



Department of  
Veterans Affairs

# Office of Inspector General

## AUDIT OF VA'S YEAR 2000 IMPLEMENTATION EFFORT

*VA's Year 2000 correction efforts were well organized and focused on mission critical systems to ensure that veterans receive uninterrupted services. However, additional effort is needed in other selected areas.*

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Office of Inspector General  
Washington DC 20420



DEPARTMENT OF VETERANS AFFAIRS  
Office of Inspector General  
Washington DC 20420

**Memorandum to the Acting Assistant Secretary for Information  
and Technology (005)**

**Audit of VA's Year 2000 Implementation Effort**

1. The purpose of the audit was to assess the Department of Veterans Affairs (VA) efforts to address Year 2000 (Y2K) issues and become Y2K compliant. The audit focused on identifying areas where VA's Y2K implementation efforts could be strengthened.
2. The Y2K problem is rooted in the way dates are recorded and computed in many computer systems. For the past several decades, in order to conserve on electronic data storage and reduce operating costs, systems have typically used two digits to represent the year, such as "99" representing 1999. With this two-digit format, however, the year 2000 is indistinguishable from 1900. Because of this ambiguity, system or application programs that use dates to perform calculations, comparisons, or sorting may generate incorrect results when working with years after 1999.
3. The Department's efforts to effectively address the Y2K computer problem are critical to assuring continued delivery of health care and benefits services to the nation's veterans and their beneficiaries. The Department's operations are substantial and involve the largest healthcare system in the United States with medical services provided at over 1,150 sites, a benefits delivery network of 58 Regional Offices (RO), a burial system involving 115 national cemeteries and 34 other cemeterial installations, 3 major data processing centers, and other Departmental staff functions. These operations are dependent on key VA mission critical systems that must be compliant to assure effective delivery of services and benefits to the nation's veterans and their beneficiaries beyond the millennium.
4. The audit found that VA's Y2K efforts were well organized and focused on those mission critical systems that must be compliant to ensure that veterans receive uninterrupted services. The Department's Y2K efforts have been substantial and VA management reports show that it completed implementation of all mission critical systems by the March 31, 1999 milestone date established for all Federal agencies. VA has 11 mission critical systems that involve 319 applications and 17 million lines-of-code. VA has reported that it has completed renovation of all of these applications. The estimated cost of VA's Y2K implementation efforts is about \$202 million.

5. The audit identified a number of key actions that could help make the Department's Y2K efforts more successful, reduce operating costs, and ensure continuity of operations beyond the millennium. Given the time sensitivity of all Y2K issues, we provided the Department with Interim Advisory Letters throughout the audit. These Advisory Letters provided early notification of our review results so that prompt corrective actions could be taken to address the Y2K related issues that were identified. Department program officials responded very positively to the Advisory Letters and initiated various corrective actions that are discussed in the report.

6. The audit found that enhancements in VA's Y2K implementation efforts could be achieved at its data centers, at selected VA Central Office (VACO) activities, and at selected field facilities in the Veterans Health Administration (VHA) and the Veterans Benefits Administration (VBA). Our review of Y2K implementation activities at the Philadelphia and Hines Benefits Delivery Centers and the Austin Automation Center found that Y2K efforts at these Centers were generally proceeding according to Department plans. However, some Y2K related issues needed attention to assure the effectiveness of VA's Y2K implementation efforts. Key issues identified at the Centers included: (i) need to address infrastructure support requirements; (ii) approval of pending requests for equipment and software replacements that would reduce operating costs by \$1.5 million and enhance Y2K implementation efforts; (iii) preparation of a 'Zero Hour Plan' covering operational procedures for the night of December 31, 1999 and the succeeding day; (iv) need to contact trading partners and Value Added Networks concerning Y2K compliance of Electronic Data Interchange transmission and receipt of VA procurement transactions; (v) authority to pay retention bonuses to staff involved with Y2K implementation efforts; (vi) inclusion of all computer applications in the Y2K assessment and renovation process; and, (vii) reporting of the status of renovation work on mission critical systems.

7. While both VACO and field facilities are actively engaged in addressing Y2K implementation requirements, additional efforts are needed to assure that necessary work is successfully completed and the cost of the Department's efforts are accurately identified and reported. Key areas that need to be addressed included: (i) completion of medical center risk analysis to address potential infrastructure support failures external to VA facilities; (ii) completion of Y2K assessment and testing of computers located in facility tenant activities such as VA's Research and Development (R&D) Service; (iii) assuring the Y2K compliance of all biomedical devices including those used in VA's R&D Service; (iv) assuring adequate procurement lead time for acquisition of replacement biomedical equipment; (v) assuring the Y2K compliance of computers, environmental control systems, and other medical devices provided to veterans for use in their homes; (vi) completion of Memorandums of Understanding with data exchange partners to document their Y2K compliance; (vii) resolution of infrastructure support issues involving ROs located in General Services Administration managed buildings; and, (viii) tracking the cost of all of the Department's Y2K implementation efforts.

8. The report includes recommendations to assist the Department's Y2K implementation efforts, ensure continuity of operations, and delivery of services and benefits to the nation's veterans and their beneficiaries beyond the millennium. Based on the audit findings and the continued Y2K risk to VA, the Y2K area should continue to be monitored by the Department as a potential material weakness area.

9. The Acting Assistant Secretary for Information and Technology concurred with the audit findings, recommendations, and monetary benefits presented in the report and provided appropriate implementation actions. We consider the report issues resolved and will follow up on planned actions until they are completed.

For the Assistant Inspector General for Auditing

*(Original signed by:)*

Stephen L. Gaskell  
Director, Central Office Operations Division

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## **RESULTS AND RECOMMENDATIONS**

### **VA's Y2K Correction Efforts Focused On Its Mission Critical Systems, But Additional Effort Is Needed In Other Selected Areas**

The audit found that VA's Y2K efforts were well organized and focused on those mission critical systems that must be compliant to ensure that veterans receive uninterrupted services. The Department's Y2K efforts have been substantial and VA management reports show that it completed implementation of all mission critical systems by the March 31, 1999 milestone established for all Federal agencies. VA operations are dependent on mission critical systems that must be compliant to assure effective delivery of services and benefits to the nation's veterans and their beneficiaries beyond the millennium.

The audit identified a number of actions that could help make the Department's Y2K efforts more successful, reduce operating costs, and ensure continuity of operations beyond the millennium. Enhancements in VA's Y2K implementation efforts could be achieved at its data centers, at selected VA Central Office (VACO) activities, and at selected field facilities in the Veterans Health Administration (VHA) and the Veterans Benefits Administration (VBA). In response to the audit findings, the Department took various corrective actions that are discussed in the report. *(A summary of the Y2K issues identified and Department corrective actions is in Appendix III on pages 19-32).*

Key Y2K issues identified at the Department's data centers included: (i) need to address infrastructure support requirements; (ii) approval of pending requests for equipment and software replacements that would reduce operating costs by \$1.5 million and enhance Y2K implementation efforts; (iii) preparation of a 'Zero Hour Plan' covering operational procedures for the night of December 31, 1999 and the succeeding day; (iv) need to contact trading partners and Value Added Networks (VAN) concerning Y2K compliance of Electronic Data Interchange (EDI) transmission and receipt of VA procurement transactions; (v) authority to pay retention bonuses to staff involved with Y2K implementation efforts; (vi) inclusion of all computer applications in the Y2K assessment and renovation process; and, (vii) reporting of the status of renovation work on mission critical systems.

Key Y2K issues that needed to be addressed at VACO and/or field facilities included: (i) completion of medical center risk analysis to address potential infrastructure support failures external to VA facilities; (ii) completion of Y2K assessment and testing of all computers including those located in tenant activities such as VA's Research and Development (R&D) Service; (iii) assuring the Y2K compliance of biomedical devices used in VA's R&D Service; (iv) assuring adequate procurement lead time for acquisition of replacement biomedical equipment; (v) assuring the Y2K compliance of personal computers (PC), environmental control systems, and other medical devices provided to

veterans for use in their homes; (vi) completion of Memorandums of Understanding (MOU) with data exchange partners to document their Y2K compliance; (vii) resolution of infrastructure support issues involving Regional Offices (RO) located in General Services Administration (GSA) managed buildings; and, (viii) tracking the cost of all of the Department's Y2K implementation efforts. Also, based on the audit findings and the continued Y2K risk to VA operations, the Y2K area should continue to be monitored by the Department as a potential material weakness area.

## **Y2K Issues Identified at Department Data Centers**

Y2K implementation activities at the Philadelphia Benefits Delivery Center (PBDC), the Hines Benefits Delivery Center (HBDC), and the Austin Automation Center (AAC) were generally proceeding according to Department plans. However, some Y2K related issues needed attention at these Centers to help assure the effectiveness of VA's Y2K implementation efforts. Key Y2K issues identified are discussed in the following sections.

### **Infrastructure Support Requirements**

At the PBDC we found that GSA, who manages the PBDC building, had not yet addressed required infrastructure support issues for the facility. GSA staff at the Center indicated that they were awaiting instructions concerning infrastructure support from the Regional Headquarters. Discussions with VA Y2K Project Managers have indicated that general discussions with GSA on Department infrastructure support issues have not yet been productive. Without needed infrastructure support mechanisms provided by GSA, such as water, fire alarms, and sprinkler systems, Center operations cannot be assured.

We found that the AAC had identified nine possible Y2K related infrastructure support areas that needed assessment. At the time of our visit, the Y2K related issues for seven of these infrastructure support areas had been resolved. Y2K related infrastructure support areas needing resolution involved a change to the software that controls security access and replacement of imbedded chips for facility lighting. Subsequent to our visit, each of these issues was successfully resolved. We also identified an infrastructure support issue concerning priority restoration of power for the AAC that required attention. We were advised that when the AAC suffers a power outage, power is restored in an unknown priority. The AAC had asked the utility for a contact point for power restoration and had been given a telephone contact number to call for priority handling. During power outages, the AAC's calls to the number given had not been handled expeditiously. Rather, the AAC had been told to call some other number. Although the AAC has an uninterruptable power system which will power critical equipment until the generators can take over, the AAC needs to assure that power can be restored as

soon as possible. GSA has been working with officials from the power company and the City of Austin to resolve the issue of power restoration for the AAC and two other GSA Federal tenants, the Treasury Department and Internal Revenue Service.

### **Reporting of Renovation Work on BIRLS/VADS**

Our review of Y2K implementation efforts at the AAC found the Department had experienced contractor related delays in completing required Y2K renovation work to the Beneficiary Identification and Record Locator System/Veterans Assistance Discharge System (BIRLS/VADS). When the contractor delivered its 'final product' in August 1998, the required renovations work had, in fact, not been completed. However, the Department reported in its August 1998 quarterly report to the Office of Management and Budget (OMB) that renovation work on the BIRLS applications had been completed.

On August 7, 1998 (the date specified in the contract) the contractor turned over final work on BIRLS batch processing. Review of this 'finished' product by the VBA staff at the AAC found that the final deliverable package was significantly incomplete. Forty percent of the modules were not modified or were modified incorrectly and fifty percent of the BIRLS runs were not modified, which prevented the program from working. Only eight of the interface modules were delivered and the staff felt more were needed. Given the significant amount of renovation work that remained to be completed, the Department should have disclosed this fact in its reporting to OMB.

When the contractor failed to deliver an adequately working package on the final task order, VBA staff activated their contingency plan and assigned nine employees to complete necessary renovation and testing of the BIRLS applications. The Y2K compliant version of BIRLS was implemented on October 13, 1998.

The VADS file conversion package was delivered by the July 31, 1998 due date. However, VBA staff at the AAC also encountered problems with the VADS conversion. VBA was able to run a fully compliant VADS file conversion program in January 1999, prior to the March 31, 1999 milestone deadline.

Effective and complete renovation of the BIRLS application was important since it provides VA with critical beneficiary information needed in support of VA's delivery of benefits and health care services to veterans. The Department needs to assure that the status of its Y2K efforts are accurately reported while work is in progress. The General Accounting Office and others tasked with monitoring the



progress of Federal systems are emphasizing that findings of difficulties early in the process are more acceptable than failure to meet milestones.

### **Approval of Pending Requests for Equipment and Software**

Our review found that the PBDC and HBDC had pending requests for equipment and software replacement that would significantly help facilitate their Y2K implementation efforts and also reduce operating costs. The PBDC had requested the purchase of a MULTIPRISE server supplemented by redundant array of inexpensive disks storage technology to replace the mainframe computer and direct access storage devices on which the Insurance Program applications process. The purchase of this client server system could save approximately \$1.2 million in the next 2 years and help streamline the Center's Y2K implementation efforts. In addition, the server is more stable than the IBM 3090 currently planned as the Insurance Program operating platform. The PBDC currently has an IBM 3090 but is testing the compliant IBM OS/390 operating system on another platform. The Department needs to take prompt action on this equipment and software request that offers the opportunity for significant cost savings and the acquisition of alternative technology that will help facilitate Y2K implementation at the Center.

The HBDC had requested purchase of a Non-Unified Memory Allocation-Q (NUMA-Q), to be used as a test platform for applications running on the Sequent platform. Currently, testing is done on a non-compliant Sequent 750 using a compliant operating system. Production is done on a NUMA-Q at the AAC. Because of the end of processing by the VBA sector sites, 10 or 11 of the Sequents in use at the sector sites are no longer needed. Excessing of these machines will save \$721,000 in hardware maintenance and \$300,000 in software maintenance annually. A NUMA-Q costs approximately \$700,000. Excessing of this equipment and purchase of a NUMA-Q would save \$321,000 in the first year and provide a Y2K compliant test platform. In addition, it may be possible to lease a NUMA-Q for use as a test platform if it is determined that the equipment will not be needed after Y2K testing is completed.

The HBDC also had requested approximately \$225,000 to add memory to the IBM and the Honeywell/Bull operating systems and obtain hardware and software. These funds would be used to configure a 100 per cent compliant Pre-Production environment for testing of applications. This equipment would allow the HBDC to test all applications in an environment that very closely resembles the typical Regional Office (RO).

During the course of the audit, all pending procurements were approved, and the equipment was received and installed.

### **Preparation of ‘Zero Hour Plan’**

In April 1998, the Systems Development Staff of the PBDC published a Y2K Continuity of Operations Plan, otherwise referred to as the ‘Zero Hour Plan’. In addition to defining risks and preparedness planning in order to mitigate potential contingencies with infrastructure and operations, the plan outlines exact Center operational procedures for the night of December 31, 1999 and the succeeding day. At the time of the audit, the HBDC and the AAC had not developed such a ‘Zero Hour Plan’ for continuity of operations at those Centers.

We cited the plan prepared by the PBDC as a possible example of issues that should be addressed in each Center’s plan. This plan outlines:

- Who will be present as the clock rolls over.
- What equipment will be allowed to remain on during the roll over.
- What resources should be available to workers.
- How to handle emergencies that may arise.

Copies of the PBDC plan were given to the HBDC and the AAC by the VBA Y2K Project Manager to review and consider in preparation for Y2K continuity of operation planning.

VHA and VBA have developed Business Continuity and Contingency Plans (BCCP) and have forwarded these plans to each facility for customization. The plans were scheduled for completion by the end of April 1999. These plans address the potential failure of power, water, and electricity. The HBDC and the AAC are drafting “Zero Hour Plans” and have completed a draft of their BCCP plans.

### **Contacts With Trading Partners and Value Added Networks (VAN)**

Our audit found that the EDI staff at the Austin Finance Service Center had not contacted either the trading partners (vendors) or VANs regarding their ability to achieve Y2K compliance and assure continued electronic processing of transactions involving VA purchases. VA has more than 1,700 vendors participating in EDI. Annual VA purchases using EDI are significant with 1.8 million transactions totaling almost \$3 billion. EDI allows an employee to electronically request delivery of an item. The request is electronically transmitted to the acquisition staff who identifies a vendor who can provide the needed item. The request is then transmitted to the finance staff for commitment of the funds. The purchase order is then transmitted to the vendor. The vendor reviews the purchase order and electronically commits to delivery of the item. When the item is delivered, an electronic receiving report is transmitted to the vendor and to the automated payment system, which electronically transfers payment to the vendor. The American National Standards Institute (ANSI) standard for transmission of EDI data is X.12. ANSI X.12 has been modified to make all data received compliant. Given the significance of

EDI in facilitating VA purchases, VA needed to contact its trading partners and the VANs to determine if they had completed necessary Y2K related modifications to facilitate continued transmission and receipt of compliant data. During the course of the audit, the EDI staff advised that they would send a letter to all trading partners and VANs requesting a status of their Y2K compliance efforts. VA is currently working with the VANs to assure that all will be compliant (Y2K compliance certifications have been received from 2 of 3 VANs that support VA EDI transaction processing). VA also plans to issue a letter by the end of June 1999 requiring that all trading partners become compliant prior to the end of September 1999.

### **Payment of Retention Bonuses**

Our review results and discussions with HBDC management found that there was a virtual balance between Center workload and staff. However, we found that any dramatic change in either could materially effect the Center's ability to meet its Y2K commitments. We were advised that the Center can accomplish anticipated workload such as Cost of Living Adjustment for Compensation and Pension and Dependents Indemnity Compensation, or other mandates. However, Center Management indicated that the loss of key staff could dramatically effect their Y2K commitments. Currently, there are sufficient staff supporting the IBM system, the Honeywell/Bull, and Sequent platforms. However, because of Center Management's concern about the potential loss of essential staff, they had asked for authority to pay retention bonuses to staff involved in Y2K. This request included not only programmers, but also managers, system operators, and other support personnel. The Center's use of retention bonuses could provide a means to reduce the risk of losing key staff that could adversely impact Center Y2K implementation. Although VBA fully supports payment of retention bonuses, approval of any retention bonuses has not yet occurred. VBA is now performing a final review of the proposed retention allowance package.

### **VA-Wide 'Business Simulation' Demonstration**

A VA-wide 'business simulation' demonstration has been proposed for July 1999. Such a demonstration of the ability to pass data from application to application within VA on a 'day in year 2000' appears to be a logical next step to the renovation of application codes, upgrading of hardware, upgrading of operating systems and testing of connectivity with trading partners and other Federal agencies. However, we believe that the demonstration should take place as soon as feasible after the implementation of all testing on applications and operating systems that were completed by the end of March 1999. The sooner VA completes the planned demonstration, the more time that will be available to address any Y2K issues that still need to be corrected. VA has advised that it will be completing critical end-to-end tests with Treasury and "dry runs" before this business simulation. This will allow adequate time to address issues that are still outstanding before the scheduled July 1999 simulation.

## **Y2K Issues Identified at VACO and Field Facilities**

Our review also showed that both VACO and field facilities are actively engaged in addressing Y2K implementation requirements. However, some additional efforts are needed to help assure that necessary Y2K implementation work is successfully completed and the cost of the Department's efforts are accurately identified and reported. Key areas that needed to be addressed are discussed in the following sections.

### **Infrastructure Risk Analysis**

During the course of the audit, we found that some facilities needed to address the specific issue of preparedness for Y2K in planning for continuity of business. We found that 5 of the 58 VBA activities responding to our national Y2K implementation survey reported that they had no Y2K plan for business continuity. We also found that 73 VHA activities reported that they were not relying on the business continuity plan required by the Joint Commission on Accreditation of Hospitals Organization to address Y2K related infrastructure support issues. Twenty-two of these respondents indicated that they had not conducted an infrastructure risk analysis.

Without a formal documented plan to address such emergencies as power failure, electronic access failure, telecommunication failure, and heating, ventilation, and air conditioning failure, there can be no assurance of continued operations. The Department needed to assure that all facilities had continuity plans in place that addressed potential infrastructure support failures. Although some infrastructure support such as elevators and centralized building control systems are supported by uninterruptable power sources and generators, this emergency power will not support all facility functions.

As discussed earlier in the report, the 'Zero Hour Plan' developed by the PBDC provides a good method for detailing operational procedures during December 31, 1999 and succeeding day. Providing a copy of this plan to each VA facility will offer a useful tool to assist in infrastructure risk analysis and planning for Y2K continuity of operations. During the course of the audit, VBA and VHA completed and distributed BCCPs to their respective field facilities. Each facility was required to review and modify the BCCPs to fit the local situations. These customized plans were due for completion by the end of April 1999.

### **Assessment of Equipment Located in Research and Development Service**

We found that not all stations which host Research and Development (R&D) Service activities had fully assessed equipment located there that could be affected

by Y2K problems. VA R&D activities and fund expenditures are significant and support research projects being conducted by more than 2,000 VA employees. The Fiscal Year (FY) 1998 R&D budget exceeded \$270 million and it is anticipated that more than \$310 million will be expended in FY 1999. Approximately 117 VA facilities participate in R&D activities. Most R&D activities do not involve direct patient care. However, the results of the investigations conducted are intended to lead to better care and treatment for such illnesses as AIDS and cancer. Given the significance and importance of the Department's R&D efforts, the equipment used to collect and process research data needs to function properly and provide accurate data. The Department needs to assure that VHA facilities hosting R&D operations inventory and assess all R&D equipment to assure it will continue to operate properly and not be adversely affected by Y2K problems. In response to our findings, VHA is now working with program offices and developing a checklist for network directors that will address Y2K issues in this and other areas we identified.

#### **Testing of Personal Computers Located at VACO and Field Facilities, Including Tenant Activities**

Based on the results of our national survey of Department Y2K implementation efforts and our site visits, we found that most VACO activities and field facilities had completed their inventory of PCs and 67 percent of those PCs were reported as compliant. (*Additional details on our survey results are found in Appendix IV on pages 33-38.*) However, we found that several sites indicated that they had not included in their assessment PCs that were assigned to tenant activities such as R&D Service and the Office of Resolution Management. These PCs are attached to facility LANs and any Y2K failure of such equipment could affect the continued operation of the LANs.

The facilities we visited had a total of 16,899 PCs in inventory. Of those, 9,434 (56 percent) had been tested for Y2K compliance and 8,509 (50.4 percent) were compliant. (*Additional details on the results of the site visits are found in Appendix V on pages 39-40.*) Many facilities reported they had not completed testing because of the difficulty in selecting a low cost test instrument. We found that VBA sent a free testing program to all VBA sites in July 1998. During our site visits, we learned that some VHA facilities were also using this testing program. One VHA facility reported that this program was reporting erroneous information when used with certain PCs. This fact was confirmed on the manufacturer's Internet page. As a result, they began using another program also used by National Cemetery Administration. Apparently, the program they switched to has not yielded false positives, is very inexpensive, and can be loaded to the server as opposed to the PCs. Additionally, facilities reported that they preferred a test program capable of testing not only the Basic Input Output

System, but also the software installed on PCs. The Department needed to assure that all PCs were tested or retested as needed as soon as possible, to achieve Y2K compliance status. In response to our audit findings, the Department reported that over 95 percent of all PCs have been assessed for Y2K compliance.

### **Y2K Compliance of Biomedical Devices Issued to Veterans for Use in Their Homes**

Our site visits found that VHA field facilities were in various stages of inventorying, assessing, and repairing biomedical devices to assure Y2K compliance. While the facilities we visited have accomplished much work in this area, we found that facility Y2K assessment efforts have not always included devices:

- Issued to veterans by Prosthetics Service (PCs, electronic devices).
- Leased by medical centers and placed in the veterans' homes (ventilators, infusion pumps).
- Issued to veterans by the Blind Rehabilitation Centers throughout the country (PCs, special adaptive devices).
- Issued to veterans by Spinal Cord Injury Centers (total environmental control units).

The Department needed to assure that all of the devices included in the above areas were identified, assessed, and repaired or replaced as soon as practical. This would help assure that required veteran use of these devices is not adversely affected by Y2K problems. Completion of required Y2K assessments may involve contact and solicitation of information from veterans, facility staff, and vendors.

In response to our findings, the VHA Y2K Project Office provided a survey to the Chief of Prosthetics at each VA healthcare facility that requested the status of actions taken to address Y2K issues for items in veterans' homes. Actions needed to address the Y2K issues for these items was considered to be the responsibility of Prosthetics Service.

### **Procurement Lead Time for Replacement of Biomedical Equipment**

The VHA facilities we visited had biomedical devices from manufacturers who had not reported the status of their equipment. Without a definite report from the manufacturer, and in view of VA's policy of relying on the manufacturers to conduct tests on these devices, the Y2K status of these devices cannot be determined. We did not find any site that had set a date for taking devices of

unknown Y2K status out of service or making plans for replacement. Given the potential importance of these devices to delivery of patient care, the Department needed to establish a 'cutoff' date for Y2K assessment of biomedical devices. This would help provide assurance that the procurement lead-time necessary for the replacement of unassessed devices is available. The Department also needed to assure that the cost of replacement of such devices is identified as soon as possible.

In response to our findings, the Department is now requiring that as of June 1, 1999 facilities must report all medical devices that are Non-Compliant or whose status is unknown to VHA, and the proposed actions that should be taken regarding the devices. Actions such as replace, retire, or use-as-is are contemplated. All devices evaluated as Conditionally Complaint must be reported by September 1, 1999. We believe that these actions should allow ample time to conduct necessary procurement of any replacement equipment.

#### **Completion of Memorandums of Understanding with Data Exchange Partners**

We found that nine VHA facilities we visited were conducting data exchanges/interfaces with non-VA partners. Only two facilities had obtained MOUs with their trading partners. Without such MOUs, VA cannot be assured that data received from the exchange partner will not contain non-compliant date formats. Such non-compliant date formats could cause disruption of processing or misprocessing of data. The Department needed to assure that all data exchange/interface points within VA obtain MOUs from all exchange partners. The VHA Y2K Project Office continues to review and monitor facilities that may be conducting data exchanges.

#### **Resolution of Infrastructure Support Issues Involving ROs**

We found that ROs that occupy space in GSA controlled buildings are at risk for infrastructure failure. GSA personnel to whom we spoke were able to provide assurance that the equipment within the GSA buildings was compliant. However, they could not provide any written assurance on the Y2K status of infrastructure support systems external to the buildings, such as: electrical, telephone, water, or police and fire protection providers.

We were concerned that information being provided by GSA on the progress of Y2K status of infrastructure support for VBA and other tenant organizations was varied and incomplete. VBA informed us that all Federal agencies that occupy GSA managed facilities are expressing the same concerns. Representatives from

Federal agencies and from VA are meeting monthly with a GSA contractor to obtain progress updates.

The Department needs to assure that GSA buildings that house VA activities will continue to be provided with needed utility and public service support during the Y2K date change period. Without such assurances, ROs continue to face increased risk of infrastructure support failures that could adversely affect operations after the millennium.

VBA has conducted a survey of all non-information technology equipment and building systems at all ROs. VBA has identified critical components and ensured that GSA will make repairs or design work-arounds necessary so that they are Y2K compliant. So far, VBA is reporting that approximately 70 percent of its buildings are Y2K compliant.

### **Tracking of Department Y2K Costs**

During our RO site visits, we found that not all facilities were monitoring the cost of Y2K efforts involving their staff. We found that RO staff have been involved with Y2K related work in renovating locally developed applications, testing and upgrading of PCs, testing and upgrading of LANs, and conducting research on telecommunications equipment. However, the costs of these efforts had not been identified. While VBA has determined that these costs are not substantial, they should have been identified and included in the Department's reporting to OMB.

### **The Department Should Continue to Monitor the Y2K Area as a Potential Material Weakness Area**

VA has been monitoring this area as an item of concern to the Department because of its potential impact as a material weakness. As a result, the Y2K area has been listed by the Chief Financial Officer as a Management Control Internal High Priority Area.

Based on the audit findings and the continued Y2K risk to VA operations, the Y2K area should continue to be monitored by the Department as a potential material weakness area.

### **Conclusion**

VA's Y2K implementation efforts were well focused and met the key milestone completion date for mission critical systems established for all Federal agencies. The audit identified a number of key actions that could help make the Department's Y2K efforts more successful, reduce operating costs, and ensure continuity of operations beyond the millennium. During the course of the audit, the Department initiated corrective actions in a number of areas in response to our Interim Advisory Letters.



### **For More Information**

- *A summary of VA Y2K efforts needing improvement is in Appendix III on pages 19-32.*
- *The results of OIG survey of Y2K compliance of VA personal computers is in Appendix IV on pages 33-38.*
- *The results of VA Y2K testing and compliance of personal computers at field facilities visited is in Appendix V on pages 39-40.*

### **Recommendation**

We recommend that the Acting Assistant Secretary for Information and Technology assure that necessary corrective actions are accomplished to address the Y2K weakness areas discussed in the report by:

- a. Completing contacts with EDI trading partners (vendors) and VANs to determine their Y2K compliance and assure continued electronic processing of transactions involving VA purchases.
- b. Establishing a ‘cutoff’ date for VA facilities to take biomedical devices of unknown Y2K status out of service and complete plans for replacement so that necessary procurement lead time is available and replacement costs can be identified as soon as possible.
- c. Completing corrective actions that were initiated during the course of the audit in response to our Interim Advisory Letters to address other Y2K weakness areas that are summarized in Appendix III on pages 19-32.

### **Acting Assistant Secretary for Information and Technology Comments**

The Acting Assistant Secretary for Information and Technology concurred with the audit recommendations and the monetary benefits presented in the report.

### **Implementation Plan**

The Acting Assistant Secretary provided the following implementation actions that address the recommendation sections a-c.

- a. VA has upgraded its X12 translation software to fully support X12 Version 4010, the Y2K compliant version. VA has implemented “windowing” on incoming transactions so that either two or four digit dates will be successfully processed. VA is currently working with the VANs that provide translation services to VA’s trading partners to migrate to X12 version 4010. The Austin Financial Services Center has contacted the

three VANs they use. Two VANs have certified they are compliant and they are awaiting the third's response. The plan is to have issues with the VANs resolved and letters to the trading partners no later than the end of June, 1999 notifying them of their VANs status and that they have to be Y2K compliant no later than the end of September, 1999.

b. VHA has developed policy requiring VA facilities to review medical devices with an unknown or Non-Compliant Y2K status and determine what action is necessary by June 1, 1999. Action includes either replace, retire, or use-as-is. The same review is required for Conditionally Compliant devices and those not repaired by September 1, 1999. The directive was released on April 21, 1999. VHA's position is that all medical devices must be tested to determine Y2K compliance. However, the primary source to determine the Y2K status is the medical device manufacturer. No other source, or combination of sources, can provide device-specific information while simultaneously ensuring proper and thorough testing. The Food and Drug Administration, Department of Defense, and industry support this position.

c. We have provided your staff copies of our February 1999 Year 2000 quarterly report and copies of the business continuity and contingency plans. This information addresses many of the concerns your audit report raises and provides updates to your findings. The response to the draft report also includes an update of Department corrective actions for each of the issue areas discussed in Appendix III.

(See Appendix VII on pages 43 to 68 for the full text of the Acting Assistant Secretary's comments.)

### **Office of Inspector General Comments**

The Acting Assistant Secretary provided comprehensive implementation actions that are responsive to the recommendation areas. We believe that these actions will help ensure continuity of Department operations, and delivery of services and benefits to the nation's veterans and their beneficiaries beyond the millennium.

Where appropriate, we revised the report in response to the Acting Assistant Secretary's comments and updated status information provided on the Department's corrective actions. With regard to VHA's policy on not testing medical devices discussed in the Acting Assistant Secretary's comments on pages 43 and 50, we have revised the report to clarify that this policy relates to VHA's position that it does not test the devices itself. We agree with VHA's policy that the devices should be tested, but only by the medical device manufacturers. We also need to clarify the status of VHA field sites that did not respond to our information survey. While the Acting Assistant Secretary's response on page 58 indicated that two of these sites had provided responses, they were not received by the OIG even after multiple requests had been made to the sites during the audit. The response also indicated that the other site had not responded because it had never

received the request. This site was also contacted by the OIG multiple times during the audit, but no response was provided. As a result, we reported on page 16 in our scope of review section of the report that we did not receive a response from these facilities. With regard to the Department's reporting of the completion of renovation work on BIRLS/VADS discussed on page 45, our review found that the significant amount of renovation work that remained to be completed on the 'finished' product from the contractor should have been disclosed, and reported to OMB before the renovation phase of Y2K work was reported as completed.

## **OBJECTIVE, SCOPE AND METHODOLOGY**

### **Objectives**

The purpose of the audit was to assess the Department of Veterans Affairs (VA) efforts to address Year 2000 (Y2K) issues and become Y2K compliant. The audit focused on identifying areas where VA's Y2K implementation efforts could be strengthened.

### **Scope and Methodology**

Our review of VA's efforts to address Y2K issues considered current Federal Information Processing Standards, VA Automated Data Processing (ADP) Policy, Federal government ADP guidance, and public laws defining ADP systems. As part of our initial survey work, we visited the primary Veterans Benefits Administration (VBA) Benefits Delivery Centers in Hines, Illinois and Philadelphia, Pennsylvania; the Austin Automation Center (AAC), and the Austin Finance Service Center (AFSC), Texas; to review VA's Y2K efforts. We also sent surveys to VBA Regional Offices (RO), Veterans Health Administration (VHA) medical centers, and selected VA Central Office (VACO) activities requesting general information on Y2K implementation and status information in key areas involving: (1) personal computers (PC), (2) locally developed applications, (3) commercial-off-the-shelf products (COTS), (4) local area networks (LAN), (5) data exchange/interfaces, (6) preparedness, and (7) biomedical devices. We received 210 responses out of 223 activities that were surveyed. We received responses from 23 VACO activities, 58 ROs, and 129 of 142 VHA facilities surveyed. Some VHA responses contained information on more than one facility.

For those VHA facilities from whom we did not get a response, we sent follow up requests to the responsible Veterans Integrated Service Network Directors. However, we still did not receive responses from 9 facilities. We met with VHA and VBA program officials to discuss potential field sites visits. Based on our discussions and information gathered from the Y2K survey responses, we selected 20 VA field facilities for site visits. We visited the following 14 VA facilities that responded to our survey:

- Maryland Health Care System (Baltimore & Ft Howard, MD)
- VAMC Salisbury, NC
- VAMC Salem, VA
- VAMC Mountain Home, TN
- VAMC Little Rock, AR
- VAMC Fayetteville, AR
- VAMC West Los Angeles, CA
- VAMC Long Beach, CA
- VARO Baltimore, MD
- VARO Roanoke, VA
- VARO Winston-Salem, NC

VARO Detroit, MI  
VARO Los Angeles, CA

We also visited the following six VA facilities that did not respond to our survey:

VAMC Bedford, MA  
VAMC Kansas City, MO  
VAMC St. Louis, MO  
VAMC Marion, IL  
VAMC Newington, CT  
VAMC West Haven, CT

We neither received a response nor visited the following VA facilities:

VAMC Poplar Bluff, AR  
VAMC Wichita, KS  
VAMROC Honolulu, HI (medical center data)

At the sites visited, we interviewed appropriate medical center and RO staff regarding PCs, locally developed applications, COTS, LANs, data exchange/interfaces, and preparedness plans. At VHA sites, we also interviewed appropriate staff regarding biomedical devices. At RO sites located in General Services Administration (GSA) space, we interviewed GSA staff to discuss their disaster plans, their reliance on public power companies (for electric, water, heat, telephones), building contingency plan for tenants, and building infrastructure compliance (elevators, electronic access controls, and police and fire protection). We visited the computer rooms, electronic access control rooms, telephone closets, and backup generators for each facility as needed. We obtained and reviewed all necessary documentation regarding Y2K efforts including inventories of computers at each facility and their compliance status, statements from vendors and manufacturers of both biomedical and other equipment identifying compliance status, and letters from utility providers ensuring compliance of public utilities. We obtained copies of contingency plans and discussed the status of disaster recovery and contingency planning with appropriate medical center, RO, and GSA officials.

The audit was conducted in accordance with generally accepted Government Auditing Standards.

### **BACKGROUND**

The Y2K problem is rooted in the way dates are recorded and computed in many computer systems. For the past several decades, in order to conserve on electronic data storage and reduce operating costs, systems have typically used two digits to represent the year, such as “99” representing 1999. With this two-digit format, however, the year 2000 is indistinguishable from 1900. Because of this ambiguity, system or application programs that use dates to perform calculations, comparisons, or sorting may generate incorrect results when working with years after 1999.

The Department’s Y2K efforts have been well organized and focused on those mission critical systems that must be compliant to ensure that veterans receive uninterrupted services. Key aspects of the Department’s program for correcting Y2K problems include:

- A full time Y2K staff with no other duties.
- Each major agency administration has a Y2K coordinator.
- Monthly briefings provided to VA’s Chief Information Officer (CIO).
- Participation on interagency committees addressing technical functions (biomedical, telecommunications, interfaces, infrastructure, etc.).
- Contractor support.

VA is highly dependent upon a wide range of information technology systems to support its mission. Appropriate correction of the Y2K problem involving Department computer systems is of utmost importance in continuing the delivery of benefits to veterans and their families. Inability to process the Y2K date could have an impact on both service to veterans and administrative functions within VA. For example, failure to make applications and hardware platforms Y2K compliant could cause severe misprocessing. Non-compliant systems could reject legitimate entries, compute erroneous results, or simply shut down. Delivery systems may not pay veterans or may pay incorrect amounts if key dates are computed incorrectly or become corrupted.

VA’s CIO is accountable for Y2K compliance across the Department. The Y2K Project Office was created by the CIO as an oversight function to ensure existing mission critical systems are made compliant. The CIO designated a single Y2K Project Manager to oversee the compliance activities of the Y2K projects established within VHA and VBA. Specific VA Y2K project objectives are to identify the Department’s mission critical systems, oversee activities related to obtaining Y2K compliance for mission critical systems which include applications that are mission critical and non-mission critical, and identify potentially problematic areas where compliance may not be reached or agency interdependencies may not have been fully communicated. The Y2K Project Manager initiates periodic assessments of progress to identify and mitigate risks.

Y2K Project Managers established in VHA, VBA, and the National Cemetery Administration provide project management and oversee Y2K actions in their respective agency elements. The Project Managers also integrate Y2K compliance activities into routine information technology organization activities.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
<b>(1) Philadelphia Benefits Delivery Center (PBDC)</b>		
a. The General Services Administration (GSA) has not yet addressed required infrastructure support issues for the PBDC.	<i>Without needed infrastructure support mechanisms such as water, fire alarms, and sprinkler systems, Center operations cannot be assured.</i>	This situation has been brought to the attention of the CIO Council Y2K Committee Facilities Subcommittee Chair (who is a GSA representative). The PBDC has conducted an assessment of its building facility systems for Y2K compliance. GSA has also established a Web Page that provides the status of GSA owned or leased space.
b. The PBDC Director requested the purchase of a MULTIPRISE server supplemented by a redundant array of inexpensive disk storage technology to replace the mainframe computer and direct access storage devices on which the Insurance applications process.	<i>Our review found that the purchase of this client server system would save approximately \$1.2 million in the next 2 years and help streamline the Center's Y2K implementation efforts. The Center currently has an IBM 3090, but is testing the compliant IBM OS/390 operating system on another platform.</i>	The requested equipment has been acquired and installed.



**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
<b>(2) Hines Benefits Delivery Center (HBDC)</b>		
a. There is a virtual balance between current workload and staff at the HBDC. The Center can accomplish anticipated workload such as Cost of Living Adjustment for Compensation and Pension and Dependents Indemnity Compensation or other mandates.	<i>Any dramatic change in workload or loss of key staff could materially effect the Center's ability to meet its Y2K commitments. Work on new initiatives at the Center before all Y2K issues are resolved could delay full compliance and implementation of VA's Y2K actions.</i>	The Acting Assistant Secretary for Information and Technology and VBA Management support the payment of retention bonuses. VBA is performing a final review of the proposed retention allowance package.
b. The HBDC did not have a 'Zero Hour Plan'. Such a plan outlines exact Center operational procedures for the night of December 31, 1999 and the succeeding day.	<i>Without a 'Zero Hour Plan' the Center may not be able to ensure continued full and effective operations throughout the period of the millennium date change.</i>	The HBDC has drafted its business continuity and contingency plan. A specific "zero-hour" plan will be developed after the July 4, 1999 business process simulation.
c. The HBDC requested purchase of a Non-Unified Memory Allocation-Q (NUMA-Q).	<i>Excessing of current equipment and the purchase of a NUMA-Q will save \$721,000 in hardware maintenance and \$300,000 in software maintenance annually, and will provide a Y2K compliant test platform. A NUMA-Q costs approximately \$700,000.</i>	The requested equipment has been acquired and installed.

## SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT

<u>Weakness</u>	<u>Effect</u>	<u>Corrective Action</u>
d. The HBDC requested approximately \$220,000 to add memory to the IBM and the Honeywell/Bull operating systems and obtain hardware and software, to provide for a compliant environment for testing of applications.	<i>Without assurance that all applications are tested in a compliant environment, there is a risk that misprocessing or processing failure will occur.</i>	The requested equipment has been acquired and installed.
e. The Hines Finance Center has not been included in the Y2K assessment of applications at the HBDC. 'In house' data exchanges, including those with the Finance Center, had not been assessed.	<i>Applications that are not included in the Y2K assessment process may be at risk of not being renovated, tested, or implemented.</i>	The Y2K assessment of all Hines Finance Center applications has been accomplished.
<b>(3) VA-Wide Business Simulation Demonstration</b>		
VA has proposed a July 1999 demonstration of Department-wide interconnectivity. The sooner VA completes the planned demonstration, the more time that will be available to address any Y2K issues that still need to be corrected.	<i>A business simulation demonstration planned for mid-year 1999 may not provide adequate time to address all outstanding Y2K issues that could still need to be corrected.</i>	VA's plan has been to conduct critical end-to-end tests with Treasury and "dry runs" in April and May 1999 before the business simulation. These tests will allow adequate time to address issues that are still outstanding before the July 4, 1999 simulation.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
<b>(4) Austin Automation Center (AAC) and the Austin Finance Service Center (AFSC)</b>		
a. When the contractor delivered its 'final product' on Y2K renovation work on Beneficiary Identification and Record Locator System/ Veterans Assistance Discharge System (BIRLS/ VADS), the Department found the required renovation work had, in fact, not been completed. The status of Y2K efforts should be accurately reported until all renovation of an application has been completed.	<i>Work on BIRLS was expected to be completed in advance of OMB's March 1999 due date for completing Y2K related implementation efforts in the Department. However, the Department should not have reported in the August 1998 Y2K report to OMB that renovation work was completed on BIRLS.</i>	BIRLS was tested, installed and implemented into production in October 1998.
b. The AAC did not have a 'Zero Hour Plan'. Such a plan outlines exact Center operational procedures for the night of December 31, 1999 and the succeeding day.	<i>Without a 'Zero Hour Plan' the AAC may not be able to ensure continued full and effective operations throughout the period of the millennium date change.</i>	The AAC has drafted its Business Continuity and Contingency Plan (BCCP). The AAC took the additional step of involving all tenant organizations to participate in the BCCP development.  An accompanying Y2K "Zero Hour Plan" is also under development and will be completed by June 1999.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
c. Two Y2K related infrastructure support areas needed resolution, a change to the software that controls security access, and replacement of embedded chips for facility lighting.	<i>Without needed infrastructure support mechanisms, Center operations cannot be assured.</i>	The remaining two AAC building infrastructure systems (lighting and security) have been upgraded with Y2K compliant components.
d. The priority for restoration of power to the AAC needs attention. When the AAC suffers a power outage, power is restored in an unknown priority.	<i>The AAC needs to assure that power can be restored as soon as possible.</i>	The AAC continues to work through GSA to increase the AAC building priority to restore power. The City has asserted that its utility systems will be Y2K compliant.
e. The Electronic Data Interchange (EDI) staff had not contacted either the trading partners or the Value Added Networks (VAN) regarding their ability to achieve Y2K compliance and assure continued electronic processing of transactions involving VA purchases.	<i>Continued transmission and receipt of compliant data with VA and its trading partners may not be assured and could prevent VA from using EDI to facilitate purchases.</i>	VA has upgraded its X12 translation software to fully support X12 Version 4010, the Y2K compliant version. The AFSC has contacted three VANs they use, two have certified they are compliant and they are awaiting the third's response. The plan is to have issues with VANs resolved and letters to trading partners no later than the end of June 1999.

## SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT

<u>Weakness</u>	<u>Effect</u>	<u>Corrective Action</u>
<b>(5) Results of OIG Information Survey</b>		
a. Responses were not received from 13 VHA sites during the survey period. We visited 6 of these 13 VHA sites (responses were received from 4 additional VHA sites subsequent to the due date).	<i>The status of required Y2K implementation efforts at these facilities was not determined.</i>	The VHA Y2K Project Office followed up with the sites that did not respond to the survey. They advised that one site had been included with an integrated facility response, which we confirmed. We were advised that two other sites had provided responses and another had not received the survey. Our position is that these three sites were contacted multiple times for responses that we never received.
b. Two VACO activities have LANs that have not been tested for Y2K compliance. Nine VACO respondents had PCs that had not been tested for Y2K compliance. Thirteen VACO respondents indicated that they have locally developed applications. Only four respondents indicated they are tracking the costs of identifying, renovating, and implementing Y2K compliant code.	<i>While the untested LANs may not be 'mission critical' to VA, they may be critical to the activities operating them. PCs that have not been tested may not properly function after the December 31, 1999 date change. Correct reporting of the renovation cost to the Office of Management and Budget (OMB) cannot be assured without accurate accounting of all Y2K related costs.</i>	The Office of Assistant Secretary for Information and Technology conducted a survey of VACO offices in 1998. VACO offices were provided assistance in testing for PC compliance. In addition, the Assistant Secretary's office has asked for Y2K certification from each administration and staff office for network and PC components. The Assistant Secretary's office will certify that the VACO network and PCs are Y2K compliant by September 1, 1999.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
c. Two VBA activities responded that data exchanges with agencies outside VA had not been tested for Y2K compliance.	<i>Non-compliant data exchanges could cause disruption of processing or misprocessing of data.</i>	VBA reports that it has resolved the interfaces cited in the survey.
d. Thirty-one of the 58 VBA respondents indicated VA employees are performing renovation of locally developed applications. However, 28 of these 31 are not tracking or reporting the costs of these efforts. Also, 36 of the 40 VBA respondents with locally developed applications are not tracking the cost of renovation. Thirty-four VBA respondents indicated that less than 50 percent of their PCs are compliant. Lastly, we found that five respondents reported they have no Y2K emergency plan.	<i>Correct reporting of the renovation cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs. PCs that have not been tested may not properly function after the December 31, 1999 date change. Without a formal, documented plan to address risk of infrastructure failures, there can be no assurance of continued RO operations.</i>	<p>VBA's Y2K Project Office will identify RO staff related Y2K costs for a one-time report.</p> <p>Noncompliant PCs have been identified and have either been repaired or replaced.</p> <p>BCCP and benefit payment contingencies were completed in January 1999.</p> <p>Each RO has been provided specific plans and templates so that they can customize their individual plans according to their local needs. These customized extensions of the BCCPs were scheduled to be completed by the end of April 1999.</p>

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
e. Forty of 128 VHA activities reported they exchange data with some agency outside VA. Memorandums of Understanding (MOU) are not in place for 24 of these exchanges. Also, in three cases the status of the MOU is not reported.	<i>Without MOUs signed by all parties, the Y2K status of exchange partners cannot be assured, and the continued exchange of data could place VHA applications at risk for failure.</i>	Data exchanges that deal with mission-critical VistA applications and VHA corporate systems already have agreements in place.  The VHA Y2K Project Office continues to review and monitor VHA facilities that may be conducting data exchanges. These exchanges are not classified as mission-critical.
f. Eighty-eight VHA respondents are having renovation of applications done by VA employees or contractors. In 21 instances, the cost of renovation is not being tracked.	<i>Correct reporting of the renovation cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs.</i>	All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. Project Office staff are carefully analyzing these monthly reports.
g. Seventy-three VHA respondents are not relying on the contingency plan required by the Joint Commission on Accreditation of Hospital Organizations to address Y2K related infra-structure support issues.	<i>Without having contingency plans in place, VHA activities are at risk of being unable to continue operations due to infrastructure support failures.</i>	On March 1, 1999 VHA issued its "Patient-Focused Y2K Contingency Planing Guidebook" that addresses all Y2K contingency planning issues including infrastructure support. VHA facilities were expected to complete their customized local plans by April 30, 1999.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
h. Twenty VHA respondents reported not having any locally developed applications. While this is possible, it is unlikely that a station has no locally developed applications.	<i>Without an accurate count of the number of applications needing renovation, estimates of Y2K completion dates and cost of renovations may not be accurate and result in some applications that will not be Y2K compliant.</i>	All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. The most recent data submitted shows only 11 sites reporting no locally developed software applications. Based on the Project Office's knowledge that many facilities' Information Resources Management staffs can no longer support locally developed applications with their limited resources, this number appears reasonable.
i. Twenty-six VHA respondents had less than 50 percent of their PCs compliant.	<i>PCs that are not known to be compliant may not properly function after the December 31, 1999 date change.</i>	All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. The most recent data submitted shows that over 95 percent of all PCs are assessed, and that 77 percent of these PCs are currently compliant. The others are in the process of being retired, replaced, or repaired.



## SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT

<u>Weakness</u>	<u>Effect</u>	<u>Corrective Action</u>
j. Six VHA respondents indicated they are not assessing the compliance of biomedical devices. Two additional respondents indicated all biomedical assessments were being done at VHA Central Office.	<i>Without an assessment of biomedical devices at all medical centers, patients may be put in danger.</i>	The Office of the Acting Assistant Secretary for Information and Technology and the VHA Y2K Project Office took action to correct this situation.
<b>(6) Y2K Preparations at VA Facilities Visited During the Audit</b>		
a. Many VHA facilities have not received assurance from local utility providers that infrastructure support systems external to the facilities are Y2K compliant.	<i>Without such assurance, VA facilities could be at increased risk to infrastructure support failures that would require them to be dependent on VA generators, stored water, and the like for continued operations. These emergency devices are not intended to provide support to allow VAMCs to continue to conduct normal business operations.</i>	VHA has established a special task force to develop overall Y2K business continuity and contingency plans. These plans are patient-focused and were put in place at each medical center in April 1999.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
<p>b. Several VA field facilities have not included PCs in their Y2K assessment that are assigned to tenant activities such as Research and Development (R&amp;D) Service, Office of Resolution Management, and the Office of Inspector General. At the time of our site visits, 56 percent of the 16,899 PCs had been tested for Y2K compliance.</p>	<p><i>The PCs that have not been included in facility assessments are attached to facility LANs and failure of such equipment could affect the continued operation of the LANs. PCs that have not been tested may not properly function after the December 31, 1999 date change.</i></p>	<p>The VHA Y2K Project Office has addressed the importance of PC testing during on-site VISN visits, visits to individual facilities, monthly national Y2K conference calls and conference calls with VISNs to clarify their reporting data. In addition, the Project Office is stressing the importance of having representation on each facility's Y2K committee from all tenant activities, with an especially strong emphasis on R&amp;D. As previously stated, the most recent data submitted shows that over 95 percent of all PCs are assessed.</p>
<p>c. VHA facilities have not included in Y2K assessment efforts all biomedical devices:</p> <ul style="list-style-type: none"> <li>- Issued to veterans by Prosthetics Service.</li> <li>- Leased by medical centers and placed in the veterans' homes.</li> <li>- Issued to veterans by the Blind Rehabilitation Centers throughout the country.</li> <li>- Issued to veterans by Spinal Cord Injury Centers.</li> <li>- Used in R&amp;D Service to monitor, process, and report data on investigations in process.</li> </ul>	<p><i>Unless the devices in these areas are identified, assessed, and repaired or replaced, their Y2K compliance status cannot be determined.</i></p>	<p>VHA is working with program offices including Prosthetics and R&amp;D and also developing a checklist for Network Directors that will address these identified areas. The checklist will be distributed to VA facilities and will require certification that these areas are addressed.</p>

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
d. VHA facilities have biomedical devices from manufacturers who have not reported the status of their equipment. We did not find any site that had set a date for taking devices of unknown Y2K status out of service or making plans for replacement.	<i>Without a definite report from the manufacturer, and in view of VA's policy of relying on the manufacturer for test data, the Y2K status of these devices cannot be determined.</i>	VHA has developed policy requiring VA facilities to review medical devices with an unknown or Non-Compliant Y2K status and determine what action is necessary by June 1, 1999. Action includes either replace, retire, or use-as-is. The same review is required for Conditionally Compliant devices and those not repaired by September 1, 1999. The directive was released on April 21, 1999.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
e. GSA personnel could not provide any written assurance that all buildings that house VA field activities under their control will continue to have needed utility support after the millennium.	<i>Without such assurances, ROs continue to face increased risk of infrastructure support failures after the millennium.</i>	<p>VBA is working with the CIO Council's Committee on Y2K Facilities Subcommittee, chaired by GSA, to ensure that Y2K problems are corrected in buildings managed by GSA.</p> <p>In addition to GSA's activities, VBA has also completed a survey of all non-information technology equipment and building systems at ROs. This survey was conducted in March 1998. VBA's goal was to identify these components and ensure that GSA will either make repairs or a work around as necessary so that they are Y2K compliant. GSA and VBA completed the second follow-up survey with ROs on mission critical Y2K issues that remained outstanding.</p>
f. ROs are not monitoring the cost of Y2K efforts involving RO staff.	<i>Correct reporting of cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs.</i>	VBA obtained cost information from ROs for a one-time report. VBA determined that these costs were not significant.

**SUMMARY OF VA Y2K EFFORTS NEEDING IMPROVEMENT**

<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>
g. Only two of nine VHA facilities conducting data exchanges had obtained MOUs with their trading partners.	<i>Without such MOUs, VA cannot be assured that data received from the exchange partner will not contain non-compliant date formats, which could cause disruption of processing or misprocessing of data.</i>	The VHA Y2K Project Office continues to review and monitor VHA facilities that may be conducting data exchanges. These exchanges are not classified as mission-critical.

**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF  
VA PERSONAL COMPUTERS**

As part of the audit, we sent surveys to VBA ROs, VHA activities, and selected VACO activities requesting general information on Y2K implementation and status information on the assessment and compliance of personal computers (PC). We received 210 responses to our survey. We received responses from 23 VACO activities, 58 VBA activities, and 129 of 142 VHA activities surveyed. Some VHA responses contained information on more than one facility. The following chart presents the information contained in these survey responses. The survey results showed a wide range of PC Y2K compliance, from 0 to 100 percent, at individual facility/organizations. Overall, the survey found that 67 percent of the PCs were reported as compliant.

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
<b>VACO</b>			
Office of Public & Intergovernmental Affairs	103	0	0%
DAS for Financial Management	118	0	0%
Center for Minority Veterans	6	0	0%
Office of Small and Disadvantaged Business Utilization	13	0	0%
Office of Inspector General	350	0	0%
Office of the Secretary	35	0	0%
Center for Women Veterans	4	0	0%
Board of Veterans Appeals	510	0	0%
Office of Human Resources Management	140	0	0%
<b>VARO</b>			
Wilmington, DE	31	0	0%
Boise, ID	61	0	0%
Providence, RI	63	0	0%
Nashville, TN	220	0	0%
St. Louis, MO	380	0	0%
Montgomery, AL	199	27	14%
Seattle, WA	332	64	19%
Anchorage, AK	50	10	20%
Phoenix, AZ	276	60	22%
Wichita, KS	95	22	23%
Columbia, SC	176	41	23%

**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF  
VA PERSONAL COMPUTERS**

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
New Orleans, LA	198	49	25%
Manila, PI	114	30	26%
Milwaukee, WI	169	45	27%
Indianapolis, IN	163	48	29%
White River Junction, VT	30	9	30%
Togus, ME	72	22	31%
Lincoln, NE	65	21	32%
Los Angeles, CA	431	158	37%
Newark, NJ	148	60	41%
Hartford, CT	75	36	48%
Pittsburgh, PA	138	66	48%
Reno, NV	88	44	50%
Huntington, WV	100	50	50%
Winston-Salem, NC	270	134	50%
Washington, DC	259	152	59%
Ft. Harrison, MT	40	24	60%
Little Rock, AR	210	132	63%
Albuquerque, NM	103	67	65%
Fargo, ND	50	33	66%
Honolulu, HI	75	52	69%
Chicago, IL	257	180	70%
Philadelphia, PA	425	305	72%
San Diego, CA	226	166	73%
Roanoke, VA	340	260	76%
Louisville, KY	189	145	77%
Houston, TX	390	300	77%
Salt Lake City, UT	82	65	79%
St. Louis Records Mgt., MO	134	109	81%
San Juan, PR	160	130	81%
St Paul, MN	537	450	84%
Jackson, MS	203	173	85%
Atlanta, GA	574	487	85%
Portland, OR	146	126	86%
Muskogee, OK	401	351	88%
Baltimore, MD	123	112	91%
Oakland, CA	326	296	91%

**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF  
VA PERSONAL COMPUTERS**

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
Detroit, MI	260	245	94%
Manchester, NH	94	92	98%
Des Moines, IA	98	96	98%
Cleveland, OH	342	342	100%
West Los Angeles, CA	402	402	100%
<b>VAMC</b>			
Battle Creek, MI	500	0	0%
Alexandria, LA	400	0	0%
HCS, Central Iowa, IA	700	0	0%
Bedford, MA	778	0	0%
HCS Connecticut, CT	1,000	0	0%
Kansas City, MO	740	60	8%
Brooklyn, NY	738	95	13%
Madison, WI	776	120	15%
Louisville, KY	650	100	15%
Little Rock, AR	2,382	411	17%
Manchester, NH	269	56	21%
Albuquerque, NM	800	200	25%
Salisbury, NC	400	100	25%
Fayetteville, NC	524	140	27%
New Jersey HCS, East Orange & Lyons, NJ	1,014	301	30%
West Los Angeles, CA	2,095	800	38%
Long Beach, CA	1,947	740	38%
Salt Lake City, UT	869	338	39%
Jackson, MS	824	335	41%
Fargo, ND	201	82	41%
Martinsburg, WV	389	164	42%
Lebanon, PA	417	182	44%
Durham, NC	603	280	46%
Brockton/West Roxbury, MA	991	454	46%
Philadelphia, PA	2,195	1,030	47%
Beckley, WV	178	87	49%
Portland, OR	1,200	600	50%
Omaha, NE	335	173	52%
Togus, ME	561	300	53%



**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF  
VA PERSONAL COMPUTERS**

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
Minneapolis, MN	1,222	661	54%
Wilkes-Barre, PA	300	162	54%
New York, NY	1,086	612	56%
Gainesville, FL	958	548	57%
HCS, Chicago, IL	1,400	804	57%
North Texas HCS, Bonham & Dallas, TX	1,600	923	58%
Northern Indiana HCS, Marion & Ft. Wayne, IN	987	574	58%
White City, OR	310	185	60%
South Texas HCS, Kerrville & Houston, TX	810	500	62%
Erie, PA	330	204	62%
Murfreesboro, TN	765	476	62%
Biloxi, MS	400	251	63%
Manila, PI	64	40	63%
Northampton, MA	329	215	65%
Hudson Valley, Castle Point, & Montrose, NY	575	375	65%
Northport, NY	500	323	65%
Boston, MA	2,320	1,500	65%
HCS, Roseburg, OR	794	527	66%
Sioux Falls, SD	382	251	66%
Richmond, VA	659	443	67%
New Orleans, LA	750	500	67%
Houston, TX	1,500	1,000	67%
Nashville, TN	900	600	67%
Phoenix, AZ	1,238	837	68%
Miami, FL	1,965	1,385	70%
St. Louis, MO	993	699	70%
Hines, IL	1,700	1,200	71%
Montana HCS, MT	339	240	71%
Walla Walla, WA	306	216	71%
Lake City, FL	687	490	71%
Milwaukee, WI	1,050	750	71%
Bronx, NY	692	500	72%

**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF**  
**VA PERSONAL COMPUTERS**

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
Grand Junction, CO	290	212	73%
Tampa, FL	1,679	1,223	73%
Salem, VA	1,048	763	73%
Cincinnati, OH	970	721	74%
Muskogee, OK	363	269	74%
Prescott, AZ	406	305	75%
Coatesville, PA	450	339	75%
Loma Linda, CA	1,000	750	75%
White River Junction, VT	728	545	75%
Boise, ID	411	313	76%
St. Cloud, MN	475	360	76%
Chillicothe, OH	500	386	77%
Black Hills HCS, Fort Meade & Hot Springs, SD	489	375	77%
Ann Arbor, MI	240	190	79%
North Chicago, IL	1,148	923	80%
Big Spring, TX	250	200	80%
Tomah, WI	600	477	80%
Providence, RI	725	581	80%
Northern California HCS, CA	826	670	81%
San Francisco, CA	1,043	843	81%
Cleveland, IL	800	650	81%
Iron Mountain, MI	339	278	82%
El Paso, TX	300	250	83%
Atlanta, GA	7,329	6,085	83%
Huntington, WV	475	400	84%
Iowa City, IA	401	336	84%
Tucson, AZ	500	420	84%
HCS, Palo Alto, Livermore & Palo Alto, CA	2,500	2,100	84%
Washington, DC	1,459	1,239	85%
Indianapolis, IN	938	810	86%
Asheville, NC	350	300	86%
Wilmington, DE	350	300	86%
Altoona, PA	236	206	87%
Fayetteville, AR	328	284	87%

**RESULTS OF OIG SURVEY OF Y2K COMPLIANCE OF**  
**VA PERSONAL COMPUTERS**

<b>Facility/Organization</b>	<b>No. of PCs</b>	<b>No. of PCs Compliant</b>	<b>Percent of PCs Compliant</b>
Hampton, VA	450	400	89%
Decatur, GA	2,765	2,452	89%
HCS, Pittsburgh, PA	1,119	1,000	89%
Greater Nebraska HCS, Grand Island & Lincoln, NE	450	400	89%
Bay Pines, FL	1,924	1,732	90%
Las Vegas, NV	600	540	90%
Dayton, OH	1,306	1,169	90%
Anchorage, AK	318	288	91%
Oklahoma City, OK	750	680	91%
Shreveport, LA	660	604	92%
Mountain Home, TN	698	639	92%
Reno, NV	345	320	93%
Butler, PA	434	405	93%
Southern California & LA, W. LA, & Sepulveda, CA	1,400	1,300	93%
West Palm Beach, FL	1,650	1,550	94%
Tuscaloosa, AL	915	870	95%
Maryland HCS, Ft Howard & Perry Point, MD	2,500	2,375	95%
Danville, IL	468	450	96%
Puget Sound, Seattle & American Lake, WA	2,134	2,052	96%
Denver, CO	600	588	98%
HCS, Topeka & Leavenworth, KS	1,230	1,200	98%
Central Texas HCS, Marlin, Waco & Temple, TX	1,975	1,935	98%
Spokane, WA	280	275	98%
Clarksburg, WV	216	213	99%
Saginaw, MI	423	421	100%
Marion, IL	595	594	100%
<b>TOTALS</b>	<b>120,207</b>	<b>79,982</b>	<b>67%</b>

**RESULTS OF Y2K TESTING AND COMPLIANCE OF VA PERSONAL  
COMPUTERS AT FIELD FACILITIES VISITED**

After reviewing the responses to our survey, we met with VHA and VBA to discuss potential field sites visits. Based on those discussions and information gathered from the Y2K survey responses, we selected 20 VA field facilities for site visits. The following chart presents the status of PC assessment and compliance at those 20 field stations. The site visits found a wide range of PC Y2K compliance from 0 – 95 percent at individual facilities. Overall, the site visits found that 50 percent of the PCs were compliant.

<b>Facility Visited</b>	<b>No. of PCs</b>	<b>No. of PCs Assessed</b>	<b>Percent Assessed</b>	<b>No. of PCs Compliant</b>	<b>Percent Compliant</b>
Edith Nourse Rogers Memorial Veterans Hospital, VAMC Bedford, MA	778	0	0%	0%	0%
VA Connecticut Health Care System (Newington and West Haven)	1,000	0	0%	0	0%
VAMC Marion, IN	595	5	1%	5	1%
John L. McClellan Memorial Veterans' Hospital, VAMC Little Rock, AR	2,382	422	18%	411	17%
VAMC Salisbury, NC	400	100	25%	100	25%
VAMC Long Beach, CA	1,947	1,370	70%	740	38%
VAMC West LA, CA	2,095	0	0%	800	38%
VARO Winston Salem, NC	270	270	100%	134	50%
VAMC St. Louis, MO	993	993	100%	699	70%
VAMC Salem, VA	1,048	1,048	100%	763	73%
VARO Roanoke, VA	340	340	100%	260	76%
VAMC Kansas City, MO	740	700	95%	600	81%
VARO West LA, CA	402	402	100%	342	85%
VAMC Fayetteville, AR	328	328	100%	284	87%
VARO Baltimore, MD	123	123	100%	112	91%
Alvin C. York VAMC, Mountain Home, TN	698	698	100%	639	92%

**RESULTS OF Y2K TESTING AND COMPLIANCE OF VA PERSONAL  
COMPUTERS AT FIELD FACILITIES VISITED**

<b>Facility Visited</b>	<b>No. of PCs</b>	<b>No. of PCs Assessed</b>	<b>Percent Assessed</b>	<b>No. of PCs Compliant</b>	<b>Percent Compliant</b>
VARO Detroit, MI	260	260	100%	245	94%
VA Maryland Health Care System (Baltimore and Ft. Howard)	2,500	2,375	95%	2,375	95%
<b>Total</b>	<b>16,899</b>	<b>9,434</b>	<b>56%</b>	<b>8,509</b>	<b>50.35%</b>

**MONETARY BENEFITS IN ACCORDANCE  
WITH IG ACT AMENDMENTS**

**Report Title:** Audit of VA's Year 2000 Implementation Effort

**Project Number:** 8D2-199

<b><u>Recommendation Number</u></b>	<b><u>Category/Explanation of Dollar Impact</u></b>	<b><u>Better Use of Funds</u></b>	<b><u>Questioned Costs</u></b>
<b>1(c)</b>	Better Use of Funds. Purchase of a MULTIPRISE server and disk storage technology to replace IBM equipment.	\$1,200,000	
<b>1(c)</b>	Better Use of Funds. Purchase of NUMA-Q and excessing of Sequent servers at the sector sites.	<u>\$321,000</u>	
<b>TOTAL</b>		<u><u>\$1,521,000</u></u>	



**ACTING ASSISTANT SECRETARY FOR INFORMATION  
AND TECHNOLOGY COMMENTS**

**Department of  
Veterans Affairs**

# Memorandum

Date: April 30, 1999

From: Acting Assistant Secretary for Information and Technology (005)

Subj: Draft Audit Report on Year 2000 Activities in VA

To: Director, Central Office Operations Division (52CO)

1. I am pleased to report that on March 31, 1999 we had completed 100% of the Year 2000 renovation, validation, and implementation of our applications including all benefit payment-related applications and applications supporting health care. We have also taken the additional step to complete business continuity and contingency plans (BCCPs) for benefits delivery and health care. These BCCPs will reduce risks due to other potential Year 2000 interruptions such as loss of power supplies, water and telecommunications.
2. We have provided your staff copies of our February 1999 Year 2000 quarterly report and copies of the BCCPs. This information addresses many of the concerns your audit report raises and provides updates to your findings. We concur with your recommendations and have attached comments and updates to your draft report. We have no disagreement with the estimated dollar impact of your recommendations.
3. One point in the report that needs clarification is the statement that it is VHA's policy not to test medical devices. VHA's position is that all medical devices must be tested to determine Year 2000 compliance. However, the primary source to determine the Year 2000 status is the medical device manufacturer. No other source, or combination of sources, can provide device-specific information while simultaneously ensuring proper and thorough testing. The Food and Drug Administration, the Department of Defense and the medical device industry advocate this position. VHA is a recognized leader in mitigating Year 2000 issues with medical devices.
3. We appreciate the effort you and your staff have made in conducting site visits to VA's medical centers and regional offices nationwide. VA's Year 2000 Project Manager has spoken with you about conducting follow-up site visits to medical centers including the research and development area. Your continued assistance in conducting site visits will assist my office in overseeing VA's Year 2000 efforts.
4. Should you have any questions concerning our comments, you can contact me on 273-8842 or have a member of your staff contact Ernesto Castro on 273-6946.

Harold F. Gracey, Jr.

Attachments

VA FORM 2105  
MAR 1989



**ACTING ASSISTANT SECRETARY FOR INFORMATION  
AND TECHNOLOGY COMMENTS**

**Appendix A - VA Summary Comments to IG Report**

**VA's Implementation update (Pages 2-3 of report)**

As of March 31, 1999, 100% of VA's applications have been renovated, validated and implemented and are running in production. We have made Year 2000 compliant the 316 applications supporting our 11 mission critical system areas. These applications support compensation and pension, health care, insurance, vocational rehabilitation, education, loan guaranty, financial management, payroll, and national cemeteries. The following bullets update your report findings on page 2 and 3.

- The computer IBM platform supporting VBA's compensation and pension has been installed and is compliant. All programs have been recompiled.
- The Construction and Valuation (C&V) application was implemented in January 1999. The Automated Loan Production System/Loan Processing (ALPS/LP) application was implemented in September 1998. The application used by the banks to get lender information is the VA Assignment System (formerly known as the Automated Assignment Appraiser Processing System). The VA Assignment System was implemented on March 29, 1999. In addition, some banks had asked for certification of compliance of ALPS/LP system, not the banking community as a whole as stated in the draft report.
- The new compliant hardware for Philadelphia was implemented in February 1999. The Insurance application was re-validated on March 4, 1999.
- The applications supporting education system have been implemented. Chapter 32 and Chapter 1606 were implemented in March 1999.
- VISTA completed the renovation, validation and implementation on March 31, 1999. There is no additional corrective action needed.

**Infrastructure Support Requirements (pages 3-4)**

This issue concerns GSA responsiveness to its tenant: VA. This situation has been brought to the attention of the CIO Council Year 2000 Committee Facilities Subcommittee Chair (who is a GSA representative). GSA has established a web page that provides the Year 2000 compliance for facilities they either own or lease.

- Philadelphia has conducted an assessment of its building facility systems for Year 2000 compliance.
- The AAC has resolved the outstanding infrastructure systems (lighting and security systems) by upgrading with Year 2000 compliant components.

AAC has worked with GSA to ensure priority of power restoration. However, the City of Austin will not place the AAC in the first priority tier since there are no public safety issues that would qualify it as a first tier priority, such as a hospital. We agree with this categorization and we consider the issue resolved.

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**Appendix A - VA Summary Comments to IG Report**

- The AAC has resolved the outstanding infrastructure systems (lighting and security systems) by upgrading with Year 2000 complaint components
- AAC has worked with GSA to ensure priority of power restoration. However, the City of Austin will not place the AAC in the first priority tier since there are no public safety issues that would qualify it as a first tier priority, such as a hospital. We agree with this categorization and we consider the issue resolved.

**Reporting Renovation Work on BIRLS/VADS (page 4)**

The issue dealt with the Beneficiary Identification and Record Locator System (BIRLS) and not the Veterans Assistance Discharge System (VADS). VADS was made compliant and implemented January 1999.

We correctly reported to OMB that BIRLS was renovated. During the validation (testing) phase, it was revealed that the contractor did not complete the required work. VBA executed its contingency plan and completed the renovation and validation work in-house. BIRLS was successfully implemented October 13, 1998. BIRLS has been successfully running in production since October 1998.

**Approval of Pending Requests for Equipment and Software (page 5)**

All pending procurements have been approved and the equipment was installed.

**Preparation of a "Zero Hour Plan" (pages 5-6)**

VHA and VBA have developed BCCPs and are now customizing these plans at each RO and healthcare facility. These plans will be developed by the end of April 1999 at all VHA facilities and VBA regional offices. In addition, NCA has also completed a BCCP. These plans address potential infrastructure failures such as power, water and electricity. In addition to the Philadelphia "Zero Hour" plan, both AAC and Hines are drafting specific "Zero Hour" plans. Both the AAC and Hines have drafted BCCP plans.

**Contacts with Trading Partners and Value Added Networks (page 6)**

The Austin Financial Services Center has contacted three VANS they use, two have certified they are compliant and they are awaiting the third's response.

In addition, VA has upgraded it's X12 translation software to fully support X12 Version 4010, the Year 2000 compliant version. VA has implemented "windowing" on incoming transactions so that either two or four digit dates will be successfully processed.

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VA is currently working with the Value Added Networks (VANs) that provide translation services to the VA's trading partners to migrate to X12 version 4010.

The plan is to have issues with the VANs resolved and letters to the trading partners no later than the end of June, notifying them of their VANs status and that they have to be Year 2000 compliant no later than the end of September.

**Payment of Retention Bonuses (page 7)**

VBA fully intends to support payment of retention bonuses and is performing a final review of the proposed retention allowance package.

**VA-wide Business Simulation (page 7)**

We will not change the date of the demonstration. We are performing end-to-end tests and dry runs well before the July 4<sup>th</sup> weekend. We will conduct the necessary tests before the simulation that would disclose Year 2000 issues. For example, our end to end test with Treasury and the Federal Reserve will be completed by the end of May. These tests will give ample time to address issues before the simulation. The intent of the simulation is to successfully demonstrate that key systems will function in an actual day in the Year 2000. It is an additional test to ensure our vendor provided hardware and software will function as indicated by the vendor.

**Infrastructure Risk Analysis (Page 8)**

VA is not alone in being susceptible to potential disruptions in operations due to Year 2000 date-related system failures. Vulnerabilities to the Year 2000 problem permeate government agencies and business institutions, creating a situation where large-scale interruptions in essential community services, such as electricity and water, could occur. The Year 2000 problem is unique in that traditional contingency plans and back-up systems may be affected by the same problem(s). Therefore, the Year 2000 problem required a review of our current contingency plans to safeguard continuity of operations.

In December 1998, VA's Deputy Secretary sent a memorandum to the Under Secretaries for Health, Benefits and Memorial Affairs emphasizing his expectation that plans be in place to ensure continuity of VA's business operations for our core business functions: benefits delivery and medical care.

VA has developed business continuity and contingency plans (BCCPs) to minimize Year 2000 impacts on our core business functions. BCCP plans for VBA benefits business lines and payments were completed in January. Patient-focused BCCP planning guidelines were completed in early March. Regional offices and healthcare facilities have been provided these plans and templates so

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that they can customize their individual plans according to their local needs. These customized extensions of the BCCPs will be completed by the end of April.

These plans address potential infrastructure failures such as power, water and electricity. VBA's BCCP is aimed at ensuring that its employees are able to carry out the assigned missions of each business line in spite of any evolving Year 2000 problem. The BCCP focuses on maintaining a minimal acceptable level of productivity regardless of the Year 2000 induced problem. VHA's detailed patient-focused BCCP guidebook was developed to assist each VA healthcare facility prepare for continuity of operations before, during and after the changing of the century in order to prevent any disruption to patient care.

Copies of these BCCPs and our February 1999 Year 2000 Quarterly Report, that further discusses VA's BCCP efforts, have been provided to the Office of Inspector General.

**Assessment of Equipment Located in Research and Development Service  
(page 9)**

The VHA Year 2000 Project Office has accounted for Research and Development (R&D) since the inception of its May 1997 Year 2000 Compliance Plan, where it specifically addressed database and archive compliance. It stated that R&D inventories must be included in the renovation activities at the facility level, and that VHA's Year 2000 Project Office would assist in the assessment, and work with the R&D field offices to determine the appropriate solutions. On September 19, 1997, a memorandum went out to all R&D field offices regarding the creation of the Research Year 2000 Compliance Plan web site. In November 1997 that inventory was completed as the initial step towards supporting R&D's Year 2000 readiness and compliance.

The VHA Year 2000 Project Office then participated in the December 1997 CNO conference call that stressed the importance for VISN CIOs and VAMC Directors to include the office of R&D in their overall Year 2000 compliance process. This included having a member of the R&D staff on every Year 2000 team. R&D directed every R&D field office to designate a point of contact for the Year 2000 Compliance Plan effort. The Project Office recommended that the Administrative Officer (AO), or delegate, assume this responsibility.

The Office of R&D later conducted a comprehensive assessment survey to determine the Year 2000 progress of each field R&D office compared to VHA's Year 2000 Compliance Plan. At the January 6-7, 1999 VISN CIO meeting in Tucson, AZ, both the VHA Year 2000 Project Manager and a member of the Chief Network Office discussed R&D compliance. Every VISN CIO was encouraged to look into R&D facilities and systems, to ensure that compliance work was on schedule. The VHA Year 2000 Project Office continues to stress, through

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conference calls and site visits, the importance of including R&D as well as other tenant activities", in all facility Year 2000 efforts.

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**Appendix A - VA Summary Comments to IG Report**

**Testing of Personal Computers at VACO and Field facilities (Page 9)**

The Office of Assistant Secretary for Information and Technology (005) conducted a survey of VACO offices in 1998. (005) is providing VACO offices assistance in testing for PC compliance. (005) also recommended a specific software Year 2000 tool for use by VACO offices. In addition, (005) has taken the additional step and has asked for Year 2000 certification from each administration and staff office for network and PC components.

PCs assigned to VHA "tenant activities" are now included in hardware inventories at the healthcare facilities. In the case of VHA, several different testing tools were recommended to VA healthcare facilities. VBA provided specific testing tools and guidance. All noncompliant PCs are being repaired, upgraded or replaced. Additional detail is provided in Appendix B of our comments.

**Year 2000 Compliance of Biomedical in Patient's Homes (Page 9)**

VHA Year 2000 Project Office has taken the lead to ensure that these devices are compliant. The Project Office is already working closely with Prosthetic and Sensory Aids Service, and is including Blind Rehabilitation, Spinal Cord Injury and Hospital Based Home Care (HBHC) in its efforts to assure compliance of devices found in patient's homes.

The Chief of Prosthetics at each VA healthcare facility received a survey dated January 19, 1999, requesting a status of actions taken to address Year 2000 that was due by February 19, 1999. Some guidance was provided as an addendum to this survey, but in general, it was considered the responsibility of each VA healthcare facility Prosthetic Service to address Year 2000. In general, attention was focused on identifying areas (projects, devices, and computers) that may be compromised by Year 2000, and contacting and recording receipt of responses from vendors. The importance of documenting the process and compliance status for due diligence purposes, and contingency planning (including back up of consumable supplies, such as oxygen), was stressed.

Most VA healthcare facilities have met the survey response deadline as of the first week in March. Prosthetics Service is following up with the Chiefs at health care facilities that have not yet completed the survey, and will then provide the VHA Year 2000 Project Office with a report of the survey results.

Many of the devices issued to both Blind Rehabilitation and Spinal Cord Injury patients are included in the National Prosthetics Patient Database. The VHA Year 2000 Project Office will continue its efforts to coordinate and oversee all Year 2000 activities that might place devices in patient's homes.

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**Procurement Lead Time for Replacement of Biomedical Equipment (Page 10)**

Only 8 devices from 8 manufacturers remain from manufacturers who have not responded. VHA has issued a medical device policy concerning the use of non-compliant devices. This policy requires VA facilities to review medical devices with an unknown or Non-Compliant Year 2000 status and determine what action is necessary by June 1, 1999. Action includes either replace, retire, or use-as-is. The same review is required for Conditionally Compliant devices and those not repaired by September 1, 1999. Because VHA is dealing with only 8 devices, there is ample lead-time to replace the equipment.

It important to note that through our exhaustive efforts we have found only one non-compliant medical device that could potentially pose direct harm to a patient. This device is a radiation dosage therapy system owned by three VA healthcare facilities. Two of these systems have already been replaced and the remaining healthcare facility is awaiting delivery of its replacement. In many cases, noncompliance is date-stamp related (for example, printing "00" on a report) and is not life-threatening. Almost all non-compliant devices are still clinically functional.

VHA's position is that all medical devices must be tested to determine Year 2000 compliance. However, the primary source to determine the Year 2000 status is the medical device manufacturer. No other source, or combination of sources, can provide device-specific information while simultaneously ensuring proper and thorough testing.

VHA's approach has not gone unnoticed. Professional working relationships have been established among VHA, Department of Defense (DoD), Food & Drug Administration (FDA), American Hospital Association (AHA), Emergency Care Research Institute (ECRI), and Joint Commission on Accreditation of Healthcare Organizations (JCAHO). These large organizations and owners of medical devices have worked together to validate and reinforce the Year 2000 process for medical devices.

**VHA MOU for Data Exchange Partners (page 10)**

Data exchanges that deal with mission-critical ~~VistA~~ applications and VHA corporate systems already have been resolved. The VHA Year 2000 Project Office continues to review and monitor VHA facilities that may be conducting data exchanges. These local data exchanges are not classified as mission-critical.

**Resolution of Infrastructure issues at ROs (pages 10-11)**

We are working with the CIO Council Committee on Year 2000 Facilities Subcommittee to ensure that Year 2000 problems are corrected in buildings managed by GSA, such as our regional offices. In addition to GSA's activities,

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VBA has also completed a survey of all non-information technology equipment and building systems at regional offices. This survey was conducted in March 1998.

VBA's goal was to identify these components and ensure that GSA will either make repairs or design a work-around as necessary so that they are Year 2000 compliant. GSA and VBA completed the second follow-up survey with its regional offices on mission critical Year 2000 issues that were still outstanding. To date, approximately 70% of our buildings are Year 2000 ready. Using the GSA definition of "Year 2000 Ready," we consider a building to be Year 2000 ready if its entire mission critical building systems are Year 2000 compliant. VBA is monitoring GSA and non-GSA buildings Year 2000 progress on a monthly basis.

**Tracking Departmental Costs (page 11)**

It is important to remember that our reported costs are for redirected costs. VA has not received any specific Year 2000 funding nor have we requested any emergency Year 2000 funding. Our report to OMB accounts for these redirected costs.

The RO costs cited in the report are minor. VBA's CIO Office redirected centralized funds for Year 2000 mitigation at the regional offices. These costs include application renovation and testing, hardware and software procurements and telecommunications. These cost are tracked and reported to (005). The cost cited by the IG is very small and would include RO FTE spent on local COTS products issues. We believe the costs we track and report for Year 2000 is accurate.



**ACTING ASSISTANT SECRETARY FOR INFORMATION  
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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<b>(1) Philadelphia Benefits Delivery Center (PBDC)</b>			
a. The General Services Administration (GSA) has not yet addressed required infra- structure support issues for the PBDC.	<i>Without needed infrastructure support mechanisms such as water, fire alarms, and sprinkler systems, Center operations cannot be assured.</i>	This situation has been brought to the attention of the CIO Council Y2K Committee Facilities Subcommittee Chair (who is a GSA representative).	Philadelphia has conducted an assessment of its building facility systems for Y2K compliance. GSA has also established a web page that provides the status of GSA owned or leased space.
b. The PBDC Director requested the purchase of a MULTIPRISE server supplemented by a redundant array of inexpensive disk storage technology to replace the mainframe computer and direct access storage devices on which the Insurance applications process.	<i>Our review found that the purchase of this client server system would save approximately \$1.2 million in the next 2 years and help streamline the Center's Y2K implementation efforts. The Center currently has an IBM 3090, but is testing the compliant IBM OS/390 operating system on another platform.</i>	The Office of Information Resources Management has recommended approval of the procurement.	Equipment has been acquired and installed.
Appendix B			
1			

**ACTING ASSISTANT SECRETARY FOR INFORMATION  
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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<b>(2) Hines Benefits Delivery Center (HBDC)</b>			
a. There is a virtual balance between current workload and staff at the HBDC. The Center can accomplish anticipated workload such as Cost of Living Adjustment for Compensation and Pension and Dependents Indemnity Compensation or other mandates.	<i>Any dramatic change in workload or loss of key staff could materially effect the Center's ability to meet its Y2K commitments. Work on new initiatives at the Center before all Y2K issues are resolved could delay full compliance and implementation of VA's Y2K actions.</i>	The Assistant Secretary for Information and Technology and VBA management supports the payment of retention bonuses.	VBA fully intends to support payment of retention bonuses and is performing a final review of the proposed retention allowance package.
b. The HBDC did not have a 'Zero Hour Plan'. Such a plan outlines exact Center operational procedures for the night of December 31, 1999 and the succeeding day.	<i>Without a 'Zero Hour Plan' the Center may not be able to ensure continued full and effective operations throughout the period of the millennium date change.</i>	The Hines BDC intends to develop a 'Zero Hour Plan', with the understanding that the plan will require many changes prior to December 31, 1999.	The Hines has drafted its business continuity and contingency plan. A specific "zero-hour" plan will be developed after the July 4 <sup>th</sup> business process simulation.
c. The HBDC requested purchase of a Non-Unified Memory Allocation-Q 0(NUMA-Q).	<i>Excessing of current equipment and the purchase of a NUMA-Q will save \$721,000 in hardware maintenance and \$300,000 in software maintenance annually, and will provide a Y2K compliant test platform. A NUMA-Q costs approximately \$700,000.</i>	An acquisition request for the purchase of a NUMA-Q is being prepared by VBA for review by the Acting Assistant Secretary for Information and Technology.	Equipment has been acquired and installed.
Appendix B			2

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
d. The HBDC requested approximately \$220,000 to add memory to the IBM and the Honeywell/Bull operating systems and obtain hardware and software, to provide for a compliant environment for testing of applications.	<i>Without assurance that all applications are tested in a compliant environment, there is a risk that misprocessing or processing failure will occur.</i>	Acquisition requests are being prepared by VBA.	Equipment has been acquired and installed.
e. The Hines Finance Center has not been included in the Y2K assessment of applications at the HBDC. 'In house' data exchanges, including those with the Finance Center, had not been assessed.	<i>Applications that are not included in the Y2K assessment process may be at risk of not being renovated, tested, or implemented.</i>	The Y2K assessment of all Hines Finance Center applications is being accomplished.	The Y2K assessment of Hines Finance Center applications was completed.
<b>(3) VA-Wide Business Simulation Demonstration</b>			
VA has proposed a July 1999 demonstration of Department-wide interconnectivity. The sooner VA completes the planned demonstration, the more time that will be available to address any Y2K issues that still need to be corrected.	<i>A business simulation demonstration planned for mid-year 1999 may not provide adequate time to address all outstanding Y2K issues that could still need to be corrected.</i>	The Acting Assistant Secretary for Information and Technology forwarded our concerns to the team responsible for planning the business simulation demonstration for their consideration.	VA's plan has been to conduct critical end-to-end tests with Treasury and "dry runs" in April and May before the business simulation. These tests will allow adequate time to address issues that are still outstanding, before the July 4 <sup>th</sup> simulation.
Appendix B			3

**ACTING ASSISTANT SECRETARY FOR INFORMATION  
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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<b>(4) Austin Automation Center (AAC) and the Austin Finance Service Center (AFSC)</b>			
a. When the contractor delivered its 'final product' on Y2K renovation work on Beneficiary Identification and Record Locator System/ Veterans Assistance Discharge System (BIRLS/ VADS), the Department found the required renovation work had, in fact, not been completed. The status of Y2K efforts should be accurately reported until all renovation of an application has been completed.	<i>Work on BIRLS is expected to be completed in advance of OMB's March 1999 due date for completing Y2K related implementation efforts in the Department. However, the Department should not have reported in the August 1998 Y2K report to OMB that renovation work was completed on BIRLS.</i>	BIRLS is awaiting final testing and implementation into production.	BIRLS was tested, installed and implemented into production in October 1998.  We reported the status of BIRLS correctly to OMB.
b. The AAC did not have a 'Zero Hour Plan'. Such a plan outlines exact Center operational procedures for the night of December 31, 1999 and the succeeding day.	<i>Without a 'Zero Hour Plan' the AAC may not be able to ensure continued full and effective operations throughout the period of the millennium date change.</i>	The AAC Y2K Continuity of Operations Plan was scheduled for completion by September 30, 1998.	The AAC has drafted its BCCP. AAC's took the additional step of involving all tenant organizations to participate in the BCCP development.  An accompanying Y2K "Zero Hour Plan" is also under development and will be completed by June 1999.
Appendix B			

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
c. Two Y2K related infrastructure support areas needed resolution, a change to the software that controls security access, and replacement of embedded chips for facility lighting.	<i>Without needed infrastructure support mechanisms, Center operations cannot be assured.</i>	These infrastructure support areas were scheduled to be resolved and compliant by January 1999.	Since the review by the IG in August 1998, the remaining two AAC building infrastructure systems (lighting and security systems) have been upgraded with Y2K compliant components.
d. The priority for restoration of power to the AAC needs attention. When the AAC suffers a power outage, power is restored in an unknown priority.	<i>The AAC needs to assure that power can be restored as soon as possible.</i>	The AAC is located in a GSA owned building. GSA agreed to send a letter to the City of Austin requesting priority when power restoration is necessary.	The AAC continues to work through GSA to increase the AAC's building priority to restore power. Letters and meetings have been exchanged between GSA and the City of Austin; however, the City utility policies still preclude the AAC from being in the first priority tier of restoration since there are no public safety issues such as at a hospital. The City has asserted that its utility systems will be Y2K compliant.

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
e. The Electronic Data Inter-change (EDI) staff had not contacted either the trading partners or the Value Added Networks (VANs) regarding their ability to achieve Y2K compliance and assure continued electronic processing of transactions involving VA purchases.	<i>Continued transmission and receipt of compliant data with VA and its trading partners may not be assured and could prevent VA from using EDI to facilitate purchases.</i>	Awaiting Department Response.	<p>VA has upgraded it's X12 translation software to fully support X12 Version 4010, the Y2K compliant version. VA has implemented "windowing" on incoming transactions so that either two or four digit dates will be successfully processed.</p> <p>VA currently working with the Value Added Networks (VANs) that provide translation services to the VA's trading partners to migrate to X12 version 4010.</p> <p>The Austin Financial Services Center has contacted three VANs they use, two have certified they are compliant and they are awaiting the third's response.</p> <p>The plan is to have issues with the VANs resolved and letters to the trading partners no later than the end of June, notifying them of their VANs status and that they have to be Y2K compliant no later than the end of September.</p>

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<b>(5) Results of OIG Information Survey</b>			
a. Responses were not received from 14 VHA sites during the survey period. We visited 6 of these 14 VHA sites (responses were received from 4 additional VHA sites subsequent to the due date).	<i>The status of required Y2K implementation efforts at these facilities was not determined.</i>	The VHA Y2K Project Office followed up with the 10 sites that did not respond to the survey.	<p>Of the 10 remaining sites, subsequent conversation with the sites and the OIG reveals that 6 of these sites were visited and the OIG survey completed while auditors were on site. These sites are:</p> <p>Bedford, MA Newington, CT West Haven, CT Marion, IL St. Louis, MO Kansas City, MO</p> <p>Data collection and analysis is therefore not an issue at these 10 sites.</p> <p>Of the remaining 4 sites the OIG listed East Orange, NJ which is integrated with Lyons, NJ and the OIG received survey data from Lyons, so this too is not a data collection and analysis issue.</p> <p>Two of the remaining 3 sites, Wichita, KS and Honolulu, HI did complete the OIG survey. Wichita indicated that they sent the original response to OIG in June 1998 and Honolulu in May 1998.</p> <p>This leaves 1 site, Poplar Bluff, MO that we contacted and who indicated that a request for survey information was never received. Poplar Bluff, MO presently has a vacancy for facility director.</p>

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
b. Two VACO activities have LANs that have not been tested for Y2K compliance. Nine VACO respondents had PCs that had not been tested for Y2K compliance. Thirteen VACO respondents indicated that they have locally developed applications. Only four respondents indicated they are tracking the costs of identifying, renovating, and implementing Y2K compliant code.	<i>While the untested LANs may not be 'mission critical' to VA, they may be critical to the activities operating them. PCs that have not been tested may not properly function after the December 31, 1999 date change. Correct reporting of the renovation cost to the Office of Management and Budget (OMB) cannot be assured without accurate accounting of all Y2K related costs.</i>	The Office of the Acting Assistant Secretary for Information and Technology is conducting a Y2K review, using a contractor. This review will independently verify VA's Y2K progress and follow-up on this and other areas discussed in the report.  The Department will review the detailed survey data to determine if there are any costs that are not reported elsewhere.	The Office of Assistant Secretary for Information and Technology (005) conducted a survey of VACO offices in 1998. (005) has provided VACO offices assistance in testing for PC compliance. In addition, (005) has taken the additional step and has asked for Y2K certification from each administration and staff office for network and PC components. (005) will certify that the VACO network and PCs are Y2K compliant by September 1, 1999.
c. Two VBA activities responded that data exchanges with agencies outside VA had not been tested for Y2K compliance	<i>Non-compliant data exchanges could cause disruption of processing or misprocessing of data.</i>	VBA will assure that the interfaces cited in the survey have been resolved.	VBA has resolved interfaces cited in the survey.



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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
d. Thirty-one of the 58 VBA respondents indicated VA employees are performing renovation of locally developed applications. However, 28 of these 31 are not tracking or reporting the costs of this effort. Also, 36 of the 40 VBA respondents with locally developed applications are not tracking the cost of renovation. Thirty-four VBA respondents indicated that less than 50 percent of their PCs are compliant. Lastly, we found that five respondents reported they have no Y2K emergency plan.	<i>Correct reporting of the renovation cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs. PCs that have not been tested may not properly function after the December 31, 1999 date change. Without a formal, documented plan to address risk of infrastructure failures, there can be no assurance of continued RO operations.</i>	VBA's Y2K Project Office will identify RO staff related Y2K costs for a one-time report.  The VA Y2K Project manager has followed-up with VBA's Y2K Project Manager concerning testing of PCs. Also, VBA has developed business continuity and contingency planning guidance for Y2K emergency plans that are scheduled for completion at ROs by June 1999.	Y2K costs for mission critical systems and supporting infrastructure have been correctly reported to OMB. VA tracks the Y2K costs centrally. These cost represent redirected funds and our report to OMB account for these redirected costs.  Noncompliant PCs has been identified and have either been repaired or replaced.  BCCP and benefit payment contingencies were completed in January 1999.  Each VA regional offices have been provided specific plans and templates so that they can customize their individual plans according to their local needs. These customized extensions of the BCCPs will be completed by the end of April.
e. Forty of 128 VHA activities reported they exchange data with some agency outside VA. Memorandums of Understanding (MOU) are not in place for 24 of these exchanges. Also, in three cases the status of the MOU is not reported.	<i>Without MOUs signed by all parties, the Y2K status of exchange partners cannot be assured, and the continued exchange of data could place VHA applications at risk for failure.</i>	The VHA Y2K Project Office is pursuing MOUs for the remaining data exchange interfaces.	Data exchanges that deal with mission-critical VistA applications and VHA corporate systems already have agreements in place.  The VHA Y2K Project Office continues to review and monitor VHA facilities that may be conducting data exchanges. These exchanges are not classified as mission-critical.

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
f. Eighty-eight VHA respondents are having renovation of applications done by VA employees or contractors. In 21 instances, the cost of renovation is not being tracked.	<i>Correct reporting of the renovation cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs.</i>	The Department will review the detailed survey data to determine if there are any costs that are not reported elsewhere.	Y2K costs for mission critical systems and supporting infrastructure have been correctly reported to OMB. VA tracks the Y2K costs centrally. These cost represent redirected funds and our report to OMB account for these redirected costs.  All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. Project Office staff are carefully analyzing these monthly reports.
g. Seventy-three VHA respondents are not relying on the contingency plan required by the Joint Commission on Accreditation of Hospital Organizations to address Y2K related infra-structure support issues.	<i>Without having contingency plans in place, VHA activities are at risk of being unable to continue operations due to infrastructure support failures.</i>	VHA has established a special task force to develop overall Y2K business continuity and contingency plans. These plans will be patient-focused and are expected to be in place at each medical center by April 1999.	On March 1, 1999 VHA issued its "Patient-Focused Y2K Contingency Planing Guidebook" that addresses all Y2K contingency planning issues including infra-structure support. VHA facilities are expected to complete their customized local plans by April 30, 1999.

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
h. There were twenty VHA respondents that reported not having any locally developed applications. While this is possible, it is unlikely that a station has no locally developed applications.	<i>Without an accurate count of the number of applications needing renovation, estimates of Y2K completion dates and cost of renovations may not be accurate and result in some applications that will not be Y2K compliant.</i>	The Office of the Acting Assistant Secretary for Information and Technology is conducting a Y2K review, using a contractor. This review will independently verify VA's Y2K progress and follow-up on this and other areas discussed in the report.	VHA has declared local applications as non-mission critical. All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. The most recent data submitted shows only 11 sites reporting no locally developed software applications. Based on the Project Office's knowledge that many facilities' IRM staffs can no longer support locally developed applications with their limited resources, this number appears reasonable. In fact, sites that did report an inventory of locally developed applications, are using this opportunity to retire both compliant and non-compliant applications that are no longer being used or maintained. For example, local IRM staffs are using national releases of <b>VistA</b> applications instead of developing and maintaining local applications.
i. Twenty-six VHA respondents had less than 50 percent of their PCs compliant.	<i>PCs that are not known to be compliant may not properly function after the December 31, 1999 date change.</i>	The VA Y2K Project Manager has followed-up with VHA's Y2K Project Manager concerning testing of PCs. Problems the audit identified with testing devices have been resolved.	All VHA facilities are submitting monthly reports to the VHA Y2K Project Office. The most recent data submitted shows that over 95% of all PCs are assessed, and that 77% of these PCs are currently compliant. The others are in the process of being retired, replaced or repaired.

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
j. Six VHA respondents indicated they are not assessing the compliance of biomedical devices. Two additional respondents indicated all biomedical assessments were being done at VHA Central Office.	<i>Without an assessment of biomedical devices at all medical centers, patients may be put in danger.</i>	The Office of the Acting Assistant Secretary for Information and Technology and the VHA Y2K Project Office took action to correct this situation.	<p>As noted, corrective action was immediately taken to correct the situation.</p> <p>It important to note that through our exhaustive efforts we have found only one non-compliant medical device that could potentially pose direct harm to a patient. This device is a radiation dosage therapy system owned by three VA healthcare facilities. Two of these systems have already been replaced and the remaining healthcare facility is awaiting delivery of its replacement.</p> <p>In many cases, noncompliance is date-stamp related (for example, printing "00" on a report) and is not life-threatening. Almost all non-compliant devices are still clinically functional.</p>

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<b>(6) Y2K Preparations at VA Facilities Visited During the Audit</b>			
a. Many VHA facilities have not received assurance from local utility providers that infrastructure support systems external to the facilities are Y2K compliant.	<i>Without such assurance, VA facilities could be at increased risk to infrastructure support failures that would require them to be dependent on VA generators, stored water, and the like for continued operations. These emergency devices are not intended to provide support to allow VAMCs to continue to conduct normal business operations.</i>	VHA has established a special task force to develop overall Y2K business continuity and contingency plans. These plans will be patient-focused and are expected to be in place at each medical center by April 1999.	This is addressed in the VHA "Patient Focused Y2K Contingency Planning Guidebook" including sample letters to write to providers.
b. Several VHA field facilities have not included PCs in their Y2K assessment that are assigned to tenant activities such as Research and Development (R&D) Service, Office of Resolution Management, and the Office of Inspector General. At the time of our site visits, 56 percent of the 16,899 PCs had been tested for Y2K compliance.	<i>The PCs that have not been included in facility assessments are attached to facility LANs and failure of such equipment could affect the continued operation of the LANs. PCs that have not been tested may not properly function after the December 31, 1999 date change.</i>	The VA Y2K Project Manager has followed-up with VHA's and VBA's Y2K Project Managers concerning testing of PCs.	The VHA Y2K Project Office has addressed the importance of PC testing during on-site VISN visits, visits to individual facilities, monthly National Y2K conference calls and conference calls with VISNs to clarify their reporting data. In addition, the Project Office is stressing the importance of having representation on each facility's Y2K committee from all tenant activities, with an especially strong emphasis on R&D. And, as previously stated, the most recent data submitted shows that over 95% of all PCs are assessed.

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
<p>c. VHA facilities have not included in Y2K assessment efforts all biomedical devices:</p> <ul style="list-style-type: none"> <li>- Issued to veterans by Prosthetics Service.</li> <li>- Leased by medical centers and placed in the veterans' homes.</li> <li>- Issued to veterans by the Blind Rehabilitation Centers throughout the country.</li> <li>- Issued to veterans by Spinal Cord Injury Centers.</li> <li>- Used in R&amp;D Service to monitor, process, and report data on investigations in process.</li> </ul>	<p><i>Unless the devices in these areas are identified, assessed, and repaired or replaced, their Y2K compliance status cannot be determined.</i></p>	<p>VHA's Y2K Project Office is working with the Prosthetics Service and R&amp;D Service to ensure that medical devices at veterans' homes, Blind Rehabilitation Centers and Spinal Cord Injury Centers are included in VHA's local efforts in mitigating Y2K problems with medical devices. This issue was discussed in a December 1998 National Y2K conference call to Veterans Integrated Service Networks (VISN), Chief Information Officers, VISN Y2K Coordinators, and other Y2K points of contact</p>	<p>VHA is working with program offices including Prosthetics and R&amp;D and also developing a checklist for Network Directors that will address these identified areas. The checklist will be distributed late April, early May and will require certification that these areas are addressed.</p>

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
d. VHA facilities have biomedical devices from manufacturers who have not reported the status of their equipment. We did not find any site that had set a date for taking devices of unknown Y2K status out of service or making plans for replacement.	<i>Without a definite report from the manufacturer, and in view of VA's policy of not testing devices, the Y2K status of these devices cannot be determined.</i>	Awaiting Department Response.	<p>VHA has developed policy requiring VA facilities to review medical devices with an unknown or Non-Compliant Y2K status and determine what action is necessary by June 1, 1999. Action includes either replace, retire, or use-as-is. The same review is required for Conditionally Compliant devices and those not repaired by September 1, 1999. The directive was released on April 21, 1999.</p> <p>VHA's position is that all medical devices must be tested to determine Y2K compliance. However, the primary source to determine the Y2K status is the medical device manufacturer. No other source, or combination of sources, can provide device-specific information while simultaneously ensuring proper and thorough testing. FDA, DoD and industry support this position.</p>

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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
e. GSA personnel could not provide any written assurance that all buildings that house VA field activities under their control will continue to have needed utility support after the millennium.	<i>Without such assurances, ROs continue to face increased risk of infrastructure support failures after the millennium.</i>	VBA is working with the CIO Council's Committee on Y2K Facilities Subcommittee, chaired by GSA, to ensure that Y2K problems are corrected in buildings managed by GSA.	<p>GSA has established a web page that provides the status of GSA owned or leased space.</p> <p>In addition to GSA's activities, VBA has also completed a survey of all non-information technology equipment and building systems at regional offices. This survey was conducted in March 1998. VBA's goal was to identify these components and ensure that GSA will either make repairs or a work around as necessary so that they are Y2K compliant. GSA and VBA completed the second follow-up survey with its regional offices on mission critical Y2K issues that remained outstanding.</p> <p>VBA is also actively working with the CIO Council's Committee on Y2K Facilities Subcommittee, chaired by GSA, to ensure that Y2K problems are corrected in buildings managed by GSA.</p>



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<b><u>Weakness</u></b>	<b><u>Effect</u></b>	<b><u>Corrective Action</u></b>	<b><u>VA Response and Update</u></b>
f. ROs are not monitoring the cost of Y2K efforts involving RO staff.	<i>Correct reporting of cost to OMB cannot be assured without accurate identification and accounting of all Y2K related costs.</i>	VBA is obtaining cost information from ROs for a one-time report. However, these costs are not expected to be significant.	<p>Y2K costs for mission critical systems and supporting infrastructure have been correctly reported to OMB. VA tracks the Y2K costs centrally. These cost represent redirected funds and our report to OMB account for these redirected costs.</p> <p>VBA has determined the costs cited in the report are FTE costs at the RO and are negligible.</p>

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Chairman, House Subcommittee on VA, HUD, and Independent Agencies,  
Committee on Appropriations  
Ranking Member, House Subcommittee on VA, HUD, and Independent Agencies,  
Committee on Appropriations  
Chairman, Subcommittee on Oversight and Investigations, House Committee on  
Veterans' Affairs  
Ranking Democratic Member, Subcommittee on Oversight and Investigations,  
House Committee on Veterans' Affairs

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