



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT  
WASHINGTON, D.C. 20410-4500

OFFICE OF THE INSPECTOR GENERAL

November 30, 1999

00-DP-166-0803  
Audit-Related Memorandum

MEMORANDUM FOR: Gloria Parker, Chief Information Officer, Q  
Joseph Smith, General Deputy Assistant Secretary for Administration, AA

FROM: Benjamin K. Hsiao, Director, Information Systems Audit Division, GAA

SUBJECT: Review of the Department's Year 2000 Clean Management Procedures and  
Preparedness For the Millennium Rollover

We have completed a review of HUD's Year 2000 (Y2K) clean management effort and the Day One strategy for the millennium date change. We found that HUD's clean management policies are sufficient to provide controls to ensure that further changes would not threaten existing Y2K compliance. Clean management includes controls and procedures implemented by HUD to protect Y2K compliant program code and data from non-certified changes, thereby placing its Y2K compliance status in jeopardy. In addition, procedures are in place to recertify applications with major releases or changes that were made after initial Y2K certification.

With respect to the Day One strategy, we suggest that the Department cross check Y2K contingency and Day One plans and activities against existing Business Continuity Plans (BCP) for disaster recovery. Specific Y2K contingency plans should reference key points in the BCP and contain any updated or supplemental information needed in the event of problems. This control would minimize the time spent on decision making during problem resolution. Critical functions and services should be assigned top priority, and for those which could not be tested, management should ensure that contingency measures are in place to address possible problems. Finally, HUD needs to ensure that both Day One and Y2K contingency plans are completed as scheduled by December 13, 1999 since this date provides little leeway for slippage.

We are not requiring a formal response to this memorandum. Should you have any questions, or require additional information, please call me or Hanh Do at 708-3444, extension 149 and 147 respectively.

cc:

William Apgar, Assistant Secretary for Housing, H  
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David M. Gibbons, Deputy Chief Financial Officer, FF  
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## **REVIEW SUMMARY**

HUD's ongoing efforts to prepare for Y2K include adopting a clean management approach and developing a Day One strategy to minimize any impact from problems caused by the millennium date change.

A key aspect of clean management is the issuance of a Y2K Change Management Policy. This policy provides that no additions or modifications to HUD's information systems and operating environments, will be implemented between October 1, 1999 to March 31, 2000. Exceptions to this moratorium must be submitted to and approved by HUD's Change Control Board.

A Day One strategy, comprises of a comprehensive set of actions to be executed during the last days of 1999 and the first days of 2000. It must be integrated with the Department's business continuity and contingency plans, and should describe key activities and responsibilities of Departmental organizations and staff. According to the General Accounting Office, the objectives of a Day One strategy are to: (1) position the organization to readily identify Year 2000-induced problems, take needed corrective actions, and minimize adverse impact on agency operations and key business processes; and (2) provide information about an organization's Year 2000 condition to executive management, business partners, and the public.

We interviewed personnel and management responsible for the Year 2000 Project, two critical disbursement systems (LOCCS and HUDCAPS), and the Single Family Claims System (A43C). We also interviewed selected IT management and technical staff responsible for HUD's computing environment. In addition, we examined Departmental procedures and test documentation. The scope of our audit included reviewing Department-wide change management policies for LOCCS, HUDCAPS, A43C, and the Day One strategy.

### **CLEAN MANAGEMENT**

#### **Change Management Policies**

Key to clean management is controlling changes subsequent to initial Y2K certification. HUD's change management policies were reviewed to assess whether they would provide sufficient controls to ensure that further changes would not threaten existing compliance. HUD has implemented additional change management policies based on the potential for increased Y2K-related risk.

The change management policy includes a "moratorium" on changes beginning October 1 and ending March 31, 2000, and will bar any change from being implemented without approval from an authoritative body. Development and testing can be performed, but new releases will not be implemented (unless properly reviewed and approved as described later) until after this period. Consideration will be given to those projects which combine high business value with low risk levels.

The policy affects all applications and includes both planned and unplanned (emergency) changes for applications, hardware, and system software. It should provide sufficient control to ensure that

only essential changes are implemented, and that they are tested and implemented in a controlled manner. We reviewed the implementation of the change management procedures for three systems.

### LOCCS

LOCCS application developers provided a release list containing all changes made since the original certification in January 1999. In each of the 12 new releases implemented since then, none were date impacted. Team 2000 reviewed the testing performed prior to the implementation of each release. The impact of each release is also discussed verbally in meetings. Based on this information, Team 2000 determined that no further testing was necessary and that recertification requirements had been met. This provides ample assurances of proper testing.

### HUDCAPS

We obtained a listing of HUDCAPS changes implemented since original Y2K certification during July 1999. Team 2000 files were reviewed, and documentation showed that approvals of test results were obtained on the development side. However, Team 2000 only approved testing for approximately 20% of the testing submitted to date. The remaining portions were deemed insufficient, and the development team was required to perform additional testing to meet recertification requirements. That testing was just completed and is now under review by Team 2000. If deemed satisfactory, HUDCAPS will be recertified as Y2K compliant. This provides evidence that Team 2000 performed an in-depth review of testing, and standards were enforced.

### Claims (A43C)

HUD uses an automated code review tool, "Beyond 1999 Verify," to identify potential non-compliant date fields, or date fields which fed other date fields but were not of the same format. This tool generates a validation report containing "suspects," which are possible non-compliant or incompatible date fields in programs and file definitions. It also provides an explanation of the possible nature of the error (e.g., format conflict). The Y2K Team performs an initial analysis of the "suspects." A spreadsheet is then prepared in order to record all suspects, with columns containing the basic information from the report. This ensures a strict accounting and explanation of all suspects. The process surrounding the use of this information in order to ensure that any possible date related issues are resolved should be highly effective. Recertification plans are being developed for the new claim types introduced in the application.

### **DAY ONE STRATEGY**

To date, HUD has developed a detailed methodology for the *development* of a "Day One" plan. It is comprehensive and covers what is needed to develop all the elements of such a plan. However, there is little time left to complete the significant amount of work specified in the document.

A plan for Initial Day One has been developed. However the plan did not address a number of the elements required under the methodology. These elements include Changeover Planning, Changeover Testing, Communication Planning, Performance Monitoring Planning, and Pre-Changeover Period Activities, and Changeover Activities. All of these elements will require significant details in order to be efficient and effective.

HUD has established a time schedule for the testing and finalizing the Day One and Y2K Contingency Plans as follows:

- November 1 -15                      Refinement and coordination
- November 16 - 19                  Walk through
- November 30 - December 7       Rehearsal of Scenarios
- December 13                        Final Plans Due

bcc:

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