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NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Leadership and Systems Needed to Effect Financial Management Improvements

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Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to discuss the financial management challenges facing the National Aeronautics and Space Administration (NASA).

My testimony today will focus on our recent work related to NASA's financial management difficulties and its attempts to implement an integrated financial management system. Although we have not performed a comprehensive review of NASA's financial management systems or information since fiscal year 1993,¹ in response to legislative mandates and requests of other interested committees we have performed work and issued several reports² that specifically address the issues included in my testimony today. My statement today is drawn from the findings and conclusions in those reports, which include detailed information on our scope and methodology. Also, as you have requested, my statement will address the results of this year's financial statement audit for which the auditor's opinion is a marked departure from the previous 5 years.

Summary

For the past 5 years NASA was one of the few agencies to be judged by its auditors as meeting all of the federal financial reporting requirements—an unqualified opinion on its financial statements, no material internal control weaknesses, and financial management systems that are in substantial compliance the requirements of the Federal Financial Management Improvement Act (FFMIA). This implied that NASA not only could generate reliable information once a year for external financial reporting purposes but also could provide accurate, reliable information for day-to-day decision-making.

In contrast with the unqualified or “clean” audit opinions of its previous auditor, Arthur Andersen, for fiscal years 1996 through 2000, NASA's new

¹*Financial Management: NASA's Financial Reports Are Based on Unreliable Data* (GAO/AFMD-93-3, October 29, 1992) and *NASA's FFMIA Assertions and CFO Plan* (GAO/AFMD-93-65R, June 11, 1993).

²*NASA: Compliance with Cost Limits Cannot Be Verified* (GAO-02-504R, To be issued), *NASA: International Space Station and Shuttle Support Cost Limits* (GAO-01-1000R, August 31, 2001), *Financial Management: Misstatement of NASA's Statement of Budgetary Resources* (GAO-01-438, March 30, 2001), and *Major Management Challenges and Program Risks: National Aeronautics and Space Administration* (GAO-01-258, January 2001).

independent auditor, PricewaterhouseCoopers, disclaimed an opinion on the agency's fiscal year 2001 financial statements because of significant internal control weaknesses. PricewaterhouseCoopers also concluded that NASA's financial management systems do not substantially comply with the requirements of FFMIA.

Although the auditor's report draws attention to the issue, NASA's financial management difficulties are not new. NASA has been on GAO's High-Risk list³ for contract management since 1990, in part, because the agency has failed to successfully implement a modern, integrated financial management system, which is central to producing accurate and reliable financial information needed to support contract management.

Further, about a year and a half ago, congressional staff members found a \$644 million misstatement in NASA's fiscal year 1999 financial statements—an error not previously detected by NASA or its auditor. As we reported in March 2001, this error resulted because NASA's systems could not produce the budgetary data required by federal accounting standards; instead, the agency was relying on an ad hoc, year-end data call from its 10 reporting units and the aggregation of data using a computer spreadsheet. Based on our work, we questioned NASA management's and Arthur Andersen's determination that the agency's systems substantially complied with the requirements of FFMIA. FFMIA builds on previous financial management reform legislation by emphasizing the need for agencies to have systems that can generate timely, accurate, and useful information with which to make informed decisions and to ensure accountability on an ongoing basis. We also reported that Arthur Andersen's work did not meet professional audit standards in the area we reviewed and that the auditors did not perform sufficient work to render opinions on the fiscal year 1999 NASA budgetary financial statements. Arthur Andersen and the NASA Inspector General disagreed with our findings and conclusions.

Our recent work on the International Space Station continues to highlight NASA's financial management difficulties. In response to a legislative mandate, we have been attempting for almost a year to validate the amounts that NASA has reported to the Congress as obligated against statutory space station and related shuttle support cost spending limits. After a protracted effort, NASA has acknowledged that it is unable to

³*High Risk Series: NASA Contract Management* (GAO-HR-93-11, December 1992).

provide the detailed obligation data needed to support amounts reported to the Congress against the spending limits. This is the same problem that NASA's current financial auditors, PricewaterhouseCoopers, faced in attempting to audit NASA's fiscal year 2001 financial statements. Specifically, according to the auditor's report, NASA was unable to provide sufficient documentation to support obligation and expense transactions and certain transaction-level cost allocations that had been selected by the auditor for testing.

We also found that NASA was not able to provide support for the actual cost of completed space station components—either in total or by subsystems or elements. As we reported in August 2001, NASA does not track the actual costs of completed space station components even though it often estimates the cost of these components for planning and budgeting purposes. As a result, NASA cannot examine its cost estimates for validity by comparing actuals to estimates after costs have been realized. Further, we found that the \$8 billion of capitalized space station equipment reported in NASA's fiscal year 2000 financial statements was not based on actual costs incurred but instead was based primarily on cost estimates. Similarly, NASA's fiscal year 2001 financial statement audit revealed that NASA did not have sufficient documentary evidence for the auditors to determine the accuracy and completeness of amounts capitalized as space station costs.

It has become increasingly clear that modernizing NASA's financial management system is essential to providing accurate, useful financial information for external financial reporting as well as internal management decision-making. To its credit, NASA is working toward implementing an integrated financial management system that it expects to be fully operational in fiscal year 2006 at an estimated cost of \$475 million. This is NASA's third attempt to implement a new financial management system. The first two efforts were abandoned after 12 years and after spending \$180 million. Given the high stakes involved, it is critical that NASA's leadership provide the necessary direction, oversight, and sustained attention to ensure that this project is successful. In this regard, NASA's new Administrator comes to the position with a strong management background and expertise in financial management. Based on our discussions with the Administrator, he has made clear that he plans to make financial management a top priority.

Financial Audit Results

After five years of receiving an unqualified opinion on its financial statements, on February 22, 2002, NASA's new independent auditor⁴ disclaimed an opinion on the agency's fiscal year 2001 financial statements. Specifically, the audit report states that NASA was unable to provide the detailed support needed to determine the accuracy of the agency's reported obligations, expenses, property, plant, and equipment, and materials for fiscal year 2001. According to the report, each of NASA's 10 centers uses a different financial management system—each of which has multiple feeder systems that summarize individual transactions on a daily or monthly basis. Financial information from the centers may be summarized more than once before it is uploaded into NASA's General Ledger Accounts System (GLAS). The successive summarization of data through the various systems impedes NASA's ability to maintain an audit trail through the summary data to the detailed transaction-level source documentation. Current OMB and GAO guidance on internal control requires agencies to maintain transaction-level documentation and to make the transaction-level documentation readily available for review. NASA was unable to provide sufficient transaction-level documentation to support certain obligation and expense transactions and certain transaction-level cost allocations that the auditors had selected for testing.

In addition, the fiscal year 2001 audit report identifies a number of significant internal control weaknesses related to accounting for space station material and equipment and to computer security. The report also states that NASA's financial management systems do not substantially comply with federal financial management systems requirements and applicable federal accounting standards.

NASA's Financial Management Difficulties Are Not New

While the fiscal year 2001 auditor's report draws attention to the issue, NASA's financial management difficulties are not new. The weaknesses discussed in the auditor's report are consistent with the findings discussed in our previous reports. We have reported on NASA's contract management problems, misstatement of its Statement of Budgetary Resources, lack of detailed support for amounts reported against certain cost limits, and lack of historical cost data for accurately projecting future cost.

⁴PricewaterhouseCoopers replaced Arthur Andersen LLP as NASA's independent auditor for its fiscal year 2001 financial statements. NASA received unqualified opinions on its financial statements for fiscal years 1996 through 2000 from its previous auditor.

Long-standing Problems With Contract Management

We first identified NASA's contract management as an area at high risk in 1990 because of vulnerabilities to waste, fraud, abuse, and mismanagement. Specifically, we found that NASA lacked effective systems and processes for overseeing contractor activities and did not emphasize controlling costs. While NASA has made progress in managing many of its procurement practices, little progress has been made in correcting the financial system deficiencies that prevent NASA from effectively managing and overseeing its procurement dollars. As a result, contract management remains an area of high risk.

The agency's financial management systems environment is much the same as it was in 1993, the last time we performed comprehensive audit work in that area. It is comprised of decentralized, nonintegrated systems with policies, procedures, and practices that are unique to each of its 10 centers. For the most part, data formats are not standardized, automated systems are not interfaced, and on-line financial information is not readily available to program managers. As a result, NASA cannot ensure that contracts are being efficiently and effectively implemented and budgets are executed as planned.

Misstatement of NASA's Fiscal Year 1999 Statement of Budgetary Resource

NASA's long-standing problems in developing and implementing integrated financial management systems contributed to a \$644 million misstatement in NASA's fiscal year 1999 Statement of Budgetary Resources (SBR), which we discussed in our March 2001 report.⁵ This error was not detected by NASA Chief Financial Officer (CFO) personnel or by its auditor, Arthur Andersen. Instead, the House Committee on Science discovered the discrepancy in comparing certain line items in the NASA SBR to related figures in the President's Budget.

NASA used an ad hoc process involving a computer spreadsheet to gather the information needed for certain SBR line items because the needed data were not captured by NASA's general ledger systems. Because each of NASA's 10 reporting units maintained different accounting systems, none of which were designed to meet FFMI requirements, it was left up to the units to determine how best to gather the requested data. This cumbersome, time-consuming process ultimately contributed to the misstatement of NASA's SBR. The SBR is intended to provide information on an agency's use of budgetary resources provided by the Congress. If

⁵GAO-01-438

reliable, the SBR can provide valuable information for management and oversight purposes to assess the obligations related to prior-year agency activities and to make decisions about future funding.

Based on this work, we questioned NASA management's and its auditor's determination that NASA's systems were in substantial compliance with the requirements of FFMIA. As I mentioned earlier, and it bears repeating, FFMIA builds on previous financial management reform legislation by emphasizing the need for agencies to have systems that can generate timely, accurate, and useful information with which to make informed decisions and to ensure accountability on an ongoing basis. This is really the end goal of financial management reforms. In particular, we questioned whether NASA complied with the federal financial management systems requirements for using integrated financial management systems.⁶

NASA Lacks Detailed Support for Amounts Reported Against Cost Limits

NASA's financial management problems were also highlighted in our effort to verify amounts NASA reported to the Congress against legislatively imposed spending limits on its International Space Station and Space Shuttle programs. Since NASA began the current program to build the space station, the program has been characterized by a series of schedule delays, reduction in space station content and capabilities, and a substantial development cost overrun. In February 2001, NASA revealed that the program faced a \$4 billion cost overrun that would raise the cost of constructing the space station to \$28 billion to \$30 billion, 61 percent to 72 percent above the original 1993 estimate.

In part to address concerns regarding the escalating space station costs, section 202 of the National Aeronautics and Space Administration Authorization Act for Fiscal Year 2000 (P.L. 106-391), establishes general cost limitations on the International Space Station and Space Shuttle programs. The act requires that NASA, as part of its annual budget request, update the Congress on its progress by (1) accounting for and reporting amounts obligated against the limitations to date, (2) identifying the

⁶According to OMB Circular A-127, *Financial Management Systems*, each agency must establish and maintain a single, integrated financial management system that is a unified set of financial systems that are planned for and managed together, operated in an integrated fashion, and linked together electronically in an efficient and effective manner to provide agencywide financial system support necessary to carry out an agency's mission and support its financial management needs.

amount of budget authority requested for the future development and completion of the space station, and (3) arranging for the General Accounting Office to verify the accounting submitted to the Congress

It was our intention to verify NASA's accounting for the space station and shuttle limits by testing the propriety of charges to various agency programs to ensure that all obligations charged to the space station and shuttle programs were appropriate and that no space station or shuttle obligations were wrongly charged to other programs. However, NASA was unable to provide the detailed obligation data needed to support amounts reported to the Congress against the space station and shuttle program cost limits. NASA's inability to provide detailed data for amounts obligated against the limits is again due to its lack of a modern, integrated financial management system. As I mentioned earlier, NASA's 10 centers operate with decentralized, nonintegrated systems and with policies, procedures, and practices that are unique to each center. Consequently, the systems have differing capabilities with respect to providing detailed obligation data. According to NASA officials, only 5 of its 10 centers are able to provide complete, detailed support for amounts obligated during fiscal years 1994 through 2001—the period in which NASA incurred obligations related to the limits. In fact, at one center, detailed obligation data are not available for even current-year obligations.

Historical Cost Data Needed to Accurately Project Future Costs

As part of our effort to verify NASA accounting for the space station and shuttle cost limits, we also found that NASA was not able to provide support for the actual cost of completed space station components—either in total or by subsystems or elements. For example, NASA cannot identify the actual costs of individual space station components such as Unity (Node 1) or Destiny (U.S. Lab). Although in its audited fiscal year 2000 financial statements, NASA capitalized the cost of Unity, Destiny, and other items in orbit or awaiting launch at about \$8 billion, according to

NASA officials, these amounts are based primarily on cost estimates, not actual costs.⁷

NASA officials stated that its accounting systems were designed prior to the implementation of current federal cost accounting standards and financial systems standards that require agencies to track and maintain cost data needed for management activities, such as estimating and controlling costs, performance measurement, and making economic trade-off decisions. As a result, NASA's systems do not track the cost of individual space station subsystems or elements. According to NASA officials, the agency manages and tracks space station costs by contract and does not need to know the cost of individual subsystems or elements to effectively manage the program. To the contrary, we found that NASA estimates potential and probable future program costs to determine the impact of canceling, deferring, or adding space station content. These cost estimates often identify the cost of specific space station subsystems. However, because NASA does not attempt to track costs by element or subsystems, the agency does not know the actual cost of completed space station components and is not able to reexamine its cost estimates for validity once costs have been realized. We continue to believe that NASA needs to collect, maintain, and report the full cost of individual subsystems and hardware so that NASA can make valid comparisons between estimates and final costs and so that the Congress can hold NASA accountable for differences between budgeted and actual costs.

Transformation of the Finance Organization Needed To Reap the Full Benefit of New System

Modernizing NASA's financial management system is essential to providing timely, relevant, and reliable information needed to manage cost, measure performance, make program-funding decisions, and analyze outsourcing or privatization options. However, technology alone will not solve NASA's financial management problems. The key to transforming NASA's financial management organization into a customer-focused partner in program results hinges on the sustained leadership of NASA's top executives. As we found in our study of leading private sector and

⁷Expenditures that are expected to benefit more than one accounting period are considered capital expenditures and are to be reported on the statement of financial position as capital assets. NASA capitalized \$2.5 billion for completed space station assets orbiting the earth and \$5.4 billion for completed contractor-held assets that are at the launch site, for a total of \$8 billion. Completed assets at the launch site are reported in NASA's financial statements as contractor-held work in process. However, NASA was not able to categorize the \$5.4 billion by space station versus other programs. Therefore, \$8 billion represents the maximum amount attributable to the space station.

state organizations,⁸ clear, strong executive leadership—combined with factors such as effective organizational alignment, strategic human capital management, and end-to-end business process improvement—will be critical for ensuring that NASA’s financial management organization delivers the kind of analysis and forward-looking information needed to effectively manage NASA’s many complex space programs. Specifically, as discussed in the executive guide, to reap the full benefit of a modern, integrated financial management system, NASA must go beyond obtaining an unqualified audit opinion toward (1) routinely generating reliable cost and performance information and analysis, (2) undertaking other value-added activities that support strategic decision-making and mission performance, and (3) building a finance team that supports the agency’s mission and goals.

An independent task force created by NASA to review and assess space station costs, budget, and management reached a similar conclusion. In its November 1, 2001, report the International Space Station (ISS) Management and Cost Evaluation (IMCE) Task Force found that the space station program office does not collect the historical cost data needed to accurately project future costs and thus perform major program-level financial forecasting and strategic planning. The task force also reported that NASA’s ability to forecast and plan is weakened by diverse and often incompatible center level accounting systems and uneven and non-standard cost reporting capabilities. The IMCE also concluded that the current weaknesses in financial reporting are a symptom, not a cause, of the problem and that enhanced reporting capabilities, by way of a new integrated financial management system, will not thoroughly solve the problem. The root of the problem, according to the task force, is that finance is not viewed as intrinsic to NASA’s program management decision process. The taskforce concluded that under the current organizational structure, the financial management function is centered upon tracking and documenting what “took place” rather than what “could and should take place” from an analytical cost planning standpoint.

NASA has cited deficiencies with its financial management system as a primary reason for not having the necessary data required for both internal

⁸U.S. General Accounting Office, *Executive Guide: Creating Value Through World-class Financial Management*, [GAO/AIMD-00-134](#) (Washington, D.C.: Apr. 2000). Our executive guide was based on practices used by nine leading organizations—Boeing, Chase Manhattan Bank, General Electric, Pfizer, Hewlett-Packard, Owens Corning, and the states of Massachusetts, Texas and Virginia.

management and external reporting purposes. To its credit, NASA recognizes the urgency of successfully implementing an integrated financial management system. The stakes are particularly high, considering this is NASA's third attempt since 1988 to implement a new system. The first two attempts were abandoned after 12 years and after spending about \$180 million. NASA expects to complete the current systems effort by 2006 at a cost of \$475 million.

The President's Management Agenda includes improved financial management performance as one of his five governmentwide management goals. In addition, in August 2001, the Principals of the Joint Financial Management Improvement Program—the Secretary of the Treasury, the Director of the Office of Management and Budget, the Director of the Office of Personnel Management, and the Comptroller General—began a series of quarterly meetings that marked the first time all four of the Principals had gathered together in over 10 years. To date, these sessions have resulted in substantive deliberations and agreements focused on key issues such as better defining measures for financial management success. These measures include being able to routinely provide timely, reliable, and useful financial information and having no material internal control weaknesses.

Our experience has shown that improvements in several key elements are needed for NASA to effectively address the underlying causes of its financial management challenges. These elements, which will be key to any successful approach to financial management reform, include:

- addressing NASA's financial management challenges as part of a comprehensive, integrated, NASA-wide business process reform;
- providing for sustained leadership by the Administrator to implement needed financial management reforms;
- establishing clear lines of responsibility, authority, and accountability for such reform tied to the Administrator;
- incorporating results-oriented performance measures and monitoring tied to financial management reforms;
- providing appropriate incentives or consequences for action or inaction;
- establishing an enterprisewide system architecture to guide and direct financial management modernization investments; and
- ensuring effective oversight and monitoring.

In this regard, NASA's new Administrator comes to the position with a strong management background and expertise in financial management.

Based on our discussions with the Administrator, he has made clear that he plans to make financial management a top priority.

Mr. Chairman and Members of the Subcommittee, this concludes my prepared statement. I would be pleased to respond to any questions that you or other members of the Subcommittee may have.

Contacts and Acknowledgments

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