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Accounting and Information
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April 23, 1999

The Honorable John M. McHugh
Chairman
The Honorable Chaka Fattah
Ranking Minority Member
Subcommittee on the Postal Service
Committee on Government Reform
House of Representatives

Subject: **U.S. Postal Service: Subcommittee Questions Concerning Year 2000**
Challenges Facing the Service

In response to your March 16, 1999, request, this letter provides answers to questions relating to our February 23, 1999, testimony on challenges facing the U.S. Postal Service in addressing the Year 2000 problem.[1] As we noted in our testimony, the Service has been working hard to address its Year 2000 problem and has recently revamped its management approach. If successfully implemented, its approach can provide significant support and oversight to Year 2000 efforts. However, the Postal Service has been running behind the Office of Management and Budget's (OMB) schedule for system renovation and still must address major issues to correct and test system and mail processing equipment, ensure the readiness of thousands of local facilities, and determine whether and when its key suppliers and interface partners will be Year 2000 compliant. The questions and our responses follow.

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[1] Year 2000 Computing Crisis: Challenges Still Facing the U.S. Postal Service (GAO/T-AIMD-99-86, February 23, 1999).

1. *What is the 1999 problem? Will this impact the Postal Service? Will the Postal Service be impacted by other dates? Please explain.*

The Year 2000 problem, which is rooted in the way dates are recorded and computed in automated information systems, is primarily associated with dates on or after *January 1, 2000*. However, computer systems using two digits to denote the year may be vulnerable to "special dates" in 1999 as well. For example, *April 9, 1999*, when written in the Julian calendar, and *September 9, 1999*, when written in the Gregorian calendar, are represented as 9999. This could cause systems to malfunction because 9999 is often assigned a special meaning, such as invalid date or end file. As noted in our testimony, these problems could disrupt the delivery of mail or other critical Postal Service business processes such as financial and personnel management. To our knowledge, April 9, 1999, however, did not prove to be problematic for the service.

In addition, because 2000 is a leap year, some computer systems may incorrectly process the last day of February 2000 (*February 29, 2000*), and the first day following the last day in February 2000 (*March 1, 2000*). The Postal Service has determined that its systems are susceptible to September 9, 1999, as well as 25 other "special dates," and it is testing its "critical and severe" systems[2] to ensure that they can correctly handle these dates.

2. *At what point should the Postal Service plan to make permanent fixes to its systems? What sort of timeframes should be considered? What might it cost to make permanent repairs? Is the Postal Service looking at this issue?*

Like many organizations with older computer systems, the Postal Service is currently pursuing a "windowing" approach to date conversion rather than expanding date fields from two to four characters. Under this approach, software is written to associate a fixed or sliding period of years with either the 20th or the 21st centuries. Many organizations with older computer systems are pursuing this approach because, in some cases, especially where data sets are large and date dense and available storage is limited, it presents a quicker and less costly solution to the Year 2000 problem. Also, because as much as several decades can be covered by the fixed or sliding window permanent system fixes or replacements may not be immediately required.

The Postal Service Year 2000 officials have advised us that windowing fixes will remain viable beyond the year 2048 for all but two systems, which will remain viable until the year

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[2] These are systems the Postal Service has determined that it must assess, correct, and verify to ensure acceptable service to the public. They include, for example, the Postal Metering System, Money Order System, Mail Distribution Requirements System, and Air Contracting Support System.

2019. According to the Postal Service, replacement schedules have already been developed for permanent fixes for these two systems.

3. *What happens to the Postal Service and its systems beyond the Year 2000? Will they suffer from increased vulnerabilities of patched systems? Or will they benefit from strengthened and updated infrastructures?*

If the Postal Service is able to effectively correct its systems, then the systems should continue to operate without Year 2000-related problems until the period covered by the sliding of fixed windows expires. As we testified, if these fixes are not done effectively, then systems could malfunction and disrupt critical postal operations.

According to the Postal Service Year 2000 program manager, the Postal Service has realized significant benefits from their Year 2000 efforts. These include the elimination of unnecessary software code; replacement of antiquated, locally developed software applications; and modernization of information technology equipment, including mainframe computer systems, mid-range computer systems, and desktop workstations. In addition, according to Postal Service officials, the Service is implementing improved processes for documenting software, testing, quality control, and configuration management. We did not assess the Service's implementation of these actions. However, while these steps should enhance information technology management well beyond 2000, they represent fundamental management practices that should have been in place long before the Year 2000 problem was identified.

4. *Is GAO specifically looking at the extent to which federal agencies are hiring contractors for Y2K and the amount of money being paid out for services? Are you monitoring contractors performing Y2K efforts to ensure that the agencies are receiving timely and quality services? If not, why not?*

We are not monitoring or assessing contractor efforts at federal agencies. We are reviewing agency progress in achieving Year 2000 compliance based on self-reported data provided to OMB and discussions with agency Year 2000 program management officials. The Inspector General of the Postal Service, however, is planning a Year 2000 conversion contract examination as part of the IG's continuing audits of Year 2000 issues within the Postal Service.

5. *What types of parameters are needed by the Postal Service in devising a national-based contingency plan? What items must it consider as part of a contingency plan? What happens if it runs into something it didn't anticipate?*

The Postal Service is following our <u>Business Continuity and Contingency Planning</u> guide,[4] which provides a conceptual framework for managing the risk of potential Year 2000-induced disruptions to operations and incorporates best practices in contingency planning and disaster recovery. Our guide describes a structured approach for (1) initiating a business continuity project, (2) assessing the potential impact of mission-critical failures on agency core business processes, (3) identifying and documenting contingency plans and implementation modes, and (4) validating the business continuity strategy. It recommends that agencies develop a business continuity plan consisting of a set of contingency plans—with a single plan for each core business process and infrastructure component (e.g., power and telecommunications services). Each plan should provide a description of the resources, staff roles, procedures, and timetables needed for its implementation.

The Postal Service's Chief Operating Officer has recently started to work with individual business area managers to develop contingency and business continuity plans. In developing these plans, Postal Service officials have told us that they intend to follow our guidance. However, we also testified that this planning did not begin until December 1998, whereas our <u>Year 2000 Assessment Guide</u> recommends that it begin before August 1997, toward the end of the assessment phase. Further, contingency plans are not scheduled to be completed and tested until June 30, 1999, and continuity plans are not scheduled to be completed and tested until August 1999 and tested again in November 1999. This schedule will leave the Service with little room for slippage or for making adjustments to ensure that contingency and continuity plans are practical and cost effective. And, as we testified, this challenge is further exacerbated by the fact that the Service anticipates a surge in workload beginning in September due to the holiday business rush, which typically requires greater management attention.

6. *Can the Postal Service control the external supplier problem? If so, how?*

As noted in our testimony, the Postal Service is heavily dependent on 271 key vendors and suppliers, such as airlines, which provide goods and services necessary to mail delivery. If their systems are not Year 2000 compliant in time, postal operations could be severely disrupted. However, the Postal Service's ability to control its suppliers is limited and, therefore, it must rely on statements of assurance of Year 2000 compliance by its suppliers. As of April 23, 1999, according to the Service, 265 suppliers had reported that they are or

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[4] <u>Year 2000 Computing Crisis: Business Continuity and Contingency Planning</u> (GAO/AIMD-10.1.19). Issued as an exposure draft in February 1998; issued in final in August 1998.

will be compliant by January 1, 2000. The Service is pursuing the readiness status of the remaining 6 suppliers. According to the Service, any critical suppliers assessed as non-compliant or for which the readiness status has not been determined will be part of Postal Service contingency planning activities.
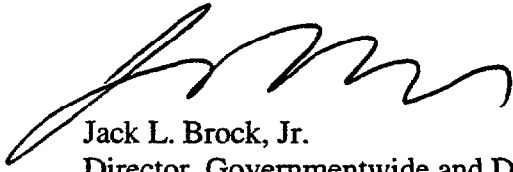
7. *What can you tell us about the Postal Service "core business processes?" What are they and why are they important?*

According to the Postal Service's <u>Year 2000 Initiative Project Plan</u>, the primary objective of its Year 2000 effort is to enable the continuous delivery of mail. To meet this objective, it is placing particular emphasis on four core business processes: (1) collecting, processing, and delivering the mail, (2) paying employees and suppliers, (3) collecting revenue, and (4) protecting the safety and well-being of postal employees. Some of these are clearly more Year 2000 dependent than others, and, as such, will require greater attention from Postal Service management. As we noted in our testimony, in many respects, the Postal Service provides critical services that are as ubiquitous as telecommunications or electrical power. A Year 2000-based disruption in mail delivery would have a serious impact across every sector of the American economy. Further, reliance on the Postal Service is part of the contingency plans for many organizations that require a backup process for electronically delivered transactions and services. Therefore, it is essential that the Service maintain continuity in its core business processes.

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To respond to these questions, we reviewed and analyzed documents describing the Postal Service's Year 2000 compliance efforts as well as its annual report. We conducted our work from March 1999 through April 1999 in accordance with generally accepted government auditing standards. In developing this report, we discussed our findings with and obtained comments on a draft of this letter from the Postal Service's Year 2000 program manager.

We are sending copies of this letter to Representative Steven Horn, Chairman, and Representative Jim Turner, Ranking Minority Member, Subcommittee on Government Management, Information, and Technology, House Committee on Government Reform; and Representative Connie Morella, Chairwoman, and Representative James Barcia, Ranking Minority Member, Subcommittee on Technology, House Committee on Science. We are also sending copies of this report to William J. Henderson, Postmaster General, as well as other interested parties. If you have any questions regarding this report, please contact me or Carl Urie, Assistant Director, at (202) 512-6240.

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