

IG-99-055

**AUDIT
REPORT**

**NASA IMPLEMENTATION OF THE
GOVERNMENT PERFORMANCE
RESULTS ACT**

September 28, 1999



National Aeronautics and
Space Administration

OFFICE OF INSPECTOR GENERAL

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Acronyms

FY	Fiscal Year
CFO	Chief Financial Officer
GAO	General Accounting Office
GPRA	Government Performance Results Act
OIG	Office of the Inspector General
SMC	Senior Management Council

W

September 28, 1999

TO: B/Chief Financial Officer

FROM: W/Assistant Inspector General for Auditing

SUBJECT: Final Report on the Review of NASA Implementation of the Government
Performance Results Act
Assignment Number A9905200
Report Number IG-99-055

The subject final report is provided for your use. Please refer to the Results in Brief section for the overall review results. Our evaluation of your responses has been incorporated into the body of the report. Your comments on a draft of this report were responsive, and actions are sufficient to close recommendation 2. For recommendations 1 and 3, we request that you notify us of the actions taken, including the extent of testing performed to ensure corrective actions are effective. Those recommendations will remain open for reporting purposes.

If you have questions concerning the report, please contact Mr. Chester A. Sipsoc, Program Director for Environmental and Financial Management Audits, at (216) 433-8960, or Mr. Richard Dix, Audit Program Manager, at (301) 286-8525. We appreciate the courtesies extended to the audit staff. See Appendix D for the report distribution.

[original signed by]

Russell A. Rau

Enclosure

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NASA Implementation of the Government Performance Results Act

Introduction

The NASA Office of Inspector General (OIG) has reviewed NASA's implementation of the Government Performance Results Act (GPRA) of 1993, focusing on the Agency's fiscal year (FY) 1999 performance plan and related performance report. See Appendix A for details on our scope and methodology. This work represents the initial step of a broader plan, requested by Congress, to review selected aspects of GPRA and to discuss the results in each OIG Semiannual Report.¹

In 1993, Congress passed the GPRA to improve public confidence in the capability of the Federal Government by systematically holding Federal agencies accountable for achieving program results. This is done through setting program goals, measuring program performance against those goals, and reporting publicly on their progress. Federal agencies are required to:

- Develop periodic strategic plans, setting forth the Agency's mission and general goals and objectives. The initial Strategic Plan, required by the Congress no later than September 30, 1997, was to cover a period of not less than 5 years forward from the fiscal year in which it was submitted, or 2002. An updated strategic plan must be submitted every 3 years thereafter.
- Prepare and submit to the Director of the Office of Management and Budget and the Congress an annual performance plan, beginning with FY 1999. The plan should establish objective and measurable performance goals, establish performance indicators to be used in measuring relevant outputs or other results, provide a basis for comparing actual results with the established goals, and describe the means to be used to verify and validate measured values.
- Prepare and submit to the President and the Congress an annual performance report that describes actual program performance in the previous fiscal year. The report is required to set forth the performance indicators established in the annual performance plan and discuss the actual program performance achieved. The report should also

¹ An October 1998 letter signed by the House Majority Leader and Chairmen of the Committee on Government Reform and Oversight, the House Subcommittee on Government Management, Information, and Technology, and the Results Caucus requested the NASA OIG to establish a Results Act review plan. The plan should examine (1) Agency efforts to develop and use performance measures for determining progress toward achieving established goals and outcomes and (2) verification and validation of selected data sources that support Agency performance plans and performance reports.

describe actions that will be taken on unmet performance goals and summarize findings of program evaluations completed during the fiscal year. The first performance report is to be issued by March 31, 2000, covering results on the FY 1999 performance plan.

Results in Brief

NASA has made significant overall progress in implementing GPRA. The Agency has:

- issued (in October 1996) a Strategic Management Handbook documenting the management policies, processes, guidelines, and responsibilities for strategic management;
- issued (in September 1997) the first official NASA Strategic Plan, required for FY 1998;
- issued annual performance plans covering FY's 1999 and 2000;
- incorporated performance targets from the annual plan into the individual performance plan of each responsible senior manager;
- created policies requiring each major NASA program and project to demonstrate how it relates to the Agency's strategic goals and to establish performance metrics; and
- included GPRA-type performance measures² in the FY 1998 Accountability Report that accompanied the financial statements.

Finally, Agency officials are actively seeking possible ways to further incorporate performance measures into the overall budgeting process and to further streamline reporting.

Those actions by NASA management are commendable and reflect a firm commitment to effectively implement the principles of GPRA. However, there are two areas in which additional management attention could help make Agency efforts more successful. First, NASA's Senior Management Council (SMC) did not assess Agency progress in achieving the established performance goals and targets until August 1999. Council assessments need to occur earlier, and at least twice during the year as described in the FY 1999 performance plan, to be most beneficial. Also, the Agency has not established formal procedures and schedules (describing who does what and when) to ensure that those assessments are accomplished in a timely manner. Management action is needed to ensure the FY 2000 and future performance plans are effectively monitored and adjusted to achieve maximum results.

Second, the Agency has not established formal procedures to ensure that all the data and information used to evaluate progress and report overall results are accurate and reliable.

² NASA did not issue an official GPRA performance plan in FY 1998. Therefore, the metrics referred to were not official GPRA measures or targets but were similar in nature to the ones included in the FY 1999 plan.

The General Accounting Office (GAO) also discussed this area in its reviews.³ Management needs to establish effective procedures and fully describe them in the performance plan to fully comply with GPRA and to produce credible performance reports.

Background

The NASA Office of Policy and Plans has overall responsibility for the Agency's strategic planning process, including preparing and updating the Strategic Plan and the Strategic Management Handbook. However, responsibility for preparing and updating the GPRA-required performance plan and performance report has been delegated to the Office of the Chief Financial Officer (CFO). As part of that responsibility, the CFO must establish the procedures and processes needed to effectively monitor and evaluate Agency-wide performance and to ensure the data and information needed to do so is available and credible.

Performance evaluation is a crucial element in the overall strategic management process. An effective evaluation process supports formal reporting on how well the Agency is doing in achieving its goals and allows changes to be identified and made to the goals to help promote the greatest overall level of performance. NASA's FY 1999 performance plan included a description of how Agency progress in meeting its performance goals would be evaluated. The process includes a combination of internal and external assessments, the results of which are to be included in the annual GPRA performance report.

A primary part of the internal assessment process is a periodic review by the SMC. The NASA Administrator chairs the Council, and the members include the Deputy Administrator, the Headquarters Officials-in-Charge, Center Directors, and the Jet Propulsion Laboratory Director. NASA's annual performance plan states that this group will conduct assessment reviews twice a year to ensure that sufficient progress is being made in meeting the performance targets established for the Strategic Enterprises and Crosscutting Processes.⁴

NASA's senior managers must have accurate and reliable information on actual performance to effectively monitor progress and prepare the required annual reports. Providing the needed accuracy and reliability requires formal, documented controls and processes to verify and validate the data and information. The data and information for some of the performance targets will come from NASA systems and sources, while

³ The GAO reviewed NASA's FY's 1999 and 2000 performance plans and noted a number of strengths as well as areas that could be improved (see Appendix B). Data credibility was a weakness noted in both plans.

⁴ NASA executes its mission through four strategic Enterprise organizations. They are Space Science, Earth Science, Human Exploration and Development of Space, and Aero-Space Technology. There are other Crosscutting processes that support these Enterprises and Agency strategic goals in general. Those processes are to: Manage Strategically; Provide Aerospace Products and Capabilities; Generate Knowledge; and Communicate Knowledge.

external studies and reports will be the sources of information for other targets. Therefore, an effective verification and validation process will have to include internal controls such as audits, evaluations, and system controls as well as external assessments by scientific peer review or advisory groups.

Monitoring Overall Agency Performance

Finding. The SMC did not assess Agency-wide progress in meeting the FY 1999 performance objectives and targets until August 6, 1999. Also, the CFO has not yet established procedures to ensure the accuracy and reliability of the data and information used by the SMC and Headquarters officials to assess progress. The Agency will also use that data and information to prepare the annual performance report. A primary reason for these conditions is that NASA, like many other agencies, is still in the early stages of implementing GPRA requirements and has placed most of the emphasis and effort on developing and updating the strategic and annual performance plans. The first official GPRA performance report and the information needed to prepare it is not due until March 2000. However, by not addressing these two areas earlier in the year, NASA has lost the opportunity to identify potential problems in the progress made on FY 1999 targets and in the data needed to assess them. Likewise, the opportunity has also been lost to make timely adjustments to the targets which could have helped maximize overall agency performance

Assessing Agency-Wide Progress. Establishing a process to periodically collect information and assess progress in meeting established targets is critical in achieving the current year performance goals and in formulating performance targets in future plans. NASA recognized the importance of assessing progress by including a provision in the FY 1999 performance plan that the SMC review progress twice a year. NASA's Strategic Management Handbook also emphasizes the importance of monitoring and assessing progress. The handbook states that when data indicate that actual performance does not meet the level planned, the measurements will help identify opportunities for continuous improvement and reengineering which will help enable performance improvement.

Many of the performance targets in the FY 1999 plan are related to programs and projects that are executed and managed at the Center level. Headquarters officials told us that there had been some assessments at the Center level, such as those by a Center-level Program Management Council or an independent review team. We did not perform work at the Centers to either verify this or evaluate what the Centers had done to monitor progress on individual targets. Assessments by program offices and groups at the Centers are clearly a vital part of the oversight process, and we are encouraged to hear that they are being done in some cases. However, the Center-level assessments and monitoring are, by nature, focused primarily on individual program or project performance goals and targets.

Our concern is that the SMC, or a similar senior-management group, did not make a mid-

year, Agency-wide assessment of progress by the Enterprises and Crosscutting Processes in meeting their objectives and targets. When we began our work in June, the SMC Executive Secretary told us that the SMC had not made a progress assessment as described in the performance plan and did not have it on the agenda for scheduled meetings. The SMC subsequently discussed GPRA objectives and targets with senior Headquarters managers on August 6, 1999, as part of scheduled budget presentations. However, we believe that was too late in the year to effectively ensure that adequate progress was being made and to implement desired or needed changes. Future evaluations need to occur earlier to be most beneficial.

Senior-management oversight by groups such as the SMC provides an Agency-wide perspective on GPRA performance and an added assurance that the Center-level reviews and oversight are effective. We recognize that GPRA implementation is still in the early stages and that several months remain until the first required performance report is due. However, a formal process should already be in place to ensure that an Agency-wide assessment is made of progress at critical points during the year and that necessary adjustments are made to achieve the strategic goals. Management needs to promptly establish procedures and schedule assessments (describing who does what and when) so the FY 2000 performance plan can be appropriately monitored and adjusted to achieve maximum results.

Verifying and Validating Performance Data. Monitoring progress and reporting final results requires that performance data and information are collected, analyzed, and summarized. Ensuring that the data and information are accurate and reliable is essential for ensuring that Agency GPRA performance reports are credible. As noted earlier, GPRA requires performance reports to describe the means used to validate and verify measured values that will be used to assess and report performance. In reviewing NASA's FY's 1999 and 2000 performance plans, the GAO concluded that there was only limited confidence in the accuracy, completeness, and reliability of the information the Agency would use to assess performance. NASA responded that GAO's assessment was premature because the Agency had issued two Accountability Reports⁵ that included performance measure information that had been audited by Arthur Anderson LLP who identified no significant issues.

Our review of the FY 1999 performance plan showed that there are some targets that will be relatively simple to measure and for which data verification will not be a major issue. For example, one target is to "establish at least five new Regional Earth Science Applications Centers." Verifying this should be simple and straightforward. Also, there is little risk that this kind of information will be subject to miscalculation or misinterpretation.

However, many of the targets involve more complicated data and/or sources that will

⁵ As part of a pilot program, NASA has streamlined reporting by producing Accountability Reports that consolidate reports required by several statutes. The FY 1998 report included information on program accomplishments, internal controls, financial improvements, and the financial statements.

need to be closely examined and verified. For example, one FY 1999 target was to “. . . begin the second of a 3-year sequence of instantaneous measurements of rainfall rates and monthly accumulations in the global tropics. This will be the first measurement of global tropical rainfall. Current uncertainty is 50 percent . . . data will reduce uncertainty to 10 percent.” Ensuring the accuracy and reliability of reported performance on this target will require verifying that all needed data was obtained and accurately recorded and analyzed, and validating that the uncertainty had been reduced to the reported level. There are many other targets like this one that will require similar efforts for verification and validation.

Senior managers at Headquarters who had collected information (from the Centers or various programs) on some targets for which they were responsible told us they had not taken specific action to verify the data or to satisfy themselves that the information and conclusions were correct and reliable. They were instead relying on the Centers and program offices that provided the information to make sure it was correct. We did not visit the Centers to perform testing of the data or the sources and did not identify specific data problems. However, the Agency needs a formal process to ensure that the data to be used by the SMC or others to assess progress and to prepare the performance report is accurate and reliable. Management action is needed to identify the performance targets that have some data risk and to establish policy and procedures to ensure the reported data and conclusions are reliable and that problems are fully disclosed.

Recommendations, Management's Response, and Evaluation of Response

The NASA Chief Financial Officer should promptly establish policy and procedures for:

- 1. Tracking progress in achieving the targets in the FY 2000 Performance Plan and future Plans with at least a mid-year and end of year assessment by a senior-management group like the SMC and appropriate external group(s).**
- 2. Taking timely corrective actions whenever possible to improve performance on those targets not achieving satisfactory progress.**
- 3. Verifying and validating data and supporting information before they are used by the SMC and others to assess progress and before they are included in the annual Performance Report.**

Management's Response. Concur. Regarding recommendation 1, the SMC charter is being modified to include reviews during the April and August meetings. For recommendation 2, applicable performance targets have been incorporated into the annual performance plans of the Enterprise Associate Administrators and heads of the Functional

Staff Offices. Regarding recommendation 3, instructions for final collection of data will require the Enterprises and Functional Staff Offices to demonstrate how their submitted data have been validated. Also, measures included in the 1999 Accountability Report will be validated by an independent auditor.

Management also suggested minor editorial changes and commented that the draft report did not describe the Comptroller's efforts to determine whether individual offices had established the means to review the status of their targets and did not mention the July 1999 presentations on the targets made to the NASA Capital Investment Council. The complete text of management's comments is in Appendix C.

Evaluation of Response. Management's actions are responsive to the recommendations. Recommendation 2 is resolved and is considered closed for reporting purposes. Recommendations 1 and 3 are also resolved, but will remain undispositioned and open until agreed-to corrective actions are completed.

We made the minor editorial changes to the report proposed by management in its general comments. We did not, however, modify the report to reflect management's concern that senior management had been provided status information on performance prior to August 6. While that statement is true, our report is limited to a discussion of what management had agreed to do as set out in its performance plan relative to monitoring progress in achieving Agency targets. The Agency's Performance Plan stated specifically that the SMC would review progress twice a year as part of the evaluation of Agency performance. If the Comptroller's review with individual offices and discussions of targets with the Capital Investment Council are intended to serve as part of the evaluation process, either in lieu of the SMC evaluation or in addition to it, then those actions should be included in the annual Performance Plan.

Appendix A. Objectives, Scope, and Methodology

Objectives

This is the first completed review in a series of planned reviews and audits performed by the OIG, at the request of Congress, to provide oversight for selected aspects of NASA implementation of GPRA. The overall plan for accomplishing this oversight was described in the OIG's Semiannual Report to Congress, Appendix VI, for the period ending March 31, 1999. The purpose of this initial audit was to determine NASA's progress in implementing GPRA and to summarize the results in the September 30, 1999, OIG Semiannual Report. In accomplishing this, the specific objectives were to briefly examine:

- NASA's efforts to develop and use performance measures for determining progress toward achieving the performance goals and program outcomes described in its annual performance plans and performance reports under the GPRA; and
- NASA's verification and validation of selected data sources, information collection, and accounting systems that support NASA's strategic and performance plans and performance reports.

Scope and Methodology

During the review, we:

- Reviewed the "Government Performance and Results Act of 1993," Public Law 103-62.
- Interviewed budget, program office, and other Headquarters personnel involved in implementing the strategic management process and the FY 1999 Performance Plan to obtain background information and documents.
- Reviewed documentation available at NASA Headquarters related to identifying and assessing progress in achieving the FY 1999 performance targets.
- Reviewed relevant parts of the NASA Strategic Management Handbook.
- Reviewed the NASA FY 1999 Performance Plan, February 1999 (revised).
- Reviewed GAO reports on evaluations of NASA's FY's 1999 and 2000 Performance Plans.
- Interviewed Headquarters personnel regarding oversight provided by the Senior Management Council on the FY 1999 Performance Plan.

Appendix A

Management Controls Reviewed

We reviewed relevant aspects of the following management controls:

- Government Performance and Results Act of 1993.
- NASA Strategic Management Handbook, October 1996.
- NASA FY 1999 Performance Plan, February 1999 (revised).

We considered controls that were within the review scope and objectives to be adequate except for those discussed in the finding section of the report.

Review Work

We performed all work from June through August 1999. After beginning the review and assessing the resources needed to complete the objectives, we decided to limit work to NASA Headquarters. Therefore, we performed no detailed testing of controls at NASA Centers. We will perform such testing, if necessary, in future reviews of GPRA. We relied on all automated data and information used to complete the review without any additional verification of the automated systems.

Appendix B. Summary of Prior Audit Coverage

General Accounting Office (GAO)

“Managing for Results: Observations on NASA’s Fiscal Year 1999 Performance Plan (letter report),” June 5, 1998, GAO-NSIAD-98-181. Pursuant to a congressional request, GAO reviewed NASA’s plan with a focus on (1) goals and objectives including how the Agency plans to measure progress toward achieving the goals and objectives (2) Agency strategies and resources needed to achieve the goals and objectives and (3) availability and reliability of data necessary to achieve progress.

GAO found that the Agency's plan could provide a clearer picture of intended performance across the Agency, does not fully portray the strategies and resources needed, and does not provide complete confidence that the information NASA will use to assess performance will be accurate, complete, and credible. GAO noted a number of strengths in the plan including that it provided good linkage between strategic goals and the plan’s performance goals and targets and that it used generally objective, quantifiable, and useful performance measures.

“Observations on the NASA Annual Performance Plan for Fiscal Year 2000, (draft report),” June 1999. As part of the congressional request for continued oversight of managing for performance, GAO reviewed NASA’s FY 2000 plan. The draft report noted some improvements over the FY 1999 Performance Plan especially in the presentation of the goals and objectives and in specifically linking certain objectives to specific goals. The key weaknesses noted were: (1) not providing a clear discussion of how information-technology-related strategies and programs contribute to achievement of performance goals and (2) not including procedures for verifying and validating performance data.

Appendix C. Management's Response

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



SEP 27 1999

Reply to Air of

BR

TO: W/Assistant Inspector General for Auditing
FROM: B/Comptroller
SUBJECT: Response to Draft Audit Report A9905200, Audit of Implementation
of the Government Performance and Results Act

Relative to the findings and background sections of the draft report, several adjustments need to be made.

- On page 2, the draft states "First, a senior management group has not assessed Agency progress in achieving the established performance goals and targets as had been described in the FY1999 performance plan." The statement needs to be corrected to acknowledge that the SMC did meet on August 6, 1999 to assess progress against the performance targets, as the draft report notes on page 4.
- In addition, in the Background, page 3, the third paragraph needs to be modified to clarify that the Administrator chairs the Senior Management Council (SMC). The Associate Deputy Administrator, Headquarters Officials in Charge, the Center Directors, and the Jet Propulsion Laboratory Director are all members of the SMC.
- On page 4, in the section Assessing Agency-Wide Progress, the draft report refers to the "Strategic Planning Handbook." The correct title of the document is "The Strategic Management Handbook."
- Finally, the report suggests that senior agency management was provided no status information on performance prior to August 6. The draft report is silent on the fact that a mid-year review was conducted by the Agency Comptroller specifically to determine whether the owners of the performance targets had instituted regular means of reviewing the status of the performance targets. The draft report also failed to note that performing organizations' budget presentations made to the CIC in July provided senior agency management with a status of performance against the targets.

Recommendation 1

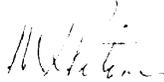
We concur with the recommendation that progress be reported to a senior-management group mid-year and at the end of the year. The SMC charter is being modified to include reviews of progress on the Performance Plan targets during the April and August meetings. The modification will be published in the forthcoming edition of the NASA organizational handbook. The precise publication date is not available, but it is anticipated within the next six months.

Recommendation 2

We concur that timely corrective actions should be taken to improve performance, as required. Delivery of performance against the agency commitments in the NASA Performance Plan is a primary responsibility of the Enterprise Associate Administrators and the heads of the Functional Staff Offices and it is they who should be directing the corrective actions. The annual performance targets have been incorporated into their individual performance plans with the Administrator and they will continue to be included in these plans in the future.

Recommendation 3

We concur that data being reported as a final representation of the agency performance should be validated prior to provision of that data to the SMC or the NASA Advisory Council. Instructions issued for the final collection of data for the FY 1999 Performance Report will include a requirement to demonstrate how that data has been validated. It is anticipated that these instructions will be issued prior to the end of September 1999. For those measures included in the NASA 1999 Accountability Report, an independent auditor will also validate those results.



Malcolm L. Peterson

Enclosure

Appendix D. Report Distribution

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Z/Senior Advisor for Strategic Planning

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Budget Examiner, Energy and Science Division, Office of Management and Budget
Associate Director, National Security and International Affairs Division, Defense Acquisition Issues, General Accounting Office
Professional Assistant, Senate Subcommittee on Science, Technology, and Space

Appendix D

Chairman and Ranking Minority Member -- Congressional Committees and Subcommittees

Senate Committee on Appropriations

Senate Subcommittee on VA, HUD, and Independent Agencies

Senate Committee on Commerce, Science, and Transportation

Senate Subcommittee on Science, Technology, and Space

Senate Committee on Governmental Affairs

House Committee on Appropriations

House Subcommittee on VA, HUD, and Independent Agencies

House Committee on Government Reform and Oversight

House Subcommittee on National Security, Veterans Affairs, and International Relations

House Committee on Science

House Subcommittee on Space and Aeronautics

Congressional Member

Honorable Pete Sessions, U.S. House of Representatives

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