November 30, 1999

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SUBJECT: Audit Report - Year 2000 Initiative: Mail Processing Equipment, Critical Suppliers, Embedded Chips, and Facilities (Report Number IS-AR-00-001)

This report presents the results of the Office of Inspector General's review of the Postal Service Year 2000 (Y2K) Initiative regarding progress in addressing mail processing equipment, critical suppliers, embedded chips, and facilities. We concluded that the Postal Service has developed and implemented an adequate process to ensure its critical mail processing equipment will function properly in the new millennium. However, we believe Postal Service management needs to: 1) place more emphasis on the issue of supplier contingency planning and establish a no-later-than date to activate these plans for its at-risk critical suppliers and 2) closely monitor deployment of Y2K-remediated software to ensure the correct version of such software is being installed in mail processing equipment prior to the Year 2000.

Postal management commented on this report and concurred with the findings and recommendations. Management's comments and our evaluation of these comments are included in the report.

We appreciate the cooperation and courtesies provided by your staff during the review. If you have any questions or need additional information, please contact [redacted], [redacted], or me at (703) 248-2300.

/Signed/
Billy J. Sauls
Assistant Inspector General
for Employee

Attachment

cc: Richard D. Weirich
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TABLE OF CONTENTS

EXECUTIVE SUMMARY

Introduction

This is our tenth report in a series of Office of Inspector General (OIG) reports regarding the United States Postal Service Year 2000 (Y2K) Initiative. See the Prior Audit Coverage section on page 19 for details on these prior reports. This report addresses our review of the noninformation system areas of the Postal Service Y2K Initiative. It focuses on the Postal Service's Y2K activities relative to its mail processing equipment, facilities, external suppliers, and embedded computer chips.

Results in Brief

It is our view that the Postal Service has developed and implemented an adequate process to ensure its critical mail processing equipment will function properly in the new millennium. Having said that, we also believe Postal Service management needs to closely monitor deployment of Y2K-remediated software to ensure the correct version of such software is being installed in mail processing equipment prior to the Year 2000.

In our September 1999 status report (see Appendix A), we characterized the Postal Service's progress in making its critical facilities Y2K ready as limited. However, based upon our review of the Postal Service's efforts to date, we believe substantial progress has been made, and an adequate process is in place to make these facilities, including mail processing equipment, Y2K-ready before the new year. Furthermore, the Postal Service's embedded chips program will likely be successful with no major problems surfacing in an assessment of its facilities' building systems and a representative assessment of its mail processing equipment.

On the other hand, we believe the Postal Service needs to place more emphasis on the issue of supplier contingency planning and establish a no-later-than date to activate these plans for its at-risk critical suppliers (i.e., suppliers who may not be Y2K ready or who have already reported their inability to become Y2K ready). Supplier contingency planning includes such alternative supplier arrangements as a process change, a work-around, stockpiling supplies, identifying alternative suppliers or some combination thereof.

Overall, with less than 31 days remaining until January 1, 2000, the Postal Service appears to have positioned itself to meets its Y2K objectives in the noninformation systems areas.

Summary of Recommendations

We recommended the Y2K Supplier Management Office coordinate with the vice president, Purchasing and Materials, to prepare supplier contingency plans that include alternative supplier arrangements for at-risk critical suppliers (i.e., suppliers who may not be Y2K ready or who have already reported their inability to become Y2K ready) and be prepared to activate those plans no later than November 30, 1999. We also recommended the Program Management Office request the chief operating officer and executive vice president arrange to closely monitor and spot check mail processing equipment software deployment actions in the field to ensure installation of the proper, Y2K compliant software. Management's comments are included in their entirety in Appendix B.

Summary of Management's Comments

Management concurred with the recommendations and stated that this report set the standard for accurate, balanced, and useful audit reporting. With regard to recommendation 1, management offered that activation of a given plan be based upon a decision by the responsible business manager(s) and not by an "arbitrary" date. Further, in regards to recommendation 2, management indicated that they were actively reviewing progress reports at various management levels.

Overall Evaluation of Management's Comments

Management's comments and subsequent discussions were responsive to the recommendations. However, with regard to recommendation 1, we are apprehensive about management not establishing a specific date to activate supplier contingency plans because of the risk associated with potential failures.

INTRODUCTION

Background

The Y2K problem results from the way dates are recorded and calculated in computer systems. In the past, to conserve electronic data storage, systems typically used two digits to represent the year, such as '98' representing 1998. With this two-digit date format, however, the year 2000 is indistinguishable from year 1900, 2001 from 1901, and so on. As a result of this ambiguity, systems that use dates to perform calculations may fail after 1999. This Y2K computing problem poses significant risks that, if not adequately addressed, could have serious consequences. For example, the delivery of almost 200 billion pieces of mail could be at-risk if Postal Service systems and equipment do not function properly. Ensuring that mail delivery is not disrupted at the turn of the century is no small undertaking in such a large and diverse organization as Postal Service.

One of the major concerns of the Postal Service's Y2K initiative is the noninformation systems area. The noninformation systems initiative includes inventorying, assessing, remediating, and testing thousands of mail processing equipment components, thousands of external suppliers, and hundreds of facilities which house thousands of building systems. The Postal Service's testing of mail processing equipment includes unit testing[1] as a part of its Y2K assurance process and testing equipment in an operational environment. The Y2K initiative also includes deploying Y2K solutions for the mail processing equipment. In addition, reviewing embedded chips in mail processing equipment and the building systems of technology-dependent facilities are critical issue areas that the Postal Service must successfully address to ensure that it is ready for the Year 2000.

[1] Unit testing is done on each type of mail processing equipment after the software is remediated to verify that logic within a unit test module is accurate and reliable and that no errors were created during remediation.

Objective, Scope, and Methodology

We focused on several objectives in this phase of our continuing audit coverage of the Y2K Initiative. They include determining:

- What the Postal Service's plans are for identifying and turning to alternative suppliers if its regular, critical suppliers do not become Y2K compliant,
- What the Postal Service is doing to ensure compliant versions of mail processing equipment software – new and/or remediated – are properly deployed and installed in field facilities before January 1, 2000,
- If the Postal Service's critical mail processing operations, specifically its mail processing equipment, are vulnerable to Y2K failures,
- If critical technology-dependent facilities have been adequately assessed for Y2K compliance and whether the Postal Service can make the building systems within those facilities compliant before January 1, 2000, and
- The status of the Postal Service's efforts to address embedded chips in mail processing equipment and facilities' building systems.

We conducted audit work between February 1999 and October 1999 in accordance with generally accepted government audit standards and included tests of internal controls as were considered necessary under the circumstances. The data in this report was gathered at headquarters and field locations by sending survey questionnaires, reviewing related Y2K documentation and through discussions with responsible Postal Service officials, as necessary. In addition, we observed field tests at various postal facilities. This report chronicles the activities and progress of specific noninformation systems Y2K areas through September 1999.

Prior Audit Coverage

During our continuing coverage of the Postal Service's Y2K initiative, we issued nine reports related to the Postal Service's Y2K Initiative. This included a letter report addressing Y2K contract indemnification matters and the OIG and General Accounting Office joint hearing before three House subcommittees on various Y2K issues. Appendix A contains a more detailed discussion of the reports.

AUDIT RESULTS

Critical Suppliers

The Postal Service is completing assessments of critical external suppliers and is monitoring the Y2K readiness status of those suppliers it expects to be Y2K ready. The Postal Service is also continuing efforts to contact suppliers who have yet to respond to inquiries regarding their Y2K readiness status and plans to identify alternative supplier arrangements (i.e., supplier contingency plans), in the event at-risk suppliers are not Y2K ready or do not respond. Supplier contingency planning would include various options such as a process change, a work-around, stockpiling supplies, identifying alternative suppliers or some combination thereof. While we applaud the Postal Service's recognition of the problem, we have concerns that its continuing delay in developing such supplier contingency plans and establishing a "drop-dead" date to activate such plans may prove detrimental to the Postal Service's ability to obtain supplies and services in the Year 2000.

Suppliers include external organizations the Postal Service uses to support its core business processes. They include finance, marketing, mail operations, airline, maritime, rail and trucking, information technology and utility entities; facilities' lessors; and airports. The Postal Service has no control over the Y2K readiness of its suppliers. However, it implemented procedures to assess its suppliers' readiness status in September 1998. Based upon that assessment, the Postal Service classified the Y2K readiness status of its suppliers as:

- '*Are Y2K Ready,'*
- '*Expected to be Y2K Ready,'*
- '*Not on Target to be Y2K Ready'* or
- '*Will not be Y2K Ready*.'

There is also a fifth category – suppliers who have not responded to the Postal Service's inquiries.

As of September 30, 1999, the Postal Service had identified 1004 Y2K critical suppliers. The Postal Service had assessed 577 (57 percent) of these suppliers as '*Y2K Ready'* and 379 (38 percent) as '*Expected to be Y2K Ready'*. Twelve suppliers had not responded to Postal Service inquiries. Therefore, at this point in time, the Postal

Service can only depend on those 57 percent that reported their status as '*Y2K Ready'* – the remaining 38 percent, though probable, need close monitoring. The Postal Service will continue to monitor the status of those critical suppliers '*Expected to be Y2K Ready*' and will try to obtain information from unresponsive critical suppliers, with the expectation that the number of '*Y2K Ready'* suppliers will increase. When we asked a postal official what their confidence level was that suppliers '*Expected to be Y2K Ready'* will in fact be ready, they replied that the Postal Service is "employing due diligence," but "nothing is guaranteed."

For those 36 critical suppliers who are '*Not Expected to be Ready*' or '*Will not be Ready*' and any of the 379 suppliers the Postal Service is monitoring that it finds may not be '*Y2K Ready,'* the Postal Service needs to develop supplier contingency plans that identify alternative supplier arrangements. However, the Postal Service has no process in place to ensure that alternative suppliers (a critical part of a supplier contingency plan) will be identified or ready should their services be needed. The current plan is for the Supplier Management Office to report to the affected managers the critical suppliers (1) with a high risk of failure, (2) who have not responded, and (3) who are not expected to be or are not Y2K ready. However, it is left to the responsible managers to develop contingency plans or to request alternative suppliers.

The Supplier Management Office indicated that contingency planning falls under the Postal Service's Business Continuity Planning process and that the timeliness for putting contracts in place for alternative suppliers will be governed by the business continuity plan. However, our review of the business continuity plan disclosed no timelines for identifying alternative suppliers nor a supplier contingency plan. Our concern is that the Postal Service has not established a control point to ensure that, by a specific date, managers identify and are ready to activate alternative suppliers arrangements. Such actions should be spelled out in a supplier contingency plan developed by the field managers and should contain a "drop-dead" date for activating those supplier contingency plans.

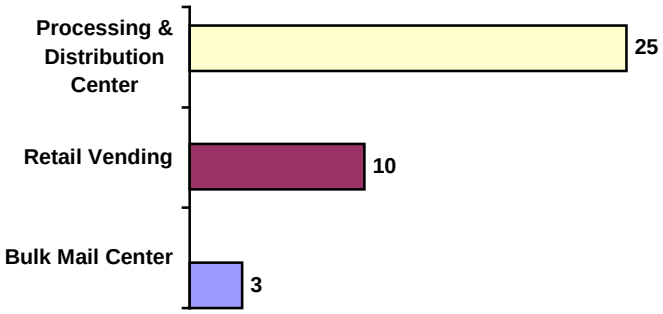
Recommendation 1	Therefore, we recommend the Supplier Management Office coordinate with the vice president, Purchasing and Materials, to assign oversight responsibility at the Headquarters level to monitor and ensure that its managers: (1) Prepare supplier contingency plans covering all at-risk suppliers. (2) Activate supplier contingency plans by November 30, 1999.
Management's Comments	Postal management concurred with the need for supplier contingency plans but offered that activation of a given plan be based upon a decision by the responsible business manager(s) and not by an "arbitrary" date. They indicated that managers would activate such plans as soon as credible evidence is received regarding the failure or pending failure of a supplier. They did agree to have such plans approved and ready by November 30, 1999.
Evaluation of Management's Comments	The logic behind Postal management's argument regarding our first recommendation appears sound, however, we are apprehensive because (1) the supplier issue is complex and year-end failures could affect Postal operations nationwide, and (2) our recent reviews of the Postal Service's supplier risk assessments and business continuity and contingency planning found risks were understated and many plans to be incomplete and not integrated with other Y2K program initiatives. Nonetheless, we will view management's position as responsive with regard to the activation issue, given the understanding that Postal management has fully assessed its supplier situation and is willing to accept the increased risk this approach entails.

Mail Processing Equipment

The Postal Service has made substantial progress in developing and implementing a process to ensure its mail processing operations are not interrupted by Y2K equipment failures after the start of the new millennium. The Postal Service also developed and put into place a plan to ensure that all Y2K-compliant software solutions that control its mail processing equipment are deployed and properly working prior to January 1, 2000.

The Postal Service utilizes 38 critical and unique types[2] of mail processing equipment to process and move the mail. Much of this equipment is controlled by computer programs (i.e., software) that enable the equipment to process mail quickly and more efficiently. In addition, some equipment may contain embedded chips (computer chips) that monitor, regulate or control its operation. These programs and embedded chips can be affected by the Y2K problem.

The graph below shows the distribution of critical and unique types of mail processing equipment in Postal Service operations:



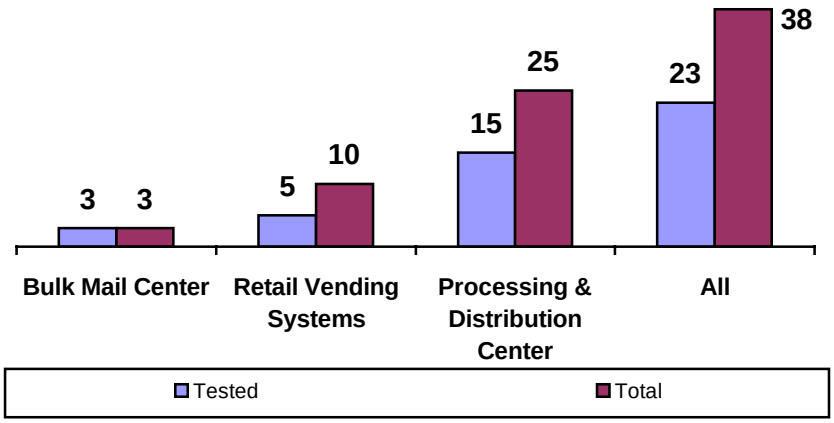
As discussed in our September 20**,** 1999, report on the status of Postal Service Year 2000 readiness, the Postal Service planned and successfully completed five operational Y2K readiness tests on mail processing equipment as of May 1999. As part of this audit, we reviewed the results of those five tests, interviewed personnel involved in and responsible for the tests, and we also observed one of the tests. Finally, we evaluated the

[2] These 38 unique types actually represent thousands of pieces of equipment in postal facilities nationwide.

Postal Service's plans to test mail processing equipment at 16 additional sites in an operational environment and have observed three tests to date.

Initial Operational Testing

The Postal Service conducted two initial operational tests at the Atlanta Bulk Mail Center in August 1998 and February 1999; two at the Tampa Processing and Distribution Center in August 1998 and March 1999; and one test of retail vending systems in Merrifield, Virginia in December 1998. During the initial operational tests, the Postal Service tested 60 percent of its critical types of mail processing equipment. The following chart shows the equipment tested and the total equipment by type:



Rollover tests were conducted at three different facilities. The following chart shows the "rollover dates" and the locations where the tests were conducted.

Rollover Test Dates for Operational Tests

	Sept. to September 11, 1999	Dec. 99 to January 1, 2000	Feb. to February 29, 2000	Feb. 29, 2000 to March 1, 2000
	USPS Fiscal Year	New Year	Leap Year	Leap Year
Tampa P&DC Test		X	X	X
Atlanta BMC Test	X	X	X	X
Merrifield Retail Test	X	X	X	X

Processing and Distribution Center Testing. During the two operational tests in Tampa, Florida, the Postal Service tested end-to-end processing of letter mail. The Postal Service also did additional tests of flats and parcel sorting equipment using test decks and live mail in a simulated Y2K production environment. See table above for rollover test criteria.

The Postal Service reported some Y2K problems during its first operational test, but indicated they will be able to work around or correct the problems and process and deliver mail after December 31, 1999. Our review of the test reports and our observation of the March 1999 test disclosed no evidence of Y2K problems that the Postal Service could not correct or work around.

Bulk Mail Center Testing. During the two operational tests in Atlanta, Georgia, the Postal Service tested mail processing equipment in a simulated Y2K production environment using test decks.

These tests identified some non-Y2K problems, but Postal Service officials again believe they can be worked around or corrected and that mail processing systems at bulk mail center sites will continue to operate after December 31, 1999. During our review of the test reports, we did not find evidence of any Y2K problems.

Retail Vending Testing. The Postal Service tested the retail vending systems during a weeklong operational test at its Merrifield, Virginia facility. It also duplicated and monitored the flow of retail data from transaction entry to Postal Service accounting and marketing systems to validate whether data flowed correctly from the Engineering sphere of control to other organizations.

The Postal Service reported some problems during this operational test, but added they will not interfere with mail operations after December 31, 1999. Postal officials ordered additional research to determine if these problems were Y2K-related, and if so, how critical they are to continued operations. Our review of the test results indicated that a majority of the problems were related to a Unix operating system problem that could occur in the year 2038 and, as such, would not require immediate attention.

However, one of the problems was Y2K-related -- an error was detected while processing a test transaction on simulated February 28, 2000, of a credit card with an expiration date of "3/00" (i.e., March 2000). To correct this problem, the Postal Service modified the affected software and successfully retested the transaction.

Although the Postal Service's initial operational tests were successful overall, we had concerns as to whether these five initial tests, conducted at only three sites nationwide, could provide the Postal Service with a satisfactory level of assurance that all mail processing equipment will be Y2K compliant. We expressed these concerns to the Postal Service during our audit and in testimony before a joint congressional subcommittee on the Postal Service's Y2K Initiative.

OIG Representative Observes Postal Service Employee Input Test Barcode Data During Successful Y2K Test of a 'Small Parcel and Bundle Sorter'

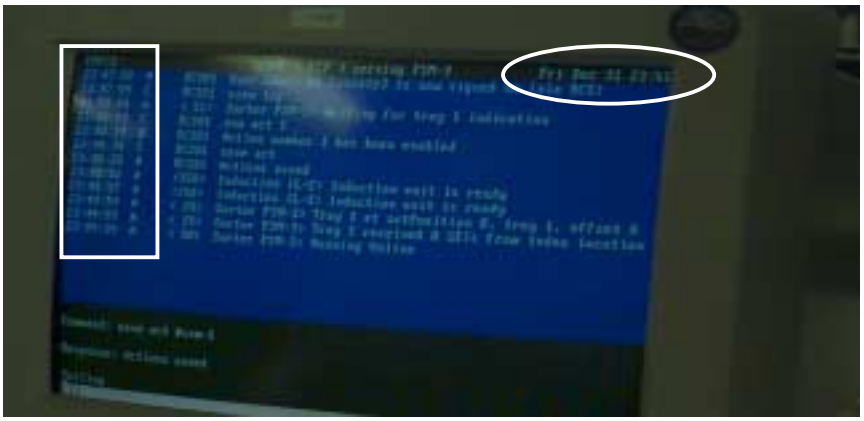
Additional Operational Testing

The Postal Service subsequently scheduled 16 additional operational tests at airmail facilities/centers, bulk mail centers, processing and distribution facilities/centers, and remote encoding centers across all 11 Postal Service areas between July and October 1999. During these additional operational tests, the Postal Service plans to test 19 of the 38 types of critical mail processing equipment. These plans will cover the new-year rollover, the two leap year rollovers and, time permitting, the Postal Service fiscal year rollover.

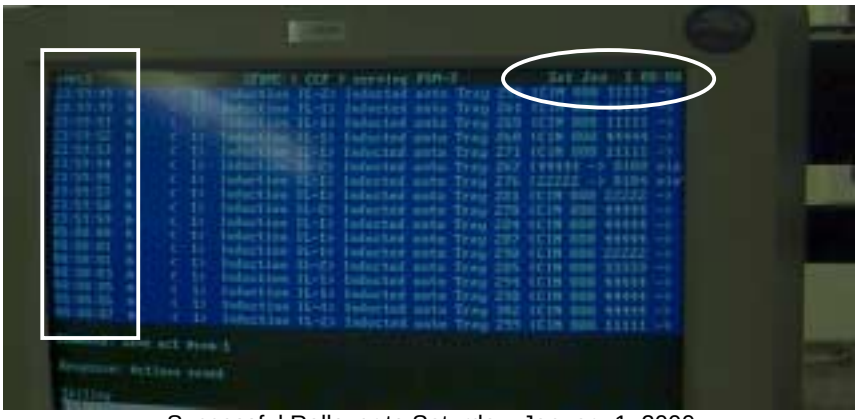
One of the tests the Postal Service conducted was an "Early Warning Test" at the Northern Virginia Processing and Distribution Center in Merrifield, Virginia. During this test, the Postal Service set dates four months into the future (e.g., on August 31, 1999, the simulated date was December 31, 1999). The test involved processing live mail and included testing 15 of the 38 critical types of mail processing equipment and six noncritical types.

In September, the Postal Service moved the date forward an additional month (i.e., simulated February 2000) to test the leap year rollover dates (i.e., February 28 to 29, 2000 and February 29, 2000 to March 1, 2000). The Postal Service anticipates the results of these tests will bolster its confidence that service will continue without disruptions.

We believe that these tests, and especially the "Early Warning Test," may provide the Postal Service reliable indicators as to how well its mail processing equipment in all its facilities nationwide will function after January 1, 2000.



Friday, December 31, 1999 1151 PM

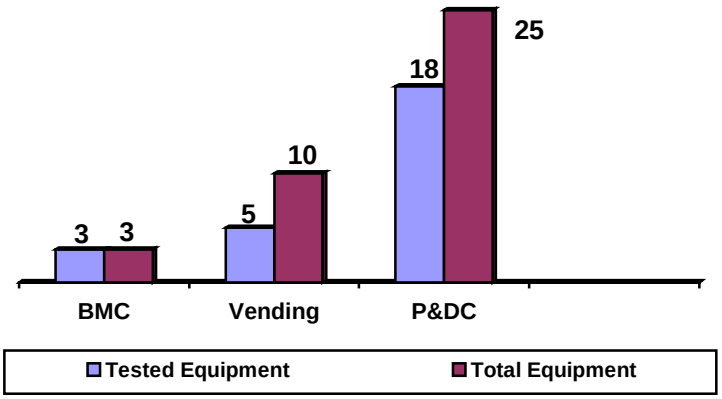


Successful Rollover to Saturday, January 1, 2000

Fixed Mechanization Processing Control System – Parcel Sorting Machine Computer

These screens illustrate a successful rollover from December 31, 1999, to January 1, 2000, for parcel sorting transactions. The system performed normally and there were no Y2K-related interruptions during this test.

Summary of Mail Processing Equipment Testing	By the time the Postal Service completes its additional testing in October 1999, it is scheduled to have operationally tested 26 of its 38 types of critical mail processing equipment at 19 different sites. Seventy percent of the critical equipment types tested during the initial tests will be included in the second round of tests. The total numbers and types of critical equipment and equipment tested in an operational environment are shown in the following chart:



The Postal Service is scheduled to unit test and independently verify all of its 38 types of critical mail processing equipment by October 1999.

A critical factor in the success of mail processing operations is the successful and timely deployment of proven Y2K software solutions to all mail processing facilities.

Deployment of Y2K Compliant Solutions	As of September 30, 1999, the Postal Service reported that it had deployed Y2K-compliant software solutions for 36 of its 38 types of critical mail processing equipment. However, the Postal Service is scheduled to complete deployment of the compliant versions of its critical mail processing equipment software by November 1999.

The deployment of Y2K compliant software solutions does not necessarily in and of itself guarantee a problem-free mail processing environment. The Postal Service has to assure itself that the software solutions it deploys to the mail processing facilities are installed and are properly configured. We discussed these concerns with Postal Service management and learned they had the same concerns.

We specifically asked Postal Service officials whether the Postal Service allowed field sites to develop and apply local software fixes and were told they did not. However, when we asked these same officials whether they believed local fixes did in fact exist, they responded "absolutely." In addition, we found a situation where some facilities had not yet implemented the compliant version of a critical type of equipment – the Fixed Mechanization Process Control System.

In July 1999, we talked with a Postal Service employee, who works primarily with the Fixed Mechanization Process Control System. He stated that at least three facilities were still running a noncompliant version of that software in July even though the compliant version was in place for the February 1999 test at the Atlanta Bulk Mail Center and was deployed in May 1999. In addition, during one of our test observations, we noted that one type of critical mail processing equipment being tested did not have the compliant version of the software; however, it did pass all the test criteria.

To address this potential problem, Postal Service management instituted a process in July 1999 whereby managers at 383 sites are required to certify that all mail processing equipment and retail vending equipment is running Y2K compliant software. The process provides managers with a list of the software and operating system that should be running on each system and procedures to identify the version of software and operating system on each piece of equipment. It also provides managers with a monthly reporting timeline to complete and provide reports and surveys regarding the compliance and configuration status of its software and equipment. The second report, delivered in late September 1999, indicated that only 199 sites (52 percent) had installed all distributed and compliant software, 134 sites (35 percent) were noncompliant, and 50 sites did not respond to the status report. Additional reports are required monthly through December 17, 1999.

The process the Postal Service has implemented should ensure that the compliant versions of software and properly configured systems are installed at applicable mail processing facilities. However, without enhanced oversight

	that includes some form of installation verification, the Postal Service could continue to have sites that are noncompliant, or are improperly configured.
Embedded Systems – Mail Processing Equipment	In addition to concentrating on making hundreds of computer programs that process Postal Service data and provide the "brains" behind much of the mail processing equipment Y2K-compliant, the Postal Service also needed to address the issue of embedded computer chips. Embedded chips may monitor, regulate or control heating and air conditioning systems, elevators, security systems, entry systems, lights, and mail processing equipment. In a February 1999 joint congressional hearing on the Y2K issue, the Chairman of the House Subcommittee on Technology wanted to know what the Postal Service was doing about embedded chips. In April 1999, senior Postal Service management directed its managers to evaluate embedded systems in its mail processing equipment and take appropriate action. According to Postal Service officials, they have been routinely assessing the embedded systems for all 38 critical mail processing equipment types as part of its Y2K initiative. With regard to Postal Service policy, a review of embedded systems (1) must include an evaluation of risk/cost/benefit, (2) must guarantee the safety and health of employees and customers, and (3) must ensure effective business processes. The Postal Service then assessed 17 of its 38 types of critical mail processing equipment, representing a cross section of bulk mail center, processing and distribution center, and retail vending systems. This review entailed inventorying its equipment, determining if embedded chips were installed, identifying the chip according to manufacturers' parts list, and checking with the appropriate manufacturer, via their Internet web sites, to determine the Y2K status of the chips. The results of this review indicated all chips identified were Y2K compliant. The Postal Service, relying on the expertise of a widely known Y2K consulting group, noted only those systems that perform date/time sensitive processes, not necessarily those with an embedded chip, need be evaluated. Postal Service officials indicated the assessment provided sufficient information to consider their embedded chip effort a success. In regard to the remaining 21 types of

equipment not tested, Postal Service officials indicated the 17 types of equipment they examined represent a cross-section of critical processes. Therefore, the Postal Service believes the chances of failure are minimal and consider it an acceptable level of risk.

We reviewed the documentation pertaining to the 17 systems the Postal Service assessed. We believe the documentation supports their conclusion as to the Y2K readiness of the equipment.

Recommendation 2

We recommend the Program Management Office request the chief operating officer and executive vice president provide additional oversight in the form of implementation checks to ensure that field site managers install the compliant versions of the software and are running properly configured mail processing equipment.

Management's Comments

Postal management concurred with this recommendation and indicated they are actively reviewing progress reports at various management levels. They also indicated that Year 2000 program management personnel conduct spot checks to confirm that data is being collected and reported accurately.

Evaluation of Management's Comments

Postal management concurred with our second recommendation, but the response was unclear in that it did not describe actions agreed to at our exit conference. A follow-up clarification discussion was held with Postal officials responsible for implementing this recommendation. They indicated that various Headquarters teams and individuals would be conducting remote systems evaluations and making site visits to review reports and sample-test various pieces of automated mail processing equipment to verify Year 2000 compliance. In our view, the corrective actions described in the clarifying language above are reasonable and satisfy the intent of the recommendation, and we consider the issue closed.

Technology-Dependent Facilities

To determine whether the Postal Service is adequately assessing its critical facilities, we reviewed the process it is using to assess those facilities. We also assessed the Postal Service's progress towards making its facilities and building systems Y2K-ready and how it is addressing the building systems for embedded chips.

In January 1999, the Postal Service defined the facilities that it planned to assess as those critical facilities that process 95 percent of the mail and where any failure would cause the most significant problems in processing mail. As a result, the Postal Service initially identified 353 facilities needing assessments. This process involves inventorying each facility, identifying all critical building systems within, and assessing their Y2K readiness. A facility is not considered Y2K compliant until all of its key components (i.e., its critical building systems) are Y2K compliant.

The components the Postal Service is assessing include the embedded systems the Building Owners and Managers Association International guide lists as examples to assess. These components include automated plant control systems, building utilities and services, communications systems, elevator and escalator systems, fire control systems, HVAC systems, lighting systems, postal equipment, security systems, and vehicle maintenance systems; these include 94 components.

It should be noted that the most difficult and time consuming part of determining the Y2K readiness of these facilities is identifying and assessing the critical building systems within each facility. To identify and assess the building systems for Y2K readiness and to track and report on their status, the Postal Service contracted with a vendor and established a Technical Support and Analysis Center (the Center). The Technical Support and Analysis Center staff use a specialized software product to access centralized compliance data on various manufacturers' equipment (i.e., building systems) that provides for a component by component analysis of microprocessor-based functions. The product allows the Postal Service to quickly identify and track the compliance status of its building systems and reduces the need to independently determine the compliance status from manufacturers directly.

In our last status report, using data as of May 31, 1999, we reported 353 critical facilities. The number as of October 7, 1999, was 390 – an increase of 37 facilities. Also, 78 percent (305) of these critical facilities were considered Y2K ready.

As of July 23, 1999, the critical facilities' baseline was fixed at 390 and the number of critical building systems within those 390 facilities has gone from 623 in July to 1765 by September 30, 1999 – reflecting the identification of additional systems as each facility assessment is completed. Furthermore, according to Postal Service officials, 89 percent of those 1765 critical building systems have been resolved (i.e., the building system has been retired, worked-around, repaired, replaced or upgraded) as of September 30, 1999.

According to the Postal Service, it has been assessing embedded chips as an integral part of assessing its critical facilities and building systems. The vendor doing the inventory and technical assessments has Y2K Embedded Technical Analysts on its staff. According to the Postal Service, they are an integral part of the team that does the inventories and inherently look for problems with embedded chips.

We visited the Technical Analysis and Support Center and reviewed the compliance determination process. Based upon our review of that process and through discussions with Center personnel, we are satisfied that the Postal Service is adequately assessing its facilities. The Postal Service also is adequately assessing its facilities for potential Y2K embedded systems issues.

PRIOR AUDIT COVERAGE SYNPOSIS

The OIG and General Accounting Office (GAO) established a joint partnership in the fall of 1998 to work on Y2K issues which led to February 1999 testimony before three House Subcommittees. The Inspector General testimony on the Postal Service Y2K Initiative (Report No. IS-TR-99-001 dated February 23, 1999), addressed major challenges facing the Postal Service. These included: developing and implementing a business continuity and contingency plan; determining whether external suppliers and Postal facilities are Y2K ready; deploying solutions and testing mail processing equipment; and reviewing, correcting, and testing information systems, data exchanges, and information technology infrastructure. The GAO delivered testimony entitled “Year 2000 Computing Crisis: Challenges Still Facing the U.S. Postal Service” (GAO/T-AMID-99-86, dated February 23, 1999), which addressed Y2K operational issues similar to those presented in the Inspector General testimony.

In September 1999, we issued a Y2K report entitled “Year 2000 Business Continuity and Contingency Planning: Initiation and Business Impacts” (Report Number TR-AR-99-002), dated September 29, 1999. This report is the first in a series of reports we plan to issue to address specific business continuity planning and recovery management efforts. The report addresses the overall progress the Postal Service has made, the effectiveness of the management structure and strategy for business continuity planning, and the adequacy of the Postal Service’s assessment of the potential business impacts resulting from Y2K disruptions. We made several recommendations, which will help the Postal Service strengthen its strategy for reducing potential Y2K disruptions.

In September 1999, we issued a Y2K report entitled “Year 2000 Initiative: Status of Postal Service Year 2000 Readiness” (Report Number IS-AR-99-002, dated September 20, 1999). In that report we provided the May 1999 status of Postal Service Y2K initiatives relating to the readiness of information systems, data exchanges, contingency plans, mail processing equipment, suppliers, facilities, business continuity plans and testing. We noted that the Postal Service had made varying levels of progress in the area of component contingency plans and limited progress in the areas of facilities, business continuity plans and recovery management planning, external suppliers and information systems readiness testing. We reported that the Postal Service is actively engaged in accomplishing these Y2K tasks.

In July 1999, we issued a Y2K report entitled "Year 2000 Initiative: Review of Administration Management" (Management Advisory Report No. FR-MA-99-002, dated July 7, 1999). Among the more significant issues we noted were that adequate controls were not always in place to monitor contractor activities, information had not always been provided to Integrated Business Systems Solutions Center personnel to help in controlling Y2K resources, and work products provided by contractor personnel were not always timely or adequate. We also noted issues with unnecessary layers of

contractor management, numbers or expertise of contractor personnel, security clearances, and deviations from Postal Service travel regulations granted to one contractor. Postal Service management concurred with seven of our eight suggestions for opportunities to save resources.

In February 1999, we issued a Y2K report entitled “Year 2000 Initiative: Program Management Reporting” (Report No. IS-AR-99-001, dated February 18, 1999) that addressed quality and reliability of Y2K information reported to senior managers. We found that Y2K briefings and reports to senior management were not always complete, consistent, or clear. Y2K briefings did not include a standard report on the overall status of Y2K progress and were not provided at regularly scheduled intervals. As a result, senior managers were not always able to use the information to monitor Y2K progress and make timely and informed decisions. Postal Service management concurred with our findings and recommendations.

In September 1998, we issued a Y2K report entitled "Year 2000 Initiative: Post Implementation Verification" (Report No. IS-AR-98-003, dated September 29, 1998), that involved an assessment of the efficiency and effectiveness of the process implemented as an independent check on Postal Service remediation efforts. This report recommended Postal Service modify its system certification and post implementation verification procedures to improve the quality of systems sent to verification as well as the process itself. Postal Service management concurred with our findings and recommendations.

In July 1998, we issued a Y2K report, entitled "Year 2000 Initiative: Status of the Renovation, Validation, and Implementation Phases" (Report No. IS-AR-98-002, dated July 21, 1998), that involved a preliminary assessment of the renovation, validation, and implementation phases of the Postal Service Year 2000 initiative. It contained recommendations for improvement in several areas including accurately reporting the compliance status of systems applications. Postal Service management concurred with our findings and recommendations.

Our first Y2K report entitled "Year 2000 Initiative" (Report No. IS-AR-98-001), was issued on March 31, 1998. During this review, we examined the awareness and assessment phases of the Postal Service Y2K initiative and made recommendations for improvement in several areas including assigning accountability to responsible managers. Postal Service management concurred with our findings and recommendations.

We also issued a letter report, entitled "Y2K Contract Indemnification Advisory Letter" (Report No. CA-LA-98001, dated July 7, 1998). That letter addressed negotiations between the Postal Service and a consulting firm regarding the Y2K program management contract's indemnification clause. That letter contained suggestions to Postal Service management regarding the indemnification issue.

NORMAN E. LORENTZ
CHIEF TECHNOLOGY OFFICER
SENIOR VICE PRESIDENT

UNITED STATES POSTAL SERVICE

November 23, 1999

Mr. Billy Sauls
Assistant Inspector General
For Employee
Office of the Inspector General
1735 N. Lynn Street
Arlington, Virginia 22209-2020

SUBJECT: Response to Draft Audit Report – Year 2000 Initiative: Mail Processing Equipment, Critical Suppliers, Embedded Chips, and Facilities (AS-AR-00-DRAFT)

Dear Mr. Sauls:

Thank you for the opportunity to respond in writing to the Office of the Inspector General (OIG) draft audit report on Year 2000 Initiative: Mail Processing Equipment, Critical Suppliers, Embedded Chips, and Facilities. This, your tenth in a series of audits related to the Year 2000 Initiative sets the standard for accurate, balanced, and useful audit reporting.

In your cover letter, you request updated data if available. In response, I am pleased to report the following:

> In the Supplier Management Office area, as of November 22, the Postal Service critical supplier count is 980. Of that number 873 are assessed as "Year 2000 ready," 101 as "expected to be ready," 5 as "not on target to be ready," and 1 as "will not be ready."
>
> In the Mail Processing Equipment area, as of October 31, reports from 99 percent of our plants with critical systems show that 92 percent have installed compliant software.

Enclosed please find the initial management comments, the two recommendations found in the body of your report.

Norman E. Lorentz

Enclosure

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Response to Recommendations
Year 2000 Initiative: Mail Processing Equipment,
Critical Suppliers, Embedded Chips, and Facilities
(AS-AR-00-DRAFT)

Recommendation 1: We recommend the Supplier Management Office coordinate with the Vice President, Purchasing and Materials, to assign oversight responsibility at the Headquarters level to monitor and ensure that its managers:

(1) Prepare supplier contingency plans covering all at-risk suppliers and
(2) Activate supplier contingency plans by November 30, 1999.

Response: Concur, but with clarification regarding the term "activate." Our goal is to have Supplier Contingency Plans approved and ready by November 30, 1999. It is equally important to have alternative suppliers, where needed, identified by this date. However, the "activation" of a given plan is ultimately a business decision and is based on a number of variables. Supplier Contingency Plans will be activated as soon as credible evidence is received regarding the failure or pending failure of a supplier. Further, plans will specify the name of the manager responsible for activating the plan, the condition or event triggering activation, and the procedure and time line to be followed. Our goal is to have our plans approved and ready by November 30, 1999. The activation of a given plan will be based on the judgement of our business managers and other factors, but not on an arbitrary date.

Recommendation 2: We recommend the Program Management Office request the Chief Operating Officer and Executive Vice President provide additional oversight in the form of implementation checks to ensure that field site managers install the compliant versions of the software and are running properly configured mail process equipment.

Response: Concur. This is an ongoing management activity. Currently, Year 2000 District Coordinators and Plant Managers are responsible for complying with the Configuration Control Version Management process and for reporting progress toward a goal of 100 percent compliance. Progress reports are reviewed at various management levels. A summary report, including the percent of severe and critical components under configuration management, is reviewed by the Year 2000 Executive Council (chaired by the Chief Operating Officer). In addition, Year 2000 program management personnel conduct spot checks to confirm that data is being collected and reported accurately.

Major Contributors to This Report