W September 17, 1999

TO: AO/Chief Information Officer

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of Year 2000 Program – Implementation Phase
Assignment Number A9900801
Report Number IG-99-044

The subject final report is provided for your information and use. Please refer to the Executive Summary for the overall audit results. Our evaluation of your comments is incorporated into the body of the report, and individual comments are addressed in Appendix D. Your comments on a draft of this report were responsive to the recommendations. Management's completed actions are sufficient to close the recommendations for reporting purposes.

If you have questions concerning the report, please contact Mr. David L. Gandrud, Program Director for Information Technology Program Audits, at (650) 604-2672, or Mr. Roger W. Flann, Audit Program Manager, at (818) 354-9755. We appreciate the courtesies extended to the audit staff. The final report distribution is in Appendix E.

{original signed by]

Russell A. Rau

Enclosure

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G/General Counsel
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IG-99-044

AUDIT REPORT

YEAR 2000 PROGRAM – IMPLEMENTATION PHASE

September 17, 1999

National Aeronautics and Space Administration

OFFICE OF INSPECTOR GENERAL

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Acronyms

BCCP	Business Continuity and Contingency Plan
CIO	Chief Information Officer
GAO	General Accounting Office
JPL	Jet Propulsion Laboratory
OIG	Office of Inspector General
OMB	Office of Management and Budget
Y2K	Year 2000

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NASA Office of Inspector General

IG-99-044 **September 17, 1999**
A9900801

Year 2000 Program - Implementation Phase

Executive Summary

Background. The Year 2000 (Y2K) date conversion problem affects computer systems worldwide. Software application programs that use a standard two-digit format (mm/dd/yy) to generate a date may not work properly after the year 2000. Systems that will continue to function properly are designated "Y2K compliant." Systems that are not "Y2K compliant" are at risk of failure and may cause other systems to fail.

To help Federal agencies prepare for possible Y2K-related failures, the Office of Management and Budget (OMB) adopted the General Accounting Office (GAO) contingency planning guide, for Federal agency use.[1] The guide identifies the key elements that a business continuity and contingency plan (BCCP) should contain (descriptions of the resources, staff roles, procedures, and timetables needed for implementation) and the key elements that a contingency test plan should address (test objectives, test approaches, required equipment and resources, necessary personnel, schedules and locations, test procedures, and expected results).

Objectives. The overall audit objective was to determine whether NASA had effectively managed the implementation of Year 2000 compliant systems. However, due to the short time remaining in 1999 to address Y2K issues, we limited our efforts to a review of contingency planning. Specifically, we evaluated NASA's efforts to prepare contingency plans that include procedures and timetables for continuing Agency operations in the event critical systems fail and to prepare test plans according to applicable guidance (see Appendix A). We have issued four other reports related to the Y2K issue; those reports are summarized in Appendix B.

Results of Audit. Under the leadership of the NASA Chief Information Officer (CIO), the Agency has been actively engaged in developing the BCCP's to prepare for Y2K-related failures. However, as of June 30, 1999, NASA installations[2] had not incorporated various key elements into the BCCP's and contingency test plans. (NASA will be updating its BCCP's and test plans through November 1999.) Consequently, NASA lacks assurance that it can effectively respond to Y2K-related failures.

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[1] The GAO guide is entitled, "Year 2000 Computing Crisis: Business Continuity and Contingency Planning," August 1998.

[2] We performed our review at the Ames Research Center (Ames), Jet Propulsion Laboratory, Lyndon B. Johnson Space Center (Johnson), and George C. Marshall Space Flight Center (Marshall).

Recommendations. The CIO should request Center and Enterprise managers to incorporate all key elements into the BCCP's. Also, the CIO should update the Agency's BCCP guidance relating to contingency plan testing to address key test plan elements.

Management's Response. Management concurred with each recommendation. The complete text of the response is in Appendix C. We consider management's comments responsive.

Introduction

On February 4, 1998, the President issued an Executive Order, "Year 2000 Conversion," which states that no critical Federal program should experience disruption because of the Y2K problem and that the head of each agency should ensure that the Y2K problem receives the highest priority attention in the agency.

On February 15, 1998, the OMB tasked the CIO Council to develop Government-wide best practices for contingency planning. Subsequently, the OMB adopted the GAO contingency planning guide.

In June 1998, the NASA CIO requested that each of the 4 NASA Enterprises and 11 Centers (including Headquarters and the Jet Propulsion Laboratory [JPL]) submit BCCP's for major NASA programs or missions by March 31, 1999. In November 1998, the CIO issued a memorandum to NASA installations, stating that the plans were to identify and assess Y2K program implications, identify potential failure scenarios, including associated risk and impact analyses, and define appropriate contingencies for Y2K-related programmatic or operational failures.

In January 1999, the CIO issued a guide[3] to the Enterprises and Centers relating to the development of BCCP's. The Enterprise BCCP's were to address major programs and projects. The Center BCCP's were to address Center core processes (including the Agency-wide services provided by the Center), Center infrastructure, and the mission-critical systems (158 in total) identified in the Agency's Y2K inventory.

In June 1999, the CIO identified additional milestones in an Agency-level BCCP summary to OMB. The milestones included BCCP testing and desktop drills[4] from April through November 1999 and the updating of Center BCCP's in November 1999.

---

[3] The NASA guide is entitled, "NASA Year 2000 (Y2K) Business Continuity and Contingency Plan Guide (BCCP)."

[4] A desktop or tabletop drill is an activity in which elected and appointed officials and key Agency staffs address simulated emergency situations without time constraints. The activity is usually informal, held in a conference-room environment, and designed to elicit constructive discussion by the participants as they attempt to examine and then resolve problems based on existing emergency operating plans. The purpose of the exercise is for participants to evaluate plans and procedures and to resolve questions of coordination and assignment of responsibilities in a nonthreatening format and under minimum stress.

Finding and Recommendations

Adequacy of Contingency Planning and Testing

Much work remains over the next several months to complete and test NASA's draft BCCP's. As of June 30, 1999, most of the BCCP's and test plans we reviewed at four NASA installations included only some of the key elements prescribed by the GAO contingency planning guide. Key GAO elements were missing because (1) Centers did not follow the NASA guide and (2) NASA's contingency test plan guide was incomplete. The lack of key elements in the BCCP's and the contingency test plans coupled with the lack of timely testing of BCCP's reduces NASA assurance that it can effectively respond to Y2K-related failures.

Contingency Planning and Testing Phases

The GAO guide describes the contingency planning and testing phases:

> Contingency planning: This phase entails developing and documenting contingency plans that specify the agency's response to system failures in order to ensure the continued operation of the agency's core business processes.
>
> Testing: In this phase, the agency develops and executes test plans to determine whether the contingency plans are capable of providing the desired level of support to the agency's core business processes and whether the plans can be implemented within a specified period of time. The agency then updates its contingency plans based on lessons learned and re-tests if necessary.

Actions Needed to Improve BCCP's

Most of the Center BCCP's we reviewed addressed only some of the key elements prescribed by the GAO contingency planning guide. Of the 43 BCCP's reviewed, 37 (86 percent) were missing one or more key elements. Table 1 presents the results of our review at the four installations.

Table 1. BCCP's Reviewed

	Ames	JPL	Johnson	Marshall	Total
BCCP's reviewed	10	14	8	11	43
BCCP's missing GAO key elements					
Resources	0	0	5	5	
Events to activate plan	0	0	4	6	
Staff roles	0	2	4	3	
Procedures	0	0	0	0	
Implementation timetable	10	14	5	6	
BCCP's missing one or more key GAO element	10	14	5	8	37

The BCCP's did not contain all key GAO elements because the CIO allowed the Centers to use their discretion in following the NASA BCCP guide (the NASA guide contains the key GAO elements). Also, the NASA guide did not require the Centers to justify deviations from the guide. The NASA Y2K Program Manager told us that she did not plan to issue further BCCP or test plan guidance.

Incomplete BCCP's may impede NASA's ability to effectively respond to Y2K-related failures. For example, the absence of events to activate the plan may delay recognition of and response to a Y2K-related failure. Similarly, unidentified staff roles can confuse those responsible for implementing contingency procedures. Also, lack of an implementation timetable[5] may cause delays in determining the appropriate order for correcting failures.

Actions Needed to Improve Contingency Test Plans

The objective of the contingency test plans is to determine whether the BCCP's are capable of providing the desired level of support to the Agency's core business processes, mission-critical systems, programs and major projects, and infrastructure and to determine whether the BCCP's can be implemented within a specified time. Most contingency test plans we reviewed addressed only some of the key elements prescribed by the GAO contingency planning guide. Of the six contingency test plans reviewed (see Table 2) at Marshall and JPL, all were lacking one or more key elements. (No test plans were available for review at Ames or Johnson.) As of June 30, 1999, all Centers were still preparing test plans.

Table 2. Contingency Test Plans Reviewed

	Ames	JPL	Johnson	Marshall	Total
Contingency test plans reviewed	0	1	0	5	6
Contingency test plans missing GAO key elements:					
Test objectives	-	0	-	2	
Test procedures	-	0	-	0	
Duration and location of test	-	0	-	5	
Required equipment and resources	-	1	-	4	
Necessary personnel	-	0	-	3	
Expected test results	-	0	-	4	
Contingency test plans missing one or more key GAO element	-	1	-	5	6

[5] An implementation timetable informs management when the contingency plan procedures should be implemented following a Y2K-related failure.

The contingency test plans did not contain all key GAO elements because NASA's BCCP guide was incomplete. The guidance only advised NASA installations to describe the reviews, rehearsals, and quality assurance audits for validating the BCCP prior to January 1, 2000, and to identify plans for conducting tests on Y2K contingency plans/procedures or "Zero Day"[6] strategies. The Agency's BCCP guide did not address the GAO key elements pertaining to BCCP testing. Further, the CIO did not require installations to include the key elements in the test plans or to follow the GAO BCCP guide. Incomplete contingency test plans do not allow NASA to evaluate the feasibility and practicality of implementing the BCCP's.

Recommendations, Management's Response, and Evaluation of Response

The NASA Chief Information Officer should:

1. **Request Center and Enterprise managers to incorporate the GAO key elements into the BCCP's (descriptions of the resources, staff roles, procedures, and timetables needed for implementation) and to document the reason(s) for excluding any key element from the BCCP's.**

2. **Update existing Agency guidance on BCCP's related to testing, to include the GAO key elements (test objectives, test approaches, required equipment and resources, necessary personnel, schedules and locations, test procedures, and expected results and exit criteria), and request Center and Enterprise managers to document the reason(s) for excluding any of the elements from the contingency test plans.**

Management's Response. Concur. The CIO will revise the Agency BCCP test plan guidance to include the GAO key elements by September 1, 1999. The CIO stated that Center and Enterprise managers will consider GAO key elements when reviewing the adequacy of BCCP's and BCCP test plans. The complete text of management's comments is in Appendix C. Other CIO comments are in Appendix D.

Evaluation of Management's Response. The actions planned by management are responsive to the recommendations. We confirmed that the CIO has issued updated BCCP test plan guidance that includes the GAO key elements. Therefore, the recommendations are resolved and dispositioned, and will be closed for reporting purposes. We address additional CIO comments in Appendix D.

[6] Zero Day is the period between Thursday December 30, 1999, and Monday, January 3, 2000.

Appendix A. Objectives, Scope, and Methodology

Objectives

Our overall objective was to determine whether NASA had effectively managed the implementation of Y2K-compliant systems. Specifically, we planned to evaluate the adequacy of (1) acceptance testing, (2) contingency and disaster recovery planning, (3) the validation process for information received from data exchanges, and (4) change/version control over renovated systems migrating into the production environment. At the time of our review, limited time remained in 1999 to address Y2K issues. Accordingly, we limited our review to the contingency planning portion of the second objective. Specifically, we evaluated NASA's efforts to prepare contingency plans that include procedures and timetables for continuing agency operations in the event critical systems fail and to prepare test plans according to applicable guidance.

Scope and Methodology

We performed work at Ames, Johnson, Marshall, and JPL. Specifically, we:

- Interviewed management representatives at NASA Headquarters and installations to determine their Y2K processes and procedures.
- Reviewed guidance issued by OMB, GAO, and NASA and its installations to determine their Y2K processes and procedures and documentation requirements.
- Obtained information regarding available BCCP's and test plans through June 30, 1999.
- Judgmentally sampled BCCP's and test plans for mission-critical systems, Center core processes, and Center infrastructure.
- Reviewed sampled BCCP's and test plans to determine whether they included key elements of the GAO guide.
- Examined applicable records and documents dated from June 12, 1998, through June 30, 1999.

Management Controls Reviewed

We reviewed GAO and Agency guidance related to BCCP's to determine applicable requirements. We then tested the GAO guidance, or controls, against the sampled systems and inventory items to determine whether the installations had complied with the guidance. We considered management controls to be adequate except that controls needed to be

strengthened to ensure that Center and Enterprise managers incorporate GAO's key elements into their BCCP's. Also, the CIO needed to update existing BCCP guidance related to contingency test plans (see the Finding).

Audit Field Work

We performed the audit field work for this report from March through July 1999. We conducted the review in accordance with generally accepted government auditing standards.

Appendix B. Summary of Prior Coverage

The NASA OIG has issued four final reports relating to the Y2K problem. The reports are summarized below. Copies of the reports are available at www.hq.nasa.gov/office/oig/hq/issuedaudits.html.

"**Exemptions for Year 2000 Testing," Report Number IG-99-025, May 13, 1999.** The Johnson Space Center, Financial Management Division, completed testing of the Center Financial System before NASA issued its July 1998 Testing and Certification Guidelines and Requirements, but did not obtain an exemption from use of the NASA guidance. The Johnson Chief Information Officer had not established procedures to implement the exemption process. Without the exemption, the Center lacks reasonable assurance that the Center Financial System will meet the minimum NASA testing requirements for Y2K compliance. We made four recommendations related to procedures for testing and exemptions of information technology assets that completed testing before the issuance of NASA's testing guidelines. Management concurred with the recommendations.

"Year 2000 Program Compliance Requirements in NASA Information Technology-Related Contracts," Report Number IG-99-022, March 31, 1999. NASA lacks reasonable assurance that its systems will be Y2K compliant on January 1, 2000. The Agency issued Y2K guidance for installations to follow when acquiring, operating, and maintaining information technology assets. The guidance required contracting officers to include a clause addressing Y2K in information technology solicitations and new contracts. Also, contracting officers were required to modify the statement of work to address Y2K in existing information technology operation and maintenance contracts. Each of the six locations audited had included the NASA-directed Y2K requirements in solicitations and new contracts used to acquire information technology assets. However, JPL had not included the NASA-directed requirements in all its applicable information technology operation and maintenance contracts as of January 31, 1999. JPL management attributed its delay to other workload priorities. Untimely incorporation of the Y2K compliance requirements into NASA contracts adversely affects the Agency's ability to meet OMB's milestones for Y2K renovation, validation, and implementation phases and increases the potential for noncompliant Agency systems on January 1, 2000. Also, contractors may not be held accountable for ensuring Y2K compliance if the requirements are not incorporated. We recommended that the NASA Chief Information Officer (1) coordinate with the NASA Management Office at JPL to establish a target date(s) for JPL completion and (2) monitor JPL's progress in meeting the target date(s). Management concurred with both recommendations. Corrective action was completed on the first recommendation and is pending on the second.

"Year 2000 Program Oversight of NASA's Production Contractors," Report Number IG-99-004, December 17, 1998. NASA lacked reasonable assurance that its production contractors would provide Y2K-compliant data to support the Agency's key financial and program management activities. This condition occurred because NASA had not asked the two principal Department of Defense audit and contract administration agencies, the

Contract Audit Agency and the Defense Contract Management Command, to conduct Y2K reviews at NASA's major contractor locations. As a result, the Agency risks using noncompliant data that may adversely affect the Agency's control, budgeting, program management, and cost accounting activities. We made two recommendations to NASA relating to the Y2K status of its major contractors. Management concurred with the intent of the recommendations and issued a letter to the Defense Contract Audit Agency requesting data on Y2K coverage of the Agency's major contractors. In addition, NASA issued a letter to its Center Procurement Officers instructing them to monitor Y2K problems identified by the Defense Contract Audit Agency.

"Year 2000 Date Conversion – Assessment Phase," Report Number IG-98-040, September 30, 1998. Some NASA Centers did not have documented support for Y2K cost estimates reported to OMB and did not prepare estimates using a consistent methodology. Also, documentation did not always exist to support the manner in which Center assessments and decisions for Y2K compliance were conducted. The audit showed that NASA Centers also needed to improve the sharing of information on the status of Y2K compliance associated with commercial off-the-shelf products. We made three recommendations to assist NASA in addressing the Y2K date conversion problem. Management concurred with the two recommendations concerning documentation for Y2K assessments and the sharing of information on commercial off-the-shelf products. Management did not concur with the recommendation concerning guidance for Y2K cost estimates, stating that adequate guidance on cost estimation had been provided to NASA Centers. This issue remains unresolved.

Appendix C. Management's Response

National Aeronautics and
Space Administration
Office of the Administrator
Washington, DC 20546-0001

AUG 23 1999

TO: W/Inspector General

FROM: AO/Chief Information Officer

SUBJECT: NASA's Response to Draft Report on Year 2000 Program - Implementation Phase, Assignment Number A9900801

This responds to your draft report on Year 2000 Program – Implementation Phase under Assignment Number A9900801.

The draft audit report lists two specific recommendations:

"1. Request Center and Enterprise managers to incorporate the GAO key elements into the BCCP's (descriptions of the resources, staff roles, procedures, and timetables needed for implementation), and to document the reason(s) for excluding any key element from the BCCP's.

2. Update existing Agency guidance on BCCP's related to testing, to include the GAO key elements (test objectives, test approaches, required equipment and resources, necessary personnel, schedules and locations, test procedures, and expected results and exit criteria), and request Center and Enterprise managers to document the reason(s) for excluding any of the elements from the contingency test plans. "

NASA concurs with the two report recommendations with comment.

The findings and recommendations in this draft report are based on initial Center BCCP's that were issued in March 1999. Center plans are iterative documents that are based on current knowledge of global Y2K status and are tailored as appropriate to meet Enterprise or Center-specific requirements. Centers will continue to update plans throughout 1999 as more information becomes available and contingency strategies are refined, with formal updates required in July and November 1999. Centers plans are reviewed by Center Directors and Enterprise Associate Administrators to ensure they adequately address continuity of critical program operations and Agency processes. We appreciate your assessment of the initial Center BCCP's and will continue to incorporate improvements to these plans throughout 1999.

See Appendix D, OIG Comment 1

Per the June 21, 1999 memorandum from the NASA Chief Information Officer, Centers are expected to validate their BCCP's through review, rehearsals, desktop or tabletop exercises, or tests prior to the end of November 1999. The NASA Year 2000 (Y2K) Business Continuity and Contingency Plan Guide (January 1999), section 1.3.6, BCCP Testing Approach, includes guidance for describing the strategy and plans for validating the BCCP. By September 1, 1999, NASA will revise this guidance to specifically include elements for objectives, approach, required equipment and resources, personnel, schedules and locations, test procedures, and expected results and exit criteria. The next formal BCCP updates are planned for November 1999. In the interim, the NASA Chief Information Officer will require that Centers provide documentation associated with this revised guidance as part of the September monthly Y2K status report. In addition, we will continue to monitor the status of BCCP validation plans and results as part of monthly Y2K status reporting.

See Appendix D, OIG Comment 2

While there are opportunities to improve the BCCPs, NASA has reasonable and adequate plans to address potential Y2K contingencies. The report's summary evaluation of the adequacy of the March 1999 plans (see Table 1) may not reflect a complete understanding of Center plans. Center plans include general information such as approach, priorities, roles and responsibilities, and testing approach. In addition, Center plans provide more detail on specific BCCP elements. A BCCP element may be a critical infrastructure element, a program, a core process, or a mission critical system. Table 1 inappropriately counts the individual detailed BCCP's that are actually appendices or subplans. For example, the table inaccurately lists staff roles and implementation timetables as missing elements of the JPL BCCP. Section 2.7, Roles and Responsibilities, of the March 31, 1999, issue of the JPL BCCP states the composite of all staff roles for the entire Center. Similarly, Section 2.6, Schedule of Major Milestones, states the composite schedule for implementing the Center BCCP. In addition, Table 1 notes some missing information that is available in other existing plans or procedures. We will clarify references to other relevant or governing documentation in subsequent BCCP updates.

With respect to the request that Centers document reasons for excluding BCCP elements, NASA does not generally require written explanation of rationale for tailoring guidance. We have consciously tried to minimize redundant plans and documentation throughout the Y2K BCCP process and believe that this is consistent with OMB and GAO intent. OMB has instructed Agencies to follow the *guidance* contained in the GAO publication, "Year 2000 Computing Crisis: Business Continuity and Contingency Planning" (August 1998)." The GAO guide is clear that, "Agencies must tailor their Year 2000 business continuity planning efforts in response to their unique needs while ensuring that the guide's concepts and principles are effectively applied in their business environment to achieve necessary results in the most cost effective manner." NASA's BCCP guidance is consistent with OMB and GAO guidance and the philosophy of tailoring, as follows:

> "This guidance is provided as a planning guide. It is impossible to consider all aspects of necessary contingency planning in one prescriptive document.

Enterprises and Centers may need to adjust this guidance to specifically accommodate individual programs, systems, or situations. Given the nature of NASA missions and programs, the majority of programs and processes have established and proven procedures for addressing operational contingencies. In addition, Center disaster recovery or emergency preparedness plans exist to address the potential for failure due to environmental anomalies that may affect common infrastructure (e.g., tornado, hurricane, etc.). This guidance recognizes this situation, and strongly encourages the use of existing plans and procedures to avoid duplication of effort. It is not necessary to rewrite existing plans to conform to the format contained in this guidance. However, it is important that the content of plans and procedures be reviewed for conformance to the guidelines set forth. Where possible, existing plans and procedures should be used or tailored as necessary to meet the intent of this guidance. Extensive work to develop new procedures is not expected."

Center BCCP's are reviewed by Center Directors and Enterprise Associate Administrators to ensure they are adequate. NASA believes that review processes are sufficient to ensure that the intent of the guidance has been accommodated, tailoring is appropriate, and that plans are reasonable and complete.

We consider this action closed with this response.

Andrea Norris for

Lee Holcomb

cc:
AO/A. Norris
AO/C. Simonson
JM/H. Robbins

Appendix D. OIG Comments on Management's Response

The Chief Information Officer (CIO) provided the following additional comments relating to the contents of the draft report. The Office of Inspector General (OIG) responses follow each comment.

Management's Comments. The CIO stated that the BCCP's audited by the OIG are initial versions and that the NASA Centers intend to revise the plans throughout 1999.

1. **OIG Comments.** We acknowledge the preliminary nature of the BCCP's reviewed. The audit was intended to provide real-time feedback to NASA management regarding the completeness of its BCCP's and BCCP test plans relative to GAO key elements. The feedback should help improve BCCP updates.

Management's Comments. The CIO questioned the accuracy of Table 1 in the audit report, stating that it does not reflect a complete understanding of Center plans. Some of his comments follow.

> Table 1 inappropriately counts the individual detailed BCCP's that are actually appendices or subplans.
>
> The table inaccurately lists staff roles and implementation timetables as missing elements of the JPL BCCP. Section 2.7, Roles and Responsibilities, of the March 31, 1999, issue of the JPL BCCP states the composite of all staff roles for the entire Center. Similarly, Section 2.6, Schedule of Major Milestones, states the composite schedule for implementing the Center BCCP."

2. **OIG Comments.** The table accurately represents the condition of the BCCP's reviewed. The CIO maintains that a Center has only one BCCP plan that covers all Center infrastructure and mission-critical systems and that individual BCCP's represent only part of the Center's overall BCCP package. However, our review of individual plans allowed us to determine the extent to which GAO key elements were being addressed in each BCCP. Also, we reviewed other applicable portions of the Centers' overall BCCP packages.

   Regarding the second comment, JPL's BCCP, Section 2.7, lists the managers responsible for each BCCP but does not identify other key personnel needed to implement the BCCP. Without the identification of key personnel for each BCCP, NASA lacks assurance that BCCP's can be executed if a Y2K failure occurs. Regarding JPL's Section 2.6, Schedule of Major Milestones, the comment reflects a misunderstanding of what is meant by the implementation timetable line in Table 1. Footnote 5 of the report explains that an implementation timetable informs management when the contingency plan procedures should be implemented following a Y2K-related failure.

Appendix E. Report Distribution

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Appendix E

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Assistant to the President and Chair, President's Council on Y2K Conversion
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Deputy Director of Management, Office of Management and Budget
Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Branch Chief, Science and Space Programs Branch, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, Defense Acquisitions Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Chairman and Ranking Minority Member -- Congressional Committees and Subcommittees

Senate Committee on Appropriations
Senate Subcommittee on VA, HUD, and Independent Agencies
Senate Committee on Commerce, Science, and Transportation
Senate Subcommittee on Science, Technology, and Space
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on VA, HUD, and Independent Agencies
House Committee on Government Reform and Oversight
House Subcommittee on National Security, Veterans Affairs, and International Relations
House Committee on Science
House Subcommittee on Space and Aeronautics

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

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