THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION: WHAT WENT WRONG?

HEARING

BEFORE THE

SUBCOMMITTEE ON GOVERNMENT EFFICIENCY, FINANCIAL MANAGEMENT AND INTERGOVERNMENTAL RELATIONS

OF THE

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WEDNESDAY, MARCH 20, 2002

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON GOVERNMENT EFFICIENCY, FINANCIAL MANAGEMENT AND INTERGOVERNMENTAL RELATIONS,
COMMITTEE ON GOVERNMENT REFORM,
Washington, DC.

The subcommittee met, pursuant to notice, at 10 a.m., in room 2154, Rayburn House Office Building, Hon. Stephen Horn (chairman of the subcommittee) presiding.

Present: Representatives Horn, Schakowsky, and Maloney.

Staff present: J. Russell George, staff director and chief counsel; Bonnie Heald, deputy staff director; Rosa Harris, professional staff member, GAO detailee; Darin Chidsey, professional staff member; Justin Paulhamus, clerk; David McMillen, minority professional staff member; and Jean Gosa, minority assistant clerk.

Mr. HORN. A quorum being present, this hearing of the Subcommittee on Government Efficiency, Financial Management and Intergovernmental Relations will come to order.

Today begins the subcommittee's first in a series of hearings to examine the progress the executive branch departments and agencies in the Federal Government are making toward providing timely and useful financial information. The results of the fiscal year 2001 financial statement audits showed that, while several agencies made marked improvements in their financial management systems and processes, others still have a long way to go.

This year the status of two agencies deteriorated. One of these agencies is the National Aeronautics and Space Administration. For the last 5 consecutive years, NASA had received unqualified or clean audit opinions on its financial statements. Similarly, for the last 5 consecutive years NASA received a grade of A on the subcommittee's score card on Federal financial management. For fiscal year 2001, however, NASA was unable to provide timely documentation to substantiate the accuracy and classification of its obligations, expenses, property, plant, and equipment and materials. These problems were so severe that NASA's new auditor, PricewaterhouseCoopers, was unable to provide an opinion on whether the amounts on the fiscal year 2001 financial statements were reasonable. The auditors also found that the agency had significant material weaknesses in its system of internal controls.

For the first time since fiscal year 1997, auditors reported that NASA's systems were not in compliance with the Federal Financial Management Improvement Act of 1996. The GAO, the General Ac-

counting Office, had questioned NASA's compliance with the act in two reports last year. In addition, the General Accounting Office found that NASA could not provide detailed support for amounts obligated against the space station or the shuttle.

In another report, the General Accounting Office found that NASA could not provide support for amounts on its fiscal year 1999 statement of budgetary resources. In this same report, the General Accounting Office questioned NASA's previous auditor, Arthur Andersen's support for an unqualified opinion on this statement.

The status of NASA's financial management has been consistently questioned by the General Accounting Office and others, yet Arthur Andersen continued for years to give NASA a clean bill of health.

Is NASA a Government Enron? Did the Agency's financial management problems begin in fiscal year 2001, or were they always present?

In this hearing we will focus on what went wrong at NASA for fiscal year 2001 and what actions are being taken to resolve the financial management issues.

I welcome today's witnesses. I look forward to working with each of you in order to ensure Federal financial accountability throughout the Federal Government.

[The prepared statement of Hon. Stephen Horn follows:]

Opening Statement
Financial Management at the National Aeronautics and Space Administration
Chairman Steve Horn
Subcommittee on Government Efficiency,
Financial Management and Intergovernmental Relations
March 20, 2002

A quorum being present, this hearing of the Subcommittee on Government Efficiency, Financial Management and Intergovernmental Relations will come to order.

Today begins the subcommittee's first in a series of hearings to examine the progress executive branch departments and agencies in the federal government are making toward providing timely and useful financial information. The results of the fiscal year 2001 financial statement audits showed that while several agencies made marked improvements in their financial management systems and processes, others still have a long way to go. This year, the status for two agencies deteriorated. One of these agencies is the National Aeronautics and Space Administration (NASA).

For the last five consecutive years, NASA had received unqualified or "clean" audit opinions on its financial statements. Similarly, for the last five consecutive years, NASA received a grade of "A" on the subcommittee's scorecard on Federal Financial Management. For fiscal year 2001, however, NASA was unable to provide timely documentation to substantiate the accuracy and classification of its obligations, expenses, property, plant, and equipment and materials.

These problems were so severe that NASA's new auditor, PricewaterhouseCoopers, was unable to provide an opinion on whether the amounts on the fiscal year 2001 financial statements were reasonable. The auditors also found that the agency had significant material weaknesses in its system of internal controls. For the first time since fiscal year 1997, auditors reported that NASA's systems were not in compliance with the Federal Financial Management Improvement Act of 1996 (FFMIA). The GAO had questioned NASA's compliance with the Act in two reports last year.

In addition, the GAO found that NASA could not provide detailed support for amounts obligated against the space station or shuttle. In another report, the GAO found that NASA could not provide support for amounts on its fiscal year 1999 Statement of Budgetary Resources. In this same report, the GAO questioned NASA's previous auditor, Arthur Andersen's, support for the unqualified opinion on this statement.

The status of NASA's financial management has been constantly questioned by the GAO and others, yet Arthur Andersen continued for years to give NASA a "clean bill of health." Is NASA the government's Enron? Did the agency's financial management problems begin in fiscal year 2001 or were they always present? In this hearing, we will focus on what went wrong at NASA for fiscal year 2001 and what actions are being taken to resolve the financial management issues.

I welcome today's witnesses. I look forward to working with each of you to ensure federal financial accountability throughout the federal government.

Mr. HORN. We will now swear in the panel. We have Mr. Kutz, Mr. Li, Mr. Pastorek, Mr. Varholy, Mr. Lamoreaux, and Mr. McNamee. Please stand and raise your right hand.

[Witnesses sworn.]

Mr. HORN. We have a vote on the floor, so we're going to have to go into recess at this point and we will be back in about 15 minutes. Thank you very much.

[Recess.]

Mr. HORN. The recess is over and the journal is approved and our best wishes to Ukraine on their elections.

Now we get down to serious business, and we now start, as we usually do, with the General Accounting Office, and we have Gregory Kutz, the Director of Financial Management and Assurance, and Allen Li, the Director, Acquisition and Sourcing Management.

Gentlemen, proceed.

STATEMENT OF GREGORY D. KUTZ, DIRECTOR, FINANCIAL MANAGEMENT AND ASSURANCE, U.S. GENERAL ACCOUNTING OFFICE, ACCOMPANIED BY ALLEN LI, DIRECTOR ACQUISITION AND SOURCING MANAGEMENT, U.S. GENERAL ACCOUNTING OFFICE

Mr. KUTZ. Mr. Chairman, good morning. It is a pleasure to be here to discuss NASA's financial management. With me is Allen Li, the Director in charge of our NASA program work.

NASA's technical and scientific excellence has been demonstrated consistently over the years; however, this same level of excellence is not evident in many of NASA's business operations, including its financial management. The bottom line of my testimony is that NASA's financial management difficulties are not new. NASA's longstanding contract management problems have always suggested that NASA does not have the financial management information it needs to effectively manage its programs.

My testimony today will focus on the work we have done recently related to NASA's financial management. GAO has not performed a comprehensive review of NASA's financial management systems or information since fiscal year 1993. Our ongoing program work at NASA and several recent GAO financial management reports are the basis for my testimony.

For the past 5 years, NASA was one of the very few agencies whose auditors reported unqualified audit opinions on the financial statements, no material internal control weaknesses, and systems that complied with Federal standards. NASA annual reports results implied that it not only could generate reliable information once a year for external financial reporting, but also could provide accurate, reliable information for day-to-day decisionmaking. However, in contrast with previous Arthur Andersen reports, NASA's new auditor, PricewaterhouseCoopers, which I will refer to as PWC, disclaimed an opinion on NASA's 2001 financial statements, identified significant internal control weaknesses, and found that NASA's systems do not comply with Federal standards.

Although the auditor's report draws attention to the issue, NASA's financial management difficulties are not new. For example, NASA has been on GAO's high-risk list for contract management problems since 1990. The high-risk designation is due, in

part, to NASA's difficulties implementing a modern, integrated financial management system that routinely provides reliable information.

Further, about a 1½ years ago congressional staff members found a $644 million mis-statement in NASA's fiscal year 1999 financial statements, an error that NASA management and Arthur Andersen had not identified. As we reported in March 2001, the error resulted because NASA's systems could not produce the budgetary data required by Federal accounting standards. Instead, NASA relied on an ad hoc year-end data call from its ten reporting units and the aggregation of data using computer spreadsheets.

Based in part on this ad hoc process, we questioned NASA's and Arthur Andersen's determination that its systems complied with Federal standards. We also reported that Arthur Andersen's work did not meet professional standards. Evidence in Arthur Andersen's working papers was not adequate to support the unqualified opinions on NASA's 1999 budgetary financial statements.

Auditing is about independently validating management representations; however, we found that Andersen's work was characterized by excessive reliance on representations by NASA management. This reliance resulted in the absence of any independent validation of underlying data for certain key balances.

Recently, additional information on the extent of NASA's financial management difficulties has come to light. In response to a legislative mandate, we have been attempting for more than a year to validate amounts that NASA has reported to the Congress as obligated against statutory space station and related shuttle cost spending limits.

After this protracted effort, NASA has finally acknowledged that it cannot support amounts reported to the Congress as obligated against the spending limits. For 2001, PWC also found that NASA could not adequately support obligations and expenses. In addition, NASA does not have real-time cost data to compare to budget estimates that would provide early warning signs of cost overruns. This is important because, from its inception, the space station program has been characterized by schedule delays, cost overruns, and reduced capabilities.

Lack of reliable cost data was evident when NASA announced in 2001 that it had a $4.8 billion cost overrun for the space station. An independent task force reported in late 2001 that the space station program lacks the financial management tools and cost data necessary for successful completion within budget.

It is clear that modernizing NASA's financial management systems is a key element of reform. To its credit, NASA is working toward implementing an integrated financial management system that is expected to be operational in 2006 at a reported cost of $475 million. However, this is NASA's third attempt at systems modernization. The first two efforts were abandoned after 12 years at a reported cost of $180 million.

In summary, NASA should fully acknowledge the financial management problems it faces and look for lasting solutions. The goal should not be a clean opinion; rather, the goal should be timely and accurate data that can be used to effectively manage NASA's programs.

We recently met with the new administrator, who represented that improving financial management at NASA, including implementing the new system, would be one of his top priorities. We believe that the administrator's support and leadership in this area are key elements for successful reform.

Mr. Chairman, this ends my statement. Mr. Li and I would be happy to answer questions after the others have given their statements.

Mr. HORN. Thank you very much.

[The prepared statement of Mr. Kutz follows:]

United States General Accounting Office

GAO

Before the Subcommittee on Government Efficiency, Financial Management and Intergovernmental Relations, Committee on Government Reform, House of Representatives

For Release on Delivery
Expected at 10 a.m.
Wednesday,
March 20, 2002

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Leadership and Systems Needed to Effect Financial Management Improvements

Statement of Gregory D. Kutz,
Director, Financial Management and Assurance and
Allen Li, Director Acquisition and Sourcing Management

GAO-02-551T

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 reports[2] 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 FMFIA 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 list[3] 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 auditor[4] 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.

[4]PricewaterhouseCoopers 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 FFMIA 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

[5]GAO-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

[6]According 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 though 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

[7]Expenditures 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

[8]U.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

For further information regarding this testimony, please contact Gregory D. Kutz at (202) 512-9095 or kutzg@gao.gov, or Allen Li at (202) 512-3600 or lia@gao.gov. Individuals making key contributions to this testimony included Molly Boyle, Francine DelVecchio, and Diane Handley.

Mr. HORN. We now move to Paul G. Pastorek, general counsel, National Aeronautics and Space Administration.

STATEMENT OF PAUL G. PASTOREK, GENERAL COUNSEL, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, ACCOMPANIED BY STEPHEN J. VARHOLY, DEPUTY CHIEF FINANCIAL OFFICER, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Mr. PASTOREK. Good morning, Mr. Chairman. I have a written statement which I'll submit for the record and I'll make a few comments, if I may.

Mr. HORN. All right. We need to get you close to that mic.

Mr. PASTOREK. I'm sorry. Can you hear me now?

Mr. HORN. Yes. Thank you.

All of the statements automatically go in the record when we call you up, and if you could summarize it, obviously we'd appreciate it.

Mr. PASTOREK. Thank you, sir.

First of all, I was appointed by the President and began service with NASA a month ago at the recommendation of Mr. O'Keefe, and prior to coming on board I have been a commercial lawyer for about 25 years involved in financial and accounting issues. Mr. O'Keefe has asked me if I would assist him in this interim period while we are awaiting a new CFO and other individuals to focus on these financial management issues.

I would like to make three points. First, we sincerely welcome the opportunity to be here today to explain what we are doing to address the financial management problems that we have at NASA and to hear your concerns and the others' concerns about that.

As you all know, the Commissioner—the Administrator has a reputation for correcting problems, particularly financial ones. And it is, indeed, important that we have that kind of management skill in this case because it is undeniable that NASA has financial management problems and a history of being unable to implement a much needed integrated financial system.

The only way to correct a problem is to fully understand the nature of it. We've already met with the Office of the Inspector General and Pricewaterhouse to understand the full measure of their concerns—just recently, about a week-and-a-half ago.

We welcome the opportunity to hear the comments today of GAO, and we certainly welcome the opportunity to hear further from all of these individuals in this regard so that we can address these problems adequately and promptly.

I do want to assure you, as has been pointed out, that after safety, which is the first priority of this Administrator, from a management perspective, financial management is the highest priority.

I want to review the steps that have been taken by the Administrator to address these problems, and I have a one-page handout which I have given to you, sir, and go through that very briefly.

No. 1, as I've said, the Administrator has made financial management systems and the implementation of the IFMP the highest management priority. The Administrator was originally advised that the schedule for implementation of financial management, the new integrated financial management program, would not occur

until fiscal year 2007, but after he came on board, further work has been done, and that timeline has been accelerated to fiscal year 2005, with the core financials to be completed in fiscal year 2003. We also have a schedule also provided to your staff which outlines that new schedule.

The Administrator has met personally with the Chief Executive Officer and chairman of the Board of SAP, who is the contractor for the Integrated Financial Management System, to make sure that we have a high level of communication with our contractor for the implementation of the program.

The Administrator has also hired a special assistant responsible for financial management, reporting directly to him in order to successfully implement the integrated financial management program. In fact, he is here today—Mr. Patrick Seganar, who comes to us from private industry as a seasoned CFO who has successfully overseen implementation of such systems in his personal experience. His primary task is to assure quick and successful implementation of that, and, again, will report directly to the Administrator.

In addition, the Administrator has directed that there be a refocusing of the field center CFO structure to include financial analysis, and that it be complete once the Integrated Financial Management System is implemented. We are also focusing on full cost management, budgeting, and accounting, which has been initiated but will not be completed until the IFMP is in place.

Now, with respect to the NASA audit by PricewaterhouseCoopers, the Administrator has also undertaken a number of steps to address this problem. He has met personally with the Chief Executive and chairman of the Board of PricewaterhouseCoopers and the Office of the Inspector General to fully understand the problem and to develop, again, a high level of communication with the company so that we do not have this problem again.

In addition, we have provided that NASA will maintain or will change the way it accounts for certain information in response to PricewaterhouseCoopers' request.

Further, the Administrator is requiring NASA's personnel to work more closely with PricewaterhouseCoopers to address the still-existing problems on fiscal year 2001 audit issues. There have already been two meetings in the last 10 days to do so.

Finally, the Administrator has directed that NASA work more closely with Pricewaterhouse to create a better plan for the audit for the upcoming 2002 fiscal year. It is hoped that, by having a better plan, a high level of coordination between the Administrator directly and the top levels of management at PricewaterhouseCoopers, we will be able to address this problem aggressively and solve it by the time the next audit is in place.

The third point I wanted to make is, unless and until we successfully implement the financial management system that we have been talking about, we will have to struggle with an unduly complex, highly decentralized, and undeniably antiquated system of financial accounting which does not lend itself easily to solving the financial management needs of the Agency, this committee, or the citizens of this country.

NASA did not get into this situation regarding financial management overnight and it will not solve the problem overnight, either; however, we will do our best to work with what we have to provide the best information we can so that proper decisions can be made by NASA and by Congress.

I want to thank the committee for the opportunity to be heard and am prepared to answer your questions.

Mr. HORN. Thank you, sir.

[The prepared statement of Mr. Pastorek follows:]

Hold for Release
Until Presented by Witness
March 20, 2002

Statement of
Paul G. Pastorek
General Counsel
National Aeronautics and Space Administration

Before the
Subcommittee on Government Efficiency,
Financial Management, and Intergovernmental Relations
Committee on Government Reform
House of Representatives

Mr. Chairman and Members of the Subcommittee:

I appreciate the opportunity to appear before you today to discuss two serious matters.

First, I am here to discuss your legitimate concerns regarding NASA's efforts to strengthen its financial management.

Second, I am here to discuss the audit by PricewaterhouseCoopers (PWC) an independent public accounting firm hired by the NASA Office of the Inspector General (OIG) to audit the Agency's FY 2001 financial statements. In the audit, PWC concluded that it could not express an opinion on the financial statements because NASA did not provide sufficient evidence needed to support certain amounts reported as obligations, expenses, property, plant, and equipment (PP&E), and materials in the Agency's financial statements.

Let me start by saying that I speak for the Administrator and NASA when I say that it is most regrettable that PWC was unable to express an opinion on the Agency audit for 2001. For its part, NASA should have produced the information that was requested by the auditors, and it should have been produced in a timely manner, so as to meet the deadlines that were imposed by PWC.

As most of you are likely aware, the new Administrator, Sean O'Keefe, was confirmed by the Senate on December 21, 2001, to serve as the Administrator of NASA. He began his service effective January 1, 2002. On February 13, 2002, less than six weeks later, the OIG and PWC advised Mr. O'Keefe for the first time that due to a lack of evidence it could not express an opinion. Unfortunately, by the late date he was advised, the audit

was due and NASA had no time within which to attempt to give the required information to PWC. Simply put, when he first became aware of the problem, time had run out.

Further, the NASA Deputy Chief Financial Officer (CFO), knew there were several questions raised by the auditor as to the adequacy of the information that had been previously supplied, but he did not understand that this lack of information would result in the level of concern that PWC ultimately expressed, until it was finally expressed to the Administrator on February 13, 2002.

Why was NASA unable to provide the data that was requested by PWC, and do so in a timely fashion?

There are essentially three reasons.

First, for one important aspect of the audit, PWC required for the first time in the 2001 audit a different protocol for sampling determination than had been required by the previous independent auditor. This newly required protocol coupled with the complicated and antiquated method of accounting and record keeping that NASA uses to collect these transactions, resulted in the Agency having to spend a substantial amount of time (three and half months) to compile a transactions log so that PWC could choose the sample items that they were interested in assessing. This delay resulted in a very short period of time for NASA to pull the requested samples. Indeed, because of the delay in preparing this log, PWC was not able to identify the necessary samples which needed to be audited until December 21, 2001, and the audit was due to be completed as of February 22, 2002. As is typical of these types of audits, most of the sample information had to be requested from NASA's field offices, sent to Headquarters, then provided to PWC, some of which was acceptable and some of which was not. Where not adequate, PWC then advised Headquarters, who in turn had to re-request the information from the field office and so forth. Further, in some cases, a few field offices failed to provide all the requested information. Unfortunately, in the end, the amount of information that was suitable for analysis was insufficient for purposes of the audit. In retrospect, the method of pulling the sampling information, although typical, was not adequate considering the short time period NASA had to get the work done. The method assumed that the field offices would get the sampling request right on the first effort, and when that didn't happen, time, which was already short, ran out.

Second, there were a number of accounting matters for which PWC sought additional information. NASA undertook to provide information to PWC in an orderly fashion. The information it provided was similar in composition to information that had been previously provided to the prior independent auditors and NASA expected that PWC would accept the same type of information. This was particularly true because in the seven years before this audit, NASA had received an unqualified audit opinion from its auditors who had relied on the same type of data NASA now offered to PWC. However, PWC did not wish to rely on the method of compiling the information that had been previously used, which is certainly within its prerogative. Unfortunately, it was not until a short period of time before the deadline to produce the audit that it became apparent to

NASA that the information provided to PWC would not ultimately be acceptable to PWC for purposes of the audit.

Third, there was a lack of understanding between PWC and NASA regarding the severity of the problems that were raised by PWC in regards to the supporting information that the Agency provided and the kind of information necessary to satisfy the auditor. It was not apparent to NASA that the concerns that PWC expressed during the audit were sufficient to rise to the level of causing the auditor to be hampered in completing the audit.

THE AGENCY MUST AND WILL CORRECT ITS FINANCIAL REPORTING DEFICIENCIES AND WORK TO RECOVER ITS CLEAN OPINION

Mr. O'Keefe came to NASA with a solid reputation as an individual who has exhibited a high level of competence in providing highly qualified financial leadership. As such, the Administrator is particularly determined to correct this problem as promptly as possible and return the Agency to the position it has enjoyed for the last seven years – achieving a clean audit – one which is unqualified and with no reference to material weaknesses.

Clarifying PWC's Requirements Earlier in the Process and Changing the Accounting Practices to Conform to PWC's Requirements

NASA is actively working with the PWC auditors to develop a better understanding of what data the auditors need and to work out a process for providing requested data to the auditors on a timely basis. Specifically, NASA is implementing the following corrective action plan:

- Teams have been formed in NASA to address PWC's recommendations. Each team will consist of CFO Office staff, Center finance staff, and subject matter experts, such as procurement staff to deal with contractor matters, and technical staff to address Station and Shuttle matters;

- Each team is developing an approach to address a PWC problem, and a written agreement on the approach NASA will follow will be obtained from PWC;

- NASA will continue to work with PWC to ensure that there will be agreement on the proper "opening balances" for all balance sheet accounts to avoid a carry-over of FY 2001 problems into the audit of the FY 2002 financial statements.

- NASA has already decided to change specific accounting practices to conform to the requests of PWC. It is fully expected that more accounting practices will be changed to accommodate the concerns of the auditor. The specific changes are being actively discussed with the auditor at this time.

Additionally, the Administrator requested a personal face-to-face meeting with the Chief Executive Officer of PWC and its top managers for the purposes of making certain that this problem does not happen again. The meeting was scheduled several weeks ago, and

was conducted on March 14, 2002. The OIG was invited to attend and did so. The meeting was very productive and there was agreement that NASA and PWC will maintain a high level of communications, and the Agency will stay focused and work as quickly as possible to correct these problems.

Finally, a meeting between PWC and NASA will be conducted next month to determine the status of this matter and make sure that things are on track to resolve these matters properly.

President's Management Agenda

It should also be pointed out that Mr. O'Keefe has committed NASA to undertake to achieve the President's Management Agenda as promptly as possible, and to the particular item related to the financial management element of the President's Management Agenda. This item focuses on three Government-wide problem areas: erroneous benefit and assistance payments, a "clean" financial audit of the Federal Government, and accurate and timely financial information. The Office of Management and Budget (OMB) guidance states that an agency must meet the following criteria in order to execute the financial management initiative successfully:

- Agency receives an unqualified and timely audit opinion on the annual financial statements; there are no material internal control weaknesses reported by the auditors;
- Financial management systems meet Federal financial management system requirements and applicable Federal accounting and transaction standards as reported by the agency head;
- Financial information is timely and accurate;
- Financial and performance management systems supporting day-to-day operations are fully integrated.

The Administrator is committed to making the necessary changes as quickly as is possible to meet these objectives.

Integrated Financial Management System

Due to the use of individual, non-integrated systems at NASA Headquarters and Field Centers to meet statutory and regulatory reporting requirements, the Agency reports its financial systems as a significant area of management concern in its annual report pursuant to the requirements of the Federal Managers' Financial Integrity Act. While financial management systems are not integrated, the Agency has already implemented compensating policies and procedures that provide appropriate assurance regarding the

fundamental completeness and integrity of internal accounting and administrative controls related to financial statements.

But that is not good enough. NASA has a major effort underway to implement a single, integrated financial management system across the Agency. As with any software technology of this type, there are many bugs that will need to be worked out, but even so, early but preliminary, indications are that this technology will be reasonably effective on its implementation. Since the Administrator has come on board, he has insisted that this new system be accelerated in implementation.

The Integrated Financial Management (IFM) Program consists of a series of projects that, when fully completed, will result in a single, fully integrated financial management system encompassing core finance, including budget execution; travel; budget formulation; human resources, including time and attendance and payroll; asset management; and, procurement. While all components of the IFM Program are important, the successful completion of the core finance project is particularly critical to the satisfaction of the four OMB criteria. The core finance project is on budget and on schedule, and the necessary financial resources are available. Barring unforeseen factors, core finance will be implemented across NASA by June 2003.

Full Cost Initiative

NASA is implementing new full cost practices to improve the cost effectiveness of mission performance. This initiative includes policy and practice improvements in the accounting, budgeting, and management areas and is expected to provide complete cost information for more fully informed decisionmaking. NASA will associate all Agency costs (including Civil Service personnel costs) with major projects and to budget, account, report, and manage these activities from a full cost perspective.

NASA's "full cost" initiative integrates several fundamental accounting, budgeting, and management improvements. The planned improvements include: accounting for costs as direct, service, and general and administrative (G&A) costs, budgeting for full project costs, and managing such costs from a full cost perspective. Briefly stated, direct costs are costs that can be obviously and/or physically linked to a particular project, service costs are costs that cannot be readily or immediately linked to a project but can subsequently be traced to a project, and G&A costs are support costs that cannot be linked to any specific project in an economical manner. Under full cost practices, service costs will be "charged" or assigned to a project based on project-controlled use of, or plans for the use of, the service; and G&A costs will be allocated to projects in a consistent, logical manner based on a metric that indirectly relates G&A costs to projects.

All costs will continue to be controlled and managed within NASA. Under full cost management, however, project managers, who have the most direct mission responsibility and intimate project knowledge are expected to continue to control direct costs but also are expected to have greater control/influence over service and G&A costs.

Such control/influence is not unconstrained. At the same time, Enterprise and Field Center management is expected to continue to guide Center capabilities consistent with strategic imperatives. The core finance component of the IFM Program will provide the cost accounting capability the Agency needs to fully implement its full cost initiative and management, budget, and account on a full cost basis.

SUMMARY

NASA is working cooperatively with PWC at the highest levels to correct the audit concerns that have been raised by PWC and numerous corrective actions have been agreed to and more are being worked on as we speak. The Administrator and NASA are determined to do all that can be done to recover its unqualified audit opinion in the next audit cycle.

NASA's IFM Program and full cost initiative will enable the Agency to meet OMB's criteria for the financial management component of the President's Management Agenda and better manage the taxpayer's investment in the Agency. NASA will use IFM and the full cost approach to improve budget tracking program execution and increase the transparency and visibility of budget and performance data across the Agency and at all levels of management.

Thank you.

Mr. HORN. You are accompanied by——

Mr. PASTOREK. Mr. Steve Varholy, the acting CFO at NASA.

Mr. HORN. Do you have anything to add to that?

Mr. VARHOLY. No, I don't, sir.

Mr. HORN. All right.

Now, when did you send this "Actions Taken by New Administrator to Resolve NASA's Financial Management Issues?" When did that come in?

Mr. PASTOREK. I provided that to the committee this morning. I refer to a number of these steps in my prepared statement that we circulated to the committee earlier this week.

Mr. HORN. Well, we like these a little prior to the hearing, but it will be put in the record at this point without objection.

Mr. PASTOREK. I appreciate that, sir.

Mr. HORN. And that also includes the IFM schedule acceleration. Would you tell us what "IFM" is?

Mr. PASTOREK. That's the Integrated Financial Management Program. That's what the acronym is for. And this is the schedule for its implementation. There are two pages. The first one relates to the overall financial management program that will be installed by SAP, and the second page refers to one of those items on the first page, to-wit, the core financial implementation schedule. It is a detail of the bar chart on the first page.

Mr. HORN. Now, there were—we're going to go on, but just at this point the shuttle is what in the status of the accountants?

Mr. PASTOREK. The shuttle is? I'm sorry?

Mr. HORN. The shuttle and the space station.

Mr. PASTOREK. Right now the folks at NASA and Pricewaterhouse are working on a protocol to be able to arrive at adequate information for Pricewaterhouse's analysis to be able to give us and the committee and others a proper accounting for those two programs.

Mr. HORN. The IFM schedule acceleration will be put in the record after the "Actions Taken by the New Administrator," so it is in one piece and our colleagues can relate to it.

Mr. PASTOREK. Thank you, sir.

[The "Actions Taken by the New Administrator" and the IFM schedule acceleration follow:]

ACTIONS TAKEN BY NEW ADMINISTRATOR TO RESOLVE NASA FINANCIAL MANAGEMENT ISSUES

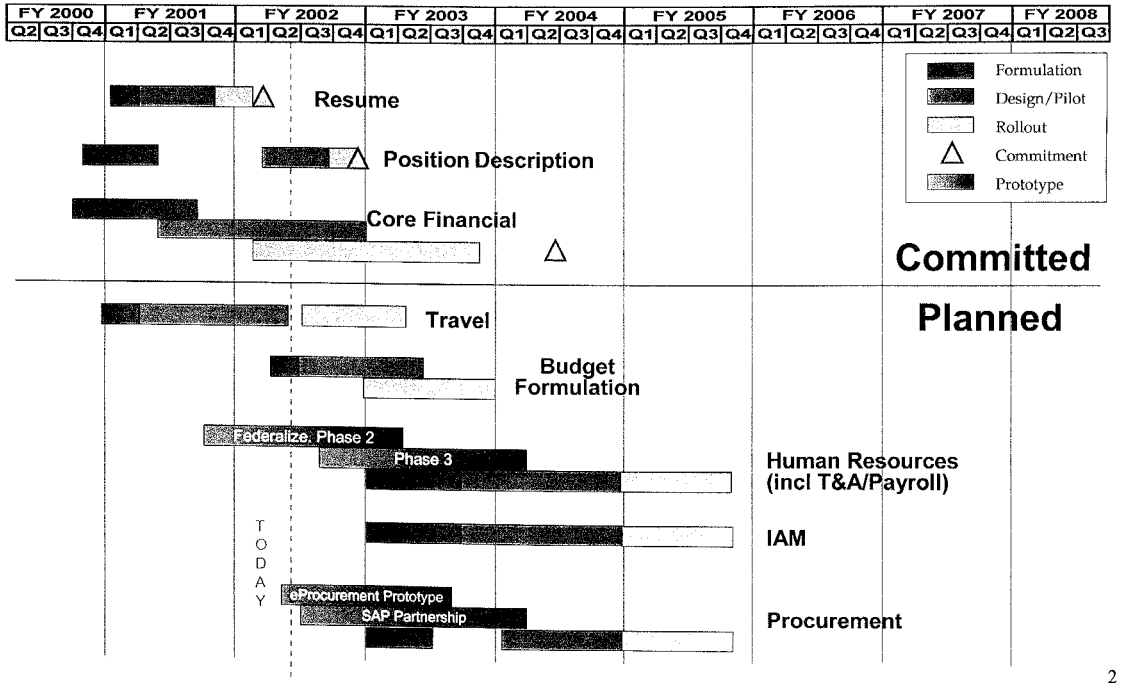
1. Financial Management – The Administrator has

- After Safety, made successful and accurate implementation of the **Integrated Financial Management System the highest priority**;
- **Accelerated the implementation schedule** of the Integrated Financial Management System;
- **Met personally with the Chief Executive Officer of SAP**, the contractor for the Integrated Financial Management System;
- **Hired a Special Assistant responsible for Financial Management** to successfully implement the Integrated Financial Management System;
- Directed a re-focus of **Field Center CFO structure to include financial analysis**, to be complete with implementation of the Integrated Financial Management System; and
- Directed that a **Full Cost management, budgeting, and accounting** initiative be initiated now, to be complete with implementation of the Integrated Financial Management System.

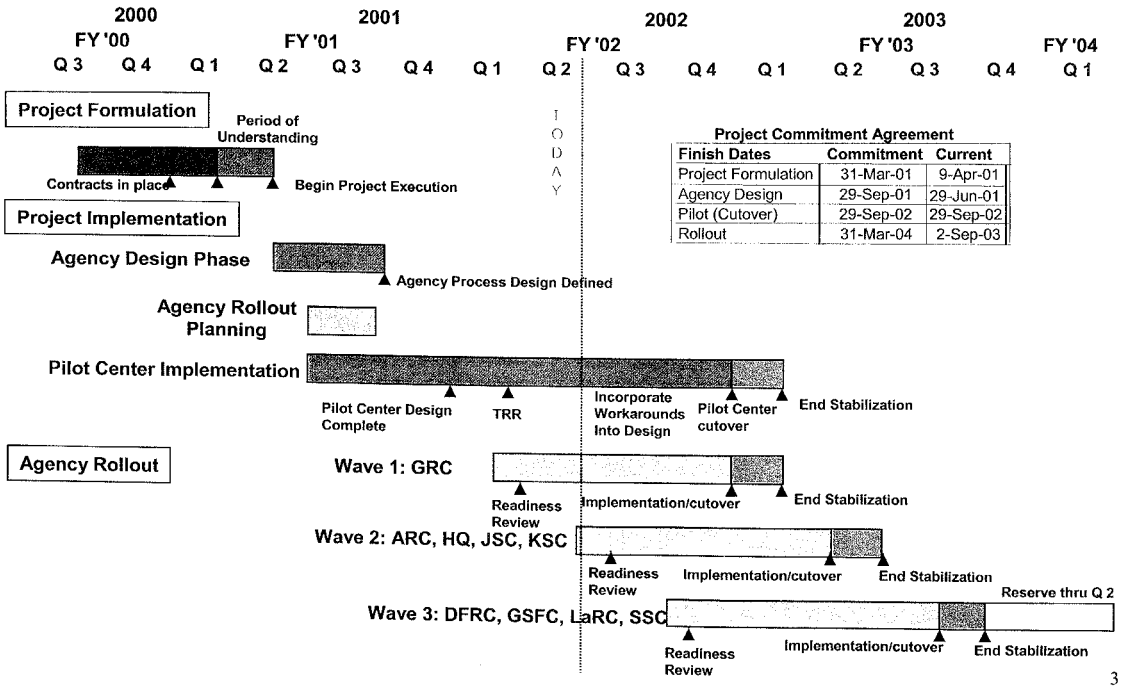
2. NASA Audit by PricewaterhouseCoopers – The Administrator has

- **Met personally with the Chief Executive Officer of PricewaterhouseCoopers and the OIG**, to understand the nature of the problem;
- Provided that NASA will **maintain communication with PricewaterhouseCoopers** and the OIG at the highest levels to avoid a repeat outcome
- Determined that **NASA will change the way it accounts for certain information** in response to the requirements of PWC;
- Required NASA to work more closely with PricewaterhouseCoopers to **address the FY 2001 audit issues**, including two progress meetings in the last two weeks; and
- Required NASA to work more closely with PricewaterhouseCoopers to **carefully plan for the FY 2002 audit**, including a meeting in the first week of April.

IFM Schedule Acceleration



Core Financial Implementation



Mr. HORN. We now go to Mr. Alan Lamoreaux, assistant Inspector General for audits, National Aeronautics and Space Administration.

STATEMENT OF ALAN J. LAMOREAUX, ASSISTANT INSPECTOR GENERAL FOR AUDITS, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Mr. LAMOREAUX. Mr. Chairman and members of the committee, thank you for the opportunity to be here today to discuss NASA's financial management issues. I'd like to briefly cover the current state of NASA's financial management system and the reasons for a disclaimer on its recent financial statements.

My written statement discusses the IG's work on the financial management system currently being implemented and a few examples of program decisions that were made without the benefit of accurate cost/benefit analyses using complete and accurate costs.

NASA's financial management system is comprised of ten decentralized, non-integrated systems established many years ago. The systems are not transaction based, standardized, or interfaced. Although the systems have been upgraded over the years, they remain antiquated and expensive to maintain.

The financial management systems do not provide NASA management with online, up-to-date information designed to assist managers in making daily decisions.

To accomplish the fiscal year 2001 financial statement audit, the NASA OIG contracted with PricewaterhouseCoopers, PWC. After NASA received unqualified—that is, clean—opinions on its financial statements for the last 7 years, Pricewaterhouse disclaimed—that is, did not express an opinion. The disclaimer resulted primarily from NASA's inability to provide in a timely manner detailed transaction data and documents to fully substantiate the accuracy and the classification of amounts the Agency reported as obligations; expenses; plant, property, and equipment; and materials.

At this point I'd like to cover what changed from last year's audit.

Our contract with PWC required that the auditors place only limited reliance on internal controls for the first 2 years. In using this approach, which is consistent with the GAO PCIE Financial Audit Manual, a more-substantial level of transaction testing is required because internal controls were not fully relied upon to reduce testing.

Because of the limited reliance on internal controls, Pricewaterhouse selected a large statistical sample covering 11 locations to test $14.9 billion of obligations and expense transactions. In comparison, the previous year's auditor, Arthur Andersen, sampled fewer transactions covering three NASA centers and obtained the samples from a summary system. Each year over the 5-year period, Andersen selected different centers. Andersen had a different degree of cumulative audit knowledge and experience with NASA's financial systems. In contrast, PWC used the transaction-based sampling approach from a universe of transactions that rolled-up to the general ledger accounts.

To statistically select a sample of obligations and expense transactions, the universe of all transactions had to be established.

NASA centers were given a few weeks to provide all transactions that made up their portions of the overall universe. Ultimately, it took until mid-December 2001, 3½ months later, to identify all of the center's transactions necessary to select the sample.

In the ensuing 6-week period, through February 13, 2002, NASA's center financial personnel were tasked to send PWC supporting documentation for the sampled obligations and expenses. Of supporting obligation documents, 24 percent was not received by PWC. Of the documents that were received, 30 percent did not adequately support the transactions. Similarly, 30 percent of expense transactions documents also were not adequately supported. Without adequate documentation, PWC could not conclude whether amounts were fairly presented in the financial statements.

The next major areas contributing to the disclaimer were an accounting for $1.2 billion in shuttle components and accounting for $5.8 billion in space station costs. In accordance with accounting principles, property is capitalized and depreciated or expensed over the useful life of the asset. By contrast, materials are expensed when consumed during normal operations. NASA did not provide sufficient documents for PWC to determine the appropriateness of these shuttle or space station costs relative to property or materials.

The final area was $4.7 billion in contractor-held property. This is property owned by NASA but in the possession of contractors. The contractors reported these assets as materials under a confusing NASA definition of materials. NASA subsequently reclassified the materials as property; however, the information NASA provided PWC did not fully substantiate the reported amount.

Even though NASA financial management officials consistently stated they would take the necessary steps to provide the requested documentation to PWC, better communication should have occurred earlier to alert senior management levels at both NASA and OMB of potential problems with the audit opinion.

During the audit, monthly then weekly status meetings were conducted with PWC, the acting CFO, the IG, and their staffs. However, until February 13, 2002, neither the NASA Administrator nor OMB knew that the opinion was in jeopardy.

For the 2002 audit, NASA financial managers are currently formulating a corrective action plan. Also, accounts that affect the 2002 audit must be analyzed and adequately documented by NASA and audited by PWC to establish accurate opening balances. In addition, PWC will brief the NASA administrator in a timely fashion when milestones are not met or major problems are identified. With sufficient management attention, documentation and accounting issues should be resolved.

My written testimony provides a history of NASA's experience with implementing an integrated financial management system. After two failed attempts, as of March 2000, a third effort is underway. The integrated financial management program, or the IFMP, is a prerequisite for implementation of the Agency's full cost initiative. The latest attempt to implement the IFMP is scheduled for implementation—or, excuse me, for completion in June 2008, at a cost of $835 million.

NASA plans to fully implement the core financial model by June 2003. It is the backbone of the system and it supports the Agency's full cost initiative.

My written testimony also provides details on OIG reviews of past IFMP efforts in both ongoing and planned audits of the current project. It is vital to have a financial system that not only produces auditable financial statements, but provides accurate, transaction-based, full-cost data to NASA's leaders, program managers, and the Congress.

I would be happy to answer any questions.

Mr. HORN. Thank you very much. We'll get to that.

[The prepared statement of Mr. Lamoreaux follows:]

Statement of

ALAN J. LAMOREAUX
Assistant Inspector General
for Audits

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

Before the

HOUSE SUBCOMMITTEE ON GOVERNMENT EFFICIENCY, FINANCIAL MANAGEMENT, AND INTERGOVERNMENTAL RELATIONS

March 20, 2002

Mr. Chairman and Members of the Committee, thank you for the opportunity to be here today to discuss NASA financial management issues.

INTRODUCTION

NASA's financial management system is comprised of 10 decentralized, non-integrated systems established many years ago in response to requirements, policies, procedures, and practices that have changed substantially throughout NASA's history. The systems are not transaction-based,[1] standardized, or interfaced. Although the systems have been upgraded over the years, they remain antiquated and expensive to maintain. Data entered by Center personnel is summarized and processed to update the Center's general ledger accounts. Subsequently, this summarized data is reported to NASA Headquarters. The financial management systems do not provide NASA management with on-line, up-to-date information designed to assist managers in making daily decisions. Each system is unique, and the cost to maintain the systems is high because each system must be evaluated and updated based on its unique capabilities. In fiscal year (FY) 2001, as it has done for the past several years, NASA management designated financial management systems as a "significant area of

[1] Under a transaction-based system, the general ledger is updated automatically as transactions are entered into the financial management system.

management concern" because these systems lack standardization and need to be modernized. NASA's nonintegrated, decentralized financial management system is one of the primary causes for NASA's receiving a disclaimer on its FY 2001 financial statements. The system contributes greatly to the inability of NASA managers to determine complete and accurate costs of Agency projects and programs and to NASA's lack of complete and accurate cost-benefit analyses.

FY 2001 FINANCIAL STATEMENT AUDIT

The NASA Office of Inspector General (OIG) is responsible for NASA's annual financial statement audit. For the FY 2001 audit, the NASA OIG contracted with PricewaterhouseCoopers LLP, an independent certified public accounting firm. The audit must comply with generally accepted government auditing standards; Office of Management and Budget (OMB) Bulletin 01-02, "Audit Requirements for Federal Financial Statements"; and the General Accounting Office/President's Council on Integrity and Efficiency "Financial Audit Manual," published in July 2001. The contract required that the audit be done using a "some" controls[2] reliance approach in the first 2 years for audit testing in all financial component areas. The "some" controls and Financial Audit Manual requirements were placed in the contract in response to a General Accounting Office (GAO) recommendation in its March 2001 report, "Misstatement of NASA's Statement of Budgetary Resources."

After NASA received unqualified (clean) audit opinions[3] on its financial statements for the last 7 years, PricewaterhouseCoopers disclaimed an opinion. The disclaimer resulted primarily from NASA's inability to provide, in a timely manner, documentary evidence to fully substantiate the accuracy and the classification of amounts reported as obligations; expenses; property, plant, and equipment; and materials.

What changed?

Sample size and methodology. For FY 2001, NASA reported obligations incurred of $14.9 billion and total program expenses of $14.9 billion. To obtain reasonable assurance about whether these large amounts were fairly stated, PricewaterhouseCoopers, in accordance with the Financial Audit Manual, selected a large statistical sample size of 268 obligations and 219 expense

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[2] A "some" controls reliance approach requires a more substantial level of transactions testing; internal controls are not fully relied upon to reduce testing.

[3] An unqualified opinion means that the financial statements present fairly, in all material respects, the financial position of NASA for the period, its budgetary resources for the fiscal year then ended, and its net cost, changes in net position, and financing for the fiscal year ended, in conformity with accounting principles generally accepted in the United States.

transactions covering 11 NASA Centers.[4] The previous year's auditor, Arthur Andersen, sampled 79 obligations and 84 expense transactions covering 3 NASA Centers and obtained the sample from a system[5] that NASA reconciled to the general ledger on a monthly basis. Each year, Arthur Andersen selected different Centers. Arthur Andersen was in the fifth year of a 5-year contract and had a different degree of cumulative audit knowledge and experience with NASA's financial systems. In contrast, PricewaterhouseCoopers used a transaction-based sampling approach from a universe of transactions that comprised the general ledger accounts.

To statistically select a sample of obligations and expense transactions, the universe had to be established that agreed with the June 30, 2001, financial statement and general ledger amounts. To accomplish this, NASA financial managers tasked the Centers to electronically provide all transactions that made up their portions of the overall universe. The Centers were tasked at the end of August 2001 and were given a September 7th deadline. Ultimately, it took until mid-December 2001, three and a half months later, to identify all of the Center transactions that made up the universe necessary to select the sample.

In the ensuing 6-week period through February 13, 2002, Center financial personnel were tasked to send supporting documentation for the sampled obligations and expenses. Although weekly audit status meetings[6] were attended by the acting Chief Financial Officer (CFO), the Inspector General (IG), and their staffs to identify backlogs and problems with acquiring documentation, as of February 13, 2002, 64 (24 percent) of 268 supporting obligation transaction documents were not received by PricewaterhouseCoopers. Of the 204 obligation documents that were received, 62 (30 percent) did not adequately support the sampled transactions. In comparison, only 4 (2 percent) of 219 expense documents were not received; however, of the 215 expense documents that were provided, 64 (30 percent) did not adequately support the sampled transactions. Because of the lack of adequate support for such a large percentage of transactions, PricewaterhouseCoopers could not conclude whether these amounts were fairly presented in the financial statements. This situation along with others that follow greatly contributed to the disclaimer.

Accounting Changes of Shuttle Components. NASA changed its accounting policy for certain assets[7] held by contractors and used in the Space Shuttle

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[4] The 11 Centers are NASA Headquarters, Ames Research Center, John H. Glenn Research Center, Langley Research Center, Dryden Flight Research Center, Goddard Space Flight Center, Jet Propulsion Laboratory (processed by Goddard), George C. Marshall Space Flight Center, John C. Stennis Space Center, Lyndon B. Johnson Space Center, and John F. Kennedy Space Center.

[5] The system Arthur Andersen used was the Financial and Contractual Status system that summarized obligations and costs by fund source, unique project number, and object class type.

[6] Weekly status meetings were held January 9, 16, and 23 and February 1, 6, 13, and 20, 2002.

[7] These assets were valued at $1.2 billion on the financial statements.

program, reclassifying them from depreciable property[8] to materials that will be expensed as they are consumed. This change was effected through the reporting of assets held by NASA's contractors on the annual NASA Form 1018 reports.[9] In accordance with the new accounting policy, most Space Shuttle components would be expensed as they were used. But other components, such as engines that are typically refurbished and reused rather than consumed in a single mission, would not be expensed until they were destroyed or replaced by a new model. Thus the acquisition costs of the engines would not be attributed to the periods in which they were used. NASA believed that the total impact on the financial statement was only $22.8 million; however, the information provided by NASA did not contain sufficient documentary evidence for PricewaterhouseCoopers to determine the appropriateness or the effect of the accounting change.

Prior Period Adjustment for Launch Costs on the International Space Station (ISS). NASA increased the amount of costs capitalized to the ISS for Space Shuttle launches made during FY 2000 by $636 million. According to NASA (but not verified by PricewaterhouseCoopers) the Agency recorded two FY 2000 launches in its financial records at $411 million each based on budget figures. In FY 2001, NASA said the actual costs for the launches were $729 million each. NASA did not provide sufficient documentary evidence in support of this adjustment for PricewaterhouseCoopers to determine whether the additional amount that was capitalized fairly presents Shuttle launch costs attributable to the ISS.

Other documentation problems.

Makeup of ISS Costs. NASA capitalized approximately $5.8 billion[10] in costs for the ISS during the year ended September 30, 2001. These costs included $2.1 billion in hardware delivered to orbit, $3.0 billion in Shuttle launch costs, and $746 million in integration contract and testing, launch support, operations, and ground processing costs. NASA did not provide sufficient documentary evidence for PricewaterhouseCoopers to determine the accuracy and completeness of those capitalized costs.

Contractor-held property. NASA reported in its consolidated balance sheet approximately $4.7 billion of NASA-owned materials held by contractors. The contractors reported materials using a definition that commingled the Federal Accounting Standards Advisory Board's definition of inventory (materials) and its definition of property, which impaired NASA's ability to classify these assets in

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[8] The cost of depreciable property is "capitalized" as an asset on the financial statements. Capitalized costs benefit more than 1 year and are, therefore, expensed over multiple years rather than in a single year.

[9] The Agency uses Form 1018, "NASA Property in the Custody of Contractors," as the primary documentation in establishing the value of ISS property in its annual financial statements.

[10] Of the $8.9 billion in total ISS costs since inception, $5.8 billion in costs occurred in FY 2001.

conformity with generally accepted accounting principles. NASA subsequently reclassified the materials as property, plant, and equipment. The information NASA provided did not contain sufficient documentary evidence for PricewaterhouseCoopers to determine how much of the reported contractor-held materials amount should have been presented as materials and how much should have been presented as property, plant, and equipment.

Communications during the audit.

Better communications should have occurred to earlier alert the most senior management levels at both NASA and OMB of potential problems with the audit opinion. During the audit, monthly status meetings were conducted from August 6 through December 19, 2001. PricewaterhouseCoopers, the Acting CFO, the IG, and their staffs attended each meeting. When time began to run short, weekly meetings were held January 9, 16, and 23 and February 1, 6, 13, and 20. PricewaterhouseCoopers distributed score sheets at the meetings showing the NASA Centers that either did not provide documents or provided inadequate documents for the obligations, expenses, and property samples. The score sheets showed some progress, and NASA financial management officials repeatedly stated they would take the necessary steps to provide the requested documentation to PricewaterhouseCoopers.

At the November 19th meeting, the PricewaterhouseCoopers timeline indicated that it would deliver a draft of the opinions to NASA on January 19, 2002. Throughout the audit, even though there was a delay in constructing the universe of transactions, NASA financial management officials consistently stated they would take the necessary steps to provide the requested documentation to PricewaterhouseCoopers. On February 13, 2002, PricewaterhouseCoopers indicated that because of multiple problems, including the lack/inadequacy of obligations and expenses documentation and the lack of supporting analyses and documentation for Shuttle, ISS, and contractor-held property costs, NASA would receive a disclaimer of opinion. The NASA Administrator was briefed for the first time on the same day. The next day, February 14, 2002, OMB was briefed.

Corrective actions planned.

NASA financial managers are formulating a corrective action plan that will be shared with PricewaterhouseCoopers and the OIG by the end of this month. Those accounts that affect next year's audit, such as Shuttle, ISS, and contractor-held property and materials, must be analyzed and adequately documented by NASA and audited by PricewaterhouseCoopers to establish accurate opening balances for the FY 2002 audit. Methodologies for obtaining obligations and expense documentation must be established, and Center financial personnel must respond promptly with accurate supportable documents. In addition, to ensure that the most senior levels of NASA management are

informed of progress on the FY 2002 audit, PricewaterhouseCoopers will set up a timeline that will include NASA Administrator briefings when milestones are not met or major problems are identified. Without adequate and timely resolution of these items, the FY 2002 financial statement opinion, due February 1, 2003 -- 1 month sooner than in FY 2002, will be in jeopardy. With sufficient management attention, existing analyses and documentation issues should be resolved.

NASA's INTEGRATED FINANCIAL MANAGEMENT SYSTEM

History.

OMB Circular A-127, "Financial Management Systems," requires Federal agencies to establish and maintain a single, integrated financial management (IFM) system that complies with applicable accounting principles, standards, and related requirements as defined by OMB, the Department of the Treasury, and the Agency. Currently, NASA does not have a single, integrated financial system as required by Circular A-127, but instead, has 10 separate systems producing information that must be consolidated at Headquarters through cumbersome techniques. It currently takes enormous efforts to produce financial statements and information for NASA decision makers, the Congress, and the public.

First attempt.

NASA has been trying to implement an integrated financial system for more than 10 years but has not been successful. In 1989, OMB cited NASA's financial accounting systems as "high risk" for not having a standardized, centralized financial accounting system. To correct that problem, the Agency began work on two major system development projects: (1) the NASA Accounting and Financial Information System (NAFIS) and (2) the Time Attendance and Labor Collection/Labor Distribution System (TALC/LD). NASA's primary contractor, Computer Sciences Corporation, attempted to design both systems to incorporate and link the many different systems that already existed at the Centers and Headquarters using specially designed software. However, in February 1995, the NASA Chief Financial Officer terminated all work on NAFIS and TALC/LD and redirected efforts toward a new approach for an IFM information system through the purchase of Commercial-off-the-Shelf (COTS) software. NASA referred to the new project as the Integrated Financial Management Project (IFMP).

Second attempt.

In our audit, "Early Phases Of NASA's Integrated Financial Management Project" (October 1996), we reported to NASA management that additional steps should be taken in its planning of the IFMP to ensure that the project is cost-effective and consistent with important management objectives and legal requirements, including:

- conducting functional and overall risk analyses as part of the requirements definition;
- performing and documenting a comprehensive analysis of alternatives for meeting requirements;
- modifying project plans to include several key cost issues and alternatives; and
- preparing a more realistic project schedule.

In September 1997, NASA awarded a fixed-price contract, valued at $186 million, to KPMG Peat Marwick (KPMG) of Washington, D.C., to provide COTS software for, and to implement NASA-wide, the IFMP. The contract required that the IFMP be implemented at all NASA locations by July 1, 1999.

During a subsequent audit of the IFMP entitled, "Implementation of NASA's Integrated Financial Management Project" (April 1999), we reported that KPMG would not deliver to NASA a COTS-based IFM system by July 1999.

Developmental and technical problems required further contract modification, and NASA was unable to determine the extent to which the problems would impact the delivery schedule.

NASA issued a stop work order to KPMG on March 10, 2000. At that time, NASA had already obligated $198 million on IFMP of which $10.2 million was paid to KPMG. On October 10, 2000, NASA and KPMG signed a Settlement Agreement and Mutual Release between the parties. Under the terms of the agreement,[11] NASA paid KPMG $37.9 million.

Latest IFMP effort.

NASA is continuing its efforts to develop an IFM system, and we are continuing audit coverage in this area. In March 2000, NASA developed a new strategy in its third attempt to implement an integrated financial system by using lessons learned from its prior efforts and by benchmarking other successful business system implementations. The goal of the latest effort, the IFMP, is to modernize and improve the Agency's business processes by implementing eight individual projects (or modules) in the areas of financial management, procurement, human resources, and logistics.[12] In addition, the IFMP is a prerequisite for

[11] The agreement was the result of an Armed Services Board of Contract Appeals Consent Judgment.

[12] The eight projects and scheduled completion dates as of February 15, 2002, are Resume Management (completed in March 2002), Position Description Management (October 2002), Travel Management (December 2002), Core Financial (October 2003), Budget Formulation (September 2003), Human Resources (July 2005), Asset Management (June 2006), and Procurement Management (June 2008).

implementation of the Agency's full cost initiative.[13] The latest IFMP is scheduled for completion on June 30, 2008, at a cost of $835 million.

One of the eight individual IFMP projects, the Core Financial Module,[14] is being developed. This project is the backbone of the IFMP as it consists of the standard general ledger, accounts receivable, accounts payable, budget execution, purchasing, fixed assets, and cost management functions. NASA plans to fully implement the Core Financial Module Project by October 2003.

On September 18, 2001, the OIG started an audit on the IFMP Core Financial Module Project. Our specific audit objectives and the status of each, based on our initial work are as follows:

Objective 1: Assess the adequacy of the procurement actions taken to acquire and implement the module. We noted no discrepancies in procurement documentation reviewed and procurement actions taken as of November 2001 that support acquisitions and implementation of the core financial module.[15] We plan no further audit work under this objective.

Objective 2: Determine whether module implementation is on target with budget and schedule expectations. As of January 2002, the core financial module was within budget and NASA met the first two major milestones.[16] At that time, nothing came to our attention to indicate that the module will not fall within budget and will not meet schedule. We plan no further audit work under this objective.

Objective 3: Determine whether the module meets Federal financial management system requirements. As a result of our initial work, we plan to perform a detailed audit to determine whether:

- The IFMP's Core Financial and Budget Formulation Modules will properly implement NASA's full cost initiative.

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[13] According to NASA's "Full Cost Initiative Agencywide Implementation Guide," February 1999, full cost is the concept of tying all Agency costs, including civil service personnel costs, to major activities.

[14] The COTS software for the Core Financial Module is supplied by SAP Public Sector and Education, Inc., of Washington D.C., under NASA contract number H 32946D with the George C. Marshall Space Flight Center.

[15] We reviewed documentation supporting purchases made from Accenture LLP; PriceWaterhouseCoopers; SAP Public Sector Education, Inc.; Credit Card Solutions, Inc.; OAO Corporation; and Thomson Financial Publishing.

[16] The two main milestones completed by the Core Financial Module were the formulation and design phases. The formulation phase developed system requirements, and the design phase developed a standard operating solution based on re-engineered business processes that would operate within the software's capabilities.

- The Core Financial Module will adequately support NASA's preparation and audit of its financial statements. In considering the circumstances surrounding the recent disclaimer of opinion in the audit of NASA's financial statements, we will determine whether the Core Financial Module will provide an adequate audit trail to support all transactions processed and ultimately support the financial statements. Additionally, we plan to determine how the system will compile the financial statements and whether this process will support the current and projected revised financial statement due dates.

Additional audits planned.

We recently announced a review of the IFMP's change management[17] plans and accomplishments. Specifically, we will determine whether NASA Centers are receiving adequate funding and support to implement the IFMP modules.

Also, our Information Assurance Audit Directorate will be conducting information security and integrity-related audits at both the pre- and post-implementation phases of the IFM system project. The scopes of these audits will include the adequacy of security planning prior to the implementation of the system as well as verification of adequate security controls after implementation.

Until project completion, NASA managers will not have complete financial visibility and insight into major programs such as the ISS and Space Shuttle. In addition, until the IFMP is fully implemented, NASA will have to use cumbersome, alternative procedures to fully account for major programs. Finally, without the IFMP, NASA will incur substantial costs to maintain legacy systems that an IFM system would replace.

COST-BENEFIT ANALYSES AND COST ESTIMATING

History.

IFM systems that provide reliable and accurate full cost information serve as the basis for reliable and accurate cost estimates. For many years, NASA has faced significant financial management challenges in providing accurate cost estimates for its programs and projects. In 1996, we reported[18] that NASA had not fully established an independent program assessment function in accordance with the

[17] Change Management is the process of aligning an organization's people and culture with changes in systems, processes, structure, and/or strategy. This alignment is achieved when people are successfully compelled to accept the value of the change and to transition into their new roles and working environment.

[18] The OIG issued a report on "Assessment of the Relocation of NASA Independent Program Evaluation & Assessment Activities to LaRC [Langley Research Center]" on July 8, 1996.

recommendations of the Augustine Report[19] and a 1992 GAO review.[20] Specifically, NASA did not implement the Augustine Report recommendation to establish an adequately staffed Systems Concept and Analysis Group at Headquarters to serve the Administrator. NASA also did not follow GAO's recommendations that the Agency direct the independent cost analysis group to review program estimates at all major milestones, decision points, or other significant events; strengthen the independent cost analysis staff with sufficient personnel to generate independent estimates; ensure that the cost analysis group operated independently with the results of cost reviews reported directly to the Administrator; and require that the advice on cost estimates be formally documented. We recommended that the Agency's independent cost analysis group, the Independent Program Assessment Office[21] (IPAO), be assigned organizationally to Headquarters to ensure its independence, even if physically located at a NASA Center. Management did not agree with the recommendation. Management agreed with our recommendation to enhance staff capabilities in systems analysis and cost estimation.

Impeded steps to improvement.

In September 2000, we reported that NASA was taking steps to improve the Agency's independent cost estimating capability by establishing a Systems Management Office[22] at each Center and by adding cost estimators to the IPAO at Langley.[23] However, we found that NASA had not established career development plans for its cost estimators and did not have a requirement to develop independent cost estimates at all major reviews. Further, we questioned whether the Agency's reporting and funding structures provide assurance that the cost estimates were independent in both fact and appearance. Management agreed to institute a requirement for an independent cost estimate after a program's critical design review and agreed to improve the training of cost estimators. However, management did not agree to establish an independent funding source for either the IPAO or for Systems Management Offices.

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[19]The Augustine report was issued in December 1990 as the "Report of the Advisory Committee on the Future of the U.S. Space Program."

[20]GAO issued report NSIAD-93-73, "SPACE PROGAMS: NASA's Independent Cost Estimating Capability Needs Improvement," in November 1992.

[21] The IPAO serves as Agency lead for the independent technical and programmatic assessment of advanced systems concepts and programs to provide Agency senior management with information needed to make sound decisions.

[22] The Systems Management Office provides (1) support and independent evaluations of programs and projects for compliance with implementation of NASA guidelines; (2) leadership, consultation services, and technical expertise on system engineering processes; and (3) support in forecasting costs for advanced program and project planning initiatives.

[23] The OIG issued report IG-00-045, "NASA's Independent Cost Estimating Capability," on September 20, 2000.

Follow-up review.

Our September 2001 report, on a follow-up of our 1996 review, again found that the effectiveness of the IPAO could be improved by increasing the organization's independence and enhancing its capabilities.[24] In addition, criteria for delaying or canceling an independent annual review should be clarified to ensure that projects needing an independent review receive such a review. NASA also needed to strengthen the capacity of the IPAO by recruiting experienced cost analysts and estimators. Further, relocating the IPAO organizationally (not necessarily physically) to NASA Headquarters could improve its effectiveness and independence. True independence and impartiality require the IPAO to report operationally and administratively to officials that have no stake in the competition for program funding.

NASA needed to modify the recently approved Integrated Review Process to ensure that the independence and effectiveness of the program/project reviews are maintained. Management agreed with five of the report's nine recommendations. Management disagreed with our recommendations to reassign the IPAO to Headquarters and to make improvements in the Integrated Review Process. Management was not responsive to our recommendation to establish clearly defined criteria for conducting independent reviews throughout the various phases of programs and projects. Management stated that criteria exist informally and have been used in the past.

Need for cost-benefit analyses.

The lack of credible cost estimates has prevented the preparation of reliable cost-benefit analyses so that sound decisions can be made by carefully examining alternatives that can result in expenditures of billions of dollars. For example, NASA did not perform a cost-benefit analysis as part of the decision-making process prior to awarding[25] the Consolidated Space Operations Contract[26] (CSOC) to ensure that the consolidation was the best approach for fulfilling space operations.[27] Without this analysis, NASA is not assured that the integrated operations approach will reduce the Agency-estimated $1.4 billion cost of operations over 10 years. Similarly, NASA cannot substantiate, as required,

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[24] The OIG issued report G-01-019, "Followup Review of the Independent Program Assessment Office," on September 28, 2001.

[25] NASA awarded the CSOC to the Lockheed Martin Space Operations Company on September 25, 1998. The contract is valued at more than $3.6 billion and includes a 5-year base period and a 5-year option period. The CSOC consolidates 13 NASA contracts.

[26] The CSOC contractor will provide and manage space operations services to meet the requirements of the NASA space flight programs. The contractor will also be accountable for data transmission to the end user, data processing and storage, mission support display and control, spacecraft operations support, mission planning and analysis, and mission control center operations.

[27] The OIG issued report IG-00-043, "Consolidated Space Operations Contract—Cost Benefit Analysis and Award Fee Structure," on September 30, 2000.

the $62 million of cost savings reported to the Congress for the first 2 years of the CSOC.[28] NASA based the reported cost savings on budget reductions rather than on an analysis of actual costs for work performed under the contract. As a result, the Congress and NASA cannot evaluate current cost savings for the CSOC or whether it will achieve the anticipated $1.4 billion cost savings through FY 2008.

NASA faces additional challenges in its management of the CSOC. The contractor's recent reorganization and performance issues including cost overruns, inadequate customer service and weaknesses in property management will require NASA's careful oversight.[29] Management agreed with our recommendation to perform a cost-benefit analysis before exercising any CSOC contract options. However, management does not plan to report cost savings in the future because NASA based anticipated savings on a mission model that is no longer valid. Also, management did not agree with our recommendation to revise cost savings amounts previously reported to the Congress to reflect savings based on actual costs.

In addition, NASA did not perform a cost-benefit analysis[30] prior to consolidation of Space Shuttle contracts under the Space Flight Operations Contract (SFOC).[31] The NASA Associate Administrator for the Office of Space Flight directed the consolidation of Space Shuttle contracts[32] in 1995 based on recommendations of a review team[33] commissioned by the NASA Administrator. Without a cost-benefit analysis and periodic evaluation, NASA cannot be certain it will achieve net savings from further consolidation of Space Shuttle contracts valued at about $10 billion for main engines, external tanks, and reusable solid rocket motors. Management agreed with our recommendation to perform a cost-benefit analysis before further consolidation of contracts into the SFOC.

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[28] The OIG issued report IG-01-029, "Consolidated Space Operations Contract: Evaluating and Reporting Cost Savings," on August 31, 2001.

[29] Although we did not make a formal recommendation, we identified these issues in a June 27, 2001, memorandum to the Associate Administrator for Space Flight.

[30] The OIG issued report IG-00-015, "Space Flight Operations Contract Phase II—Cost-Benefit Analysis," on March 14, 2000.

[31] The basic SFOC contract awarded to United Space Alliance (a joint venture between Boeing and Lockheed Martin) is 6 years with a value of $6.949 billion. The contract has two 2-year option periods.

[32] Under the SFOC, NASA identified 12 Space Shuttle contracts to be combined during Phase I and 15 contracts to be combined during Phase II. NASA's plan for the SFOC was designed to include a subset of Space Shuttle contracts and activities specifically focused on operational (rather than developmental) functions. As part of the SFOC, United Space Alliance is also responsible for certain Space Station Program mission operations functions.

[33] This team is known as the Kraft review team and was headed by the former Johnson Space Center Director, Dr. Christopher Kraft.

The absence of cost estimating data has impacted outsourcing decisions.[34] For example, in FY 1997, NASA management decided to outsource the Agency's desktop computing requirements.[35] Management made the decision based on a business case (outsourcing) analysis that concluded that desktop outsourcing could produce costs savings (about $226 million over 5 years) and other nonquantified benefits. However, NASA lacks a full cost accounting system, and many in-house desktop computing costs had to be estimated. The data the Centers used were incomplete and inconsistently compiled. Consequently, NASA made the decision to outsource its desktop computing needs without assurance that this alternative would save money. After its decision to outsource, NASA conducted additional cost analyses, but the data remained deficient.

Conclusion.

NASA financial managers are committed to providing adequate analyses and documentation that support NASA financial statement balances. PricewaterhouseCoopers is committed to working diligently with NASA managers to provide an early understanding of what is required for the FY 2002 audit. PricewaterhouseCoopers is also committed to providing to the NASA Administrator early warnings of problems that will jeopardize the FY 2002 audit opinion. In addition, it is vital to ensure that independent program assessment officials are independent in fact and in appearance and report their results directly to the NASA Administrator. Equally important is the successful implementation of an integrated, full cost NASA financial management system that provides accurate cost data in support of major program and project decisions by NASA leaders.

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[34] The OIG issued report IG-98-029, "Outsourcing of Desktop Computers," on September 14, 1998.

[35] Desktop computing includes hardware, software, local area networks, and customer support.

Mr. HORN. Our last presenter is Patrick L. McNamee, and he's a partner at PricewaterhouseCoopers.

STATEMENT OF PATRICK L. MCNAMEE, PARTNER, PRICEWATERHOUSECOOPERS, LLP

Mr. MCNAMEE. Good morning Mr. Chairman and members of the subcommittee, and thank you for the opportunity to be here. My name is Patrick McNamee, and I'm a partner with PricewaterhouseCoopers, or PWC. I lead our Federal audit practice and serve as the engagement partner on our audit work at NASA.

Before I talk about our work at NASA, I'll give you a little of my own background. Since 1995, I have been with PWC and its predecessor firm, providing auditing and financial management services to agencies across the Federal Government. Earlier in my career, I spent 10 years working to set professional auditing standards for the private as well as the public sectors, including 5 years where I worked with the General Accounting Office, where my principal responsibility was revising the Government auditing standards which apply to audits across the Government.

In May 2001, after a competitive bidding process, the NASA Inspector General contracted with PWC to audit NASA's fiscal year 2001 financial statement. On February 27, 2002, we delivered to NASA our reports on the results of that work. These reports expressed a disclaimer of opinion on NASA's fiscal year 2001 financial statements, identified significant deficiencies in NASA's internal controls, and reported substantial noncompliance with the Federal Financial Management Improvement Act.

I have with me this morning copies of our reports on the NASA financial statements and respectfully request that they be included in the record of this hearing.

Mr. HORN. Without objection, it is put at this point in the record.

[The referenced NASA financial statement reports follow:]

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Report of Independent Accountants

To the Inspector General of the
National Aeronautics and Space Administration:

We were engaged to audit the accompanying consolidated balance sheet of the National Aeronautics and Space Administration (NASA) as of September 30, 2001, and the related consolidated statements of net cost and changes in net position and the combined statements of budgetary resources and financing for the year then ended. These financial statements are the responsibility of NASA's management. The financial statements of NASA as of September 30, 2000, and for the year then ended were audited by other independent accountants whose report, dated February 6, 2001, expressed an unqualified opinion on those statements.

For the year ended September 30, 2001, NASA reported obligations incurred of $14.9 billion in its combined statements of budgetary resources and financing and total program expenses of $14.9 billion in its consolidated statement of net cost. To obtain reasonable assurance about whether those amounts were fairly stated, we selected for testing statistical samples of individual obligation and cost transactions from general ledger accounts comprising obligations incurred and expenses. NASA did not provide sufficient documentary evidence in support of transactions included in our samples to determine the accuracy of the reported obligations and expenses.

NASA capitalized approximately $5.8 billion in costs for the International Space Station (ISS) during the year ended September 30, 2001. NASA did not provide sufficient documentary evidence to determine the accuracy and completeness of those capitalized costs. As discussed in Note 1 to the financial statements, NASA recorded in its fiscal year 2001 consolidated statement of changes in net position a prior period adjustment, increasing the amount of costs capitalized to the ISS for space shuttle launches made during fiscal year 2000 by $636 million. NASA did not provide sufficient documentary evidence in support of this adjustment to determine if the additional amount capitalized fairly presents shuttle launch costs attributable to the ISS.

As discussed in Note 6 to the financial statements, NASA changed its accounting for certain assets held by contractors and used in the space shuttle program, reclassifying them from depreciable property, plant, and equipment to materials that will be expensed as they are consumed. This change was effected through the reporting of assets held by NASA's contractors on the annual form 1018 reports. Included among the assets reclassified are certain space shuttle components, such as engines, that generally are refurbished and reused, rather than consumed in a single mission. Thus, the acquisition costs of these components would not be attributed to the periods of their use. The information provided by NASA did not contain

sufficient documentary evidence to determine the appropriateness or the effect of this accounting change.

As of September 30, 2001, NASA reported in its consolidated balance sheet approximately $4.7 billion of NASA-owned materials that are held by contractors. The contractors reported materials using a definition that commingles the Federal Accounting Standards Advisory Board's (FASAB) definition of inventory and its definition of equipment, impairing NASA's ability to classify these assets in conformity with generally accepted accounting principles. The information provided by NASA did not contain sufficient documentary evidence to determine how much of the reported contractor-held materials balance should have been presented as materials, and how much should have been presented as property, plant, and equipment in the consolidated balance sheet as of September 30, 2001.

FASAB's Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, requires federal agencies to report within the financial statements the full cost of their programs. Office of Management and Budget (OMB) Bulletin No. 97-01, *Form and Content of Agency Financial Statements*, requires that costs incurred during a fiscal year that are capitalized on the balance sheet be reported in the statement of financing and notes that such costs do not result in expenses in the statement of net cost in that period. NASA reported $8.5 billion of capitalized costs as operating expenses of the programs, while depreciation expense of $2.5 billion was not reported as an operating expense of the programs. We believe the elimination of capitalized costs from each program's operating expenses and the allocation of depreciation expense to each program are necessary for the fair presentation of the fiscal year 2001 consolidated statement of net cost in conformity with generally accepted accounting principles.

As discussed above, NASA did not provide the sufficient evidence needed to support the accuracy and the classification of amounts reported as obligations, expenses, property, plant, and equipment, and materials in the consolidated and combined financial statements as of and for the year ended September 30, 2001, thereby limiting the scope of our work such that we are not able to express, and we do not express, an opinion on these financial statements.

The management's discussion and analysis, required supplementary stewardship information, and required supplementary information are not required parts of the financial statements but are supplementary information required by the Federal Accounting Standards Advisory Board and OMB Bulletin No. 97-01. This information has not been subjected to auditing procedures; accordingly, we express no opinion on this information.

The accountability report includes other information, in addition to the financial statements, management's discussion and analysis, required supplementary stewardship information, and required supplementary information, which is presented for the purpose of additional analysis and is not a required part of the financial statements. This information has not been subjected to auditing procedures; accordingly, we express no opinion on this information.

PRICEWATERHOUSECOOPERS

In accordance with *Government Auditing Standards*, we have also issued reports dated February 22, 2002, on our consideration of NASA's internal control and on its compliance with laws and regulations. Those reports, which disclose a material weakness and reportable conditions in internal control and non-compliance with the Federal Financial Management Improvement Act, are integral parts of a report prepared in accordance with *Government Auditing Standards* and should be read in conjunction with this report in considering the results of our work.

PricewaterhouseCoopers LLP

Washington, D.C.
February 22, 2002

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Report of Independent Accountants on Internal Control

To the Inspector General of the
National Aeronautics and Space Administration:

We were engaged to audit the financial statements of the National Aeronautics and Space Administration (NASA) as of and for the year ended September 30, 2001, and have issued our report thereon dated February 22, 2002, in which we disclaimed an opinion on those financial statements.

In planning and performing our work, we considered NASA's internal control over financial reporting by obtaining an understanding of NASA's internal control, determined whether internal controls had been placed in operation, assessed control risk, and performed tests of controls. We limited our internal control testing to those controls necessary to achieve the objectives described in Office of Management and Budget (OMB) Bulletin No. 01-02. We did not test all internal controls relevant to operating objectives as broadly defined by the Federal Managers' Financial Integrity Act of 1982, such as those controls relevant to ensuring efficient operations. The objective of our work was not to provide assurance on internal control. Consequently, we do not provide an opinion on internal control.

Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be reportable conditions. Under standards issued by the American Institute of Certified Public Accountants (AICPA), reportable conditions are matters coming to our attention relating to significant deficiencies in the design or operation of the internal control that, in our judgment, could adversely affect the agency's ability to record, process, summarize, and report financial data consistent with the assertions by management in the financial statements. Material weaknesses are reportable conditions in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. Because of inherent limitations in internal controls, misstatements, losses, or noncompliance may nevertheless occur and not be detected. However, we noted certain matters discussed in the following paragraphs involving the internal control and its operation that we consider to be a material weakness and reportable conditions under standards established by the AICPA and OMB Bulletin No. 01-02.

Material Weakness:

NASA Lacks Adequate Controls to Reasonably Assure that Property, Plant, and Equipment and Materials are Presented Fairly in the Financial Statements

NASA's property, plant, and equipment is comprised of several broad categories, including land, buildings and structures, assets-in-space, work-in-progress, and equipment. The most significant categories of assets include NASA-held assets-in-space and NASA-held work-in-progress and contractor-held work-in-progress. Combined, these three categories comprise $24.8 billion, or 83%, of NASA's net property, plant, and equipment at September 30, 2001.

As of September 30, 2001, NASA had capitalized approximately $8.9 billion related to the International Space Station (ISS). During our audit, we noted weaknesses in NASA's controls to ensure the validity and completeness of the amounts capitalized to the ISS during fiscal year 2001.

- NASA does not have a cost allocation policy to guide its financial and program managers in determining and documenting allocations of costs to the ISS.

- NASA was unable to provide us with a comprehensive listing of ISS costs that had been classified as capitalized assets versus amounts that had been classified as operating expenses. Thus, we were unable to determine whether all significant capital costs had been correctly included in the costs capitalized to the ISS as of September 30, 2001.

- NASA capitalized space shuttle launch costs of approximately $3.0 billion for the transportation of ISS hardware to orbit during fiscal year 2001. On a sample basis, NASA provided Contractor Financial Management Reports and vendor invoices in support of the $3.0 billion. We noted that whole or partial amounts from the Contractor Financial Management Reports and vendor invoices were allocated to the space shuttle launch costs capitalized. However, NASA did not provide sufficient documentary evidence to assess the reasonableness of the allocations.

  Related to this issue, during fiscal year 2001, NASA recorded in its consolidated statement of changes in net position a prior period adjustment, increasing the amount of costs capitalized to the ISS for space shuttle launches during fiscal year 2000 by $636 million. NASA did not provide sufficient documentary evidence in support of this adjustment to determine if the additional amounts capitalized fairly present shuttle launch costs attributable to the ISS.

- We noted that other cost allocations regarding ground processing costs, multiple element integration testing, and space launch support made to the ISS during the fiscal

year approximated $746 million. The documentation NASA provided for the sample transactions tested was not sufficient to assess the reasonableness of these allocations.

Recommendations:

- NASA should develop cost allocation policies to guide its financial and program managers in determining and documenting allocations of costs to the ISS.

- NASA should complete a review of significant ISS contracts to provide reasonable assurance that costs are being appropriately capitalized or expensed, and that an appropriate audit trail evidencing the basis for capitalization decisions is maintained.

- NASA should develop and implement an approach for determining the actual launch costs associated with each space shuttle flight so that the appropriate cost of transporting ISS components to space are capitalized, and that an appropriate audit trail evidencing the basis for capitalization decisions is maintained.

- We recommend that, as NASA addresses these recommendations related to the ISS, NASA apply these same considerations to other significant assets currently held in work-in-progress pending the beginning of their missions.

We also noted that NASA needs to improve the controls surrounding contractor-held property and the contractor reporting process to reasonably assure the accuracy of the data reported by the contractors and that data's consistency with generally accepted accounting principles. Federal Acquisition Regulations (FAR) require contractors to maintain the detail property records for the NASA-owned, contractor-held items. Annually, contractors report to NASA aggregated property, plant, and equipment and materials information to update NASA's accounting records via NASA Form 1018, *NASA Property in the Custody of Contractors*. NASA uses the 1018 reports as the basis for reporting significant materials and property, plant, and equipment balances in its financial statements. In testing these balances, as of September 30, 2001, we found:

- As of September 30, 2001, NASA reported in its consolidated balance sheet approximately $4.7 billion of NASA-owned materials that are held by contractors. The NASA FAR Supplement defines materials as "NASA-owned property held in inventory that may become a part of an end item or be expended in performing a contract. Examples include raw and processed material, parts, assemblies, small tools and supplies. Material that is part of contract work-in-process is not included." This definition, which guides contractors in preparing the 1018 report, commingles the Federal Accounting Standards Advisory Board's (FASAB) definitions of inventory and its definition of equipment, impairing NASA's ability to report these assets in conformity with generally accepted accounting principles. Under FASAB standards, equipment and inventory should be separately classified in the financial statements. In

addition, we noted that one of NASA's larger contractors had misclassified work-in-progress items as materials. Work-in-progress should be classified as property, plant, and equipment. The information reported to NASA by the contractors did not contain sufficient documentary evidence to determine how much of the reported contractor-held materials balance should have been presented as materials and how much should have been presented as property, plant, and equipment in the consolidated balance sheet as of September 30, 2001.

- Some of NASA's contractors used estimated costs instead of actual costs to assign values to completed assets. The current 1018 reporting instructions do not provide guidance to the contractors regarding the development or use of estimates to assign final values to completed assets. Lacking guidance on the use of estimates, it is difficult to assess the reasonableness of the estimates or the impact that this has on NASA's financial statements.

Recommendations:

- NASA should revise the 1018 definitions and reporting instructions so that consumable materials are reported separately from items to be built into long-lived assets, consistent with FASAB and OMB form and content reporting requirements.

- NASA should revise the form 1018 to provide additional information that would allow NASA to conduct a more rigorous analysis of the 1018 reports and better enable it to provide reasonable assurance that property, plant, and equipment and materials balances are properly aggregated and classified by the contractors. Specifically, the 1018 should provide information from the contractors regarding additions and deletions to construction-in-progress, materials, and work-in-progress as well as transfers of assets among contractors and with NASA. NASA should also obtain detailed data supporting balances reported for materials and property, plant, and equipment in the 1018 reports and use this data to validate the contractor-submitted information. In particular, NASA should conduct an analysis of contractor data on the specific items comprising the materials balances reported by the contractors to determine the proper classification of these assets within the consolidated balance sheet.

- NASA should ensure that the 1018 reporting instructions are clarified and updated regarding the use of estimated costs by the contractors. If the use of estimated costs is not permitted, then the reporting instructions should be updated to specifically preclude the use of estimates. If NASA determines that the use of estimated costs is appropriate for assigning values to finished equipment, then NASA should implement appropriate controls to determine the reasonableness of the contractor estimation techniques.

- NASA should build on its fiscal year 2001 outreach to contractors, which it undertook in response to a fiscal year 2000 reportable condition and which surfaced a number of the issues reported here, to provide regular dialogue with and monitoring of contractors to minimize the risk of errors on the 1018 reports.

Reportable Conditions:

System Constraints Impede the Operational Effectiveness of NASA's Financial Management Processes

Each of NASA's Centers uses a different financial management system. These systems were designed and implemented before the current OMB form and content requirements and Federal accounting standards became effective. The systems used by the Centers have multiple feeder systems, and most of the systems 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 the 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 we had selected for testing.

Recommendation:

NASA is currently in the process of implementing a new agency-wide financial management system. If implemented properly, the new financial management system, linked closely with operational procedures, should provide NASA with the ability to readily support transactions and significant events that impact the financial statements. Until the new system becomes operational, we recommend that NASA maintain documentation trails from summary level data recorded in the financial management systems to the detailed source documents.

Improve Controls Used to Estimate the Environmental Liability

NASA has reported a liability of approximately $1.3 billion for environmental cleanup costs for numerous NASA-owned environmental sites around the country. This liability was calculated using parametric models and other estimation techniques, including references to site-specific cleanup reports and bids received from NASA contractors to cleanup sites. Remediation managers located at each of NASA's Centers were responsible for completing the site-specific liability calculations. During our review of the documentation supporting this liability, we noted that the remediation project managers did not have clear or consistent guidance for estimating environmental remediation liabilities. Therefore, the process of

estimating site-specific liabilities varied significantly from one NASA Center to another. In addition, the initial documentation provided by NASA to support site-specific liability calculations did not support the liability calculations completed by the NASA remediation managers. During our audit, NASA made a concerted effort to update the liability calculations for a majority of the environmental cleanup sites around the country. However, control improvements are still warranted for this significant liability.

Recommendation:

NASA should develop liability calculation documentation and provide training to all of the remediation managers to ensure that environmental liabilities are calculated consistently across all of its sites. NASA should establish and implement control procedures to ensure the proper development of environmental liabilities and documentation requirements. NASA should also validate estimates against actual spending to determine the accuracy of estimates.

Perform a Comprehensive Disaster Recovery Test of Logical Partitions that Process Financially Significant Applications

Examination of the Disaster Recovery Test Plan that provides a testing history of all logical partitions revealed that the logical partitions at NASA's primary recovery site in New Jersey, which process the significant financial applications of the Space Centers have not been tested in a consolidated manner to provide comfort that the NASA Automated Data Processing Consolidation Center (NACC) could recover the data processing environments in the event of a disaster that affects the entire data center. In addition, documentation and/or contracts from all of the computer vendors were not available to provide assurance that the necessary hardware and software would be delivered to the secondary recovery site at the Johnson Space Center in a required period of time to support NACC operations and services.

Recommendation:

We recommend that NACC management schedule a consolidated test of the logical partitions at the primary site in the near future and ensure that contracts are in place to provide for delivery of necessary hardware and software to the secondary site.

Improve Logical Access Controls over Security of Financial Management Systems

Our testing of the LPARS that process the significant financial applications revealed a number of weaknesses in the system software and access control settings. A number of security software parameters either were incorrectly set or were not operating effectively in the mainframe and client server architecture that we tested. Below are a few examples of the control weaknesses noted:

- Emergency IDs used by authorized NACC primary and backup system programmers not suspended/revoked after resolution of emergency conditions

- Incorrect settings for the RACF and ACF2 access control software programs
- Incorrect settings for the operating system
- Weak password controls
- Inadequate monitoring of violations
- Inadequate auditing of functions supporting sensitive or critical general resources

Recommendation:

NACC staff should review the various security plans and ensure compliance with such plans. These are: 1) The NACC Security Policies and Procedures, 2) the CSC-PrISMS Security Plan, 3) the Marshall Space Flight Center (MSFC) Information Technology Security Plan, and 4) NASA's NASA Procedures and Guidelines 2810.1.1. A comprehensive review should be performed of all security parameters and these parameters should be modified accordingly to bring them in compliance with NASA's stated security program.

Access Control Weakness for the NACC Mainframe

We identified additional vulnerabilities in security over the NACC mainframe. Because of the sensitive nature of these findings, we are reporting them, together with our recommendations, in a separate limited-distribution report.

* * *

In addition, we considered NASA's internal control over required supplementary stewardship information by obtaining an understanding of NASA's internal control, determined whether these internal controls had been placed in operation, assessed control risk, and performed tests of controls as required by OMB Bulletin No. 01-02 and not to provide assurance on these internal controls; accordingly, we do not provide an opinion on such controls.

Finally, with respect to internal control related to performance measures reported in the Strategic Enterprise and Performance Highlights, we obtained an understanding of the design of significant internal controls relating to the existence and completeness assertions, as required by OMB Bulletin No. 01-02. Our procedures were not designed to provide assurance on internal control over reported performance measures; accordingly, we do not provide an opinion on such controls.

We also noted certain other matters involving internal control that we will report to the management of NASA in a separate management letter.

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This report is intended solely for the information and use of the management of NASA, OMB, and Congress, and is not intended to be and should not be used by anyone other than these specified parties.

PricewaterhouseCoopers LLP

Washington, D.C.
February 22, 2002

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Report of Independent Accountants on Compliance with Laws and Regulations

To the Inspector General of the
National Aeronautics and Space Administration:

We were engaged to audit the financial statements of the National Aeronautics and Space Administration (NASA) as of and for the year ended September 30, 2001, and have issued our report thereon dated February 22, 2002, in which we disclaimed an opinion on those financial statements.

The management of NASA is responsible for complying with laws and regulations applicable to the agency. We performed tests of its compliance with certain provisions of laws and regulations, noncompliance with which could have a direct and material effect on the determination of financial statement amounts, and certain other laws and regulations specified in OMB Bulletin No. 01-02, including the requirements referred to in the Federal Financial Management Improvement Act (FFMIA) of 1996. We limited our tests of compliance to these provisions, and we did not test compliance with all laws and regulations applicable to NASA.

Under FFMIA, we are required to report whether the agency's financial management systems substantially comply with the Federal financial management systems requirements, applicable Federal accounting standards, and the United States Government Standard General Ledger at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA section 803(a) requirements. The results of our tests disclosed instances, described below, which indicated that NASA's financial management systems did not substantially comply with Federal financial management systems requirements and applicable Federal accounting standards.

We found that NASA lacked adequate controls to provide reasonable assurance that materials and property, plant, and equipment are presented fairly in the financial statements as of September 30, 2001. In addition, NASA did not provide sufficient documentary evidence in support of amounts reported as obligations incurred and operating expenses in fiscal year 2001. We also noted weaknesses over the security surrounding NASA's financial management systems and the mainframe located at the NASA Automated Data Processing Consolidation Center. We believe that these matters, taken together, represent substantial noncompliance with the Federal financial management systems requirements under FFMIA. Further details on these findings, together with our recommendations for corrective action have been reported separately to NASA in our report on internal control dated February 22, 2002.

Statement of Federal Financial Accounting Standards No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, requires federal agencies to report

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within the financial statements the full cost of their programs. Office of Management and Budget (OMB) Bulletin No. 97-01, *Form and Content of Agency Financial Statements*, requires that costs incurred during a fiscal year that are capitalized on the balance sheet be reported in the statement of financing and notes that such costs do not result in expenses in the statement of net cost in that period. NASA reported $8.5 billion of capitalized costs as operating expenses of the programs, while depreciation expense of $2.5 billion was not reported as an operating expense of the programs. We believe the elimination of capitalized costs from each program's operating expenses and the allocation of depreciation expense to each program are necessary for the fair presentation of the fiscal year 2001 consolidated statement of net cost in conformity with generally accepted accounting principles. Thus, we believe that NASA's treatment of depreciation expense and capital expenditures in its fiscal 2001 statement of net cost represents substantial noncompliance with the Federal accounting standards requirements under FFMIA.

We believe that NASA should assign priority to corrective actions for these FFMIA related matters consistent with the requirements of OMB Circular No. A-50, Revised, on audit follow-up.

The results of our tests of compliance disclosed no other instances of noncompliance with laws and regulations that are required to be reported under *Government Auditing Standards* or OMB Bulletin No. 01-02.

Providing an opinion on compliance with certain provisions of laws and regulations was not an objective of our work; accordingly, we do not express such an opinion.

This report is intended solely for the information and use of the management of NASA, OMB, and Congress, and is not intended to be and should not be used by anyone other than these specified parties.

PricewaterhouseCoopers LLP

Washington, D.C.
February 22, 2002

Mr. MCNAMEE. Before discussing the conditions that led us to these conclusions and our recommendations for remedying those conditions, I will give some background on the objectives of an audit to provide some context for our findings.

An audit is a systematic evaluation of an agency's records to determine whether its financial statements are fairly stated in accordance with generally accepted accounting principles. The auditor's goal is to see if the agency's records provide sufficient information to show that the financial statements are fairly stated. If the agency fails to provide sufficient documentation and if that failure is significant and affects a number of accounts and financial statements, then the auditor cannot conclude that the agency's financial statements are fairly stated.

In that situation, professional standards call for the auditor to issue a report that disclaims an opinion, which means the auditor expresses no opinion on the financial statements because the agency does not have sufficient competent evidence to support its financial statement.

Our reports explain why we found this situation at NASA. NASA did not provide us sufficient documentary evidence needed to support amounts reported as obligations; expenses; property, plant, and equipment; and materials in its fiscal year 2001 financial statement. This lack of evidence resulted from deficiencies in controls which we have reported on in our report on internal control.

NASA has informed us that, given more time, it could in the future provide the necessary documentation; however, the Office of Management and Budget, OMB, requires audits to be completed by February 27, 2002, so we could not delay our report. Moreover, based on our findings, we were not confident at the time that NASA could provide the necessary documentation to support its financial statements at a specific time in the near future.

In August 2001, we had met with NASA to discuss the documentation of obligation and expense transactions required from NASA's centers. Our plan was to select statistical samples of individual transactions from all ten of NASA's centers. NASA was to provide us data from all the centers by September so that we could select a sample of transactions that we would test; however, NASA did not provide all this data to us until December 2001, delaying the selection of our sample by 3 months.

In January and February 2002, NASA centers worked to provide documentation in support of the transactions selected in our sample, but by February 13th we concluded that the gap between the documentation we needed to complete our testing in accordance with professional standards and the documentation we had been provided was too great to close by OMB's February 27th deadline for completing the audit, and so we informed NASA.

NASA centers use a variety of financial management systems which were designed and implemented before the current OMB and FASAB requirements became effective. A number of these systems summarize data from other systems that feed into them. The successive summarization of data through various systems impedes NASA's ability to maintain an audit trail through the summary data back to the detailed source-level documentation. It is this

source documentation that we must examine in order to express an opinion.

NASA is implementing a new agency-wide financial management system. We have recommended that, until that new system becomes operational, it work to maintain documentation trails in the summary level data recorded in its current financial management systems to detailed source documents.

Let me just mention briefly the other major issues reflected in our reports to NASA. NASA capitalized approximately 5.8 billion in cost for the international space station during fiscal year 2001. It also recorded in its fiscal year 2001 financial statements a prior period adjustment, increasing the amount of cost capitalized to the space station by $636 million for space shuttle launches made during fiscal year 2000. However, NASA did not provide sufficient documentary evidence to determine the accuracy and completeness of these capitalized costs.

During our audit, we noted weaknesses in their controls over the validity and completeness of amounts capitalized to the ISS during fiscal year 2001. In response to these findings, we made a number of recommendations, which are summarized in the written statement I submitted earlier to this subcommittee.

As of September 30, 2001, NASA reported in its consolidated balance sheet approximately $4.7 billion of NASA-owned materials being held by contractors. We found that NASA needs to improve the controls surrounding contractor-held property and the contractor reporting process to reasonably assure the accuracy of data reported by contractors and that data's consistency with generally accepted accounting principles. We have also made a number of recommendations in that regard, which are summarized in my written statement.

In addition to the matters previously discussed, a report on NASA's financial statements stated our disagreement with NASA's treatment of capital expenditures and depreciation expense in the statement of net cost.

Our report on internal controls identified significant deficiencies in controls over the estimation of environmental cleanup liability and over NASA's financial information systems.

The matters reported in our disclaimer of opinion and report on internal controls led us also to report noncompliance with the Federal Financial Management Improvement Act.

I hope my testimony has been helpful to this subcommittee. I would be happy to answer any questions the subcommittee members may have.

Mr. HORN. We are very pleased with your succinctness of this particular situation, because there's a lot of things we'll get into in the questioning.

[The prepared statement of Mr. McNamee follows:]

Statement of Patrick McNamee
Partner of PricewaterhouseCoopers LLP
Before the United States House of Representatives
Committee on Government Reform's
Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations

March 20, 2002

Good morning. My name is Patrick McNamee. I am a partner with PricewaterhouseCoopers LLP (PwC). I lead PwC's audit practice for federal agencies and serve as the engagement partner on the firm's audit work at NASA. Since 1995, I have provided auditing and financial management consulting services to agencies throughout the federal government. I have also dedicated ten years of my career to setting professional standards for the government and private sectors. From 1990 through 1994, I was with the U.S. General Accounting Office, where my principal responsibility was the revision of the *Government Auditing Standards*. Prior to that, I spent five years with the American Institute of Certified Public Accountants, where I was a director working with the Auditing Standards Board.

PwC is a multinational professional services firm with 150,000 partners and employees in 150 countries, and offices in over 100 U.S. cities, providing clients with auditing, accounting, tax and management consulting services. Our federal audit practice involves over 100 professionals providing financial and EDP audit services to a number of agencies. We currently audit four of the twenty-four agencies covered by the Chief Financial Officers Act.

In May 2001, after a competitive bidding process, the NASA Inspector General contracted with PwC to audit NASA's fiscal year 2001 financial statements. On February 27, 2002, we delivered to NASA our reports on the results of that work. These reports expressed a disclaimer of opinion on NASA's fiscal year 2001 financial statements, identified significant deficiencies in NASA's internal controls, and reported substantial noncompliance with the Federal Financial Management Improvement Act. I have with me copies of our reports and respectfully request that they be included in the record of this hearing.

Before discussing the conditions that led us to these conclusions and our recommendations for remedying those conditions, I will give some background on the objectives of an audit to provide some context for our findings.

An audit is a systematic evaluation of an agency's records to determine whether its financial statements are fairly stated in accordance with generally accepted accounting principles. It is not practicable to examine every transaction in an organization, so auditors test selected transactions to find information about such things as the valuation, existence, and completeness of assets, liabilities, funding sources, expenses, and obligations. The auditors' goal is to see if the agency's records provide sufficient information to show that the financial statements are fairly stated.

If the agency fails to provide sufficient documentation, and if the failure is significant and affects a number of accounts and financial statements, then the auditor cannot conclude that agency's financial statements are fairly stated. In that situation, the professional standards call for the auditor to issue a report that disclaims an opinion, which means the auditor expresses no opinion on the financial statements

because the agency does not have sufficient, competent evidence to support its financial statements. Our reports explain why we found this situation at NASA.

NASA did not provide sufficient documentary evidence needed to support amounts reported as obligations; expenses; property, plant, and equipment; and materials in its fiscal year 2001 financial statements, thereby limiting the scope of our work, which is a term of art in the profession. The scope limitation was such that we were not able to express, and we did not express, an opinion on those financial statements in accordance with our professional standards. This lack of evidence resulted from deficiencies in internal controls, which we reported upon in our report on internal controls.

NASA told us that, given more time, the agency could in the future provide the necessary documentation. However, the Office of Management and Budget requires audits to be completed by February 27, 2002, so we could not delay our report. Moreover, based upon our findings, we were not confident that NASA could provide the necessary documentation to support its financial statements at any specific time in the near future. Accordingly, we informed NASA on February 13, 2002, that the absence of timely documentation would require us under the professional standards to give a disclaimer.

Obligations and Expenses

In August 2001, we met with NASA to discuss the documentation of obligation and expense transactions required from NASA's Centers. Our plan was to select statistical samples of individual obligation and expense transactions from all ten of NASA's Centers. NASA was to

provide us data from all the Centers by September, so that we could select a sample of transactions that we would test. NASA did not provide all this data to us until December 2001, delaying the selection of our sample by three months. Between September and December, we informed NASA that the delay was jeopardizing completion of our audit work. In January and February 2002 NASA Centers worked to provide documentation in support of the transactions selected in our sample. Throughout this time we advised NASA on what documentation we had received, what documentation had not been provided, and what documentation was not adequate. By February 13, we concluded that the gap between the documentation we needed to complete our testing in accordance with professional standards and the documentation we had been provided was too great to close by OMB's February 27 deadline for completing the audit.

NASA's Centers use a variety of financial management systems, which were designed and implemented before the current OMB form and content requirements and Federal accounting standards became effective. A number of these systems summarize data from other systems that feed into them. 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. It is this source documentation that we must examine in order to express an opinion.

NASA is implementing a new agency-wide financial management system. We have recommended that, until the new system becomes operational, NASA maintain documentation trails from summary level data recorded in the financial management systems to the detailed source documents.

International Space Station Costs

NASA capitalized approximately $5.8 billion in costs for the International Space Station (ISS) during fiscal year 2001. NASA also recorded in its fiscal year 2001 financial statements a prior period adjustment, increasing the amount of costs capitalized to the ISS by $636 million for space shuttle launches made during fiscal year 2000. The explanation given to us for the adjustment is that previously NASA capitalized budgeted instead of actual costs. NASA did not provide sufficient documentary evidence to determine the accuracy and completeness of those capitalized costs.

During our audit, we noted weaknesses in NASA's controls over the validity and completeness of amounts capitalized to the ISS during fiscal year 2001. In response to these findings, we recommended that NASA:

- Develop cost allocation policies to guide its personnel in determining and documenting allocations of costs to the ISS.

- Review significant ISS contracts to determine that costs are being appropriately capitalized or expensed.

- Implement an approach for determining the actual costs associated with each space shuttle flight so that the appropriate cost of transporting ISS components are capitalized.

- Maintain an audit trail evidencing the basis for capitalization decisions.

- Apply similar approaches to assessing the reliability of amounts capitalized for other significant assets currently held in work-in-progress pending the start of their missions.

Materials Held by Contractors

As of September 30, 2001, NASA reported in its consolidated balance sheet approximately $4.7 billion of NASA-owned materials being held by contractors. Among these materials were certain space shuttle components that, before fiscal year 2001, NASA had classified as long-lived assets. The information provided by NASA did not contain sufficient documentary evidence to determine the appropriateness or the effect of the change in accounting for space shuttle components or whether other items reported as contractor-held materials were classified properly at September 30, 2001.

We found that NASA needs to improve the controls surrounding contractor-held property and the contractor reporting process to reasonably assure the accuracy of the data reported by the contractors and that data's consistency with generally accepted accounting principles. Federal Acquisition Regulations (FAR) require contractors to maintain the detailed property records for the NASA-owned, contractor-held items. Annually, contractors report to NASA aggregated property, plant, and equipment and materials information to update NASA's accounting records via NASA Form 1018, *NASA Property in the Custody of Contractors*. Among our recommendations to improve the reporting of contractor-held property are:

- NASA should analyze contractor data on the specific items comprising the materials balances to determine the proper classification of these items.

- NASA should revise the Form 1018 definitions and reporting instructions so that consumable materials are reported separately from items to be built into long-lived assets, consistent with generally accepted accounting principles.

- NASA should revise the form 1018 to provide additional information that would allow NASA to conduct a more rigorous analysis of the 1018 reports and better enable it to provide reasonable assurance that property, plant, and equipment and materials balances are properly aggregated and classified by the contractors.

As with all our recommendations, prompt compliance is essential if there is to be reasonable assurance that NASA will be able to support its financial statements in the future.

Other Matters

In addition to the matters discussed above, our report on NASA's financial statements stated our disagreement with NASA's treatment of capital expenditures and depreciation expense in the statement of net cost, and our report on internal controls identified significant deficiencies in internal controls over the estimation of environmental clean-up liabilities and over NASA's financial information systems. The matters reported in our disclaimer of opinion and report on internal controls led us also to report noncompliance with the Federal Financial Management Improvement Act.

I hope my testimony has been helpful to the Subcommittee. I would be happy to answer any questions the Subcommittee members may have.

Mr. HORN. Now I want to yield to Ms. Schakowsky, the ranking member, to give her opening statement.

Ms. SCHAKOWSKY. Mr. Chairman, once again I want to thank you for shedding light on these important financial matters and to the GAO for helping us to get to the bottom of some of the problems, or at least expose the problems if not provide the solutions.

Most of my generation grew up with NASA responding to President Kennedy's challenge to put a man on the moon. Many of us also fondly remember Neil Armstrong's, "One small step for man, one giant leap for mankind," and we've watched with awe as scientists and engineers and test pilots like Senator John Glenn accomplished what was fantasy in the first half of the 20th century.

It is an understatement to say that the accomplishments of this Agency are amazing, and therefore I expect that all of you share my dismay when GAO comes before us to tell us that the Agency can't keep its books straight.

The scientists and engineers at NASA stretch their creativity to improve the systems necessary to bring Apollo 13 home, but the financial managers at NASA can't tell us where the money has gone.

There is another story here today, and it is even more troubling than the failure to keep the books straight. As the chairman pointed out in his statement, for the past 5 years Arthur Andersen has given NASA accountants high marks, then PricewaterhouseCoopers comes in and tells us the supporting documentation for those accounts either doesn't exist or is too confusing to make sense.

GAO warned us of this in 1999. GAO pointed out that the accountants from Arthur Andersen were relying on what the managers at NASA told them, rather than performing an independent analysis. Greg Kutz, who is here today and testified, told reporters at that time that the work by Arthur Andersen "did not meet professional standards."

This is not unlike what Arthur Andersen did at Enron, as the press has repeatedly pointed out. The Inspector General at NASA has never explained why the auditing contract with Arthur Andersen was not renewed. Unfortunately, it is impossible to get an answer to that question that is not tainted by current events. It would have been helpful if the Inspector General had been more forthcoming at the time the contract was changed.

NASA has been an exceptional government agency. We don't often think of our Federal agencies as sparking the imagination and challenging our expectations. Even today, every space mission is featured on the nightly news and broadcast live on cable. That is why we are so disappointed in the failures before us today.

So I appreciate the testimony and just want to say in the end that you have in your hands the public trust and respect, and if you squander public funds you also squander that reputation.

Thank you, Mr. Chairman.

Mr. HORN. We thank you for that fine statement.

[The prepared statement of Hon. Janice D. Schakowsky follows:]

STATEMENT OF THE HONORABLE JAN SCHAKOWSKY
AT THE HEARING ON
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
FINANCIAL MANAGEMENT

MARCH 20, 2002

Thank you Mr. Chairman for holding this hearing today. Most of my generation grew up with NASA responding to President Kennedy's challenge to put a man on the moon. Many of us also fondly remember Neil Armstrong's "One small step for man, one giant leap for mankind." We have watched with awe as scientists, engineers, and test pilots like Senator John Glenn accomplished what was fantasy in the first half of the twentieth century. It is an understatement to say that the accomplishments of this agency are amazing.

I expect you all share my dismay when GAO comes before us to tell us that the agency can't keep its books straight. The scientists and engineers at NASA stretched their creativity to improvise the systems necessary to bring Apollo 13 home. But the financial managers at NASA can't tell us where the money has gone.

There is another story here today, and it is even more troubling that the failure to keep the books straight. As the Chairman pointed out in his statement, for the past five years Arthur Anderson had given the NASA accountants high marks. Then PriceWaterhouseCoopers comes in and tells us the supporting documentation for those accounts either doesn't exist or is too confusing to make sense.

GAO warned us of this in 1999. GAO pointed out that the accountants from Arthur Andersen were relying on what the managers at NASA told them rather than performing an independent analysis. Greg Kutz, who is here today testifying, told reporters at that time that the work by Arthur Anderson "did not meet professional standards." This is not unlike what Arthur Andersen did at Enron, as the press has repeatedly pointed out. The Inspector General at NASA has never explained why the auditing contract with Arthur Andersen was not renewed. Unfortunately, it is impossible to get an answer to that question that is not tainted by current events. It would have been helpful if the Inspector General had been more forthcoming at the time the contract was changed.

NASA has been an exceptional government agency. We don't often think of our federal agencies as sparking the imagination and challenging our expectations. Even today, every space mission is featured on the nightly news and broadcast live on cable. That is why we are so disappointed in the failures before us today.

You have in your hands the public trust and respect. If you squander public funds, you will also squander that reputation.

Mr. HORN. I am now going to start 10 minutes in a round. I'll start, as chairman, with 10 minutes, and then Ms. Schakowsky will have 10 minutes.

Let me ask Mr. Kutz of the General Accounting Office—the General Accounting Office attempted for nearly a year to audit the supporting data for NASA's fiscal year 2002 budget submission relating to costs charged to the international space station and related shuttle costs. In your experience, can other large agencies provide transaction-based support for amounts reported to Congress?

Mr. KUTZ. Yes, Mr. Chairman. You may recall that back several years ago I did the IRS audit for GAO for several years, and even IRS, with hits old master files that go back, as Commissioner Rizotti has testified before you, the 1950's or 1960's technology, is able to support the $2 trillion that run the Government in tax revenue, getting detailed transaction support for GAO to audit from the system. So yes, people like IRS—DOD, who we are going to talk about this afternoon, is not able to do that, and they have many of the same problems you've heard about today, where you can't reconcile populations, you can't draw statistical samples of detailed, transaction-based support to validate numbers that the Department of Defense reports to the Congress. So I would say that, in a much smaller way, NASA has some of the same issues the that Department of Defense has and IRS, for that matter. IRS is just able to jury-rig their system to get information once a year to do a financial audit, versus NASA is struggling now to do so.

Mr. HORN. If NASA had an integrated financial management system that complied with the Federal standards, should NASA be able to easily support amounts reported to Congress?

Mr. KUTZ. Yes. If their systems complied, our judgment would be that they would be able to routinely provide this information. The information we've tried to audit for the Science Committees on the space station, we have been trying to get that information for a year. I think it is safe to say that a year is not routinely being able to get reliable information.

So certainly this is something they should be able to come up with on a fairly routine basis, and the system should be able to track back to transaction-based support if, indeed, it complied.

Mr. HORN. Well, some would say that Russia might not have the accounting standards we have, and that's a joint endeavor. Is that one of the problems?

Mr. KUTZ. I don't believe that is.

Mr. Li.

Mr. LI. No. The problems that are associated with the international space station and our partners from Russia have been that they have not been able to meet our schedule of construction for the space station and, as a result, they were unable to provide important parts and components of the space station, like the service module.

Mr. HORN. Based on the work that the General Accounting Office has performed at NASA related to the space station and the related costs we're talking about here, do you believe NASA's inability to provide supporting documentation during your audits is a systems issue or what?

Mr. KUTZ. I guess it would have to do—I think that the other members of the panel here have talked about the lack of integrated systems, about the summarization or re-summarization of data, so that would be a safe assumption, I would believe.

Mr. LI. I would have to say that also some of the contributing factors to the problems associated with the space station have to do with NASA not having properly implemented some basic principles in terms of systems engineering and project management that have been impediments of them being able to estimate how much some of these components were going to cost, and, as a result, it came as a surprise to them when cost growth occurred.

Mr. HORN. Well, Mr. Li, as I remember, you have been auditing NASA's programs for years. You've also reported NASA's contracting as a General Accounting Office high-risk area since 1990, and you have that series, which is a very good one, for all Members of Congress when a new Congress comes. In 1990 it was including its inability to implement a new financial management system. Now, what's the relationship between an integrated financial management system and sound contract management?

Mr. LI. That's a good question, and let me try to perhaps draw that relationship.

The relationship is, in order to do contract management and to do it well, you need information. You need information on your contracts. But that information is only provided—can only be provided with an accurate, integrated financial management system. In NASA, Mr. Chairman, what has happened is that, because you have all these individual centers, they have been brought up to have their own systems, and, as a result, when they need information—and obviously in these days everybody is involved in such things as the space station—they are unable to get that information very quickly and they need to do it manually.

From that respect—and that's the largest contract. The contract with Boeing for the prime contract is the largest example, but there are many other types of examples that we have seen in terms of building component that rely on having accurate information, and that's not available. So I think that is that relationship that we're referring to.

Mr. HORN. Well, I thank you on that. I want to move to the General Counsel. Paul Pastorek is new to NASA.

Does the Administrator believe that the PricewaterhouseCoopers audit accurately reflects the condition of financial management at NASA, or did Arthur Andersen's audit better reflect the financial condition of NASA?

Mr. PASTOREK. I think it is safe to say at this point in time that, with respect to financial management, Pricewaterhouse has called it correctly. I think we acknowledge that there is a financial management problem in the Agency.

I think that the methodology that has been used by Pricewaterhouse is a more-comprehensive methodology for assessing the accuracy of the data and held a higher standard than apparently had been before, and, as a consequence, we weren't able to meet that standard.

I do think that the challenge that we are faced with these multiple accounting systems is trying to create an adequate universe

of information so that Pricewaterhouse can do this, and I'm very hopeful that we will be able to do this on a going-forward basis.

Mr. KUTZ. Mr. Chairman, the standards that Arthur Andersen and Pricewaterhouse used were this yellow book here that Mr. McNamee pointed out in his statement that he actually authored, but, I mean, the only thing that has changed here is really the auditors. The standards that they applied, both the Arthur Andersen audit, which we said did not meet professional standards, and the Pricewaterhouse audit were purported to be done in accordance with this yellow book, which is generally accepted Government auditing standards. So, you know, our view would be that the only thing that has changed here is the auditor.

I think that the work we saw in 1999 of Arthur Andersen did not meet professional standards, they did not go back and look at underlying data, and standards do call for them to do so. So to say it is a change in methodology without saying that there's something to do with professional standards I think is incorrect. I do believe that it has to do with the standards that they used, which we said in 1999 were not meeting professional standards in the yellow book.

Mr. PASTOREK. Perhaps I mis-spoke, sir. I should have used the word "protocol." It was a different protocol used by Pricewaterhouse. I'm not qualified really to speak to the standards issue, and I'd defer to Mr. Kutz on that.

Mr. HORN. Well, what is the difference, to put it in a nutshell, in terms of that protocol approach?

Mr. PASTOREK. From my perspective—and, Mr. Kutz, I'd be happy for you to comment on it, or Mr. McNamee—but, as I understand it, there was a different sampling methodology and a requirement by Pricewaterhouse to get a larger universe of samples to be able to make a decision on, and we could not deliver that. And that was different. They required a larger universe of samples, if I understand correctly.

Mr. LAMOREAUX. That's true. When we wrote the new contract, we used the financial audit manual that is put out by the PCIE and GAO, and we asked——

Mr. HORN. Spell PCIE. Nobody in the audience knows what that is.

Mr. LAMOREAUX. I'm sorry, sir. The President's Council on Integrity and Efficiency, sort of the group of IG's under OMB.

But the document refers to using a moderate reliance on internal controls instead of a full reliance, and with a moderate reliance on internal controls, or some reliance, as I stated in my statement, written statement, requires a larger sample, requires more transaction testing, so where we had Arthur Andersen taking a much smaller sample, Pricewaterhouse, because of the moderate reliance instead of full reliance, had to take a much larger sample, and then we got into the documentation problems.

Mr. KUTZ. Mr. Chairman, I think some of the samples that we're talking about here, based on the review we did in 1999, the sample size Arthur Andersen used was zero. For undelivered orders, for example, on the statement of budgetary resources, which was $2.2 billion, there was no testing of underlying data. There was a simple—what they did was there was a one-page document that rep-

resented that in their working papers that said they asked management if the numbers were right, management said they were, and that was it. I mean, that is going more than just a different sampling methodology. You're talking about no substantive audit work for major balances on the 1999 financial statements.

Mr. HORN. Well, how about it, Inspector General.

Mr. LAMOREAUX. I'm referring to the samples that were taken from obligations and expenses—Pricewaterhouse took a sample of 79, for example, last year—excuse me, Arthur Andersen took a sample of 79 obligation transactions and 84 expense transactions. By contrast, Pricewaterhouse took 268 obligations and 200-plus expense transactions. That's the level of testing that I'm talking about.

Mr. HORN. Let me move on this question to Steven Varholy, the NASA deputy chief financial officer.

For the past several years you have held NASA out as a model of good financial management. Now, according to the General Accounting Office and PricewaterhouseCoopers, NASA has problems with its financial management and it is in non-compliance with the Federal Financial Management Improvement Act, and that is obviously with the system standards and the standard of the general ledger.

Now, could you elaborate on this, and do you believe that the General Accounting Office and the PricewaterhouseCoopers audit results are an accurate reflection of NASA's financial management condition, or did Arthur Andersen's reports better reflect NASA's financial management condition?

Mr. VARHOLY. You may recall, Mr. Chairman, a couple of years ago when we were here testifying, dealing with the issue of compliance with the Federal Financial Management Improvement Act. Our then CFO, Mr. Holt, pointed out that one of the problems that we had in NASA was the outdated, antiquated systems that we have and the difficulty of dealing with them and the necessary manual procedures and so forth that we needed to be able to put financial statements together, and I think a fair assessment would be, with the additional audit procedures and the timing issues, those weaknesses in the systems basically did us in. I think that would probably be the fairest way to describe it. We were not able in the timeframe that we had to basically recover, to be able to pull the necessary documentation and so forth.

So I think we have a situation where both conclusions, in essence, were correct, but from a practical standpoint we have definite problems that we need to continue to deal with specifically. They are very difficult systems to work with. There's no other way around it.

Mr. HORN. Mr. Lamoreaux, speaking for the Inspector General's office, did the change of auditors for fiscal year 2001 impact the audit opinion received?

Mr. LAMOREAUX. The methodology that was used to try to pull the samples that I talked about earlier for obligations and expenses impacted the financial opinion that was rendered by PWC because they simply ran out of time. Documents were not forthcoming.

If the documents were forthcoming, then those balances would have been attested to and we also, of course, had problems with the

change in accounting for station and shuttle, which was a difference from when Arthur Andersen did the audit.

So the answer is yes, PWC looked at more—at a larger sample, they went deeper because we asked them to. We paid attention to what the GAO people said when they were critical of Arthur Andersen using too much reliance on management representation, and so we wrote into the contract that, "We wanted to use a moderate reliance," and that drove larger sample sizes and drove them to look deeper at the various accounts. So yes.

Mr. HORN. Besides that, what went wrong at NASA for fiscal year 2001 compared to prior years' audits? Was it just the sample?

Mr. LAMOREAUX. It was basically coming up with the supporting documentation for the large sample of obligations and costs, but it was also how the accounting for shuttle components and accounting for space station costs and accounting for contractor property were handled.

Mr. HORN. Using the Office of Inspector General, to what extent are you involved in monitoring or reviewing the work of the independent auditor responsible for NASA's financial statement audits?

Mr. LAMOREAUX. We have a contractor tech rep—COTR, they call them—that spends 100 percent of his time looking at Pricewaterhouse and he also looked at Arthur Andersen. He did a limited review of work papers to ensure that the terms of the contract are being adhered to.

This year under Pricewaterhouse we also have about another half of a full-time equivalent person dedicated to the effort.

Mr. HORN. If the Inspector General is responsible for the audits, were you aware of any issues raised in prior years' audits related to NASA's inability to provide supporting documentation for financial statement amounts?

Mr. LAMOREAUX. In prior years I think it is fair to say that they had trouble coming up with documents to support obligations and costs, as well, but the way the universe was constructed by Arthur Andersen and the way the universe was constructed by Pricewaterhouse resulted in a 3½ month difference of time. We lost 3½ months to try to get the documents to support those obligations and expenses.

So when you take 3½ months out and you have difficulty getting documents from the centers, as Arthur Andersen also, I think it is fair to say, had difficulty getting documents—they had more time to get the documents.

Mr. HORN. Was anybody shredding them?

Mr. LAMOREAUX. No, sir.

Mr. HORN. Just out of curiosity.

Mr. LAMOREAUX. No, sir. Not to my knowledge.

Mr. HORN. OK. And if they were, who was it? [Laughter.]

Does the Inspector General agree with the results of the PricewaterhouseCoopers audit?

Mr. LAMOREAUX. Yes, sir, we do.

Mr. HORN. OK. In your testimony you stated that NASA's prior year's audit, Arthur Andersen, was in the 5th year of a 5-year contract and had a different degree of cumulative audit knowledge and experience with NASA's financial systems. Could you elaborate on

this statement? And what does the statement mean in terms of the audit work that was performed?

Mr. LAMOREAUX. Arthur Andersen started their audit back in 1996 they were on the audit for 5 years. In the first 2 years of Arthur Andersen's audit, it is my understanding they spent enormous amounts of time doing transaction testing and internal control reviews. By contrast, Pricewaterhouse is in the first year of the audit using a moderate reliance on internal controls, and they would have to spend more time and go deeper to understand the systems.

The difference referred to is this cumulative audit knowledge and experience of one CPA firm at the end of their contract, at the end of 5 years having 5 years' worth of experience, compared to a new CPA firm coming in, as Pricewaterhouse did, in its first year.

Mr. HORN. In your testimony you stated that the core financial module of the integrated financial management project will not be completed until June 2003, and that it will support NASA's preparation and audit of its financial statements. What are the timeframes of the Inspector General's audit of this module? Does it appear that the core financial module will support the preparation and audit of NASA's financial statements?

Mr. LAMOREAUX. Our audit of the core financial system module is ongoing at this point. We have done work already to conclude that the procurement documentation and procurement actions were proper. We see that the core module is within budget and on schedule as of January 2002, and we are continuing with our audit work.

This audit began September 18, 2001, so we're not too terribly far in, but we are continuing with our audit work to see whether or not the system will support the full cost initiative.

Mr. HORN. I'll move now to Mr. McNamee. Patrick L. McNamee is partner with PricewaterhouseCoopers, and let me ask you—your predecessor auditor gave NASA a clean audit opinion on its financial statements for 5 consecutive years. Did you meet with Arthur Andersen at the beginning of the audit or review their work papers? If so, in your opinion, how adequate were the work papers?

Mr. MCNAMEE. Mr. Chairman, as required by professional standards, whenever there is a change in auditors the successor auditor meets with the predecessor auditor to look at their work papers.

The purpose of the work paper review is to help us begin to gain our understanding of the composition of NASA's accounts, what its financial systems and processes do, rather than be a qualitative assessment of the scope and execution of the predecessor's auditor.

Mr. HORN. And you didn't find anything accurate or inaccurate, or do you look for that?

Mr. MCNAMEE. Again, our objective was to help gain an understanding of NASA and how it works——

Mr. HORN. Yes.

Mr. MCNAMEE [continuing]. Rather than to gauge the accuracy or inaccuracy of what other work had been done before us.

Mr. HORN. Well, was there any change in the management approaches of NASA over that 5-year period that might have changed with you doing the work? What do we see from that? If they've got 5 years of working papers and you've got 1 year—and, by the way, do you have a 5-year contract also?

Mr. MCNAMEE. Yes, sir, we do.

Mr. HORN. OK. And was there anything that you saw in this last year about the management of NASA versus the management at NASA in the predecessor? You seem to follow it this time based on similar ways of dealing with it by the various forces of the General Accounting Office, the IGs, and all their various committees, so forth. But is it—would you think, going back, that if they had used your methodology that, if nothing much happened over management—which I can't—really don't know one way or the other, but to that degree would those previous 5 years really not have a clean audit? What can you say on that?

Mr. MCNAMEE. Again, since our focus was to look on the current state and the current readiness of records and controls in fiscal year 2001 and what our testing could tell us about those controls, and not benchmarking them back to what records were like in prior years, what controls were in place, what personnel were in place to support audits in prior years, we're not in a position that we could speculate on how this methodology—what result might have been achieved from it if it were applied in earlier periods.

Mr. HORN. Well, I suspect that professional standards are that you don't lob one across the ocean into your previous audit, and I'm simply interested in: were those working papers—did they make sense when you went back over them of your predecessor, that would be—were there any differences you saw in the working papers that would have made it differently, not necessarily arguing about the sample, but just what were the working papers and did it look like the working papers reflected it accurately over the sum of the 5-years.

Mr. MCNAMEE. Again, in our review of the working papers, we focused on the working papers of the most recent audit, which was fiscal year 2001, which would give us the most up-to-date insight into the state of what comprises NASA's balances, what's the state of their accounting system, how do their transaction flows work, and we believe that gave us a good starting point for our understanding for fiscal year 2001.

Mr. HORN. There has been a discussion from both Mr. Lamoreaux and Mr. Pastorek that the timeliness of the supporting documentation was more the issue during fiscal year 2001 audit than the lack of supporting documentation. Do you believe that, time permitting, NASA could have provided supporting documentation for the amounts in question on the financial statement?

Mr. MCNAMEE. One of the things that we are working with NASA on going forward is pulling together a lot of the documentation again that we needed for particularly space station and space shuttle launch costs and items that are going to continue to roll over into fiscal year 2002. And we are hopeful that we can establish effective protocols to get that information, but until we see it—and we have to see what the timeline will be to conclude when that can be provided.

Mr. HORN. When you look NASA, which has scientists and all sorts of different, very complex research, does that—do the existing regulations of the various groups that get into this thing, which would be OMB, General Accounting Offices, Comptroller General of the United States, so forth—are there any changes that you see in this or other agencies you have been involved with? Are we missing

somewhere in terms of the protocols that should be done? Is there something that hasn't been done that should have been done in terms of what the standards are in all of the agencies, but this one in particular, except for maybe National Science Foundation or Agriculture that have a lot of research? But do you find it is very difficult in such a complex operation that NASA is? What happens to you when you move into HHS? They have research, of course, and you have HUD that has different types of things that aren't research, and so is anything missing that ought to be in the protocols and ought to be in the feelings of GAO and OMB in terms of its accounting and what you're supposed to do and expected to do?

Mr. MCNAMEE. I think the standards, if you look across the Office of Management and Budget, starting with the audit bulletins, the form and content bulletins, standards that define how agencies account for their transactions, and then the financial management systems requirement, those provide a strong framework.

You mentioned there's scientists and research and lots of complex activities going on, but in the end they're all driven by the starting point, the Federal budget process, and here is the money that has been appropriated, and controlling the funds and the flow of the funds is the central element that needs to be there.

I think the framework of standards is appropriate for that. You asked sort of my experience across other agencies, and what I've seen is that, where financial management is most successful and most effective is when it is not just the purview of the CFO but when it has strong support from the agency head, and in that regard the commitment, the strong statements of commitment that the new administrator have made I think are very heartening for NASA's prospects.

Mr. HORN. Well, I agree with you on that.

Mr. Kutz, what about the General Accounting Office? Are there any holes that we need to get in the various protocols so in the next round those can be made very clear?

Mr. KUTZ. I agree with Mr. McNamee that the framework is there for financial management reporting and auditing. NASA is not unlike many other Federal agencies from the standpoint that they have a lot of the same challenges.

In the private sector you have entities that can close their books in a matter of days. They've got information to manage on the day-to-day basis. What you've seen with all the series of financial management hearings you've had here over the years is that in the Federal Government we do not have that same quality and timeliness of information. We're probably several decades behind the private sector. So really what the Federal Government needs to do is continue to have oversight hearings like this and agencies need to continue to put focus on this, because we really need to have that kind of information to ensure that we are effectively and efficiently operating all of the Government agencies.

There are very few real models out there right now. The one that I can point to probably is the Social Security Administration, who, for the last several years, is able to get their audit done in November. You may know that Secretary O'Neil and OMB Director Daniels and Comptroller Walker are pushing to have the deadlines moved back for preparation of financial statements, which will ef-

fectively force the agencies to fix their systems so that they can get this information on a more routine basis.

The ultimate deadline of financial audits is now going to be November several years down the road, and so it is going to be very difficult for agencies that don't have systems that can routinely produce good information to get their audits done by November. That would be more closer to the private sector, where most of the entities that have December 31st year end you see their annual reports coming out in January.

Mr. HORN. And I praise all three of those gentlemen that meet rather regularly. That hasn't happened since about 1921.

Mr. KUTZ. Yes. The principals actually do meet now.

Mr. HORN. Yes. They do meet.

Mr. KUTZ. Yes, the principals, including OPM.

Mr. HORN. Yes.

Mr. KUTZ. The head of OPM meets also with them.

Mr. HORN. I didn't realize that.

Mr. KUTZ. Yes.

Mr. HORN. That's fine.

Well, I thank you all for coming. I want to thank the staff on both majority and minority. The majority staff: Russell George is the staff director and chief counsel. I think it is imperative that NASA and every Federal agency utilize the financial management laws as the tools created by Congress to ensure that the important functions they perform are done efficiently, effectively, for the benefit of the American taxpayers. We have good people here that are working on this, and we have Rosa Harris, the professional staff person on the left. She is a detailee from General Accounting Office. See, they're everywhere, so you've got to do the right thing. And Bonnie Heald, deputy staff director, is there; and Darin Chidsey, the professional staff somewhere around there; and our clerk that makes sure you talk into the microphones and does a great job, Justin Paulhamus; and minority staff, Dave McMillen, he's up there and professional staff; and Jean Gosa, minority clerk; and our court reporter, Joan Trumps. Thank you very much all.

We are adjourned.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned, to reconvene at the call of the Chair.]

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