W March 31, 1999

TO: B/Chief Financial Officer

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Audit of NASA's Full-Cost Initiative Implementation
Assignment Number A-HA-98-022
Report Number IG-99-024

The subject final report is provided for your use and comments. Please refer to the Executive Summary for the overall audit results. Our evaluation of your response is incorporated into the body of the report. We considered management's comments in preparing this report, and revised recommendation 2 based on the additional information provided. With respect to management's nonconcurrence with the initial recommendations, we request that management reconsider its position based on the additional information presented and provide additional comments by April 30, 1999. Recommendations 1 and 2 will remain unresolved and undispositioned until we reach an agreement on corrective actions and until the agreed-upon corrective actions are implemented and determined to be effective.

If you have questions concerning the report, please contact Mr. Chester A. Sipsock, Program Director, Environmental and Financial Management Audits, at (216) 433-8960, or Mr. Jim Richards, Auditor-in-Charge, at (407) 867-4841. We appreciate the courtesies extended to the audit staff. See Appendix F for the report distribution.

Russell A. Rau

Enclosure

cc:
B/Chief Financial Officer
G/General Counsel
JM/Director, Management Assessment Division

IG-99-024

AUDIT REPORT

NASA'S FULL-COST INITIATIVE IMPLEMENTATION

March 31, 1999

National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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NASA'S FULL-COST INITIATIVE IMPLEMENTATION

EXECUTIVE SUMMARY

INTRODUCTION

Federal law and financial accounting standards require Federal agencies such as NASA to account for the full costs of programs and activities beginning with fiscal year (FY) 1998. The Federal financial accounting standards state that costs may be accumulated either through the use of cost accounting systems or through alternative methods such as special cost studies and analyses.

NASA relies on its current financial management system, supplemented with cost finding techniques/analyses to determine the full costs of programs and activities. NASA plans to use alternative methods until its new integrated financial management system is implemented. NASA plans to have its new financial management system operational by FY 2001 to provide NASA with full-cost budgeting, accounting, and management.

OBJECTIVES

The overall objective of our audit was to review NASA's transition to full costing. As part of our review, we determined whether NASA's plans for full-cost implementation adequately address legislative requirements and internal initiatives and whether the Agency's transition was being effectively executed. See Appendix A for a detailed description of our objectives, scope, and methodology.

RESULTS OF AUDIT

Overall, NASA is progressing well in its efforts to implement full-cost accounting using alternative methods. In addition, full-cost concepts are being properly integrated into the new financial management system being developed. Our audit results relating to those areas and to our specific objectives are in Appendix B.

The body of this report highlights an area of concern identified during work related to the first two specific audit objectives. We noted that, according to the NASA Full-Cost Initiative Agencywide Implementation Guide, NASA is not planning to distribute the costs of the Space Shuttle Program, which is a major Agency effort, to programs that benefit from Shuttle services and, therefore, has not developed the

methodology to do so. As a result, the financial statement presentations for NASA programs that use Shuttle services beginning in FY 1998 will not include the approximately $3 billion per year in Shuttle Program costs among these programs. Users of financial information would benefit from a presentation of total program costs inclusive of Shuttle support costs.

REPORT REVISIONS

We incorporated, where appropriate, the changes suggested by management. We revised our statement on the current financial management system to recognize that NASA is able to determine the full cost of programs and activities using cost finding techniques, although such procedures are resource intensive and do not produce needed data in a timely manner. We also revised our second recommendation to state that NASA should consistently use the methodology it develops to distribute the costs of service-oriented programs.

RECOMMENDATIONS

We recommend that NASA (1) develop a methodology for distributing the costs of the Space Shuttle Program, as well as service-oriented programs, to programs that benefit from the services, and (2) consistently utilize the methodology for cost presentations requiring the distribution of service oriented program costs.

MANAGEMENT RESPONSE

Management did not concur with the recommendations. Management stated that the recommendations are not practical or prudent because implementation would require extensive cost distributions between activities to determine the full cost of any program. Also, it would be premature to attempt to further redistribute the costs of certain NASA programs at this stage in the evolution of its full cost practices. See Appendix E for the full text of management's response.

EVALUATION OF MANAGEMENT RESPONSE

We do not agree with management's view that, for service-oriented programs like the Space Shuttle Program, it is impractical to distribute costs on some reasonable basis to benefiting programs. We continue to believe that making such distributions and providing such information to managers when required is the intent of full costing. Using the existing capability of the financial management system, supplemented by cost finding techniques, NASA has the means to arrive at a reasonable distribution of Space Shuttle costs once the methodology is determined and agreed upon.

Absent a consistent methodology for distribution of these costs, cost presentations on programs benefiting from these services may have widely varying results. We reaffirm our position on the recommendations and request that management further review its position in light of the changes already made to this report and provide additional comments.

BACKGROUND

The objective of full-cost budgeting, accounting, and management is to establish the true mission costs of programs and activities and thereby enable NASA managers to make more reliable business decisions in performing critical work with fewer resources. In 1995, NASA undertook an initiative to implement full-cost practices at the Agency. Subsequently, Federal law mandated that Federal agencies implement such practices. NASA relies on its current financial management system, supplemented with cost finding techniques/analyses to determine the full costs of NASA programs and activities. The new system, the Integrated Financial Management Project system, is intended to provide the necessary capability without using alternative procedures; however, it is not expected to be fully operational until at least FY 2001. Until the new system is on line, NASA will continue to rely on alternative procedures to account for full costs. See Appendix C for additional background information.

FINDING AND RECOMMENDATIONS

PRESENTATION OF SERVICE COSTS

NASA can enhance the presentation of total program costs by distributing the costs of programs that provide services, such as the Space Shuttle Program, to programs that benefit from the services. NASA plans to present the Shuttle Program in the financial statements as a final cost objective[1] because that is how NASA manages the program. As a final cost objective, Shuttle Program costs will be presented as a separate line item in the financial statements and not as part of the programs that benefit from Shuttle services. As a result, the financial statement presentation of NASA programs that use Shuttle services in FY 1998 and subsequent years will not include those costs. While we take no exception to this accounting treatment, the internal distribution of Shuttle costs to benefiting programs would more accurately present the full cost of programs to internal NASA users who rely on such information to effectively manage their programs.

COSTS SHOULD BE ASSIGNED TO PROGRAMS THAT BENEFIT

Federal financial accounting standards state that costs of supporting services should be assigned to segments of the entity that benefit from the services. Federal law requires each agency to comply substantially with these standards. Also, Office of Management and Budget Bulletin No. 97-01, Form and Content of Agency Financial Statements, dated October 16, 1996, requires that full costs of programs be reported in each agency's Statement of Net Cost and allows supplemental cost information to be presented as accompanying information. See Appendix D for further explanation of the relevant Federal financial reporting requirements.

SHUTTLE SERVICES BENEFIT OTHER PROGRAMS

The goal of the Shuttle Program is to provide launch services, or "access to space," according to the FY 1999 budget summary for Human Space Flight. Thus, the Shuttle Program is to function as a service to other NASA programs. When accounted for as a service activity, Shuttle Program costs would be accumulated and then charged to projects and activities based on Shuttle usage.

The Shuttle Program's current budget is divided into two sections: Shuttle Operations and Safety and Performance

[1]A final cost accumulation point that has direct and indirect costs allocated to it and is not allocated or charged directly to other cost objectives.

Upgrades. Shuttle Operations provides space transportation services to various space science projects and, beginning in FY 1999, will primarily support the assembly and operation of the International Space Station. Shuttle Operations includes costs for flight and ground operations, logistics, sustaining engineering, hardware and software production, and flight crew operations for all elements. Safety and Performance Upgrades includes costs for orbiter improvements, propulsion upgrades, flight operations and launch site equipment upgrades, and a relatively small amount of construction of facilities.

NASA plans to treat the Shuttle Program as a final cost objective and present it as such in the Agency financial statements. Consequently, NASA has not developed the methodologies needed to distribute Shuttle Program costs to programs that benefit from its services. As a final cost objective, Shuttle Program costs will be shown only as a separate line item in the Statement of Net Cost and will not be presented as part of the programs that benefit from Shuttle services. In our opinion, the methodologies do not have to be integrated into the Agency's financial management system. Instead, they could consist of analytical procedures, special cost studies or analyses, and cost-finding techniques. Cost-finding techniques are special procedures used to determine the cost of producing goods or services. Regardless of the approaches used, methodology development would be difficult and require decisions involving complex accounting issues such as cost allocation and capitalization[2] and depreciation of assets.

Regarding cost allocation, NASA managers would have to decide whether to use actual cost or standard cost to distribute Shuttle Program costs and then develop a cost methodology for assigning costs. If actual cost is used, NASA would have to develop methodology for capturing and distributing the actual costs of each Shuttle flight. However, actual cost may not be an equitable method of distribution. The actual cost of individual Shuttle flights could vary widely because of factors often beyond the customer's control, such as: the number of Shuttle flights per year, Shuttle hardware problems encountered during launch processing, weather conditions, and launch delays

[2] The recording and carrying forward into one or more future periods any expenditure the benefits from which will then be realized.

caused by problems at other launch pads in the area. If standard cost is used, NASA would have to develop a methodology for distributing costs based on reasonable estimates or cost studies rather than according to the actual cost incurred on a specific Shuttle flight. We believe standard cost methodology would provide a more equitable distribution because the cost effect of the uncontrollable factors would be spread out over many Shuttle flights.

Regarding capitalization and depreciation of assets, NASA managers would have to decide which assets to capitalize and how to depreciate or amortize them. Past capital expenditures, especially the cost of developing, producing, and upgrading the Shuttle components, need to be estimated and used to calculate a net book value for depreciation or amortization purposes. Current nonrecurring expenditures, such as completed Shuttle improvements and upgrades, should be capitalized and either depreciated or amortized. NASA managers would also need to make decisions regarding depreciation methodology, such as determining the useful life for each type of asset.

PRESENTATION OF PROGRAM COSTS

Because NASA does not distribute Shuttle Program costs for presentation purposes in the financial statements, the costs of NASA programs that benefit from the Shuttle services do not include the costs of those services. Thus, NASA's presentation of the cost of those programs beginning with FY 1998 will be understated by about $3 billion per year, based on the Shuttle Program FY 1999 budget request of $3.1 billion. The Space Station Program is the program most affected by the exclusion of Shuttle Program costs because it is expected to use most of the future Shuttle services. The General Accounting Office estimates that the total Shuttle launch support costs for the assembly and operation of the Space Station will be about $43.5 billion over a period of 15 or more years.[3]

A recent independent review[4] of the Space Station program observed that Space Shuttle flights related to the Space Station could arguably be included as a cost of that program under full-cost accounting. NASA officials have discussed

[3] "International Space Station: U. S. Life-Cycle Funding Requirements," NSIAD-98-147, May 1998, General Accounting Office.

[4] "Report of the Cost Assessment and Validation Task Force on the International Space Station" (also known as "the Chabrow Report"), April 21, 1998, completed by the NASA Advisory Council.

whether the Shuttle Program should be treated as a service activity and decided not to treat it as such because that method of accounting would involve changing final cost objectives. NASA plans to let the conversion to full costing evolve and could choose to treat the Shuttle Program as a service activity in the future.

PRESENTATION OF SHUTTLE COST DISTRIBUTION

Given the way the Shuttle Program is managed and the need for visibility into total program costs, we take no exception to NASA's treatment of the Shuttle Program as a final cost objective. However, users of NASA financial statements and cost information would benefit from knowledge of the total cost of NASA programs that use Shuttle services, such as the Space Station.

NASA is already distributing the costs of expendable launch vehicles, such as the Titan, Delta, and Pegasus, to benefiting programs. NASA's FY 1999 budget request for the Earth Science program notes that $100 million of such expendable launch services is included in the flight projects that use the services. Also, the FY 1999 budget request for the Space Science program includes $203 million of such expendable launch services.

NASA is already distributing the costs of the following six services: Information Technology, Facilities and Related Services, Publishing Services, Science Engineering, Fabrication, and Testing.

NASA can enhance the presentation of total program costs in accompanying information to the financial statements by presenting a distribution of the costs of service-oriented programs, such as the Shuttle and eventually the Space Station, to the programs benefiting from these services. Presenting total program costs inclusive of costs for service-oriented programs more accurately portrays the total resources committed to a program and reflects that activities such as launch services are an inseparable part of the program.

RECOMMENDATIONS

The NASA Chief Financial Officer should:

1. **Develop a methodology for distributing the costs of the Space Shuttle Program, as well as other service-oriented programs, to programs that benefit from those services.**

2. **Consistently utilize the methodology for cost presentations requiring the distribution of service oriented program costs.**

MANAGEMENT'S RESPONSE

Nonconcur. NASA's comments addressed what it considered to be a major factual discrepancy in the report. Namely, the OIG reference to NASA's current financial management system not being capable of determining the full cost of programs and activities. NASA stated that it is relying on the current system supplemented with cost finding techniques/analyses to determine the full cost of Agency programs and activities for FY 1998, and that this methodology was consistent with Federal law and related standards for external financial reporting.

NASA further believes its present approach to implement full costing is practical because it focuses on existing programs and projects with external outputs and outcomes (such as the Space Shuttle Program) as final cost objectives. Management questions the need to make additional cross program project cost distributions between established final cost objectives (projects), particularly through or as an adjunct to the accounting system. Considering the evolution of full cost practices within the Agency, officials believed that pursuing the OIG recommendations to their full extent would require extensive, complex and potentially confusing cross activity cost distributions.

EVALUATION OF RESPONSE

Management's formal comments, supplemented by additional discussions with Agency financial management personnel, resulted in revisions to the draft report. We agree that the current financial management system, supplemented by cost-finding techniques, enables NASA to comply with full costing requirements. However, the use of cost-finding techniques is not a permanent solution to fulfilling these requirements. In its own prototype and Agencywide testing of the full-cost initiative, NASA concluded that the current systems cannot support full-cost budgeting and management or an operational full-cost accounting capability. NASA also

found that using cost-finding techniques as an alternative to a full-cost system is extremely resource-intensive and could not produce data in a timely manner.

Based on the management response we revised the previous recommendation that NASA present total program costs, including costs from service-oriented programs, in its financial statements or accompanying information. Instead, the final report recognizes that the ultimate goal of full costing is to permit distribution of costs for management purposes that provides consistent and reliable results. We reaffirm our position that NASA should be able to distribute the cost of programs, such as the Space Shuttle Program which provide a service or benefit to other programs, to the benefiting programs in a consistent manner. Concerning the prudence of such distributions, the fact that, for example, International Space Station program cost presentations may include Space Shuttle Program costs is a clear indication that distribution is not only prudent, but a routine practice for management purposes. However, until NASA's financial management system is capable of making the cross activity distributions required, NASA should use the alternative techniques at its disposal to distribute the costs of service-oriented programs and make such information available for internal management decision-making purposes. Therefore, we request that management further review its position on these matters and provide additional comments.

Appendix A. Objectives, Scope, and Methodology

OBJECTIVES

The overall objective of our audit was to review the implementation of NASA's full-cost efforts from a broad, framework perspective. Specifically, we determined whether:

- NASA's plans for full-cost implementation adequately address the requirements of legislative and internal initiatives.
- The prototype phase and first year of the Agency-wide test phase of the Full-Cost Initiative were effectively executed and the conclusions reached justified.
- Full-cost concepts are being properly integrated into the new financial management system.
- NASA management has adequately addressed budget constraints on full-cost implementation.

SCOPE AND METHODOLOGY

We reviewed NASA's implementation of full costing. As part of the audit, we:

- Reviewed full-cost documents and interviewed key personnel at NASA Headquarters.
- Reviewed documents relating to the development and implementation of the new integrated financial management system.
- Reviewed Federal law, financial accounting standards, and financial management system requirements.
- Reviewed FY 1997 full-cost recasts[5] prepared by each NASA Center using cost-finding techniques.
- Reviewed documentation supporting the FY 1997 recasts prepared by three NASA Centers -- Goddard Space Flight Center, Kennedy Space Center, and Marshall Space Flight Center.
- Discussed the Full-Cost Initiative and the FY 1997 recasts with personnel at the same three NASA Centers.

We did not review the software being developed for the new financial management system. Our review of the new system was limited to the contract's statement of work, functional requirements, the project management plan, and the financial information strategic plan.

[5] Traditional cost or budget information into full-cost format.

MANAGEMENT CONTROLS REVIEWED

We reviewed management controls relating to full-cost planning and found them to be adequate except as noted in our finding.

AUDIT FIELD WORK

We conducted the audit field work at NASA Headquarters and three NASA Centers from February to August 1998, in accordance with generally accepted government auditing standards. The three NASA Centers visited were Goddard Space Flight Center, Kennedy Space Center, and Marshall Space Flight Center.

OVERALL RESULTS

NASA has made a positive step forward in the implementation of full cost. NASA's full-cost efforts have been well planned and organized, as evidenced by NASA's Full-Cost Initiative Agencywide Implementation Guide. The Agency has already identified, analyzed, and resolved many important issues relating to full-cost implementation.

CONCLUSIONS ON SPECIFIC OBJECTIVES

Our conclusions on the four specific objectives of this audit are summarized below.

Requirements of Legislative and Internal Initiatives

NASA's plans for full-cost implementation, as described in the Full-Cost Initiative Agencywide Implementation Guide, adequately address the requirements of legislative and internal initiatives. However, NASA's planned presentation of service-oriented program costs could be improved, as explained in the Finding and Recommendations section of this report.

Prototype and Agency-wide Test Phases of Full Cost Initiative

NASA effectively executed the Prototype and Agencywide Test phases of the Full-Cost Initiative and NASA's conclusions were justified, except as noted in the Finding and Recommendations section of this report. The Full-Cost Initiative's major conclusion was that NASA's current systems cannot support full-cost budgeting and management or an operational full-cost accounting capability. Also, NASA concluded that the new Integrated Financial Management Project system must be operational for NASA to fully and efficiently operate under full-cost practices. Furthermore, NASA found that using "cost-finding techniques" as an alternative to a full-cost system is extremely resource-intensive and could not produce needed data in a timely manner. Also, recasting of budgets from traditional to full cost was a resource-intensive, manual effort that would be prohibitive in terms of time and cost to perform on a regular basis.

As part of our audit, we reviewed the FY 1997 full-cost recasts prepared during the Full-Cost Initiative test phase by Goddard Space Flight Center, Kennedy Space Center, and Marshall Space Flight Center using cost-finding techniques. We found that the recasts were properly prepared and supported by documentation.

Also, NASA management is actively pursuing standardization and consistency of full-cost principles and practices used by NASA Centers. On June 8, 1998, the Deputy Administrator issued a memorandum emphasizing standardization and consistency and directing the NASA Chief Financial Officer to review the Centers' consistency in using full-cost principles and practices. In response, the Chief Financial Officer provided additional guidance on full-cost principles and practices.

Integration of Full-Cost Concepts into the New Financial Management System

NASA has properly integrated full-cost concepts into the new financial management system. NASA integrated full-cost concepts into the statement of work and functional requirements of the new system's contract as well as other key system documents. However, we did not evaluate how well the new system's software meets the contract's functional requirements as part of this audit. Also, implementation of the new system has been delayed, so NASA will not benefit from the full-cost aspects of the new system until at least FY 2001.

Budget Constraints on Full-Cost Implementation

NASA management adequately addressed budget constraints on full-cost implementation. The new system appears to be fully funded as of September 1998.

NASA's Full-Cost Initiative began in 1995 in response to guidance from several NASA and Federal authorities. While the initiative was undertaken in direct response to a specific management initiative of the NASA Administrator, the project also responded to guidance in NASA's Zero Base Review and to mandates in several key Federal financial and performance laws and related standards. In 1995, the NASA Administrator started an internal initiative for full-cost budgeting, accounting, and management after he was unable to obtain NASA overhead information from NASA's existing accounting system. Also in 1995, NASA's Zero Base Review indicated that NASA should improve cost information and pursue full-cost management.

The Federal Financial Management Improvement Act of 1996 required Federal financial management systems to support full disclosure of Federal financial data, including the full costs of programs and activities, to the citizens, the Congress, the President, and agency management, so that programs and activities can be considered based on their full costs and merits. Other laws, including the Chief Financial Officers' Act of 1990 and the Government Performance and Results Act of 1993, encourage Federal agencies to have adequate cost accounting and reporting systems.

Congress appropriates funds to NASA as part of the Departments of Veterans' Affairs and Housing and Urban Development, and Independent Agencies Appropriations Act. The Shuttle Program is a budget line item within NASA's Human Space Flight appropriation. NASA's FY 1999 budget request for the Shuttle Program was $3.1 billion, which consisted of $2,487 million for Shuttle Operations and $572 million for Safety and Performance Upgrades. Shuttle Operations consisted of orbiter and integration ($573 million), propulsion ($1,093 million), and mission and launch operations ($821 million). Safety and Performance Upgrades consisted of orbiter improvements ($235 million), propulsion upgrades ($176 million), other upgrades ($153 million), and construction of facilities ($8 million).

Federal financial reporting requirements relating to the finding are summarized below.

Federal financial accounting standards relating to cost assignment state that:

> Some responsibility segments of an entity may provide supporting services or deliver intermediate products to other segments within the same entity. The costs of the supporting services and intermediate products should be assigned to the segments that receive the services and products. This is referred to as the intra-entity cost assignments.[6]

The Federal Financial Management Improvement Act of 1996 was established, in part, to require that Federal financial management systems support full disclosure of Federal financial data, including the full costs of Federal programs and activities, so that programs and activities can be considered based on their full costs and merits. The Act requires each agency to implement and maintain financial management systems that comply substantially with applicable Federal financial accounting standards, including those that relate to full cost.

The Office of Management and Budget Bulletin No. 97-01 defines the form and content for Federal agency financial statements and "other accompanying information."[7] One of the six principal financial statements is the Statement of Net Cost. That statement must show separately the components of the net cost of the reporting entity's operations for the period. In the Statement of Net Cost, program costs must include the full costs of the program outputs and consist of the direct costs and all other costs that can be directly traced, assigned on a cause and effect basis, or reasonably allocated to the program outputs. Supplemental program cost information can also be presented with the financial statements as "other accompanying information."

[6] "Managerial Cost Accounting Concepts and Standards for the Federal Government," Statement of Federal Financial Accounting Standard No. 4, paragraph 122, "Cost Assignment," Federal Accounting Standards Advisory Board, July 1995.

[7] "Formats and Instructions for the Form and Content of Agency Financial Statements," Attachment, Bulletin No. 97-01, Office of Management and Budget, October 16, 1996.

National Aeronautics and
Space Administration
Headquarters
Washington, DC 20546-0001

NOV 20 1998

Reply to Attn of: BF

TO: W/Assistant Inspector General for Auditing

FROM: BF/Director Financial Management Division

SUBJECT: Draft Full Cost Initiative Audit Report (Assignment A-HA-98-022)

Thank you for the opportunity to review the subject draft report. The report provides a concise summary of the National Aeronautics and Space Administration's (NASA's) recent development and implementation of new full cost accounting, budgeting, and management practices. We agree with the fundamental report conclusion that NASA is progressing well in its full cost implementation efforts. However, we do not agree and do not concur with the noted recommendations.

This memorandum highlights one major factual discrepancy that requires explanation/correction and summarizes the basis for our non-concurrence related to the draft recommendations. Additional details are attached.

The report states that "NASA's current financial management system is not capable of determining the full cost of programs and activities." We do not agree with this statement. NASA's current financial management system is capable of determining the full cost of programs and activities. In that regard, NASA is relying on its current system supplemented with cost finding techniques/analyses to determine, report, and audit the full cost of NASA's programs and activities for Fiscal Year 1998. Our methodology is consistent with Federal law and related standards for external financial reporting. In our opinion, the draft report requires contextual clarification/ correction related to this matter.

The draft report recommends that NASA (1) develop a methodology to distribute the costs of the Space Shuttle Program and other, what the report identifies as "service-oriented programs" (eventually to include the Space Station Program) into other benefiting programs and (2) present total program costs, including costs from "service-oriented" programs, in NASA's financial statements or related attachments. We do not concur with these recommendations.

The draft recommendations indicate that NASA should supplement its planned full cost reporting by introducing additional cross program cost distributions. NASA's

research and development (R&D) activities involve extensive synergy across programs, projects, and activities. If NASA pursued the draft recommendations to their full extension, NASA would require extensive cross activity cost distributions to determine the "theoretical" full cost of any program. Such an approach currently is not practical or prudent.

Instead, NASA has decided to pursue its full cost initiative in a more practical manner and to focus on existing programs and projects with external outputs and outcomes as our key final cost objectives. In that light, pursuant to related legislative guidance, NASA also plans to closely align and integrate full cost budgeting with full cost accounting and management practices for improved program and project management and oversight. We also have integrated the key concept of service pools for those largely internal activities that are singularly/basically organized to service other NASA entities. In such instances, such service pools are not also treated as separate final budget programs or as final cost objectives.

Managerial cost accounting involves considerable judgment. In applying such judgment, we have concluded that the Space Shuttle Program has a management and oversight history, as well as, national output characteristics that warrant the continued treatment of the program as a final cost objective. While the Space Shuttle Program provides critical support and service to other national and international programs, the Space Shuttle Program is also a key national symbol of the United States as a space-faring nation.

In addition, at this stage in the evolution of our full cost practices, we believe it would be premature to attempt to further redistribute the costs of certain NASA programs through or, as an adjunct to, the accounting system. We plan to continue to estimate the cost of Space Shuttle flights based on data from within and outside the accounting system, but to do so outside the accounting system, and to disclose that information in various internal and external reports. However, we do not plan to pursue additional system or analytically based detailed cost accounting distributions of Space Shuttle costs to other programs or to include such estimates in audited financial statements/reports.

If you have any questions on these matters, please do not hesitate to contact me at 358-0978.

Stephen J. Varholy

Attachment

Attachment

Comments on
Draft Inspector General Audit Report on
NASA's Full Cost Initiative Implementation
(Assignment Number A-HA-98-022)

The draft Inspector General (IG) report provides a concise summary of the National Aeronautics and Space Administration's (NASA's) recent development and implementation of new full cost accounting, budgeting, and management practices. We agree with the fundamental report conclusion that NASA is progressing well in its full cost implementation efforts. However, we do not agree and do not concur with the noted recommendations. This attachment highlights one major factual discrepancy that requires explanation/correction and summarizes the basis for our non-concurrence related to the draft recommendations.

Draft Conclusions/Findings

The report states that "NASA's current financial management system is not capable of determining the full cost of programs and activities." We do not agree with this statement. NASA's current financial management system is capable of determining the full cost of programs and activities. In that regard, NASA is relying on its current system supplemented with cost finding techniques/analyses to determine, report, and audit the full cost of NASA's programs and activities for Fiscal Year 1998. Our methodology is consistent with Federal law and related standards for external financial reporting. In our opinion, the draft report requires contextual clarification/ correction related to this matter.

While we are using the current systems to determine auditable full cost information, we recognize that such "after-the-fact" external financial reporting only addresses one of the many uses of cost accounting information. In that regard, managerial cost accounting information is traditionally more closely associated with internal management information. In that light, the draft could be significantly strengthened by additional context information on the uses, timing, and relative accuracy requirements for key cost information, as well as, the differing characteristics of cost information obtained through cost accounting systems versus information obtained through cost finding techniques. We fully intend to implement a wide variety of more timely, internal management focused full cost practices in conjunction with our new Integrated Financial Management Project (IFMP) system. In that context, the new system may be considered a prerequisite for certain key full cost budget and management initiatives.

Draft Recommendations

The draft report recommends that NASA (1) develop a methodology to distribute the costs of the Space Shuttle Program and other, what the report identifies as "service-oriented programs" (eventually to include the Space Station Program) into other benefiting programs and (2) present total program costs, including costs from "service-oriented" programs, in NASA's financial statements or related attachments. We do not agree and we do not concur with these recommendations.

The draft recommendation indicates that NASA should supplement its planned full cost program/project reporting by introducing additional cross program cost distributions. NASA's research and development (R&D) activities involve extensive synergy across programs, projects, and activities. If NASA pursued the draft recommendations to their full extension, NASA would require extensive, complex and potentially confusing cross activity cost distributions to determine the "theoretical" full cost of any program.

In addition, such an approach could significantly complicate related full cost budgeting and control. NASA's full cost practices integrate close alignment between final cost objectives/objects (accounting) and fundamental budget structure control units (budgeting), as well as, in many respects, with related program/project organizational structures (management). In that regard, the full cost budget already integrates service activity/pool and General and Administrative (G&A) pool budget resources into NASA's program and project budgets thereby supporting insight, oversight and control. Additional cross program/project cost distributions between established final cost objectives (projects) does not appear particularly practical at this time.

Instead, NASA has decided to pursue its full cost initiative in a more practical manner and to focus on existing programs and projects with external outputs and outcomes as our key final cost objectives. In that light, pursuant to related legislative guidance, NASA also plans to closely align and integrate full cost budgeting with full cost accounting and management practices for improved program and project management and oversight. We also have integrated the key concept of service pools for those largely internal activities that are singularly/basically organized to support/service other NASA entities. For example, we plan to establish and operate information technology service pools to provide information technology service to NASA programs. In such instances, such service pools are not also treated as separate budget programs or as final cost objectives.

Managerial cost accounting involves considerable judgment. In applying such judgment, we have concluded that the Space Shuttle Program has a management and oversight history, as well as, national output characteristics that warrant the

continued treatment of the program as a final cost objective. While the Space Shuttle Program provides critical support and service to other national and international programs, the Space Shuttle Program is also a key national symbol of the United States as a space-faring nation.

In addition, at this stage in the evolution of our full cost practices, we believe it would be premature to attempt to further redistribute the costs of certain NASA programs through or, as an adjunct to, the accounting system. For example, the myriad of permutations inherent in the Space Shuttle Program currently are not amenable to cost distributions within NASA's new accounting system or within NASA's current full cost structure. Such permutations would include variables related to shuttles as laboratories as contrasted with shuttles as transportation capabilities. Such permutations could also include variables related to shuttle launch scheduling interdependencies, mission and payload scheduling interdependencies, payload processing interdependencies, physical space and crew assignment interdependencies and potential transportation cost nuances by payload related to requirements for transportation to versus to and from orbit.

Based on the noted and other complications and the current status of our supporting systems and concepts, we plan to continue to estimate the cost of Space Shuttle flights based on data from within and outside the accounting system, but to do so outside the accounting system and to disclose that information in various internal and external reports. However, we do not plan to pursue additional system or analytically based detailed cost accounting distributions of Space Shuttle costs to other programs or to include such estimates in audited financial statements/reports.

Appendix F. Report Distribution

National Aeronautics and Space Administration Headquarters
Code AO/Chief Information Officer
Code B/Comptroller
Code C/Associate Administrator for Headquarters Operations
Code G/General Counsel
Code H/Acting Associate Administrator for Procurement
Code J/Associate Administrator for Management Systems and Facilities
Code JM/Director, Management Assessment Division
Code L/Associate Administrator for Legislative Affairs
Code M/Associate Administrator for Space Flight
Code S/Associate Administrator for Space Science
Code U/Associate Administrator for Life and Microgravity Sciences and Applications
Code Y/Associate Administrator for Earth Science
Code Z/Associate Administrator for Policy and Plans

NASA Field Installations
Director, Ames Research Center
Director, Dryden Flight Research Center
Director, John H. Glenn Research Center at Lewis Field
Director, Goddard Space Flight Center
Director, Jet Propulsion Laboratory
Director, Lyndon B. Johnson Space Center
Director, John F. Kennedy Space Center
Director, Langley Research Center
Director, George C. Marshall Space Flight Center
Director, John C. Stennis Space Center

NASA Office of Inspector General
Ames Research Center
Dryden Flight Research Center
John H. Glenn Research Center at Lewis Field
Goddard Space Flight Center
Jet Propulsion Laboratory
Lyndon B. Johnson Space Center
John F. Kennedy Space Center
Langley Research Center
George C. Marshall Space Flight Center
John C. Stennis Space Center

Appendix F

Non-NASA Federal Organizations and Individuals

Assistant to the President for Science and Technology Policy
Deputy Associate Director, Energy and Science Division, Office of Management and Budget
Budget Examiner, Energy and Science Division, Office of Management and Budget
Associate Director, Accounting and Information Management Division, General Accounting Office
Associate Director, National Security and International Affairs Division, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology and Space
Special Counsel, House Subcommittee on National Security, International Affairs, and Criminal Justice

Chairman and Ranking Minority Member - Congressional Committees and Subcommittees

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

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

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