined the certification guidelines. Commendably, DeCA decided to recertify the system using the guidelines. The DeCA identified the deficiencies and necessary fixes needed for the other three mission-critical systems to become year 2000 compliant. The fixes ranged from rewriting code to upgrading software.

In addition to the four mission-critical systems, we reviewed the DeCA year 2000 program for handling infrastructure equipment that is critical to the operation of each commissary and administrative office.

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**Standard Automated Voucher Examination System.** The Standard Automated Voucher Examination System provides contracting, bill paying, and accounting support for DeCA. The DeCA took the initiative to complete the year 2000 repairs to the Standard Automated Voucher Examination System in October 1996 and certified it as year 2000 compliant. However, the certification procedures used did not follow those subsequently defined in the DoD Management Plan. In May 1998, with the establishment of and direction from the DeCA Year 2000 Program Office, the System Manager for the Standard Automated Voucher Examination System decided to recertify the system using the certification process defined by the DoD Management Plan. Testing started in March 1999, which was the earliest opportunity to use the developmental test bed.

**DeCA Interim Business System.** The DeCA Interim Business System is an on-line, interactive inventory management system that supports most business functions within DeCA. DeCA used two methods to identify the year 2000 deficiencies within the DeCA Interim Business System. First, DeCA rolled over the date on the system's test platform to the year 2000 and processed transactions for approximately 2 months. Second, programmers reviewed the source code for the DeCA Interim Business System to identify any that were not year 2000 compliant. Using the two methods, DeCA identified 58 programs that were noncompliant. About 75 percent of the 58 programs that were not year 2000 compliant required only 10 or less lines of source code to be rewritten to be compliant, and none required extensive rewrites. In April 1999, DeCA began rewriting the source code.

**DeCA Automated Coupons System.** The DeCA Automated Coupons System tabulates and processes manufacturer coupons redeemed at the commissaries. With the assistance of the contractor, DeCA identified and rewrote the noncompliant lines of source code and tested the software on the operating platform. The tests showed that although the software processed date data accurately, the operating platform was not year 2000 compliant; therefore, the system needed to be migrated to a year 2000 compliant operating platform. The DeCA started migrating the DeCA Automated Coupons System to a year 2000 compliant operating platform and is testing the system on the new platform.

**Point of Sale System.** The commissaries use the Point of Sale System to process customer purchases and capture sales and financial data. The contractor for the Point of Sale System identified the upgrades needed to make the system's hardware and software year 2000 compliant. DeCA started testing the software in November 1998 to ensure that it met all functional requirements. An independent testing organization also tested the upgraded software for functionality. When DeCA completes the testing and the contractor fixes all the software, DeCA will start to deploy the software and hardware upgrades to its 294 commissaries, 4 regional offices, and headquarters offices.

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In addition to reviewing the four mission-critical systems, we reviewed DeCA infrastructure equipment that is critical to the operation of the individual commissaries and administrative offices. DeCA uses the infrastructure equipment to operate the commissaries and to complete administrative duties. Examples include telephones, refrigeration monitoring, meat wrapping, and fire alarm systems. In its evaluation of year 2000 implications for infrastructure equipment, DeCA defined 16 categories as critical to the operation of the commissaries. In November 1998, DeCA established a working group within the Year 2000 Program Office to organize and manage the infrastructure equipment for year 2000 compliance. The DeCA conducted a 100 percent, wall-to-wall inventory of all infrastructure equipment in commissaries and offices. As of April 9, 1999, the inventory showed that 3,285 vendor models of infrastructure equipment fell under the critical categories. Of these, DeCA knew the year 2000 compliance status of only 1,822 vendor models of equipment (55 percent). The compliance status of the remaining 1,463 vendor models of equipment (45 percent) was unknown. DeCA plans to upgrade and replace all noncompliant equipment by September 30, 1999.

## **Target Dates for Completing Year 2000 Solutions**

During its implementation of the DoD Management Plan, DeCA developed the DeCA Year 2000 Management Plan (Plan), dated December 1998. The Plan determined March 31, 1999, as the target completion date for all systems within DeCA. Thus, it was implicitly acknowledged that all four mission-critical systems would miss the December 31, 1998, DoD goal and be termed high risk.

As of April 8, 1999, three of the DeCA mission-critical systems were in the validation phase; the DeCA Interim Business System was in the renovation phase; and infrastructure equipment was in the assessment phase. The target dates established for fixing, testing, and deploying year 2000 compliant systems and infrastructure equipment range from April 30, 1999, to October 31, 1999, which may not allow for any unexpected errors, changes, or delays in the year 2000 compliance effort. The following table shows the specific estimated completion dates for the four mission-critical systems and the infrastructure equipment.

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### Estimated Compliance Dates for DeCA Mission-Critical Systems and Infrastructure Equipment

<u>Mission-Critical System</u>	<u>Current Phase</u>	<u>Estimated Implementation/Completion Date</u>
DeCA Automated Coupon System	Validation Phase	April 30, 1999
DeCA Interim Business System	Renovation Phase	October 31, 1999
Point of Sale System	Validation Phase	August 26, 1999
Standard Automated Voucher Examination System	Validation Phase	May 25, 1999
Infrastructure Equipment	Assessment Phase	September 30, 1999

### Reasons for Delays in the DeCA Year 2000 Effort

Although DeCA had been planning efforts to prepare for year 2000 since 1996, DeCA did not focus on using the centralized management strategy described in the DoD Management Plan for making its mission-critical systems and infrastructure equipment year 2000 compliant until May 1998. DeCA management had not directed its components to follow the centralized management strategy. Also, each system had a unique problem that further delayed the implementation of year 2000 solutions.

**Management Strategy.** In May 1998, DeCA established the Program Office and directed that system managers use the centralized management strategy defined in the DoD Management Plan. Before it established the Program Office, DeCA did not follow the guidance in the DoD Management Plan. This delay hindered DeCA in achieving year 2000 compliance for its mission-critical systems.

**Other Issues.** In addition to the delay incurred by not complying with the DoD Management Plan, the following system-unique issues further delayed DeCA efforts:

- canceling a replacement system,
- deciding to modernize systems before resolving the year 2000 issues,
- contractual disputes, and
- resource availability.

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**DeCA Interim Business System.** Delays occurred in the DeCA Interim Business System, in large part, because DeCA cancelled the acquisition of the Defense Commissary Information System. DeCA was confident that the Defense Commissary Information System, a commercial off-the-shelf business system, would replace the DeCA Interim Business System and resolve the DeCA year 2000 problem. The Defense Commissary Information System was to mirror the commercial grocery sector and eliminate the increasing cost of hardware maintenance and upgrades on a proprietary platform. After realizing that it could not change its business practices to mirror the commercial grocery store, DeCA shifted the focus of the Defense Commissary Information System to a software development program. The decision adversely affected the program cost and, by mid-1998, the system was 2 years behind schedule and the projected cost to complete the contract was almost \$100 million over the original estimated cost of \$58 million. In May 1998, the Director, DeCA, decided to discontinue the acquisition of the Defense Commissary Information System.

When DeCA cancelled the Defense Commissary Information System, it decided to eliminate the increasing cost of hardware maintenance for the proprietary platform. To accomplish this, DeCA decided to convert the existing software to make the DeCA Interim Business System to a new "open systems" platform. The DeCA could have accelerated DeCA Interim Business System year 2000 compliance by making the changes needed to the 58 programs on the proprietary platform, testing and certifying the system as year 2000 compliant and then, continuing with the conversion effort. However, DeCA management made the conversion its highest priority to establish a firm baseline, preferring to dedicate the resources to the conversion effort. Because it believed that year 2000 fixes would be minor and the contractor for the existing hardware and operating system would not certify that it was year 2000 compliant, DeCA decided to modernize the system before making it year 2000 compliant.

**Point of Sale System.** The delay in the Point of Sale System was caused by a dispute about the requirements of the original contract. In February 1996, DeCA awarded a 4-year contract to NCR to procure the Point of Sale System for the commissaries. The contract had four 1-year options and required the system to be functional at the time of installation, which would be beyond the year 2000. In November 1997, DeCA informed NCR that the contract required the current version of the Point of Sale System software and hardware to be year 2000 compliant. At this point, a legal battle ensued for NCR to replace the software and hardware with year 2000 compliant versions without additional cost to DeCA. In early 1998, DeCA and NCR reached a consensus.

**DeCA Automated Coupons System.** The DeCA Automated Coupons System was delayed because the necessary technical personnel were assigned to the DeCA Bad Check System to make changes required by law.

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**Infrastructure Equipment.** Shortage of available personnel was also the primary reason that DeCA delayed its efforts to inventory infrastructure equipment and upgrade or replace noncompliant equipment.

## **DeCA Year 2000 System Compliance Risk**

DeCA was still at risk for year 2000 disruptions. DeCA maintained that the year 2000 compliance changes were minor and, even if the changes were not made, the business functions performed by the DeCA Interim Business System would not be affected. For the Point of Sale System, the commissaries could still make sales; however, they could not execute credit and debit card transactions. For the DeCA Automated Coupons System, the commissaries would manually batch and process manufacturer coupons for redemption. However, failure of infrastructure equipment would affect the operations of the individual commissaries. Because DeCA had not completed testing of the mission-critical systems, the potential year 2000 impact on its operations remained uncertain.

## **Year 2000 Contingency Plans**

The DoD Management Plan states that system-level contingency plans should detail the procedures necessary to restore a system in the face of all anticipated and unanticipated year 2000 disruptions. The contingency plans should also provide for continuing operations when the support from a single system or group of closely related systems is disrupted.

DeCA developed adequate contingency plans for three of its four mission-critical systems: the Point of Sale System, the DeCA Automated Coupons System, and the Standard Automated Voucher Examination System. However, the contingency plan for the DeCA Interim Business System was inadequate. Specifically, the DeCA Interim Business System contingency plan addressed actions to take if DeCA did not complete the conversion of the DeCA Interim Business System to the new "open systems" platform; it did not address the actions needed if system validation is not completed before the year 2000. Further, the DeCA Interim Business System contingency plan did not address the actions needed if the system is believed to be year 2000 compliant but experiences a system failure at the start of year 2000. In addition to the DeCA Interim Business System, DeCA did not complete contingency plans for each of the critical infrastructure equipment categories.

The failure of DeCA to develop complete and adequate contingency plans for the DeCA Interim Business System and the infrastructure equipment further increases the risk of mission-critical systems and infrastructure equipment not

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being operational after December 31, 1999, and of responsible personnel not knowing what to do when faced with year 2000 failures.

The DeCA system managers for the DeCA Interim Business System and infrastructure equipment were in the process of updating and completing contingency plans.

## **Conclusion**

The DeCA was making progress to make its mission-critical systems and critical infrastructure equipment year 2000 compliant. However, the DeCA year 2000 conversion strategy is not without significant risk and sound contingency planning is particularly important. DeCA needs to intensively manage its high-risk systems and take additional measures to minimize risk.

## **Recommendations and Management Comments**

**We recommend that the Director, Defense Commissary Agency:**

**1. Expand the contingency plan for the DeCA Interim Business System to delineate alternative operational procedures that will be used to perform its functions if a system fails as a result of the year 2000.**

**2. Expand the contingency plan for the DeCA Interim Business System to delineate the operational procedures by which the mission or function supported by the system will be continued during a prolonged disruption of the system.**

**3. Complete contingency plans for each critical infrastructure equipment category that identifies alternative actions to be taken at DeCA offices and commissaries if infrastructure equipment fails as a result of the year 2000.**

**4. Test the contingency plans in the above recommendations to ensure that the alternative procedures are realistic and executable.**

**Management Comments.** The Executive Director for Support, Defense Commissary Agency concurred and stated that DeCA had prepared and expanded the contingency plan for the DeCA Interim Business System. The contingency plan delineates alternative operational procedures that will be used to perform functions if a system fails as a result of the year 2000 and ensure the mission or functions are continued during a prolonged disruption of the system. In addition, DeCA is in the process of developing a handbook on contingency plans for infrastructure equipment within the commissaries. The Executive Director stated that DeCA has made significant progress in lowering the

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year 2000 risk associated with evaluating the compliance status of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices. As of May 10, 1999, DeCA had identified the compliance status of 2,055 (79 percent) of 2,840 vendor models of infrastructure equipment. (Note: Subsequent to the audit, DeCA revalidated its infrastructure equipment inventory and identified discrepancies which reduced the total inventory of vendor models from the 3,285 previously reported to the 2,840 referenced in its response.) Further, DeCA is currently testing or will test the contingency plans to ensure that the alternative procedures are realistic and executable. The target completion date for all ongoing tasks is October 1999.

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## Appendix A. Audit Process

This report is one in a series being issued by the Inspector General, DoD, in accordance with an informal partnership with the Chief Information Officer, DoD, to monitor DoD efforts to address the year 2000 computing challenge. For a list of audit projects addressing the issue, see the year 2000 web page on the IGnet at <http://www.ignet.gov>.

### Scope

We reviewed and evaluated the efforts of DeCA to resolve its year 2000 issues. Specifically, we reviewed the steps taken by the system manager for each of the four systems that DeCA identified as mission critical. We compared the DeCA year 2000 compliance management efforts with DoD policies and procedures, including documentation and reporting requirements, to assess whether the efforts were adequately conducted to avoid undue year 2000 disruption. We obtained documentation dated from May 1996 through April 1999, including the DeCA inventory of mission-critical systems, contingency plans, and test plans, to assess efforts to avoid undue year 2000 disruptions. We also reviewed the year 2000 efforts for critical infrastructure equipment because a year 2000 failure in this area would directly influence the operation of the commissaries, as well as the Headquarters, DeCA.

**DoD-Wide Corporate-Level Government Performance and Results Act Goals.** In response to the Government Performance and Results Act, DoD has established 6 DoD-wide performance level objectives and 14 goals to meet these objectives. This report pertains to the achievement of the following objective and goal:

**Objective:** Maintain highly ready joint forces to perform the full spectrum of military activities. **Goal:** Recruit and retain well-qualified military and well-qualified military and civilian personnel. (DoD-5.2)

**DoD Functional Area Reform Goals.** Most major DoD functional areas have also established performance improvement reform objectives and goals. This report pertains to the achievement of the following functional area objectives and goals:

#### **Information Technology Management Functional Area.**

- **Objective:** Become a mission partner. **Goal:** Serve mission information users as customers. (ITM-1.2)

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- **Objective:** Provide services that satisfy customer information needs.  
**Goal:** Modernize and integrate Defense information infrastructure.  
(ITM-2.2)
  - **Objective:** Provide services that satisfy customer information needs.  
**Goal:** Upgrade technology base. (ITM-2.3)

**General Accounting Office High-Risk Area.** The General Accounting Office has identified several high-risk areas in the Department of Defense. This report provides coverage of the year 2000 conversion high-risk area.

## Methodology

**Use of Technical Assistance and Computer-Processed Data.** We did not use technical assistance or computer-generated data to perform this audit.

**Audit Period, Standards, and Locations.** We performed this economy and efficiency audit from December 9, 1998, through April 9, 1999, in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD.

**Contacts During the Audit.** We visited or contacted individuals and organizations within DoD and contractors for the systems at DeCA. Further details are available on request.

**Management Control Program.** We did not review the management control program related to the overall audit objective because DoD recognized the year 2000 computing problem as a material management control weakness area in the FY 1997 and FY 1998 Annual Statements of Assurance.

## Summary of Prior Coverage

The General Accounting Office and the Inspector General, DoD, have conducted multiple reviews related to year 2000 issues. General Accounting Office reports can be accessed over the Internet at <http://www.gao.gov>. Inspector General, DoD, reports can be accessed at <http://www.dodig.osd.mil>.

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  Deputy Assistant Secretary of Defense (Command, Control, Communications, and  
    Intelligence, Surveillance, Reconnaissance, and Space Systems)  
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    Information Officer Policy and Implementation)  
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Chief Information Officer, Department of the Air Force  
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Auditor General, Air Force Audit Agency

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Senate Subcommittee on Defense, Committee of Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
Senate Special Committee on Year 2000 Technology Problem  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Reform  
House Subcommittee on Government Management, Information, and Technology,  
Committee on Government Reform  
House Subcommittee on National Security, Veterans Affairs, and International  
Relations, Committee on Government Reform  
House Subcommittee on Technology, Committee on Science

# Defense Commissary Agency Comments



REPLY TO  
ATTENTION OF

**DEFENSE COMMISSARY AGENCY**  
HEADQUARTERS  
1300 E AVENUE  
FORT LEE, VIRGINIA 23801-1800

IR

MEMORANDUM FOR INSPECTOR GENERAL, ACQUISITION MANAGEMENT  
DIRECTORATE, 400 ARMY NAVY DRIVE, ARLINGTON, VA  
22202-2884

SUBJECT: Audit Report on the Status of Year 2000 Compliance at  
the Defense Commissary Agency Operations (Project No.  
9AL-0083)

Reference: DoDIG Memorandum, April 20, 1999, SAB

Attached is the DeCA reply to subject report as requested  
in referenced memorandum. If you have any questions, please  
contact Mr. Ben Mikell at (804) 734-8103.

*Charles Sedley*  
for CROSBY H. JOHNSON  
Executive Director for Support

Attachment:  
As Stated

**DEFENSE COMMISSARY AGENCY REPLY**

SUBJECT: Audit Report on the Status of Year 2000 Compliance at  
the Defense Commissary Agency Operations (Project No.  
9AL-0083)

**ADDITIONAL COMMENTS RELATED TO RECOMMENDATIONS 1 AND 2**

The audit report states "DeCA confidence that year 2000 certification will be accomplished before December 31, 1999, and that operations will not be affected if year 2000 changes are not made, has resulted in DeCA not deeming the development of complete and adequate contingency plans for all of its mission-critical systems and infrastructure equipment to be a high priority".

In actuality, the DeCA Interim Business System (DIBS) 2000 is the contingency plan for the Defense Commissary Information System (DCIS). The Air Force Standard Systems Center awarded a contract on DeCA's behalf to Computer Sciences Corporation in July 1995 for a Y2K compliant, modernized grocery business system (DCIS). In May 1998, DeCA decided to let the contract expire because DCIS could not be completely fielded by Year 2000 and because DCIS was competing with DeCA's Y2K initiatives for available IT resources. DoDIG has audited DCIS (Inspector General, DoD Direction from the Report of the House Committee on National Security for H. R. 3616, National Defense Authorization Act for Fiscal Year 1999, DoDIG Project Number 9AL-5030.) May 1998 was a pivotal date for DeCA's Y2K efforts because the uncertainties surrounding DCIS functionality and schedule were finally resolved. Once the DCIS contract expired, DeCA could focus dollar and human resources on Y2K.

Confidence in certification and a belief that operations could continue were not the reasons that DeCA had not developed DIBS contingency plans. Having invoked the primary contingency plan, we had only enough resources to ensure it was well underway before developing secondary and tertiary contingency plans.

The audit report states "Because it believed that year 2000 fixes would be minor and the contractor for the existing hardware and operating system would not certify that it was year 2000 compliant, DeCA decided to modernize the system before making it year 2000 compliant".

While waiting for DCIS, DeCA spent minimal dollars to keep the current DIBS baseline operational. But as with any software production baseline, DeCA had to change the system to accommodate changes in operational procedures. The system could not be put in moratorium as mission-critical system change packages had to be released. DeCA had identified the required changes for DIBS Y2K in 1996 and received notification from the hardware vendor in 1997 that he would not migrate the hardware and operating system for Y2K compliance. The mean-time-between-failures rate for the computers was increasing steadily beginning in 1997. Additional machines, replacement parts, and knowledgeable field engineers to support the obsolete technology were becoming scarce. The machines were seven years old by May 1998 when the DCIS decision was made and were beginning to fail sporadically. DeCA assessed the risk of total hardware failure between May 1998 and January 2000 against making additional changes to the software baseline required by January 2000. Given the criticality of the production system, we determined that the risk of continuing with the obsolete hardware and further agitating the production baseline with Y2K changes was greater than that associated with making Y2K changes on a stable baseline.

**RECOMMENDATION 1.** Expand the contingency plan for the DeCA Interim Business System to delineate alternative operational procedures that will be used to perform its functions if a system fails as a result of the Year 2000.

**DeCA REPLY.** CONCUR. This recommendation has been completed. DeCA has prepared and expanded the contingency plan for the DIBS to delineate alternative operational procedures that will be used to perform its functions if a system fails as a result of the Year 2000.

**RECOMMENDATION 2.** Expand the contingency plan for the DeCA Interim Business System to delineate the operational procedures by which the mission or function supported by the system will be continued during the prolonged disruption of the system.

**DeCA REPLY.** CONCUR. This recommendation has been completed. DeCA has prepared and expanded the contingency plan for the DIBS to delineate the operational procedures by which the mission or function supported by the system will be continued during a prolonged disruption of the system.

**ADDITIONAL COMMENTS RELATED TO RECOMMENDATION 3**

The audit report states "As of April 9, 1999, the Defense Commissary Agency had identified the compliance status of only 1822 (55 percent) of 3,285 vendor models of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices". From March to date, the DeCA Y2K PMO has intensely managed equipment and has successfully lowered the increased risk identified. As of May 10, 1999, DeCA had identified the compliance status of 2,055 (78.73 percent) of 2,840 vendor models of infrastructure equipment that are critical to the operation of the individual commissaries and administrative offices.

Reference Page 5, Estimated Compliance Dates for Infrastructure Equipment, first paragraph. Infrastructure Current Phase only states Assessment Phase. The Implementation Phase is being executed concurrently with the Assessment Phase at this time, in order to meet the estimated completion date of September 30, 1999.

**RECOMMENDATION 3.** Complete contingency plans for each critical infrastructure equipment category that identifies alternative actions to be taken at DeCA offices and commissaries if infrastructure equipment fails as a result of the Year 2000.

**DeCA REPLY.** CONCUR. DeCA staffed a draft handbook DeCAH 40-5, Non-It Store Contingency Plans on April 22, 1999, and requested comments from offices and commissaries on the critical infrastructure equipment categories by May 7, 1999. Responses have now been received and are being incorporated into the draft document. The target completion date is October 1999.

**ADDITIONAL COMMENTS RELATED TO RECOMMENDATION 4**

The contingency plan for DIBS is a two-level approach. Level one, currently being tested, is running year 2000 transactions on the current baseline. Level two is the business continuance or continuity of operations plan in effect today. If there is a failure in any piece of the supply chain, store-specific orders are pre-staged on each region processor, the Headquarters processor, and the supplier's processor. A phone call communicates the emergency order for the store to the supplier so that the shelves can be replenished.

Non-IT infrastructure equipment contingency plans are currently being tested at several commissaries in each region.

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**RECOMMENDATION 4.** Test the contingency plans in the above recommendations to ensure that the alternative procedures are realistic and executable.

**DeCA REPLY.** CONCUR. DeCA is currently testing or will test the contingency plans as recommended to ensure that the alternative procedures are realistic and executable. The target completion date is October 1999.

## **Audit Team Members**

The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD, prepared this report.

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