

A black and white photograph of the Space Shuttle Discovery during its ascent. The orbiter is mounted on the External Tank and Solid Rocket Boosters. The orbiter's name "Discovery" is visible on the side. The orbiter is oriented vertically, and the External Tank and Boosters are also oriented vertically. The orbiter is surrounded by a large plume of white smoke and fire from the engines. The orbiter is positioned to the right of the External Tank and Boosters. The orbiter is oriented vertically, and the External Tank and Boosters are also oriented vertically. The orbiter is surrounded by a large plume of white smoke and fire from the engines. The orbiter is positioned to the right of the External Tank and Boosters.

**Office of Inspector General
SEMIANNUAL REPORT**



National Aeronautics and
Space Administration

October 1, 1998–March 31, 1999

A Message From the Inspector General

In the last 6 months, NASA has achieved a new level of success in its mission to develop space. Clearly, John Glenn's historic Space Shuttle flight captured the public's attention. However, NASA also accomplished many important (while less visible) milestones. For example, the first two elements of the International Space Station, Zarya and Unity, were launched. Also, NASA and its partners realized technological progress in the development of the next-generation reusable launch vehicle, the X-33.

These successes and others that the Agency accomplishes through partnerships and cooperative agreements with national and international aerospace agencies and companies can make positive contributions in an era of downsizing and diminished budgets. I support the Agency's initiative in developing these innovative processes. However, NASA and its partners must demonstrate both excellence in achieving its missions and integrity in conducting its business operations. My office focuses on the integrity of NASA's business operations through our investigations, audits and other reviews.

I have consolidated resources to focus on those areas representing the Agency's highest vulnerabilities. NASA spends more than 75 percent of its resources through contracts. To address the problems inherent in a contractual environment, I have established an Interdisciplinary Fraud Working Group that will focus on identifying NASA's programs that are most vulnerable to fraudulent activities or other high risks.

As in the past, the NASA Office of Inspector General (OIG) expends considerable resources on information technology initiatives. Our efforts include audits of information systems, reviews of NASA's removal of sensitive information from excess computers, and investigations of felonious intrusions into NASA's networks. In the coming months, we intend to focus on coordination efforts with other



A Message From the Inspector General

Offices of Inspector General to maximize our resources.

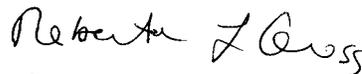
NASA is committed to providing aerospace products and capabilities to and sharing knowledge with its partners, customers, and the public. We have established the Technology Oversight Project to help the Agency assure the integrity of its technology exchanges. This project is an OIG cross-discipline approach to identify programmatic and systemic matters that adversely impact NASA's technology-sharing processes. Project members will review Agency programs and operations to identify programmatic weaknesses or the need for new or amended legislation, policies, and procedures to protect NASA technology.

NASA strives to improve its planning and management processes consistent with the Government Performance and Results Act and integrate its strategic planning, budgeting, performance management, accounting, and reporting activities. At the request of Congress, we developed and are implementing our plan to examine certain performance measures and the data sources and information collec-

tion and accounting systems the Agency uses. Our plan is incorporated into this Semiannual Report as Appendix VI.

This report represents our work for the first semiannual period of fiscal year 1999. As we look to the next semiannual period, my office will continue to monitor the concerns related to the Year 2000 (Y2K) problem and the Agency's efforts to meet Office of Management and Budget compliance milestones. We will continue to assist the Agency in identifying best practices in its programs and business processes. In addition, in response to a request of the Administrator, we will focus significant resources on a review of the performance management of the International Space Station contract.

I look forward to working with the Administrator and the Agency to assure a successful, cost-effective aerospace program.



Roberta L. Gross
Inspector General

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ROLE OF THE INSPECTOR GENERAL

ADMINISTRATION

NASA is composed of an integrated national aeronautics and space program operating from nine Field Centers, the Jet Propulsion Laboratory (JPL), and the Wallops Flight Facility. NASA's stated mission is:

- To advance and communicate scientific knowledge and understanding of Earth, the solar system, and the universe
- To advance human exploration, use, and development of space
- To research develop, verify, and transfer advanced aeronautics, space, and related technologies

To implement that mission and serve its customers, NASA established four Strategic Enterprises to function as primary business areas. Enterprise management establishes overall customer requirements and ensures overall customer satisfaction. Working in partnership with the Enterprise Associate Administrators and Center Directors, Functional/Staff Offices ensure that Agency activities are conducted in accordance with all statutory and regulatory requirements, including fiduciary responsibilities. These offices also coordinate central services, including the assurance that procedures are consolidated and standardized across the Agency. NASA employs 18,500 civil servants and generates thousands of high-tech jobs in the private sector. NASA's highly skilled workforce and facilities represent the backbone of the Nation's civil research and development capabilities in aeronautics and space. NASA also relies on partnerships with large and small contractors, members of the academic community, other Federal agencies, State and local agencies, and other space agencies throughout the world. NASA's budget authority for fiscal year (FY) 1999 is \$13.6 billion.



Organization

ROLE OF THE INSPECTOR GENERAL

The Office of Inspector General (OIG) is organized into three major units: Audits; Criminal Investigations; and Inspections, Administrative Investigations, and Assessments. Our staff are located at NASA Headquarters and at ten NASA installations. Approximately 80 percent of the staff are assigned to field offices. Working under the general direction of the Inspector General, the Assistant Inspectors General for Auditing (AIGA); Investigations (AIGI); and Inspections, Administrative Investigations, and Assessments (AIGIAIA) are responsible for the development, implementation, and management of their respective programs.

Within this organizational structure, we perform a balanced independent program of audits, investigations, inspections, and other activities to assist NASA management in promoting economy, efficiency, and effectiveness in the administration of its programs and operations. The OIG directs considerable resources toward identifying procurement effectiveness and irregularities and contract fraud, as well as assuring the integrity of NASA's

information technology systems. We work jointly with other members of the Inspector General community, other Federal agencies, and other investigative and audit entities when concurrent jurisdiction exists.

ADMINISTRATION

The OIG's internal administrative and support operations are directed and managed by the Director, Resources Management Division (RMD). The Director, RMD, advises the Inspector General and all other OIG managers and staff on administrative, budget, and personnel matters and oversees OIG adherence to management policies. Under the Director's guidance, the OIG exercises full, autonomous personnel and budget authority. (Refer to Sections 6(a)(6), (7), and (8) of the Inspector General Act, 5 U.S.C. Appendix III.) The RMD provides OIG employees with administrative support and coordinates the acquisition of state-of-the-art electronic data processing and office automation equipment and capabilities.

Important Issues and Activity Highlights



IMPORTANT ISSUES

Fraud Working Group

Technology Oversight Project

The Government Performance and Results Act

ACTIVITY HIGHLIGHTS

IMPORTANT ISSUES

The OIG continues to focus attention on material weaknesses, areas of significant concern reported under the Federal Managers' Financial Integrity Act (FMFIA), and areas of material nonconformance considered by the OIG to be reportable under the FMFIA. During this period we identified the following areas of significant concern: (1) financial management, (2) information technology security, (3) equitable environmental cost sharing, (4) International Space Station cost and schedule performance, (5) contract management, (6) cost analysis, (7) Year 2000 date conversion, and (8) decommissioning of the Plum Brook Reactor Facility. Details concerning these issues may be found in Appendix IV.

Fraud Working Group

NASA spends a significant part of its resources on contracts to procure support and services. To enhance the OIG's effectiveness in combating fraud within NASA procurement, the OIG is establishing an objective relationship with NASA Offices of Procurement, Quality Assurance, and Safety. The teaming of NASA expertise with OIG investigation, auditing, and inspection resources will be used to conduct more extensive analyses of NASA's vulnerability to fraud. The OIG established its Interdisciplinary Fraud Working Group at a kick-off meeting held in January 1999. The group was established to identify NASA's programs that are vulnerable to fraudulent activities and to develop a joint approach to assess and monitor those vulnerabilities. Investigations; Auditing; and Inspections, Administrative Investigations, and Assessments staff representatives identified and prioritized those areas presenting the greatest risk of fraud directed against NASA.

We identified product substitution and prime/sub-contractor fraud as areas having the greatest potential for fraud against NASA. The OIG will evaluate

Important Issues and Activity Highlights

whether NASA is getting the best products at the most economical costs and assess quality reporting systems to assure that the products provided meet the standards required to ensure mission safety. Other areas we identified were environmental issues, leasing agreements, international issues, computer crimes, and Small Business Innovative Research contracts.

Technology Oversight Project

NASA is committed to providing aerospace products and capabilities to and sharing knowledge with its partners, customers, and the public. While NASA openly shares its technology, that openness may generate unintended consequences involving industrial espionage, economic security issues, or security/enforcement issues. To assure the integrity of NASA's technology exchange, we have established the Technology Oversight Project (TOP). TOP is a long-term OIG cross-discipline approach to identify programmatic and systemic matters that adversely impact NASA's processes for sharing advanced technology.

We will review Agency programs and operations to identify programmatic weaknesses or the need for new or amended legislation, policies, and procedures to protect NASA technology. One current effort of the TOP is to examine whether the various types of agreements that NASA uses to develop technologies with outside entities sufficiently protect proprietary and trade secret information against misappropriation. The loss of commercially sensitive or trade secret technologies could adversely impact certain U.S. industries. Also, we will proactively identify areas susceptible to criminal misuse and investigate instances of criminal wrongdoing related to NASA's advanced technologies. For example, technologies are frequently the targets of computer crimes. We will be

alert to technologies that have particular potential for enhancing the performance of the OIG. The introduction of those technologies into OIG operations has the added benefit of demonstrating NASA's contributions to the OIG community—for instance, the use of low-cost Beowulf High Performance Computer Cluster (HPCC) computing systems developed by our Computer Crimes Division (CCD).

The Government Performance and Results Act

The Government Performance and Results Act (Results Act) requires each executive agency to develop strategic plans, performance plans, and performance reports to improve responsiveness to the needs of the public and reduce waste and inefficiency. In October 1998, members of Congress asked each Federal agency inspector general to develop and implement a plan to examine the performance measures and the data sources and information collection and accounting systems his or her agency uses to meet Results Act requirements.

The NASA OIG intends to monitor and review NASA's compliance with the Results Act requirements in the course of its regular reviews and in our independent public accountant's audit of NASA's financial statements. In addition, we will initiate a broad Agencywide audit in FY 1999 to assess the degree to which NASA complies with the full range of Results Act requirements. We will also conduct an in-depth review of NASA's technology development processes to determine whether the Results Act is being effectively applied at the program level. The initial results of our reviews will be included in the September 30, 1999, semiannual report. The plan is included as Appendix VI of this report.

Important Issues and Activity Highlights

ACTIVITY HIGHLIGHTS

Agency Plans Stronger Management Controls Over Export-Controlled Technologies

Report No. IG-99-020

The threat to NASA's technological information is continually increasing. An audit to evaluate NASA's control of export-controlled technologies found: (1) annual internal Agency audits of each Center's export control system are not adequately performed, and (2) NASA Export Control Program personnel lack training in controlling and documenting export-controlled technologies. Improvements in each of these areas are necessary to preclude unauthorized or unlicensed transfers of NASA's technological information.

Audit Identifies \$3.9 Million in Savings

Report No. IG-99-008

We evaluated NASA's management of contractor facility leasing in the geographic vicinity of the Johnson Space Center. Of the facilities we reviewed, almost 20 percent had idle space exceeding 10 percent of the total leased space. For one of those facilities, NASA negotiated a contract modification for a \$4.2 million reduction in cost and fee, of which approximately \$1.2 million was directly attributable to idle space. NASA could potentially save another \$2.7 million in excess lease costs over the terms of the leases by classifying the operating leases to capital leases. Management has initiated responsive corrective actions.

Y2K Status of Major Contractors to be Assessed

Report No. IG-99-004

NASA depends on the Defense Contract Management Command (DCMC) and the Defense Contract Audit Agency (DCAA) to perform contract administration and

audits at its contractor locations. An OIG audit disclosed that NASA had not asked the DCMC or DCAA to conduct Y2K reviews at major contractor locations. As a result, NASA risks using noncompliant data that may adversely affect the Agency's control, budgeting, program management, and cost accounting activities. Management has initiated a plan to assess the Y2K status of NASA's major contractors.

Compliance With Y2K Milestones Impacted

Report No. IG-99-022

NASA issued Y2K guidance that required contracting officers to include a clause in information technology (IT) solicitations and new contracts addressing Y2K and to modify the statement of work in existing IT operation and maintenance contracts. An OIG audit at six NASA Centers showed that each Center included the required clause in their solicitations and new contracts for IT assets. However, as of January 31, 1999, JPL had not included the requirements in all of its existing IT operations and maintenance. This could adversely impact the Agency's ability to meet the milestones of the Office of Management and Budget (OMB) for Y2K renovation, validation, and implementation phases and increases the potential for noncompliant Agency systems on January 1, 2000. Management established a target date of June 30, 1999, for JPL to incorporate the Y2K requirements into the applicable contracts and will monitor JPL's progress toward meeting that date.

Disaster Recovery Plan for Software Production Facility Incomplete

Report No. IG-99-005

The Johnson Space Center's Shuttle Software Production Facility (SPF), which is responsible for developing,

Important Issues and Activity Highlights

testing, and manufacturing Space Shuttle software, must have the ability to quickly resume operations in the event of a disaster. An OIG audit showed that while a disaster recovery plan is in place, the SPF has neither a strategy nor procedures in place for extended backup operations in the event of a disaster. Furthermore, the plan was not tested annually, and SPF application users have not developed contingency plans. Management has initiated corrective action on all but two of our recommendations aimed at enhancing the SPF's disaster recovery planning. We asked management to provide additional comments in the final report regarding (1) the vendors supplying backup resources in a timely manner and (2) management establishing contingency plans for the Flight Equipment Interface Devices.

Poor Billing Practice on X-33 Program

Report No. IG-99-001

The X-33 program is a joint NASA and industry program to demonstrate key technologies needed to build a next-generation reusable launch vehicle to replace the Space Shuttle. NASA awarded a cooperative agreement to Lockheed-Martin for performance of the program. As a result of a practice whereby Lockheed-Martin delayed billing for completed and Government-accepted milestones until the following fiscal year, NASA had unrecorded year-end obligations, costs, and liabilities totaling \$22 million in FY 1996 and \$34 million in FY 1997. Management agreed to perform a study of the appropriateness of those practices and to take corrective actions deemed appropriate by the study. As of March 31, 1999, NASA had not released the study results.

Use of Cooperative Agreement Has Limited Success

Report No. IG-99-019

An audit of whether the use of a cooperative agreement for the X-33 program was appropriate and whether the agreement effectively defines roles, responsibilities, and rights of the Government showed that NASA has had limited success. Although NASA's use of a cooperative agreement has provided certain benefits, including faster award and greater flexibility in managing the program, it has also contributed to program management problems. Management's planned actions were responsive to all but two of our recommendations to improve program management. We requested additional comments in the final report concerning (1) the need for an Agency-unique risk assessment plan and (2) the need for periodic Estimate at Completion Analyses.

Space Station Performance Measurement Reports Could Be Improved

Report No. IG-99-007

The OIG conducted an audit to assess the adequacy of corrective action plans for addressing International Space Station cost and schedule variances and to assess the Government's oversight of the plans. The audit showed that the prime contractor's (Boeing) corrective action plans and NASA's oversight of the plans need improvement. We recommended that management (1) ensure surveillance of the Earned Value Management System (EVMS), (2) require the DCMC to prepare required contract administration reports, and (3) improve the quality of corrective action plans.

Important Issues and Activity Highlights

Contingency Plans for Space Station Assembly Need Attention

Report No. IG-99-009

An audit showed that the Space Station Program Office had not developed an integrated and comprehensive plan to address risks to the assembly of the International Space Station caused by the possible delay or default by international partners. In addition, the current contingency plan did not contain cost and schedule impacts and did not clearly identify risk mitigation measures and the primary consequences of the contingencies. The plan also did not include actions being taken to prevent further Russian delays and did not address the Y2K computer problem. We recommended that management establish (1) procedures to ensure that the contingency plan complies with Agency guidance for effective risk management and (2) a process to ensure that the contingency plan is kept current. Management concurred with the intent of both recommendations but only planned corrective actions responsive to the second recommendation. We requested that management reconsider its position on the first recommendation.

Rhode Island Hacker Sentenced

A Rhode Island man was sentenced to 1 year in prison to be followed by 3 years of supervised release, perform 150 hours community service, and ordered to pay \$32,650 in damages to the victims of his computer hacking activities. He was also ordered to avoid contact with computer hacking and cracking organizations and pay \$500 in special assessments to the court.

Corporation President Agrees to Pay Government \$350,000

During this reporting period, a corporation's former president and its general manager each pled guilty in U.S. District Court to one count of charges relating to the removal of country-of-origin markings from high-pressure valve strainers used by NASA and the Navy. He also agreed in a separate settlement agreement, presented before the U.S. Court of International Trade, to pay the Government \$350,000. The corporation pled guilty in U.S. District Court to a conspiracy charge for misrepresenting the origin of strainers imported into the United States.

Contractor Convicted for False Certification of Microelectronic Devices

An investigation led to the successful prosecution during this reporting period of a corporation and several of its employees for engaging in a scheme to defraud NASA and the Department of Defense (DoD) in acts of product substitution in the testing of microelectronic devices. Three employees who had earlier agreed to plead guilty to causing the filing of false statements were sentenced to 1-year probation, ordered to serve 40 hours of community service, and assessed a \$25 special assessment. Also, a Government quality assurance inspector entered into a plea agreement with the United States.

Discontinued Charter Flights Results in \$4 Million Cost Savings

Report No. G-98-014

In lieu of commercial airline service, Johnson Space Center was using a

Important Issues and Activity Highlights

chartered 727 aircraft to transport employees between the United States and Russia in support of the International Space Station program. Johnson justified the use of the charter on expected cost savings and programmatic benefits. Our inspection team determined that the charter service was not cost-effective compared to commercial air services, and

in a final report, the team emphasized concerns in the areas of physical security, general procedures, and adherence to NASA transportation regulations. NASA concurred with our single recommendation to terminate the charter service, which will result in annual cost savings of approximately \$4 million.

Significant Audit Matters

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE PROGRAM

INFRASTRUCTURE AND SUPPORT PROGRAM

FINANCIAL MANAGEMENT

CROSCUTTING PROCESSES *Information Assurance and Technology Audits and Program*

EARTH SCIENCE PROGRAM

SPACE SCIENCE PROGRAM

AERO-SPACE TECHNOLOGY PROGRAM

OIG audits evaluate the economy, efficiency, and effectiveness with which NASA performs and manages its programs and operations. During this period, the OIG issued 23 audit reports that addressed program and operational areas with a high vulnerability of risk and impact on NASA operations, internal control weaknesses, and other management deficiencies. Appendix II lists these reports. Because many of NASA's major contractors are also DoD contractors, the services of the DCAA are relied on for most audits of contractors. The OIG, in coordination with the DCAA, has expanded its audit coverage of NASA contractors for many reasons, including issues reported in OIG audits and investigations, the importance of contractors in performing NASA's mission, continued use of on-site contractors to provide support services to NASA, and the significant impact contractor data have on NASA's financial statements. In addition, we are reengineering the process used for fulfilling our statutory responsibilities related to contract audits and audits of NASA grants and contracts at educational and nonprofit institutions that are performed by public auditors with cognizant Federal agency oversight. We fulfilled our oversight responsibilities with respect to the independent public accountant's audit of NASA's FY 1998 financial statements. We are also establishing a quality control program to ensure that annual financial statement audits of exchanges operated by NASA are performed in compliance with Government auditing standards. Our goal is to ensure that NASA receives high-quality audit services and properly resolves and acts on the results of those audits. Further information concerning OIG audit oversight activities may be found in Chapter 5. Information on all DCAA reports issued and action taken by NASA management during the 6-month period is contained in Appendix III. As can be seen in Appendix III, NASA management was able to sustain 54 percent of the \$13.5 million questioned by the DCAA, resulting in \$7.4 million being saved by NASA.



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The OIG assists NASA management and other customers through audit cooperative and outreach efforts and other significant audit activities. These activities are detailed in Chapter 5. The following are summaries of significant audits issued during the 6-month period of October 1, 1998, through March 31, 1999.

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE PROGRAM

Boeing Can Improve Space Station Performance Measurement Reports

Report No. IG-99-007

The NASA International Space Station contract requires the prime contractor, Boeing, to have an Earned Value Management System (EVMS) that produces an assessment of cost and schedule performance. Boeing prepares a report, which identifies the largest cost and schedule variances, and the corresponding cause, effect, and corrective action plans. The OIG conducted an audit to assess the adequacy of corrective action plans for addressing International Space Station cost and schedule variances and to assess the Government's oversight of the plans. We found that Boeing's corrective action plans and NASA's oversight of the plans need improvement. Specifically, variance analyses and corrective action plans have not been used effectively to control negative variances. In addition, NASA did not provide effective oversight of the DCMC surveillance of the EVMS, including the verification of corrective actions related to cost and schedule variances. Furthermore, NASA did not ensure that Boeing took corrective actions on conditions that have been noted since at least early 1997 to properly prepare and submit Variance Analysis Reports. Three recommendations

were made to management: (1) ensure surveillance of the EVMS, (2) require the DCMC to prepare required contract administration reports, and (3) improve the quality of corrective action plans. Management concurred with each of the recommendations and has planned responsive corrective actions.

Contingency Plans for Space Station Assembly Need Attention

Report No. IG-99-009

A 1998 agreement between NASA and each of the International Space Station's international partners established each partner's contributions and levels of participation. These partners will provide and support critical hardware and functions, such as guidance, navigation, control, propulsion, and life support. An audit was performed to determine whether NASA had developed adequate plans for international partner contingencies that present risk to the International Space Station program. The audit showed that the Space Station Program Office had not developed an integrated and comprehensive plan to address risks to the assembly of the International Space Station caused by possible delay or default by international partners. In addition, the contingency plan did not contain or clearly identify several critical elements for effective risk management. Specifically, the plan did not contain cost and schedule impacts and did not clearly identify risk mitigation measures and the primary consequences of the contingencies. The contingency plan also did not address the Y2K computer problem. Two recommendations were made to management: (1) establish procedures to ensure that the contingency plan complies with Agency guidance for effective risk management and (2) establish a process to ensure that the contingency plan is kept current. Management concurred with the

intent of both recommendations but planned corrective actions that were responsive to only the second recommendation. The proposed corrective actions concerning the compliance of contingency plans with Agency guidance were not responsive. We requested that management reconsider its position on this recommendation.

INFRASTRUCTURE AND SUPPORT PROGRAM

Facility Leasing Audit at Johnson Space Center Identifies \$3.9 Million in Savings

Report No. IG-99-008

NASA contractors may lease facilities to perform the work required in their contracts. The Federal Acquisition Regulation (FAR) states that lease costs for facilities are allowable costs, but they must be reasonable. As part of a continuing OIG effort, we performed an audit to evaluate NASA's management of contractor facility leasing in the geographic vicinity of Johnson Space Center. The audit showed that the management of facility leasing at Johnson could be improved. Specifically, 5 of 28 facilities reviewed had idle space exceeding 10 percent of the total leased space. For one of these facilities, NASA negotiated a contract modification for a \$4.2 million reduction in cost and fee, of which approximately \$1.2 million was directly attributable to idle space identified by OIG auditors. For two other facilities leased by one contractor, changes in contractor performance resulted in a significant reduction of idle space during the audit. The audit also showed that four contractor leases were not correctly classified as capital leases. NASA could potentially save another \$2.7 million in excess lease costs over the terms of the

leases by reclassifying the operating leases to capital leases. We made recommendations to management to review the allowability of lease costs, establish procedures to periodically review facility requirements for those contractors with leased facilities, and review lease classifications to ensure that leases are properly classified. Management concurred with the recommendations and has initiated responsive corrective actions.

Program Offices to Tighten Management Controls Over Export-Controlled Technologies

Report No. IG-99-020

The threat to NASA's technological information is continually increasing as foreign entities seek to gain technological and economic advantages. While the National Aeronautics and Space Act of 1958 promotes the sharing of information to the greatest practical extent, it also seeks to preserve the preeminent position of the United States in aeronautics and space. An audit was conducted to evaluate NASA's control of export-controlled technologies. OIG auditors found that NASA has not identified all export-controlled technologies related to its major programs and does not maintain a catalog of classifications for transfers of export-controlled technologies. The audit also showed that Agency oversight of training for personnel in the Export Control Program needs improvement. Specifically, annual audits of each Center's export control system were not adequately performed, and NASA personnel lack training in controlling and documenting export-controlled technologies. Improvements in each of these areas are necessary to ensure that controls over export-controlled technologies are sufficient enough to preclude unauthorized or unlicensed transfers. A total of six recommendations were made to

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management to ensure that a cataloging process for export-controlled technologies is developed, that only qualified personnel perform the export control audits conducted by the Agency, and that NASA employees involved directly or indirectly with technology are trained in properly classifying and protecting export-controlled technologies. Management maintained their position, accepting the risk associated with these two issues as minimal. They cited additional information to support their position and are currently working with the OIG to obtain and review that information.

FINANCIAL MANAGEMENT

Delayed Billing of \$56 Million Affects Accuracy of Agency Financial Records

Report No. IG-99-001

The X-33 program is a joint NASA and industry effort to further develop and demonstrate the technologies needed to build a reusable launch vehicle to replace the Space Shuttle. NASA awarded a cooperative agreement in 1996 to Lockheed-Martin for this effort. An audit of the agreement showed that obligations of funds on the program were not recorded in a timely manner, resulting in potential violations of fiscal statutes, including the Anti-Deficiency Act and the Agency fund control system. OIG auditors found that NASA established an arrangement with Lockheed-Martin, within the X-33 cooperative agreement, to delay billing for completed and Government-accepted milestones until the following fiscal year. NASA concluded that, under this arrangement, an obligation does not occur until Lockheed-Martin submits an invoice for payment and that the "Limitation of Government Obligation"

provisions within the cooperative agreement ensures that this arrangement is compliant with fiscal statutes. For the other X-33 partners, NASA obligates funds on the cooperative agreement before work is performed and adjusts funding as work progresses. As a result of this practice, NASA had unrecorded year-end obligations, costs, and liabilities totaling \$22 million in FY 1996 and \$34 million in FY 1997. This resulted in Agency reports and financial statements not being accurate. We recommended that NASA review the funding and payment practices used on the program and adjust the appropriate financial records where necessary. Management agreed to perform a study of the appropriateness of the existing funding and payment practices and to take corrective actions deemed appropriate by the study. NASA had not released the study results as of March 31, 1999.

CROSCUTTING PROCESSES

Information Assurance and Technology Audits and Program

Jet Propulsion Laboratory Delay Could Affect Y2K Compliance Milestones

Report No. IG-99-022

Software applications programs that use a standard two-digit format to generate a date may not work properly after the year 2000. NASA issued Y2K guidance for installations to follow when acquiring IT assets and for contractors to follow when operating and maintaining NASA IT assets. The guidance required contracting officers to include a clause in IT solicitations and new contracts addressing Y2K and to modify the statement of work in existing IT operation and maintenance contracts. The OIG conducted an audit at six NASA Centers to evaluate the adequacy

cy of renovation and validation efforts, including NASA's Y2K oversight of contractor activities and reporting to OMB. The audit showed that the six locations each included the NASA-directed Y2K requirements in solicitations and new contracts used to acquire IT assets. However, JPL had not included the NASA-directed requirements in all its existing IT operations and maintenance contracts as of January 31, 1999. The untimely incorporation of the Y2K compliance requirements into NASA contracts adversely affects the Agency's ability to meet OMB's milestones for Y2K renovation, validation, and implementation phases and increases the potential for noncompliant Agency systems on January 1, 2000. Two recommendations were made to management to ensure that NASA Y2K requirements are incorporated into JPL IT contracts. Management concurred with the recommendations and (1) established a target date of June 30, 1999, for JPL to incorporate the necessary Y2K requirements into the applicable contracts and (2) will monitor progress toward meeting the target date.

Agency Plans Assessment of Y2K Status of Major Contractors

Report No. IG-99-004

The Y2K problem affects computer systems worldwide. With many NASA and contractor computer systems using a two-digit format to generate a date, the change to the year 2000 could affect any system or program, including desktop software. NASA depends on the DCMC and the DCAA to perform contract administration and audits at its contractor locations. An OIG audit of NASA's Y2K Program found that the Agency lacks reasonable assurance that its production contractors will provide Y2K-compliant data to support key financial and program management activities. This

condition exists because NASA has not asked the DCMC or the DCAA to conduct Y2K reviews at major contractor locations. As a result, NASA risks using noncompliant data that may adversely affect the Agency's control, budgeting, program management, and cost accounting activities. Two recommendations were made to help ensure that contractor data supporting Agency activities are Y2K compliant. Management generally concurred with the intent of the recommendations and initiated a plan to assess the Y2K status of NASA's major contractors.

Space Shuttle Software Production Facility Needs Improved Disaster Recovery Plan

Report No. IG-99-005

Johnson Space Center's Shuttle Software Production Facility (SPF) is responsible for developing, testing, and manufacturing software for the Space Shuttle. Because of its importance to the Space Shuttle program, the SPF must have the ability to resume operations in a timely manner in the event of a disaster. The OIG conducted an audit to determine whether the SPF has adequately planned and prepared for disaster recovery for its IT processing needs. The audit showed that while a disaster recovery plan is in place, the SPF does not have a strategy or procedures in place for extended backup operations in the event of a disaster. Furthermore, the plan is not tested annually. We also found that SPF application users have not developed contingency plans. Without these precautions, the SPF is at risk of not recovering from a disaster in a timely manner. The report contained six recommendations aimed at implementing an SPF operations strategy, contingency plan, procedures for extended backup operations, and annual testing. Management concurred with four of the recommendations and initiated

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corrective actions. Management's planned actions were not responsive to two recommendations concerning (1) vendors supplying backup resources in a timely manner and (2) establishing contingency plans for the Flight Equipment Interface Devices. We reaffirmed our position on these two recommendations and requested additional comments in the final report. Management maintained their position on the two recommendations and cited additional information to support their position.

Management to Strengthen Controls Over Numerical Aerospace Simulation Facility

Report No. IG-99-010

The Numerical Aerospace Simulation (NAS) facility at Ames Research Center is a supercomputing installation dedicated to solving the Nation's critical problems in aeroscience and space technology. An audit showed that management had not established an adequate control structure to provide for a reliable computing environment. Specifically, major control weaknesses were identified in the following areas: (1) physical and logical access; (2) computer security; (3) file retention, backup, and recovery management; (4) software change management; (5) system accounting and file auditing; and (6) risk assessments. We recommended that Ames (1) establish policies and procedures where needed, (2) review and report on compliance with existing policies and procedures, and (3) establish a backup system for the NAS keypad/keycard entry system. A total of 16 recommendations were made to management to correct deficiencies in these areas. Management generally concurred with 15 recommendations and initiated responsive corrective actions. Management did not concur with the recommen-

dation to establish a backup system for the facility's keypad and keycard entry system. With respect to this issue, management provided additional information concerning the features of the new card access system that satisfies the intent of the recommendation.

EARTH SCIENCE PROGRAM

Audit Results in Improved Program Management for EOS Common Spacecraft

Report No. IG-99-011

The two Earth Observing System (EOS) spacecraft designated as PM-1 and CHEM-1 are central to NASA's Earth Science Enterprise, a long-term effort to study Earth and its processes. The PM-1 spacecraft is scheduled for launch in the year 2000, and the CHEM-1 spacecraft is scheduled in 2002. NASA awarded a \$398.7 million cost-plus-award-fee contract to TRW to design, fabricate, integrate, test, deliver, and provide launch and sustaining engineering support for each spacecraft. An OIG audit identified that program management for the spacecraft can be improved in the areas of quality control and the communication of award fee determinations. Specifically, auditors found that the DCMC did not submit an approved Quality Assurance Plan and periodic status reports to the NASA Flight Assurance Manager. In addition, differences concerning award fee scoring were not adequately resolved. This potentially resulted in award fees not accurately reflecting contractor performance. We recommended that NASA must ensure that the DCMC performs required quality assurance services and that the Agency must improve the communication of award fee determinations to participants in the evaluation process.

Management concurred with each recommendation and initiated responsive corrective actions.

Agency Should Leverage Commercial Sector to Provide Remote-Sensing Data

Report No. IG-99-023

John C. Stennis Space Center is designated as NASA's lead Center for commercial remote sensing. The Commercial Remote Sensing Program Office (CRSPO) at Stennis supports the development of a commercial remote-sensing industry, which can contribute to NASA's long-term Earth Science Enterprise strategic goals. In addition to internally developed initiatives, the CRSPO administers a congressionally directed program to purchase Earth science data from commercial providers. An OIG audit showed that although the CRSPO has been successful in developing the commercial remote-sensing industry, the program office has not leveraged this industry to provide products that meet baseline scientific requirements. This has resulted in the CRSPO being unable to fulfill its goal to reduce NASA's costs of remote-sensing science and technology programs through competition within the commercial remote-sensing industry. We made recommendations to (1) publish a baseline of scientific requirements to foster competition within the commercial remote-sensing industry and (2) use this baseline in initiatives to fulfill NASA's Earth science objectives at the lowest cost. The Earth Science Enterprise will publish a Science Implementation Plan in September 1999 that identifies baseline scientific requirements. The CRSPO will continue to facilitate communication between industry and the scientific community, however, NASA believes it is ulti-

mately industry's choice to provide data and services to the scientific community.

SPACE SCIENCE PROGRAM

Software Problems Cause Launch Delay of Chandra X-ray Observatory

Report No. IG-99-016

The Chandra X-ray Observatory is the third of NASA's four "Great Observatories" intended to observe the universe in the four electromagnetic spectrum regions. Based on observations in the x-ray band, Chandra is intended to provide unique information on the nature of objects, ranging from nearby stars such as our Sun to quasars at the edge of the observable universe. In November 1997, the observatory's prime contractor, TRW, informed NASA that the August 1998 launch date would not be met. The OIG conducted an audit to evaluate NASA's response to the launch delay, including procurement and contract administration functions. The audit showed that Chandra's launch delay was caused by problems in software development and inadequate time scheduled for integration and test activities for the observatory's flight and ground software. Although software development was identified as a high risk, the observatory's Risk Management Plan was not updated to reflect the problem because NASA policy did not require it. We recommended that management periodically revise NASA policy to require program managers to update Risk Management Plans. Management concurred with the recommendations and plans to address them the April 1999 meeting of the Program/Project Management Working Group.

Chapter 1

AERO-SPACE TECHNOLOGY PROGRAM

Use of Cooperative Agreement on X-33 Program Has Limited Success

Report No. IG-99-019

NASA awarded a cooperative agreement to Lockheed-Martin for the performance of the X-33 technology demonstrator program. Under this agreement, NASA will fund \$913 million of the program's \$1.1 billion costs, with Lockheed-Martin and four other industry partners funding the remaining \$211 million. The OIG conducted an audit to determine whether NASA's use of a cooperative agreement was appropriate and whether the agreement effectively defines roles, responsibilities, and rights of the Government and industry partners. The audit showed that NASA has had limited success in the use of a cooperative agreement on the X-33 program. NASA's use of a cooperative agreement has provided certain benefits, including faster award and greater flexibility in managing the program. Conversely, auditors found that the use of a cooperative agreement contributed to program management problems, such

as (1) program plans, internal agreements, and guidance documents either were not prepared or were not timely; (2) industry partners did not routinely provide required analyses of their cost estimates at program completion or submit monthly reports on resource contributions; (3) Center practices for controlling and reporting costs require improvement; (4) Government property reports submitted by industry partners were incomplete; and (5) ownership of the X-33 flight vehicle upon program completion has not been determined. We made a total of nine recommendations to improve X-33 program management and to ensure that effective program management practices are followed on future Agency cooperative agreements. Management generally concurred with seven of the nine the recommendations and initiated corrective actions. Management's planned actions were not responsive to two recommendations concerning (1) the need for an Agency-unique risk assessment plan and (2) the need for periodic Estimate at Completion Analyses. We reaffirmed our position on each recommendation and requested additional comments in the final report.

Significant Audit Matters

Management Decisions

REVISED DECISIONS

DISAGREEMENT ON PROPOSED ACTIONS

STATUS OF MANAGEMENT DECISIONS

REVISED DECISIONS

Section 5(a)(11) of the Inspector General Act, as amended, requires a description and explanation of the reasons for any significant revised management decision made during the reporting period.

During this reporting period, there were no such instances.

DISAGREEMENT ON PROPOSED ACTIONS

Section 5(a)(12) of the Inspector General Act, as amended, requires information concerning any significant management decisions with which the Inspector General is in disagreement.

During this reporting period, there were no such instances.

STATUS OF MANAGEMENT DECISIONS

- A. Sections 5(a)(8) and (9) of the Inspector General Act, as amended, require statistical tables on the status of management decisions on OIG audit reports involving questioned costs or recommendations that funds be put to better use. The following two tables summarize the status of management decisions as of March 31, 1999.

Chapter 1

OIG AUDITS WITH QUESTIONED COSTS

Type of Audit	Number of Audit Reports	Total Costs Questioned
No management decision was made at beginning of period	8	\$11,709,105
Issued during period	1	\$2,700,000
Needing management decision during period	9	\$14,409,105
Management decision made during period:	4	\$3,563,157
amounts disallowed		\$3,173,838
amounts not disallowed		\$389,319
No management decision at end of period:	5	\$10,845,948
less than 6 months old	1	\$2,700,000
more than 6 months old	4	\$8,145,948

OIG AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

Type of Audit	Number of Audit Reports	Dollar Value of Recommendations
No management decision was made at beginning of period	8	\$5,622,649,198
Issued during period	1	\$1,200,000
Needing management decision during period	9	\$5,623,849,198
Management decision made during period: ¹	4	\$5,558,784,198
amounts management agreed to be put to better use based on proposed management action		\$680,000
based on proposed legislative action		\$680,000
amounts not agreed to be put to better use		0
		\$5,558,104,198 ²
No management decision at end of period:	5	\$65,065,000
less than 6 months old	1	\$1,200,000
more than 6 months old	4	\$63,865,000

¹ We have changed our reporting procedure this period. Monetary benefits are reported when a management decision has been made for all monetary benefits associated with a report, not on each recommendation as was our previous reporting method. Consequently, the beginning numbers of reports and monetary benefit amounts are not the same as the ending numbers and amounts reported on September 30, 1998.

² This amount includes \$5,500,000, which the OIG identified could be put to better use as a result of decommissioning the Plum Brook Station Nuclear Reactor (Report No. IG-97-038, September 12, 1997). Management agreed to decommission the reactor but did not provide an alternative amount to the OIG's estimate of funds that can be put to better use. Management will resolve this once the decommissioning takes place and an actual dollar amount can be determined.

Management Decisions

- B. Section 5(a)(10) of the Inspector General Act, as amended, requires a summary of each audit report issued before the commencement of the reporting period for which no management decision has been made by the end of the reporting period. The following table summarizes the status of management decisions as of March 31, 1999.

AUDIT REPORTS ISSUED PRIOR TO OCTOBER 1, 1998, FOR WHICH NO MANAGEMENT DECISION HAS BEEN MADE

Report Number, Title, and Date	Reason for No Management Decision ³
Infrastructure and Support	
IG-98-024 Cost Sharing for Santa Susana Field Laboratory (SSFL) Cleanup Activities August 18, 1998	The OIG recommended that management seek a cost-sharing agreement, recovery of costs, and allocation of future preventive costs. Management is waiting for the completion of cost-sharing negotiations on a related OIG report before proceeding with the SSFL negotiations. Management is also waiting for the completion of the contracting officer's review of the contractor's charging practices for environmental preventive costs.
IG-98-035 NASA General-Purpose Vehicles Acquisition and Use September 25, 1998	The OIG made recommendations to establish policy for vehicle usage, disposal, and leasing. Management has implemented the recommendations but has not agreed to an amount of funds put to better use. The NASA logistics office has established a reporting requirement to document savings resulting from the new policies.
IG-98-038 Commercial Use of the Santa Susana Field Laboratory September 30, 1998	Management has not agreed to an amount of questioned costs for one recommendation. Management concurred with and is pursuing corrective actions on all recommendations. Because of the effort and coordination required, the full implementation of the corrective actions may require several months.
IG-98-027 NASA Costs Paid to Rehired, Former JPL Employees September 21, 1998	Two recommendations are unresolved because management has not agreed to amounts of questioned costs. Management has agreed to all corrective actions and is negotiating with the contractor for the recovery of any costs deemed unallowable.

(Continued)

³ The OIG and NASA management are working together to resolve by September 30, 1999, all reports on which there are no management decisions. Also, NASA management has instituted a new procedure under which a management decision will be made within 60 days of issuance of a final audit report.

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AUDIT REPORTS ISSUED PRIOR TO OCTOBER 1, 1998, FOR WHICH NO MANAGEMENT DECISION HAS BEEN MADE

(Continuation)

Report Number, Title, and Date	Reason for No Management Decision
Information Assurance and Technology Audits	
IG-98-040 Year 2000 (Y2K) Conversion-Assessment Phase September 30, 1998	The OIG recommended that management develop and issue guidance on Y2K estimating methodology. NASA management stated that existing guidance is sufficient. We are requesting additional information from management that will allow us to resolve and carry out disposition on the recommendation.
Space Science	
IG-98-041 Consolidated Network Mission Operations Support Contract, Transition and Implementation September 30, 1998	The OIG recommended that the contracting officer seek to recoup overstated savings. Management has requested the DCAA to conduct a review of the contractor's claimed savings. This action was agreed to by the OIG to resolve the recommendation.
IG-97-028 Technology and Applications Programs' Bid and Proposal (B&P) Costs at the Jet Propulsion Laboratory June 24, 1997	The OIG recommended that management evaluate the use of a special allocation for B&P costs. Management disagreed and stated that the current allocation method is the preferred allocation method under Cost Accounting Standards. Under the circumstances, management does not believe that a special allocation is warranted.
Aero-Space Technology	
LA-95-001 PCIE Audit of Aircraft Management March 28, 1995	Management has not agreed to an amount for the OIG's funds put to better use. Management has concurred with the corrective action and has recently submitted a cost analysis to the OIG. We will review the cost analysis as part of our followup.

Significant Audit Matters

Significant Audit Matters Previously Disclosed for Which Corrective Actions Are Still in Process

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE PROGRAM

ENVIRONMENTAL PROGRAM

INFRASTRUCTURE AND SUPPORT PROGRAM

CROSSCUTTING PROCESSES

EARTH SCIENCE PROGRAM

SPACE SCIENCE PROGRAM

AERO-SPACE TECHNOLOGY PROGRAM

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE PROGRAM

Shuttle Processing Subcontract Audit Identifies Fraud Indicators

Report No. IG-97-011

The audit of the Space Operations subcontracting function under the Kennedy Space Center Shuttle Processing Contract identified a significant number of fraud indicators in two construction subcontracts valued at a total of \$7.0 million. We recommended that management address those procurement fraud indicators and review \$2,076,073 in unsupported cost, disallowing at least \$885,519. Management completed actions on all recommendations except one. Closure of the remaining recommendation is pending the completion of other OIG reviews of the matter.

Amendments to Commercial Revenue Sharing Agreement Were Not in NASA's Best Interest

Report No. IG-97-026

An OIG audit showed that, under amendments to a commercial revenue-sharing agreement with Columbia Communications Corporation (CCC), CCC had: (1) claimed unreasonable marketing and operations costs, resulting in approximately \$709,000 of lost revenue to NASA; (2) improperly used C-band revenues to pay profits, resulting in an additional \$108,000 in lost revenue to NASA over a 2-year period; and (3) did not comply with the lock box provision of the agreement to ensure that the company was reporting all C-band revenues accurately. We recommended that the Office of Space Flight (1) establish clear guidelines to determine what constitutes allowable and reasonable marketing and operations expenses under the C-band agreement, (2) require that operations expenses be fully documented, (3) pursue the recovery of \$108,000 in improperly paid profits from CCC, and (4) ensure that CCC's customers send their payments directly to the bank lock box as required by the C-band agreement. The Office

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of Space Flight concurred with our recommendations and has planned corrective actions.

During this period, the audit remained open pending the completion of legal remedies being pursued by the NASA General Counsel.

Costs Not Recovered for Commercial Payloads Flown on SPACEHAB Module

Report No. IG-98-028

NASA has a \$43 million contract with SPACEHAB, Inc., for the lease of pressurized modules for NASA payloads to be flown on the Space Shuttle. Under this contract, NASA agreed to allow non-NASA customers (secured by SPACEHAB) to share payload capacity on Space Shuttle missions. NASA sought consideration for the associated transportation costs allocable to non-NASA payloads through a reduced price for the contract. An OIG audit found that because NASA has no clear guidance on how to determine the appropriate amount of consideration, the Agency has no assurance that sufficient consideration was received. Based on a method used for previous contracts involving non-NASA payloads, the OIG calculated that transportation costs should have been \$19.12 million more than NASA received. We recommended that NASA develop guidance for calculating transportation fees for non-NASA payloads flown on the Space Shuttle's SPACEHAB module.

NASA concurred with the recommendation, but did not state whether the planned guidance would specifically address transportation fees. We have requested additional information from management concerning this issue.

\$1.5 Million in Unallowable Management Fees Paid to Nonprofit Organization

Report No. IG-98-037

In 1995, the NASA Zero Base Review identified the concept of science research institutes as a potentially beneficial approach to maintain or improve the quality of science during a period of organizational streamlining. The goal was to operate 11 institutes under competitively awarded contracts or cooperative agreements to conduct research to support the missions of selected NASA Centers. In 1997, three Centers—Ames Research Center, John H. Glenn Research Center, and Marshall Space Flight Center—entered into cooperative agreements with a nonprofit organization to establish research institutes. The NASA Centers agreed to pay management fees on the cooperative agreements that will total about \$1.54 million over the next 5 years. Consequently, the nonprofit organization used management fees to pay for unallowable costs on the cooperative agreements. We revised our final report to recommend that NASA establish policy requiring the authorization, justification, and approval of management fees to nonprofit organizations on cooperative agreements. That policy should define a process for considering the use of management fees and emphasize that routine use should be discouraged. The OIG asked for comments to the revised recommendation in the final report.

During the reporting period, our review of documentation provided to support actions being taken on the recommendation found the actions to be responsive. We intend to close this recommendation upon receipt of the NASA Grant and Cooperative Agreement Handbook, including the amendment to prohibit the

Significant Audit Matters

Significant Audit Matters Previously Disclosed for Which Corrective Actions Are Still in Process

payment of management fees for new awards or modifications of grants and cooperative agreements.

Contractor Receives \$1.8 Million More Than Entitled Under Contract Clause

Report No. IG-98-041

NASA signed an agreement with AlliedSignal Technical Services and Computer Sciences Corporation (CSC) to consolidate three existing support services contracts into a single prime contract with AlliedSignal. AlliedSignal submitted a cost reduction proposal describing changes in its work practices and included organization and contract cost reductions that would occur as a result of these changes. Based on this proposal, AlliedSignal and NASA negotiated a \$34.8 million contract cost reduction, with NASA sharing 20 percent of actual savings with Allied, up to a maximum of \$7.2 million. An audit showed that AlliedSignal's cost reduction proposal overstates negotiated savings by \$9.0 million. This overstatement resulted in AlliedSignal's receiving \$1.8 million more than entitled under the contract's shared savings clause. We recommended that NASA seek to recoup the \$1.8 million paid to AlliedSignal. Management did not concur with the recommendation. The OIG reaffirmed its position in the final report and requested additional comments.

During this reporting period, NASA management requested that the DCAA conduct an independent review of the contractor's savings. The OIG agreed with this action as a means to resolve the open recommendation.

ENVIRONMENTAL PROGRAM

Kennedy Space Center Recycling Efforts Need Improvement

Report No. IG-98-017

Executive Order 12873, "Federal Acquisition, Recycling and Waste Prevention," requires the Federal Government to use natural resources efficiently by maximizing recycling and waste prevention activities. Our audit of Kennedy Space Center's recycling efforts showed that Kennedy did not have the necessary goals, policies, or procedures to support the Executive Order requirements. The audit also showed that Kennedy did not enforce those procedures to ensure that proceeds from its recycling program are retained. These proceeds can be used to benefit the existing recycling program or other Center environmental efforts. We estimate that recycling revenue of approximately \$141,000 was not available to fund additional projects. We made recommendations to ensure that Kennedy (1) complies with appropriate recycling guidance and (2) efficiently collects additional revenues that can be used to promote the Center's recycling program.

During this reporting period, Kennedy management established a single program office that is accountable for tracking recycling revenue from receipt through disbursement. However, this office has not yet established procedures to ensure the completeness of collections, the accuracy of recording, or the reconciliation of the recycling revenue account.

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NASA Overpaid Contractor \$16.4 Million for Environmental Remediation Costs

Report No. IG-98-024

The Rocketdyne Division of Boeing North America operates the Santa Susana Field Laboratory (SSFL) in Ventura, California, for rocket engine testing. Between 1954 and 1961, Rocketdyne used trichloroethylene (TCE) as a cleaning solvent for flushing engines and test stands. The use of TCE at SSFL resulted in significant environmental contamination. Rocketdyne became aware of this contamination in 1984. Environmental laws require past and present owners, operators, and generators of hazardous waste to clean up the hazardous waste sites. As one of the owners of SSFL, NASA has paid remediation costs and will continue to do so. Our audit showed that NASA has been unable to negotiate a cost-sharing agreement for remediation costs with the other parties involved in the SSFL facility. As a result, NASA may have overpaid Rocketdyne \$16.4 million for the remediation costs during the period 1984 through 1997. Over the next 40 years, NASA could further pay an annual average of \$6.8 million in remediation costs with little assurance that these costs will be recovered from other responsible parties. The audit also showed that Rocketdyne's method for distributing environmental preventive costs resulted in a disproportionate share of those costs being paid by NASA. This practice resulted in NASA potentially overpaying Rocketdyne \$4.7 million for these costs during FY 1996 and 1997. If not addressed, NASA may overpay \$6.9 million annually for environmental preventive costs over the next 40 years. We made recommendations to negotiate a cost-sharing arrangement for remediation costs and obtain an equitable distribution of preventive costs.

Management is awaiting the completion of negotiations on another issue concerning SSFL before proceeding with negotiations to close the recommendations concerning cost sharing. With respect to the two recommendations concerning preventive costs, management is waiting for the completion of the contracting officer's review of the contractor's charging practices.

INFRASTRUCTURE AND SUPPORT PROGRAM

Contractor Using NASA-Owned Property Rent Free for Commercial Business

Report No. IG-98-038

The FAR requires that contractors pay rent when using Government-furnished property for non-Government business. An audit showed that Marshall Space Flight Center management, citing the Commercial Space Launch Act (CSLA) of 1984, authorized a contractor's use of NASA-owned production property at SSFL on a rent-free basis. The CSLA provides for Government agencies to make only their launch property, not production property, available to support the commercialization of these programs. NASA Headquarters officials notified Marshall that the commercial use of production property does not fall under the purview of the CSLA, but is instead rent bearing. Despite this notice, Marshall maintained its authorizations. OIG auditors concluded that Marshall should have collected approximately \$3.1 million in rent. We recommended that Marshall withdraw its authorization and charge the contractor rent for both its past and future commercial use of the property.

Three of the four recommendations remain open. During this period, man-

Significant Audit Matters

Significant Audit Matters Previously Disclosed for Which Corrective Actions Are Still in Process

agement committed to initiate actions to (1) withdraw improper authorizations, (2) collect rent in the future when SSFL is used for commercial purposes, and (3) review the potential for collecting rent for past commercial use of the facility. Although these actions are responsive, the three recommendations will remain open pending actual implementation.

CROSSCUTTING PROCESSES

Review of NASA's Single Process Initiative/Block Change Process Improvements

Report No. P&A-98-002

The Government and Industry Quality Liaison Panel conceived the Single Process Initiative (SPI)/Block Change, also referred to as the common process initiative. NASA, DoD, and the Federal Aviation Administration (FAA) endorse this initiative, which enables contractors to propose single processes that would meet the needs of multiple Government customers. The intent of SPI is to reduce a contractor's operating costs and achieve cost, schedule, and performance benefits for both the contractor and the Government. The review addresses NASA's involvement and partnering with DoD, the application of SPI at NASA Centers, achievements in reducing contract costs, and contractor participation. We found inconsistent implementation across Centers, minimal cost savings, and inadequate resources for staffing SPI implementation. We recommended that: (1) the Chief Engineer reassess NASA's continued participation in SPI, (2) adequate funding be provided for implementation, (3) internal guidelines be issued or clarified, (4) data keeping be centralized and uniform within NASA, and (5) NASA resolve with DoD a number of issues outside the control of NASA but that directly

impact NASA's implementation of SPI. In general, management concurred with the report's recommendations.

Of the report's seven recommendations, five remain open during this reporting period pending management's implementation of proposed corrective actions.

EARTH SCIENCE PROGRAM

Earth Science Data and Information Are Not Reaching All Users

Report No. IG-98-013

NASA's Earth Science Enterprise is a scientific endeavor seeking to provide an understanding of Earth and how it is changing, both naturally and as the result of human interaction. The Earth Science Strategic Enterprise Plan provides NASA's vision of a broad spectrum of five categories of users for the program's data and information. An OIG audit showed that although the Office of Earth Science has taken initiatives to enhance dissemination services to make data and information more accessible, these products are primarily being designed to support the scientific community. We found that four of the five intended user groups (commercial, technological, educational, and the public sector) are not receiving or making any significant use of the data and information. We made recommendations to establish and fund a formal outreach plan to focus dissemination efforts on nonscientific customers and to integrate nonscientific user groups more fully into the Office of Earth Science's data dissemination activities.

NASA management is currently in the process of closing out the remaining open recommendation concerning the composition of user working groups.

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SPACE SCIENCE PROGRAM

Inequitable Allocation Method Resulted in NASA Paying a Disproportionate Share of Bid and Proposal Costs

Report No. IG-97-028

JPL used an inequitable allocation method to distribute bid and proposal (B&P) costs that resulted in NASA paying a disproportionate share of B&P costs attributable to commercial and other non-U.S. Government work. We recommended that NASA (1) consider requesting that the contractor distribute the B&P costs equitably with a special allocation method and (2) evaluate the allowability of the contractor's FY 1994 and FY 1995 B&P costs (\$712,000) attributable to commercial and other non-Government work.

Previously, NASA management provided the OIG with a DCAA audit report that addressed the allowability of the contractor's B&P costs. Based on our review of the DCAA report, we determined that sufficient actions had not been taken to address the intent of the first recommendation. The OIG is currently in the process of obtaining additional data from JPL to update data in the audit report and determine the impact on current B&P costs.

\$95,000 in Costs Paid to Former Contractor Employees Questioned

Report No. IG-98-027

JPL is a Federally Funded Research and Development Center operated by the California Institute of Technology under a NASA contract. An OIG audit reviewed controls over payments to rehired former JPL employees. The audit showed that JPL rehired former employees as consultants and extended their services without adequate justification; JPL also paid former employees at a daily rate that

exceeded their final JPL salary rate. Former employees were also rehired as on-call personnel without adequate justification. We questioned more than \$95,000 paid for consultants and on-call services in which JPL did not follow its own policies. We recommended that NASA management direct JPL to (1) comply with existing procedures for hiring consultants and on-call personnel, (2) revise its procurement policies and procedures to include managerial review and approval of consultant agreements and documentation of consultants' work, and (3) establish procedures for justifying the rehire of former employees for on-call services. We also recommended that NASA management review the reasonableness of costs paid for obtaining consulting and on-call services from former JPL employees and recover any unreasonable costs.

All five recommendations remain open. Management is currently in the process of (1) obtaining revised policies and procedures from the contractor and (2) preparing a negotiation position on any unreasonable costs.

AERO-SPACE TECHNOLOGY PROGRAM

Savings Possible Through Improved Aircraft Management

Report No. LA-95-001

We participated in a President's Council on Integrity and Efficiency-sponsored audit of Federal civilian agency use of Government aircraft. We identified several areas in which NASA could improve the management and control of its aircraft fleet (for example, using commercial aircraft to transport personnel in lieu of its own aircraft would save NASA \$5.8 million annually and selling seven of the

Significant Audit Matters

Significant Audit Matters Previously Disclosed for Which Corrective Actions Are Still in Process

eight aircraft having a market value of about \$10.6 million that were used exclusively for transporting personnel). We recommended that NASA tighten controls over transporting personnel on NASA aircraft, perform cost-effectiveness studies to justify the retention of aircraft assets, and reevaluate aircraft lease versus purchase options. Management fully or partially concurred with all the recommendations.

Of the 19 recommendations, 1 remains open. This open recommendation is for NASA to perform cost-effectiveness analyses as required by OMB Circular A-76 to justify the retention of mission management aircraft. NASA management informed us that they intend to complete this analysis. We will review the cost-effectiveness analyses when management completes action on the recommendation.

Policy and Guidelines Needed to Ensure the Adequate Recovery of Facility Costs

Report No. IG-97-040

We evaluated NASA's policy and procedures for recovering the costs associated with performing wind tunnel and other tests in its aeronautical research facilities for, or in cooperation with, non-NASA customers or partners. Several areas required management's attention, including: (1) making interim improvements to accounting systems; (2) removing impediments to the completion of the facility charging policy; (3) developing proper billing methods for the DoD Joint Strike Fighter program; and (4) executing adequate agreements to protect NASA's interests. Management concurred with our recommendations.

Management has completed actions on seven of the report's eight recommendations. The remaining open recommenda-

tion is addressed to the Office of Aero-Space Technology and concerns development of criteria for approving nonreimbursable test agreements.

Management continues working with the Centers to develop the criteria, which has taken longer than expected.

Management and Administration of Grants Need Improvement

Report No. IG-98-019

NASA obligates approximately \$400 million annually for grant research. NASA accountants use grantee quarterly financial reports to record cost and disbursement data into Center accounting systems. These reports must be accurate, timely, and recorded promptly so that management can make informed and reliable operating decisions. An OIG audit of grant reporting and recording practices at four Centers showed that financial reports were often late and that Centers did not always record grant data accurately and promptly. The audit also showed that NASA (1) did not adequately monitor report timeliness or close out grants in a timely manner, (2) overstated FY 1997 grant costs, and (3) lacked a centralized data base of information to identify those grantees not meeting financial reporting requirements. These issues can or did lead to inaccurate accounting data, understated grant costs, unreliable cost and disbursement reports, an unreliable basis for budget and program decisionmaking, and an inaccurate cost carryover position at the fiscal year's end. We made a total of nine recommendations to help improve the Agencywide management and administration of grants.

NASA has completed corrective actions for four of the nine recommendations. Corrective action is under way for the

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remaining five recommendations but, in many cases, requires coordination among several NASA organizational elements.

Plan to Acquire Excess Military Housing Contains Risks

Report No. IG-98-022

Ames Research Center plans to acquire 693 military family housing units that the Air Force will excess because of base realignment and closure decisions. Ames plans to acquire the housing because of (1) the need to maintain a noise buffer between the Center's wind tunnels and the surrounding community and (2) the belief that low-cost housing will retain and attract military tenant organizations that help defray the cost of maintaining and operating Moffett Federal Airfield. Ames management believes that the housing units can be acquired and operated at no cost and little risk to NASA. An OIG audit showed that the cost-benefit study supporting Ames' cost assertions does not fully identify and consider all costs associated with the housing. In addition, Ames has not resolved all legal and environmental issues associated with the housing. The OIG concluded that the planned housing acquisition and operation could incur additional costs for Ames and increase liability for NASA. We recommended that Ames (1) ensure that the proposed military family housing operation incurs no cost for NASA and involves no use of Agency personnel and (2) minimize NASA's exposure to potential tort and environmental liability from continuing the military family housing operation. Management concurred with the recommendations and is taking corrective action.

NASA management continues working to complete the corrective actions necessary to close the five open recommendations.

NASA has not completed corrective actions, in part, because no military resident agency has been willing to accept responsibility for the housing operation. Stanford University has tentatively agreed to manage the housing operation as part of a larger Space Act agreement covering the university's research efforts with Ames. Ames is currently negotiating the details of this agreement with Stanford University. We will continue to monitor management's progress during the next reporting period.

National Technology Transfer Centers' Mission Needs to be Defined

Report No. IG-98-031

The National Technology Transfer Center (NTTC) fosters NASA and Federal technology transfers with U.S. industry and provides businesses with access to information, expertise, and facilities. Located at Wheeling Jesuit University in West Virginia, the NTTC is one element in NASA's technology transfer network. An OIG audit showed that, in 1995, NASA directed the NTTC to shift its technology transfer focus from a national to a strictly NASA focus without formally defining the NTTC's revised mission. As a result, the NTTC's mission is unclear and similar to that of NASA's Regional Technology Transfer Centers. In addition, the NTTC is not fully integrated into NASA's technology transfer organization. The audit also identified that (1) some NASA-specific activities are inappropriate under the cooperative agreement with Wheeling Jesuit University, (2) the NTTC's monthly reports do not include enough performance information, and (3) the NTTC charged \$19,500 of unallowable costs to the NASA cooperative agreement. We recommended that NASA (1) clearly define the NTTC's mission, (2) acquire

Significant Audit Matters

Significant Audit Matters Previously Disclosed for Which Corrective Actions Are Still in Process

services using the appropriate award instrument, (3) revise the monthly report format, and (4) recover the unallowable costs.

The three recommendations remain open. Actions taken during this period include NASA and the NTTC executing a Program Commitment Agreement for the remaining period of the cooperative agreement, which helps clarify the responsibilities of the NTTC. In addition, NASA is currently developing the statement of work in planning for the transition of the cooperative agreement to a contract in FY 2000. Management stated that the contract would ensure that the products and services of the NTTC are acquired appropriately. The Goddard Space Flight Center's Grants Office is also working with Wheeling Jesuit University to resolve the unallowable salary costs.

Review of the Aeronautics and Astronautics Coordinating Board Implementation Results

Report No. P&A-98-003

The Aeronautics and Astronautics Coordinating Board (AACB) is a joint DoD and NASA senior management review and advisory body. It was chartered by interagency agreement in 1960, in part, to help ensure the effective use of U.S. scientific and engineering resources, avoid unnecessary duplication of efforts, facilities, and equipment, and reduce costs. During 1995 and 1996, the AACB undertook an extensive effort to identify opportunities to further increase cooper-

ation. From the initiative, 34 recommendations were developed that have the potential to effect savings and increase efficiency and effectiveness. Our review concluded that the AACB Cooperation Initiative has been a successful partnership, resulting in significant savings for both agencies. However, the implementation of approximately half of the recommendations remains incomplete. The remaining open recommendations offer additional potential opportunities to improve operations and reduce costs.

We recommended that the NASA AACB Co-Chair (the NASA Deputy Administrator) and the DoD Co-Chair plan the implementation of the open recommendations and ensure funding for implementation. The NASA Deputy Administrator agreed to pursue implementation upon DoD appointment of a Co-Chair, but stated that funding would depend on NASA's priorities and the overall level of Agency funding available. DoD's Deputy Assistant Secretary of Defense (C3ISR and Space Systems), Office of the Assistant Secretary of Defense, agreed that the open recommendations should be reviewed, updated, and implemented where appropriate.

DoD has recently named a new AACB Executive Secretary. The OIG has been informed that NASA's AACB Executive Secretary plans to meet with DoD's new Executive Secretary soon to discuss how to proceed with resolving the open recommendations.

Significant Investigative Matters

COMPUTER INTRUSIONS/CRIMES

PROCUREMENT

BRIBERY/KICKBACKS

PRODUCT SUBSTITUTION

EMPLOYEE MISCONDUCT

OIG investigations originate from many sources. A majority of those investigations are predicated on information provided by NASA, contractor employees, or other Federal agencies. OIG investigators develop and investigate cases having significant financial and programmatic impact.

The OIG continues to focus investigative resources on preventing and detecting fraud and waste in NASA's procurement activities. Efforts by the OIG to investigate cases with potentially significant impact have produced a consistent record of positive results.

The OIG has expanded its capability to investigate statutory violations in the Agency's electronic data processing and advanced technology programs. The incidents of computer intrusion are increasing. The CCD detects those intrusions and protects the integrity and enhances the security of NASA's IT systems.

The following are summaries of significant OIG investigations during this reporting period.

COMPUTER INTRUSIONS/CRIMES

Rhode Island Man Sentenced in Computer Hacking Case

A Rhode Island man, who was a part of a computer hacker group known as "ViRii," was sentenced to 1 year in prison for his computer hacking activities. "ViRii" executed various denial-of-service attacks and compromises against numerous NASA and other Federal entities, as well as corporate and educational computer systems around the world. The Rhode Island man pled guilty to committing intentional damage to computer systems maintained by Harvard University, Amherst College, Internet Services of Central Florida, and Aliant Technologies. He also pled guilty to a charge of unauthorized access to an Alaskan computer system maintained by Arctic Slope Regional



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Corporation and Barrows Cable. The U.S. District Judge recommended that the man serve his sentence in boot camp and ordered him to pay \$32,650 in damages to the victims. He will remain on supervised release for 3 years following his imprisonment and be required to perform 150 hours of community service. Furthermore, he cannot have contact with hacking and cracking organizations, including “ViRii” and “enforcers.” He was also ordered to pay \$500 in special assessments to the court.

NASA Contractor Employee Charged for Electronic Mailing of Sexually Explicit Material

A joint investigation by agents from the OIG, the Los Angeles County District Attorney’s Office, and NASA Security resulted in the arrest of a NASA contractor employee on seven State felony counts of allegedly sending sexually explicit material to a minor using a NASA-owned computer and e-mail account. The charges stemmed from an investigation that disclosed evidence that the contractor employee allegedly sent numerous sexually explicit electronic mailings to a 14-year-old minor. Resolution of the charges is pending.

PROCUREMENT

NASA Contractor Enters Into \$214,462 Civil Settlement Agreement

An OIG investigation, with the assistance of the DCAA, resulted in a contractor repaying the Government \$214,462 as part of a release and settlement agreement in connection with NASA contracts. The settlement agreement alleged that between 1992 and 1996, the contractor submitted 98 false claims to NASA. The false claims were based on

“pro forma” invoices from subcontractors, which were submitted to the contractor prior to actual delivery of services and materials and subsequently billed to NASA prematurely.

NASA Contractor Pleads Guilty to Violating Resource Conservation and Recovery Act

An investigation by the OIG, the Criminal Investigation Division of the Environmental Protection Agency (EPA), the Defense Criminal Investigative Service (DCIS), and the Naval Criminal Investigative Service (NCIS) resulted in a subcontractor pleading guilty to two felony counts of the Resource Conservation and Recovery Act. The investigation disclosed that the contractor had stored hazardous waste in violation of Federal law. In pleading guilty, the contractor agreed to pay \$65,000 in fines, \$35,000 in restitution, and a \$800 special assessment fee. In addition, the contractor is required to serve 3 years of probation during which the company will make improvements to its facility to ensure it conforms to local and Federal environmental laws.

NASA Contractor Enters Into Civil Agreement

As the result of our joint investigation with EPA’s OIG, a contractor official signed a release and settlement agreement in connection with alleged “premature billing practices” in violation of the Federal Acquisition Regulation. The Government lost the value and use of its funds while the contractor gained an unjust enrichment by billing the Government prematurely for subcontract costs it had not incurred. The contractor denied any wrongdoing but has entered into the agreement to avoid litigation and to resolve the outstanding issues. As a part of the settlement, the contractor agreed to pay the Government \$50,000.

Significant Investigative Matters

Moon Rock Recovered

The OIG, the U.S. Customs Service (Customs), and the Postal Inspection Service conducted a joint investigation in which they seized an actual Moon rock that was being offered for sale in Miami. The Moon rock, which was the property of the Republic of Honduras, was offered to undercover agents for \$5 million. A South Florida man explained to undercover agents that the Moon rock he possessed was given to a Central American nation, later identified as Honduras, on behalf of President Nixon. He also explained that he purchased the Moon rock from a retired Honduran military officer. Customs agents seized the Moon rock because it was smuggled into the United States without being properly declared on Customs Service forms, as is required by law. An analysis of the Moon rock verified that the rock was in fact from the surface of the Moon and was the same one presented to the nation of Honduras. Customs agents proceeded with the forfeiture of the Moon rock so that the rock and the plaque on which it is mounted may be repatriated to the Republic of Honduras.

BRIBERY/KICKBACKS

NASA Contractor Enters Into Civil Settlement

A joint OIG and DCIS investigation resulted in a contractor official signing a release and settlement agreement in connection with alleged kickbacks paid to a NASA and DoD prime contractor. As a part of the settlement, the contractor agreed to pay the Government \$75,000. The contractor has denied any wrongdoing but has entered into the agreement to avoid litigation and to resolve the outstanding issues.

PRODUCT SUBSTITUTION

Former Contractor Representative Sentenced

A joint OIG, Customs, and DCIS investigation resulted in a former contractor representative being charged with a misdemeanor violation of aiding and abetting in the unlawful removal of country-of-origin markings from company merchandise sold to Government contractors. The former contractor representative entered a guilty plea to the charge. He was sentenced to 1 year of supervised probation and ordered to serve 100 hours of community service.

EMPLOYEE MISCONDUCT

Former NASA Employee Filed False Travel Claims

An OIG investigation resulted in a former NASA employee entering a guilty plea to one count of theft and conversion of Government funds. The employee admitted he falsified taxicab receipts, which he subsequently submitted to NASA for travel reimbursement between July 1994 and March 1998. The employee received reimbursement of approximately \$852 in travel expenses to which he was not entitled. The former employee was sentenced to 1 year of probation and 100 hours of community service, ordered to pay a \$2,500 fine, and assessed a \$25 special assessment.

Two Former NASA Contractor Employees Sentenced on Drug-Related Charges

A joint investigation conducted by the OIG, the Drug Enforcement Administration, and the Seminole County Sheriff's Department of Sanford, Florida, resulted in two former contractor employees pleading no contest to

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possession and sale of a controlled substance. One employee admitted to selling the substance, ecstasy, while on duty and to using NASA facilities and equipment to facilitate drug transactions. The other employee admitted to assisting in the selling of the substance. The former employees were sentenced to 5 years of probation and ordered to pay \$6,227 in restitution for the cost of the investigation.

Former NASA Contractor Employee Sentenced on Charge of Petty Theft

A joint OIG investigation with the Accomack County Sheriff's Department, Accomack, Virginia, resulted in a former NASA contractor employee pleading guilty to one count of unlawfully and feloniously uttering a check. The investigation disclosed that the employee stole a coworker's payroll check and fraudulently negotiated the check at a local con-

venience store. The court sentenced the employee to 10 days in jail, suspended the sentence to time served, and ordered the employee to pay restitution of \$176. The contractor subsequently fired the employee.

NASA Employee Pleads Guilty to Grand Theft

An OIG, NASA Security, and U.S. Federal Protective Service investigation resulted in a former NASA contractor employee entering a guilty plea to one count of grand theft. The employee was loaned a NASA laptop and printer to work at home, which she subsequently reported stolen. During the investigation, the employee admitted she pawned the equipment. The employee received an 18-month suspended sentence to run concurrently with 18 months of probation, and she was ordered to pay \$2,900 in restitution to NASA.

Selected Updates on Previously Reported Cases

COMPUTER INTRUSIONS/CRIMES

BRIBERY/KICKBACKS

EMPLOYEE MISCONDUCT

PRODUCT SUBSTITUTION

COMPUTER INTRUSIONS/CRIMES

Former Contractor Employee Enters Guilty Plea

Previously Reported (September 1998): A joint OIG and Customs investigation, with the assistance of the contractor's computer security, resulted in a former contractor employee pleading guilty to possession of child pornography. The former contractor employee admitted that he knowingly downloaded the pornographic images from the Internet to numerous NASA computers at the NASA Center.

Update: The former contractor employee was sentenced to 1 year of probation, fined \$4,000, and ordered to pay a \$100 special assessment.

Former NASA Employee Enters Guilty Plea

Previously Reported (September 1998): An OIG investigation, with the assistance of the contractor's security investigators, resulted in a former NASA Center employee entering a guilty plea to possession of child pornography. The former employee admitted that he knowingly downloaded the pornographic images from the Internet to numerous NASA computers at the NASA Center.

Update: The former NASA employee was sentenced to 2 years of probation, fined \$6,000, and ordered to pay a \$100 special assessment.

BRIBERY/KICKBACKS

Contractor Official Pays More Than \$32,000 in Kickbacks

Previously Reported (September 1998): A joint OIG, DCIS, and Air Force Office of Special Investigations investigation disclosed that a subcontractor official, acting on behalf of her company, paid more than \$32,000 in kickbacks to a prime contractor's procurement manager. The sub-

Chapter 2

contractor official entered a guilty plea to the charge on behalf of the company and entered into a pretrial diversion agreement for her role in this matter.

Update: The official was sentenced to 1 year of probation and ordered to pay \$32,212 in restitution to NASA.

In a related development, another former contractor employee entered a guilty plea to conspiracy to violate the Anti-Kickback Act of 1986 and to one count of filing a false tax return concerning unreported income. The former contractor employee was sentenced to 6 months of home confinement, ordered to pay NASA \$40,121 in restitution, and assessed a \$3,000 fine.

EMPLOYEE MISCONDUCT

Former NASA Employee Enters Guilty Plea

Previously Reported (September 1998): An OIG investigation resulted in a former NASA Center employee being charged with falsifying her NASA timecards, which resulted in her receiving approximately \$12,500 to which she was not entitled. She entered a guilty plea to one count of theft of Government funds.

Update: The former NASA employee was sentenced to 3 years of probation, placed on 6 months of home detention, ordered to pay \$12,465 in restitution, and assessed a \$25 special assessment.

PRODUCT SUBSTITUTION

Contractor and Two Officials Charged With Product Substitution

Previously Reported (March 1996): Following a joint investigation by the

OIG, NCIS, and Customs, a company and two of its officials were indicted by a grand jury. The indictment alleged that the company and its officials falsely represented the country of origin of the high-pressure valve strainers and check valves used by NASA and the Navy and that they were manufactured in accordance with the contract specifications.

Update: The corporation pled guilty in U.S. District Court to a conspiracy charge for misrepresenting the origin of strainers imported into the United States. The corporation's former president and its general manager each pled guilty in U.S. District Court to one count of charges relating to the removal of country-of-origin markings from the strainers. The former corporation president also agreed in a separate settlement agreement, presented before the U.S. Court of International Trade, to pay the Government \$350,000. The corporation and its former president and general manager were scheduled for sentencing on April 30, 1999.

NASA Contractor Indicted for Improper Testing and Falsifying Test Results

Previously Reported (September 1998): A joint OIG, DCIS, and the Department of Transportation OIG investigation resulted in the indictment of a NASA/DoD contractor on charges of conspiracy and nine counts of false statements. The indictments stemmed from an investigation that disclosed that between 1981 and March 1997, the contractor had improperly heat-treated, aged, and falsified quality testing on metal parts. The parts are used on NASAs Space Shuttle and International Space Station and in military and commercial aircraft and missile applications.

Significant Investigative Matters

Criminal Charges Filed Against NASA Contractor and Nine Individuals for False Certification of Microelectronic Devices

Previously Reported (March 1998): A joint investigation of a NASA/DoD contractor by the OIG and the DCIS resulted in an indictment against the contractor and five of its employees, charging them with conspiracy, false statements, and false claims. They were charged with false certification of tests on microelectronic devices having application in a number of significant NASA and military programs, including the Space Shuttle,

the International Space Station, the Hubble Space Telescope, F-14 aircraft, and submarines. Three other employees, who were not charged in the indictment, had earlier agreed to plead guilty to causing the filing of false statements with the Government.

Update: The three employees who had earlier agreed to plead guilty to causing the filing of false statements were sentenced to 1 year of probation, ordered to serve 40 hours of community service, and assessed a \$25 special assessment.

Significant Investigative Matters

Special Thanks

The OIG commends the hard work and dedication of John G. Duncan and Richard R. Southwick, Assistant United States Attorneys (AUSAs), Northern District of New York, Syracuse, New York, and Special Agent Scott C. Miller, DCIS, Syracuse, New York. We appreciate the tireless efforts of these professionals in the pursuit of fraudulent acts on the part of NASA and DoD contractors.

During this period, AUSA's Duncan and Southwick successfully prosecuted this case in a 9-week trial in U.S. District Court, Northern District of New York, Syracuse. The corporation was found

guilty of 26 felony counts of false statements and false claims. In a plea bargain, the corporation pled guilty to criminal conspiracy and paid a substantial fine. Prior to the trial, three employees had entered into plea agreements with the United States in exchange for their cooperation.

The NASA OIG is currently working with AUSA Southwick and Special Agent Miller on several investigative efforts. We look forward to continuing a long and productive relationship with these dedicated professionals.



Left to right: AUSA Richard Southwick, DCIS Special Agent Scott Miller, and AUSA John Duncan

Inspections, Administrative Investigations, and Assessments

ADMINISTRATIVE INVESTIGATIONS

INSPECTIONS AND ASSESSMENTS

ONGOING ACTIVITIES

The staff of the Office of Inspections, Administrative Investigations, and Assessments (IAIA) provide timely and constructive evaluations of Agency programs, projects, and organizations. They conduct comprehensive assessments of policy, processes, structures, and operations to determine whether resources are effectively managed and applied toward accomplishing NASA's missions. IAIA projects also include focused reviews of specific management issues or plans. Typically, IAIA actions are "rapid responses," usually completed within 180 days.

During this reporting period, IAIA staff continued their role of providing expanded technical and consultation support to OIG audits and criminal investigations. With many specialized backgrounds, they provide advice and insight to OIG colleagues on information systems, information security, engineering, research and technology, and acquisition management. The staff also reviewed proposed and revised NASA policy and regulatory guidance in the areas of program and project management, safety and mission assurance, information systems, security, logistics, and acquisitions.

ADMINISTRATIVE INVESTIGATIONS

The IAIA staff conduct administrative investigations (inquiries involving noncriminal allegations or administrative wrongdoing), including misuse of Government equipment and other resources, employee violations of the Standards of Conduct, and other forms of misconduct. We investigated 70 new reports of suspected or alleged misconduct during this period. In addition, 78 administrative investigations were carried over from the previous reporting period. Of these 148 cases, we closed 27.



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INSPECTIONS AND ASSESSMENTS

Significant inspection and assessment activities during this reporting period include the following.

Review of International Space Station Phase I Lessons Learned Activity

Report No. G-98-012

An IAIA team reviewed the International Space Station (ISS) program's implementation of the lessons learned from Phase I Shuttle/Mir program. Our review concluded that while the ISS program was late in initiating the process, the transfer of the knowledge and experience acquired by the Phase I program was being adequately addressed. Our final report included three recommendations to enhance the lessons learned process. Management fully concurred with two of the recommendations and partially concurred with the third recommendation. Management agreed to assess the inclusion of other historical sources of lessons learned and to apply those to the ISS program.

Followup Assessment of Management Alert Issued February 6, 1998, Chartered Flights Between the United States and Russia

Report No. G-98-014

We issued a followup assessment of the charter aircraft service Johnson Space Center used to transport employees between the United States and Russia in support of the ISS program. In general, we determined the charter service was not cost-effective compared to commercial air services. We also stated our concerns regarding security, procedures, and adherence to transportation regulations. We found that the programmatic justification provided by Johnson was not suf-

ficient to continue the charter service. NASA management concurred with our single recommendation to terminate the charter service, which will result in annual cost savings to the Agency of approximately \$4 million.

NASA's Implementation of a Public Key Infrastructure

Report No. G-99-006

Because of the increasing number of computer intrusions, NASA requires security, authentication, and access control over electronic communications, including electronic mail, data interchange, the Internet, and financial software. One important way that strong security is achieved is by using cryptography implemented through the use of a Public Key Infrastructure (PKI). In response to the need for a PKI, NASA moved forward in implementing encryption solutions by selecting one vendor's products to meet key requirements. An interdisciplinary team of auditors and IAIA evaluators conducted a review and provided recommendations to NASA management concerning the implementation of the PKI.

ONGOING ACTIVITIES

Other IAIA activities during the report period included:

- **Assessment of the Aircraft Disposal Process (Report No. G-98-010).** Based on our review of aircraft disposal processing at Wallops Flight Facility, we will be transmitting to NASA a memorandum detailing our findings and recommendations. An internal draft of the memorandum is under OIG review.

Inspections, Administrative Investigations, and Assessments

- **NASA Flight Termination System (Report No. G-98-011).** We recently issued a draft report (classified with restricted distribution) to NASA management for review and comment.
- **Goldstone Facility Transportation Services (Report No. G-98-013).** An IAIA team is assessing the Goldstone facility's management of Government vehicles. The Goldstone facility is located in California's Mojave Desert. The team's findings and recommendations will be conveyed to NASA in a management alert memorandum. An internal draft of the memorandum is under OIG review.
- **NASA Badging Program and Physical Access Controls (Report No. G-99-001).** Our specialists have commenced our first badging and physical access control installation assessment at Marshall Space Flight Center. We are planning to issue draft reports and final reports as we complete our activities at each targeted installation. An internal draft of the Marshall assessment is under OIG review.
- **Hard Drive 99—Clearing Controlled Information From Excessed Microcomputers (Report No. G-99-003).** The IAIA staff conducted a series of unannounced spot checks of excessed microcomputers at NASA Centers in FY 1997. The team found electronic information, some controlled by statute and regulation, remaining on hard drives ready to be excessed. As a result of our findings and recommendations, NASA and its Centers issued new rules governing the clearing of hard drives. This inspection will follow up on corrective actions at the two Centers surveyed in 1997 and review other installations.
- **Feasibility of Transferring Mir Equipment to the International Space Station (ISS) (Report No. G-99-004).** An IAIA team is coordinating activities with the NASA Advisory Committee Task Force on ISS Operational Readiness in assessing the feasibility of transferring equipment from the Russian space station *Mir* to the ISS. This review is a result of a recent Russian proposal to recover equipment from *Mir* for use on the ISS.
- **Assessment of the NASA Automated Systems Information Response Capability (NASIRC) (Report No. G-99-007).** A team of specialists is assessing the effectiveness of NASIRC. The team will also evaluate the Agency's efforts to increase NASIRC's ability to provide real-time emergency response, assistance, countermeasures, and notification to other Centers and law enforcement organizations.
- **Johnson Space Center Exchange Commercial Relationships Inspection (Report No. G-99-008).** This activity responds to a December 12, 1998, letter from Congressman Rohrabacher to the Inspector General. Congressman Rohrabacher requested a NASA OIG inspection of certain Center and Exchange relationships with commercial entities.
- **Headquarters Computer Support Contract Inspection (Report No. G-99-009).** This inspection will evaluate the Headquarters installation

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support contract, including contract and subcontract administration, customer service, hardware/software acquisitions and support, and systems security.

- **ISS Program Implementation of Communications Security (COMSEC) and Automated Information Security (AIS) Measures (Report No. G-99-010).** We recently announced this inspection to determine whether NASA management has accurately identified the COMSEC and AIS requirements necessary for mission assurance and safe ISS operation. In addition, our team will determine whether appropriate processes and safeguards are being effectively implemented.
- **Security Planning for the X-38 Crew Rescue Vehicle (Report No. G-99-011).** This new activity will determine whether NASA management has identified necessary security requirements in the design of the X-38. The team will also assess whether communications and computer security considerations have been addressed to address effectively potential risks and threats.
- **Consolidated Space Operations Contract (CSOC) Security (Report No. G-99-012).** This new inspection will determine whether the security management portion of the CSOC contract addresses potential threats and risks effectively. In addition, our team will assess whether CSOC security management effectively uses NASA Information Technology Security and COMSEC program capabilities.

Legislation, Regulations, and Legal Matters

LEGISLATION

REGULATIONS

LITIGATION

OTHER

The OIG legal staff provide advice and assistance on a variety of legal issues and matters relating to the OIG's reviews of Agency programs and operations. The OIG Attorney-Advisor acts as the central official for the review and coordination of all legislation, regulations, Freedom of Information Act (FOIA) requests, and congressional and legal matters requiring OIG attention. The OIG legal staff provide advice and assistance to senior OIG management, staff auditors, inspectors, and investigators, and they serve as counsel in administrative litigation in which the OIG is a party.

LEGISLATION

H.R. 305, "Office of Inspector General Oversight Council Act of 1999"

This bill would establish an oversight council appointed by the legislative branch and the Inspector General (IG) community to hear and investigate complaints with respect to decisions and actions of Offices of Inspector General. There are three principal concerns with this bill. First, it would replicate functions currently performed by the Integrity Committee of the President's Council on Integrity and Efficiency, pursuant to Executive Order 12993. Second, it would extend beyond the coverage of the executive order into areas that should remain within the prerogative of the IG—for example, internal management of his or her office. Third, the bill may lend itself to abuse by felons and other individuals and entities dissatisfied with the outcome of prosecutions and other litigation against them. The bill as written would give these parties another "bite of the apple" to retry issues decided by the courts.

Proposed NASA FY 2000 Authorization

As part of our review of this draft legislation, we commented on a provision that seeks to protect commercially valuable information generated by NASA. We recommended that NASA compile an inventory of technical data subject to delay in



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unrestricted disclosure. Technical data recorded in this inventory would be required to be protected from unauthorized disclosure in accordance with procedures established by NASA. These procedures need not be statutorily imposed, but NASA should administratively establish such.

REGULATIONS

During this reporting period, the OIG reviewed 43 Agency regulations.

IG Access Clause

We are continuing our efforts to seek inclusion of a standard IG access clause in NASA and other Government contracts. A standard access clause would reduce the need to enforce IG access to contractor data and facilities in the courts. IG access provisions have been incorporated into Government-funded Space Act agreements, grants, and cooperative agreements. In the contract arena, we plan to submit a proposal to the General Counsel and the Acting Associate Administrator for Procurement for presentation to the FAR Council. If the FAR Council adopts the proposal, an IG access clause will have Governmentwide effect. Until the FAR Council acts, we are proposing a provision for NASA to use in its contracts. We see a greater need to assure access to contractor records, premises, and personnel, particularly as the Government downsizes and outsources more and more functions. In addition, we are exploring a statutory basis for IG access provisions with congressional committee staff who have oversight responsibilities for NASA and IG activities.

Freedom of Information Regulation—Law Enforcement Records

We reviewed NASA's regulations implementing the Electronic Freedom of Information Act. NASA has incorporated our recommendations into those proposed regulations. One recommendation would clarify that certain especially sensitive law enforcement records are not subject to the Freedom of Information Act, in accordance with the exclusions authorized by 5 U.S.C. 552(c)(1) and (c)(2).

NASA Telephone Policy

During the course of our internal review of the use of IG telecommunications resources, we questioned the legal basis for NASA's policy set forth in NPD 2540.10D, *Use of Government Telephones*. NASA's authorization to charge personal long-distance calls to the Government under certain circumstances may conflict with the policies applied to the rest of the executive branch and may be contrary to law. We are recommending that NASA seek a change in the existing regulations.

LITIGATION

NASA v. Federal Labor Relations Authority

The Supreme Court heard oral argument on March 23, 1999, on NASA and NASA OIG's appeal of a decision of the 11th Circuit Court of Appeals, *FLRA v. NASA and NASA OIG*, 120 F.3d 1208 (11th Cir. 1997). One issue in the case is whether IG investigators are "representatives of the agency" for the purpose of Federal labor law and the granting of *Weingarten* rights. Another issue is whether NASA can be held responsible for an unfair labor practice allegedly committed by its

Legislation, Regulations, and Legal Matters

IG in light of the independence granted the IG under the Inspector General Act.

There is a split in the circuit courts on whether IG investigators are subject to the *Weingarten* rule. NASA argued the OIG could not be a representative of the agency because the IG is outside the labor-management relationship and the Inspector General Act established the OIG as an entity independent of the agency. The IG's statutory independence also dictates that NASA Headquarters should not be held liable for the OIG's actions in relation to the *Weingarten* rule. The respondents, the Federal Labor Relations Authority (FLRA) and the American Federation of Government Employees (AFGE), argued that the FLRA's interpretation of "representative of the agency," which was upheld by the 11th Circuit, was correct and should be given deference. They argued that because the results of OIG investigations are often the basis of agency action, the OIG is "a representative of the agency," and, moreover, holding the agency head liable for an unfair labor practice does not conflict with IG independence.

A summary of the hearing may be found at our web site at <http://www.hq.nasa.gov/office/oig/hq> (click on the "Legal" category). The Government's brief is also posted on our web site.

OTHER

Remote Sensing Initiative

We submitted a draft proposal to the Stennis Space Center's Commercial Remote Sensing Program to explore the possibilities of using existing imagery to

assist in the enforcement of environmental statutes. We also posted an analysis of the Fourth Amendment issues of remote sensing at our web site at <http://www.hq.nasa.gov/office/oig/hq/> (click on "Legal" category).

IG Participation in Governmentwide List of Commercial Activities

The IG has taken the position in communications with OMB that the IG mission is inherently governmental. As deemed appropriate by the IG, contracting out can be used on a very limited basis to enhance OIG resources. Even in those areas that may be appropriate to out-source, OIG's must nonetheless maintain a core oversight capability.

Freedom of Information Act Matters

During this reporting period, the OIG processed eight Freedom of Information Act requests. We processed one appeal of an initial determination during this time-frame.

Subpoenas

During the reporting period, the IG issued 20 subpoenas. No enforcement actions were filed.

OIG Legal Newsletter

The legal staff provided information for the OIG newsletter on Fourth Amendment aspects of remote sensing, the use of privilege teams when executing search warrants, the continuing controversy over communicating with represented persons, and the legal implications of a prosecutor offering a criminal defendant leniency in exchange for truthful testimony.

Special Thanks



David C. Frederick, U.S. Attorney, Office of Solicitor General

The OIG commends appellate attorneys at the Department of Justice for their able work in the litigation of this case before the U.S. Supreme Court and the U.S. Court of Appeals for the 11th Circuit. We particularly commend David C. Frederick of the Office of Solicitor General, who represented NASA OIG and NASA Headquarters in proceedings before the Supreme Court; Howard S. Scher, Appellate Staff, Civil Division, the trial attorney before the 11th Circuit; and William Kanter, Deputy Director, Appellate Staff, who supervised the appeals court process.

The Supreme Court proceeding was the culmination of a 6-year process that began in 1993 when the AFGE filed an unfair labor practice against the OIG following an investigatory interview of a NASA employee at Marshall Space Flight Center. OIG counsel handled the litigation at the administrative level. The Department of Justice became involved when the FLRA filed a petition for enforcement in the U.S. Court of Appeals for the 11th Circuit.

William Kanter is responsible for overseeing labor-related litigation in the Civil Division Appellate Staff. He and his staff moved quickly to file a petition for review in the Court of Appeals for the District of Columbia Circuit. (A judicial

branch panel assigned the case to the 11th Circuit.) Howard Scher, who was later assigned to the case, and Kanter did an excellent

job in formulating and articulating the appeal position. They also provided invaluable support to the NASA General Counsel and the OIG during meetings

with the Solicitor General and the Deputy Solicitor General. Scher wrote the NASA briefs and argued the case before the 11th Circuit. When the 11th Circuit issued its decision, holding for the FLRA, NASA sought a hearing before the U.S. Supreme Court. David Frederick represented NASA before the Supreme Court. He eloquently argued NASA's position and deftly fielded the Justices' many questions.



Howard S. Scher, U.S. Attorney Appellate Staff, Civil Division



William M. Kanter, Deputy Director, Appellate Staff

Working with these attorneys was a rewarding experience. They involved NASA in every step of the process, requesting input on filings and inviting NASA to meetings and moot court sessions.

We greatly appreciate their hard work.

Cooperative, Outreach, and Other Activities

COOPERATIVE ACTIVITIES

OUTREACH

OTHER ACTIVITIES

COOPERATIVE ACTIVITIES

Our cooperative activities advise NASA management of areas that, if not addressed, could become problematical. These activities also provide an opportunity to work proactively with management to resolve these issues. Through our outreach program, the OIG disseminates information about our programs to enhance the public knowledge of our mission and our commitment to improving the effectiveness of Government programs.

AUDIT

OIG Supports GSA in Property Surveys at the Santa Susana Field Laboratory

The General Services Administration (GSA) conducts periodic surveys of the NASA-owned property at the Santa Susana Field Laboratory (SSFL) in California, to determine whether the property is available for excessing by the Government. Based on the experience we gained during previous audits of the SSFL (*Cost Sharing for SSFL Cleanup Activities and Commercial Use of the SSFL*), NASA requested our participation in the latest survey. We continue to work closely with representatives from GSA Headquarters and their Region Nine Offices, NASA Headquarters' Office of Management Systems and Facilities, and Marshall Space Flight Center's Facilities Office. The OIG's support will help identify options for NASA concerning future use of SSFL facilities, including the possibility of transferring ownership and responsibility for environmental cleanup of the SSFL to the contractor for appropriate consideration.



Chapter 5

NASA and Department of Commerce OIGs Jointly Review Polar-Orbiting Satellite System

(Previously Reported Under Report No. P&A-98-008)

The National Polar-orbiting Operational Environmental Satellite System (NPOESS) will combine the Department of Commerce's Polar-orbiting Operational Environmental Satellite (POES) program with DoD's Defense Meteorological Satellite Program. NASA manages the design, development and launch of the POES spacecraft for the Department of Commerce. Under NPOESS, NASA will be responsible for technology transfer, as well as research and development support for several NPOESS instruments. We teamed with the Department of Commerce's OIG in conducting a joint review to assess the level of sensor technology being transferred from NASA and other sources to NPOESS to minimize risk and cost. The review found that preliminary planning assumptions for the proposed NPOESS Preparatory Project (NPP) do not include evaluating the feasibility of demonstrating the Ozone Mapper Profiler Suite (OMPS). Exclusion of the OMPS from flight demonstration will significantly increase the risk of a disruption in vital ozone data continuity. We recommended that the NPOESS Project Office (1) request NASA to include OMPS as a payload alternative in its NPP feasibility study, (2) defer the decision to include or exclude the OMPS for flight demonstration until mission costs are fully analyzed and a cost-sharing arrangement is negotiated, and (3) assess the operational risk of not demonstrating the OMPS. The Project Office Director agreed with the recommendations and has taken responsive corrective actions.

NASA and Department of Transportation OIGs Jointly Review Aviation Safety Issues

(Previously Reported Under Report No. P&A-98-005)

The Airline Deregulation Act of 1978 has resulted in a significant growth in air travel, placing heavy demands on the National Airspace System, NASA and the FAA have a long history of working together on air traffic management systems and aviation safety research to enhance the capacity, efficiency, and safety of the Airspace System. We teamed with the Department of Transportation's OIG to conduct a joint review of aviation safety and air traffic management research. Although the review concluded that joint FAA and NASA research has produced very valuable aviation technology, the team identified five areas in which the FAA and NASA can take action to further enhance the effectiveness of their coordination efforts and help ensure that Government resources are used in the most cost-effective manner. We recommended that NASA, in cooperation with the FAA: (1) reevaluate the advisory committee structure; (2) increase the number of common members participating on NASA and FAA advisory committees; (3) adopt a joint implementation plan and a formal agreement for aviation safety research that includes a requirement for an integrated plan; (4) ensure adequate cross-representation of expertise at each agency; and (5) update the coordinating committee agreement and require regular meetings to resolve issues regarding joint research efforts. Management generally concurred with the recommendations and planned or initiated responsive corrective actions.

Cooperative, Outreach, and Other Activities

COMPUTER CRIMES DIVISION

In keeping with our commitment to assist NASA in its continuing oversight of Agency information technology programs and operations, the Inspector General met with the Administrator to assure his continued support for the CCD's efforts to combat network systems crimes. On October 5, 1998, the Administrator issued a letter to all NASA employees that stressed the reality of cyber-based threats and crimes and the policy requirement that "every NASA employee and supporting contractor . . . report to their local Center IT Security Manager all incidents. . . ." In turn, the IT Security Manager must report all IT security incidents to the NASA Automated Systems Incident Response Capability (NASIRC) inter-Center cyber incident coordination body. The IT Security Manager must report all incidents, or suspected incidents, involving computer crimes to the OIG. The Administrator also directed NASIRC to share information on security incidents with the OIG.

Subsequent guidance for reporting IT security incidents was issued by the Chief Information Officer (CIO) on November 2, 1998. The CIO affirmed the Administrator's direction that the IT Security Manager must report all incidents that may constitute a computer crime to the OIG.

INSPECTIONS, ADMINISTRATIVE INVESTIGATIONS, AND ASSESSMENTS

The AIGIAIA represents the NASA OIG on NASA's Critical Infrastructure Protection Team (CIPT). NASA created the CIPT to develop the Agency's Critical

Infrastructure Protection Plan as required by Presidential Decision Directive 63.

A team of analysts from IAIA and CCD briefed the Associate Administrator of the Office of Aero-Space Technology. We presented our concerns and issues related to the need for communications security and other information system security measures as they relate to the X-33 program. Also in attendance were representatives from the X-33 program, Lockheed-Martin Skunk Works, and the Office of Safety and Mission Assurance.

IAIA analysts successfully teamed with the Technical Security Officer from Goddard Space Flight Center during OIG assessment of NASA's Flight Termination Systems. This teaming led to recommendations in the Flight Termination Assessment draft report oriented toward technology-based solutions.

OUTREACH

AUDIT

OIG Participates on PCIE Audit Standards Committee Task Force

A representative from the NASA OIG participates on a task force of the President's Council on Integrity and Efficiency (PCIE) Audit Standards Committee. The task force will be revising the PCIE audit report and working paper review guides to reflect the Single Audit Act Amendments of 1996 and the revised OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

OIG Responds to PCIE Inquiry Concerning Quality of Single Audit Process

According to the PCIE, the OIG community's monitoring and reporting of single audit activity have declined substantially. As a result, there is limited community-wide information regarding OIG oversight of single audit quality for the approximately \$300 billion in annual Federal awards. We responded to a PCIE questionnaire to provide information that will be used to develop a revised Governmentwide approach for assuring the quality of single audits. The questionnaire addressed how each Federal IG at grant-making agencies handles the cognizant audit agency responsibilities stated in OMB Circular A-133. It also sought to ascertain the number of non-Federal agencies under the IG audit cognizance, the number of audit reports and quality control reviews completed and planned from 1997 through 1999, and the number of personnel assigned to the single audit function.

COMPUTER CRIMES DIVISION

Network Intrusion Threat Advisory Issued

During this period, the CCD worked with several Federal law enforcement and intelligence agencies on organized criminal cyber attacks directed at the infrastructure of the United States and NASA. The CCD published *Network Intrusion Threat Advisory, Number 1999-0001*, bearing an analysis of highly sophisticated, systemic, organized criminal cyber attacks directed at NASA resources. These attacks are similar to other matters under active investigation by a number of agencies and coordinated through the FBI's National Infrastructure Protection Center. Because of the sensi-

tivity of its contents, the advisory was offered, on a limited distribution, to designated recipients in the law enforcement, security, and management communities.

Joint CCD-DoD Computer Forensic Laboratory Project: Automated Analysis Tools

During this period, the CCD launched an initiative with the Defense Computer Forensic Laboratory (DCFL) to develop high-performance, LINUX-based, advanced computational analysis tools. The objective of the project is to create tools that can perform automated analyses of Internet protocol-based communications traffic and digital media created by any computer operating system. The CCD-DCFL team will design two sets of tools. One set will be designed for distribution to network system administrators and security specialists in public agencies. The second set will provide law enforcement officials with the ability to recover evidence in criminal investigations. By investing only in commodity off-the-shelf Intel-based hardware, recipients will be able to acquire a sophisticated capability coupled with a low cost of entry. The distribution of the law enforcement version is restricted to law enforcement agencies.

Joint OIG Community Training: Network Systems Crimes Investigations

OIG outreach efforts include initiatives to assist the OIG community in developing information technology oversight capabilities. During this period, the CCD initiated an effort for joint OIG community training in network system intrusion investigations. The OIG at the U.S. Postal Service partnered with the CCD in the early stages and now coordinates this project by providing the community with

Cooperative, Outreach, and Other Activities

the use of the Postal Service OIG training facility and network to accommodate the initiative. The initial training, scheduled February 22 through May 28, 1999, will include 120 OIG community personnel from NASA, the Postal Service, the Departments of Education and Transportation, and EPA. More than a dozen OIG's have scheduled personnel for future training sessions.

INSPECTIONS, ADMINISTRATIVE INVESTIGATIONS, AND ASSESSMENTS

The Inspections group serves as the principal OIG liaison to the NASA security community. To keep the NASA community apprised, the Inspections group instituted a special e-mail update of OIG activities focusing on security issues. This e-mail update is sent to NASA security officials.

MULTI-PROGRAM ACTIVITY

At the recent Procurement Officers Conference (Williamsburg, Virginia, March 31, 1999), an OIG interdisciplinary team consisting of senior representatives from Audits, Inspections, and Criminal Investigations presented to top Agency procurement officials the OIG's new proactive initiatives to detect and deter procurement fraud in NASA. The OIG team also presented updates on other recent and current activities and solicited the procurement community's active involvement and support.

OTHER ACTIVITIES

AUDIT

Year 2000 Issues

The OIG continues to devote significant audit resources toward evaluating NASA's Y2K program. We focused primarily on strategies to assess potential conversion problems associated with data exchanges and international partners, Y2K program oversight of its production contractors, exemptions from Y2K testing requirements, and Y2K program compliance requirements in NASA's IT-related contracts. We also began our evaluation of strategies for contingency planning.

OIG Oversight of Audit Services

The majority of NASA's investment in audit services goes to audit organizations that are external to NASA and the OIG. The OIG is working on a variety of programs to obtain insight into the quality of these audit services and ensure that the maximum benefit of the audit is achieved for:

- **Financial Statement Audits.**

The OIG contracted with Arthur Andersen LLP, an independent public accounting firm, to conduct the audit of NASA's FY 1998 financial statements. To fulfill our oversight responsibilities, the OIG performed a quality control review that showed Arthur Andersen had conducted the audit in accordance with applicable standards and requirements. According to their report issued February 3, 1999, Arthur Andersen (1) rendered an unqualified opinion on NASA's principal financial statements, (2) found no reportable noncompliance with the laws and regulations it tested, and (3) noted a reportable

condition involving the internal control over information technology. The reportable condition was not considered a material weakness.

- **Educational and Nonprofit Organizations.** During this period, the OIG performed quality control reviews of the working papers supporting the fiscal year ending June 30, 1998, audits of New Mexico State University and the Universities Space Research Association. The OIG also performed desk reviews of the FY 1997 audit reports for Florida Atlantic University Research Corporation, Kansas Cosmosphere and Space Center, New Mexico State University, San Jose State University Foundation, and the Universities Space Research Association.
- **Nonappropriated Fund Activities Audits.** NASA policy requires annual audits of the financial statements of exchanges operated by NASA Headquarters and the Field Centers. The OIG is establishing a quality control program to ensure the audits comply with applicable standards. This program will commence with the FY 1998 financial statement audits and will include (1) desk reviews of audit reports and supporting documentation, (2) periodic quality control reviews of auditor working papers and exchange books and records, and (3) monitoring of corrective actions taken in response to selected recommendations resulting from the audits.

Implementation of an OIG Nationwide Information System

The OIG has enhanced its Nationwide Information System (NIS) to track data

related to audits, investigations, inspections, and other activities. The enhancement, NIS II, which will also provide improved data collection, is one of the first major applications based on Java programming language. However, implementation of the system currently requires close and persistent monitoring.

Implementation of Audit Working Paper Software

TeamMate 97 is an electronic audit working paper software package that automates various audit processes, including planning, administration, documentation, and report writing. Using TeamMate, auditors at different locations can share documents, and audit supervisors can electronically review and approve working papers. Because the OIG operates in a decentralized environment with team members at multiple locations, the OIG-wide implementation of this software should result in a more efficient, effective, and economical audit process.

INSPECTIONS, ADMINISTRATIVE INVESTIGATIONS, AND ASSESSMENTS

Training

In November 1998, IAIA held an all-hands conference at NASA Headquarters. We addressed issues designed to improve the effectiveness of IAIA activities, emphasizing interviewing techniques and report writing. The IAIA staff also participated in several important training sessions during this period. The procurement analyst completed the new procurement training sponsored by NASA. Some members of our staff attended the computer intrusion training initiated by the CCD and coordinated by the U.S. Postal Service.

APPENDIX I Statistical Highlights

APPENDIX II Audit Reports Issued by the OIG

APPENDIX III DCAA Audits of NASA Contractors

APPENDIX IV High-Risk Areas and Material Weaknesses

APPENDIX V Directives Reviewed by the OIG

APPENDIX VI Government Results Act Review Plan

APPENDIX VII Glossary And Acronyms



APPENDIX I

Statistical Highlights October 1, 1998–March 31, 1999

AUDIT ACTIVITIES

OIG Reports Issued	23
Other Audit Activity	2 ¹

AUDIT IMPACT

Recommended Better Use of Funds	\$1.2 million
Questioned Costs	\$2.7 million
TOTAL Audit Dollar Impact	\$3.9 million

INVESTIGATIONS ACTIVITIES

Cases Opened	66
Cases Closed	72
Cases Pending	282
Hotline Complaints Received	36
Referred to Audits or Investigations	14
Referred to Inspections	8
Referred to NASA Management	12
Referred to Other Agencies	1
	1

¹ These efforts are summarized in Chapter 5 as audit cooperative efforts.

APPENDIX I

INVESTIGATIONS IMPACT²

Indictments/Informations	16
Convictions/Pleas Bargains/Pretrial Diversions	31
Cases Referred for Prosecution	21
Cases Declined	9
Cases Referred to NASA Management for Action	25
Cases Referred to Other Agencies for Action	9
Suspensions/Debarments	
Individuals	2
Firms	3
Administrative Actions	
NASA Employees	5
Contractor Employees	8
Recoveries	\$7.1 million
Funds Put to Better Use	\$0 million
TOTAL Investigations Dollar Impact	\$7.1 million

ADMINISTRATIVE INVESTIGATIONS ACTIVITIES

Cases Opened	70
Cases Closed	27
Cases Pending	127
Referred to Management	13
Closed	1
Pending	22
Referred to Investigations	1

² Includes results from joint investigations.

Statistical Highlights

INSPECTIONS/ASSESSMENTS ACTIVITIES

Activities Opened	9
Activities Closed	2
Activities Pending	12
Management Referral Letters/Alerts	4

INSPECTIONS/ASSESSMENTS IMPACT

Funds Put to Better Use	\$4.0 million
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Audit Reports Issued by the OIG

Section 5(a)(6) of the Inspector General Act, as amended, requires a listing of each audit report issued by the OIG during the reporting period. For each report, where applicable, the total dollar values of questioned costs, including separate identification of unsupported costs, and recommendations that funds be put to better use are to be included. For this period, a total of 23 reports identified \$2.7 million in questioned costs and \$1.2 million in recommendations that funds be put to better use.

AUDIT REPORTS ISSUED BY THE OIG

Report	Report Title & Monetary Amount
IG-99-001	X-33 Funding Issues
IG-99-002	Department of Health and Human Services Audit Services Provided to NASA
IG-99-003	Delivery Order Placement Under Outsourcing Desktop Initiative Contracts
IG-99-004	Year 2000 Program Oversight of NASAs Production Contractors
IG-99-005	Disaster Recovery Planning at Johnson Space Center
IG-99-006	Disaster Recovery Planning at the Jet Propulsion Laboratory
IG-99-007	Space Station Corrective Action Plan
IG-99-008	Contractor-Acquired Facilities at Johnson Space Center (*\$2,700,000; **\$1,200,000)
IG-99-009	Space Station Contingency Planning for International Partners
IG-99-010	NAS Data Center General Controls at Ames Research Center Numerical Aerospace Simulation Facility
IG-99-011	EOS Common Spacecraft Planning and Management
IG-99-012	Proposed NPOESS Preparatory Project Reduces Operational Risk, But Excludes Demonstration of Critical Ozone Suite
IG-99-013	Audit of Hubble Space Telescope Cost Saving Initiatives

(Continued)

APPENDIX II

AUDIT REPORTS ISSUED BY THE OIG (Continuation)

Report	Report Title & Monetary Amount
IG-99-014	Quality Control Review of KPMG Peat Marwick LLP Audit of New Mexico State University for Fiscal Year Ended June 30, 1998
IG-99-015	Audit of Home-to-Work Use of Government Vehicles
IG-99-016	Advanced X-ray Astrophysics Facility
IG-99-017	Audit of Disaster Recovery Planning at Kennedy Space Center
IG-99-018	Oversight of FY 1998 Financial Statement Audit
IG-99-019	Audit of X-33 Cooperative Agreement
IG-99-020	Audit of NASA Control of Export-Controlled Technologies
IG-99-022	Audit of Year 2000 Program Compliance Requirements in NASA Information Technology-Related Contracts
IG-99-023	Audit of Commercial Remote Sensing Program Office
IG-99-024	Audit of NASAs Full Cost Initiative Implementation

DCAA Audits of NASA Contractors

The DCAA provides various audit services to NASA on a reimbursable basis. The audits performed include: proposal evaluations that are used to negotiate a contract price; incurred cost reviews that verify amounts billed to the Government; reviews of contractor estimating, accounting, and purchasing systems; defective pricing reviews; and reviews for compliance with cost accounting standards. The resulting audit reports that are sent to the NASA or Government contracting official having cognizance over the contract or contractor involved. The following sections summarize information provided during this period by the DCAA on reports involving NASA activities, results of NASA actions on those reports, and significant reports that have not been completely resolved.

A. AUDIT REPORTS ISSUED

During the period, DCAA issued 637 audit reports (excluding pre-award contractor proposal evaluations) on contractors that do business with NASA. The types of audits performed and the results of these audits are shown in the DCAA-provided figures shown here. (Dollar figures are in thousands.)

DCAA also issued 136 reports on audits of NASA contractor proposals totaling \$880.8 million, which identified cost exceptions totaling approximately \$23.6 million. These figures include proposals from several contractors bidding on the same contract; therefore, the total amount of exceptions is larger than the amount of potential savings to NASA.

TYPE OF DCAA AUDITS CONDUCTED ON NASA CONTRACTORS

Type of Audit	Number of Audit Reports	Total Costs Questioned	Total Costs Avoided	Total
Incurring Costs	513	\$9,101	\$16,050	\$25,151
Defective Pricing	8	\$0	\$0	\$0
Cost Accounting Standards	116	\$0	\$0	\$0
Other Direct Effort	0	\$0	\$0	\$0
Totals	637	\$9,101	\$16,050	\$25,151

APPENDIX III

B. NASA ACTIONS

Corrective actions taken on DCAA audit report recommendations usually result from negotiations between the contractor and the Government contracting officer. The following tables show the number of DCAA audit reports and amounts of questioned costs and funds put to better use for the period October 1, 1998, through March 31, 1999. During this period, NASA management resolved 74 reports with \$13.5 million of questioned costs, and 30 reports with \$9.6 million of funds put to better use. NASA management sustained 54 percent of DCAAs questioned costs and 61 percent of the funds put to better use. (Dollar figures are in thousands.)

DCAA AUDITS WITH QUESTIONED COSTS

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made at beginning of period	598	\$321,591
Issued during period	43	\$9,101
Needing management decision during period	641	\$330,692
Management decision made during period:	74	\$13,544
Amounts agreed to by management		\$7,389
Amounts not agreed to by management		\$6,155
No management decision was made at end of period:	567	\$317,148
No management decision prior to period and still unresolved at end of period	540	\$308,405
Reports issued during reporting period and unresolved at end of period	27	\$8,743

DCAA AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made at beginning of period	165	\$459,687
Issued during period	48	\$39,625
Needing management decision during period	213	\$499,312
Management decision made during period:	30	\$9,648
Amounts agreed to by management		\$5,894
Amounts not agreed to by management		\$3,754
No management decision was made at end of period:	183	\$489,664
No management decision prior to period and still unresolved at end of period	135	\$450,039
Reports issued during reporting period and unresolved at end of period	48	\$39,625

High-Risk Areas and Materials Weaknesses**FINANCIAL MANAGEMENT SYSTEMS**

NASA currently reports its financial management systems area as a significant area of concern. The Agency's corrective action plan calls for the implementation of an Agencywide integrated financial management system. However, implementation of the new NASA-wide system has slipped from July 1999 to June 2000. In addition, costs for the system have increased significantly, the integrated test facility is still not completed, and there is a significant risk that the revised delivery schedule will not be met. The delay in implementing the Integrated Financial Management Project will result in NASA's continued inability to fully comply with the provisions of the Federal Financial Management Improvement Act of 1996. Also, NASA will not be able to implement full cost management as planned and will instead incur substantial costs to maintain legacy systems that the new system would otherwise replace. We will continue to follow this area until the new system is successfully developed and implemented.

INFORMATION TECHNOLOGY SECURITY

In 1998, NASA reported information technology (IT) security as a significant area of management concern. We believe the IT security concern should be elevated to a material weakness. Our work in this area found a fragmented IT security program, which we believe caused the expenditure of significant funds when more secure and less costly solutions were available. Under this fragmented approach, responsibilities for the IT security has been divided among multiple Centers. A single individual at these loca-

tions performs some of the key functions, when in many cases the extent and complexity of these functions require a team of IT security professionals. This multiple-Center approach leads to serious coordination problems and diminishes corporate oversight.

We are concerned that NASA policies and procedures do not effectively integrate computer and communications security. The Agency tends to address these two components separately rather than synergistically under a single IT security program.

A candid assessment of IT security coupled with implementation of an aggressive corrective action plan is an appropriate course for NASA to pursue. The OIG will continue to work with the Agency to resolve the concerns regarding IT security.

EQUITABLE ENVIRONMENTAL COST SHARING

NASA reported equitable cost sharing among potentially responsible parties for environmental cleanup areas as a significant area of management concern. Our audit of cost sharing for the Santa Susana Field Laboratory found that NASA has not been successful in negotiating a fair cost-sharing agreement for remediation costs. As a result, NASA has substantially overpaid cleanup costs at the facility. If an agreement is not obtained, the Agency could pay far above its fair share of remediation costs for past contamination. Also, unless the cost allocation methodology is changed, NASA may continue to overpay annually more than its fair share in future preventative costs. This area remains an area of concern, and we will continue to monitor it as such.

APPENDIX IV

INTERNATIONAL SPACE STATION COST AND SCHEDULE PERFORMANCE

NASA must ensure its policies, practices, oversight, implementation and followup on cost and schedule for this program are sufficient to meet the goals of this high-profile, high-risk program. An OIG report on ISS Corrective Action Plans found that the prime contractor's corrective action plans and NASA's oversight of these plans need improvement. The ISS program has experienced a continued deterioration in cost and schedule performance after a September 1997 adjustment of the contract cost baseline, but variance analyses and corrective actions plans have not been effectively used to control the negative variances. Our audit of ISS Contingency Planning for International Partners found that the contingency plan did not include or clearly identify several critical elements for effective risk management, as required by Agency guidance. OMB recently identified "manage risks in building the International Space Station" as one of 24 Priority Management Objectives for FY 2000. The 24 objectives were chosen as areas in need of priority oversight and will receive ongoing attention from the Administration. Because of these concerns, the OIG believes this is a significant area of management concern.

CONTRACT MANAGEMENT

GAO identified NASA contract management as a continuing area of high risk. GAO does not believe that NASA has demonstrated the capability to consistently produce accurate and reliable procurement-related information in order to better assess and oversee its procurement

activities. Specifically, GAO cited the Agency's delay in implementing the integrated financial management system, lack of formal evaluation requirements for field center procurement activities, and delay in the implementation of NASA procurement metrics initiative. Furthermore, the ability of NASA procurement personnel to fully utilize addition procurement-related information, if produced, is also questions. Shifts in the NASA acquisition workload and workforce are impacting the experience levels of NASA's procurement personnel. The continuous turnover of NASA procurement staff has led to a lack of continuity in administering contracts. Procurement personnel are seriously challenged both by workload and by the many changes in the field of recent years. Initiatives such as performance-based contracting and expanded use of indefinite delivery/indefinite quantity contracts present new areas of potential risk together with opportunities for improvement in the procurement process. In an effort to compensate for lack of Government resources, NASA procurement and program personnel are becoming increasingly reliant on contractors to administer programs themselves. Contract management risks may increase as procurement activities increasingly rely on information technology, such as electronic commerce. In light of these issues, we consider contract management a significant area of management concern.

COST ANALYSIS

In 1995, we recommended that NASA perform an OMB Circular A-76 cost analysis to determine the least expensive method of satisfying the Agency's air transportation needs. Although our audit showed that the Agency could achieve significant savings by using alternatives

High-Risk Areas and Materials Weaknesses

to mission management aircraft, NASA has completed only one cost comparison. Also, NASA has yet to perform an A-76 cost comparison as part of its plan to outsource desktop computers. Deficiencies existed in the initial estimate for the outsourcing program and have continued. NASA needs to provide Agencywide guidance for a uniform costing methodology.

YEAR 2000 DATE CONVERSION

The change of date from 1999 to 2000 and beyond, known as the "Y2K" data conversion problem, has the potential to affect the integrity of data and the continuity of processing capabilities. In numerous reports to Congress, both OMB and General Accounting Office (GAO) have identified the importance and risks associated with the Y2K problem, both in terms of complexity and time constraints. Congress requires OMB to report to them on a quarterly basis the status of Y2K efforts for Government systems, including cost estimates, strategies, and implementation schedules. In turn, OMB monitors the progress of work at Federal agencies through stringent quarterly reporting requirements. NASA had implemented a plan regarding its Y2K

data conversion problem by March 1999. The OIG is currently evaluating potential problems associated with cost estimates reported to OMB, inconsistent classification of inventories (mission critical versus nonmission critical), and failure to identify systems completely. The process to identify and fix the date conversion problem Agencywide is complex, and little time remains between now and January 1, 2000. Because of the wide-ranging systems involved and the inherent risks, Y2K data conversion is a significant area of management concern.

DECOMMISSIONING OF THE PLUM BROOK REACTOR FACILITY

The process of decommissioning the Plum Brook Reactor Facility is a NASA-wide concern that will require a coordinated effort involving several Agency organizations. The costs of decommissioning Plum Brook will rise substantially the longer the process is postponed. NASA has committed to take all appropriate and reasonable steps to accomplish the decommissioning by the end of 2007. Because of the costs involved and the need to take timely action, this issue represents a significant area of management concern.

Directives Reviewed by the OIG

14 CFR 1203	NASA Information Security Program
14 CFR 1206	NASA FOIA Regulations
Amendment to 14 CFR Title V	Proposed Joint Common Rule to Implement Title IX of Education Amendments of 1972
14 CFR 1214.9	Use of Small Self-Contained Payloads (SSCPs)
14 CFR 1214.10	Special Policy on SSCP's by Domestic Educational Institutions
HQPC 1150	HQ Quality Council
HQPG 1400.1A	HQ Management Directives Guide
NHB 1101.3	Code U Roles and Mission Statement, Organization Chart Change 48
NHB 1101.3	Revised JSC Roles and Mission Statement
NHB 1101.3	LaRC Roles and Mission Statement and Organization Chart
NHB 1101.3	LeRC Mission Statement and Organization Chart Renaming Lewis to John H. Glenn Research Center at Lewis Field
NHB 1101.3	MSFC Roles and Mission Statement and Organization Chart
NHB 1101.3	Code J Roles and Mission Statement
NHB 1101.3, Change #48	Change to ARC Roles and Mission Statement
NPD 1080	NASA Generate Knowledge (GK) Process for Programs and Projects
NPD 1090 (three submissions)	NASA Communicating Knowledge Process Policy for Programs and Projects
NPD 1150.21	Establishment and Operation of NASA Advisory Committees
NPD 1210 Draft 1	Use of Gifts and Donations Accepted by NASA
NASA 1383 Draft 1	NASA Assistance to Non-Government, Entertainment-Oriented Motion Picture, Television, Video and Multimedia Productions/Enterprises, and Advertising
NPD 1383.1A	Release and Management of Audiovisual Products and Services
NPD 1400.1F	NASA Directives Systems
NPD 2190	NASA Export Control Program

APPENDIX V

NPD 4300	Personal Property Manual
NPD 7330.1F	Delegation of Authority—Approval Authorities for Facility Projects
NPD 7500.2	NASA Technology Commercialization Process
NPD 8074.1B	Space Data Systems Standards
NPD 8320	Basic Policy for NASA–University Relationships
NPD 8410.1	Pricing Policy for Space Operations Resources and Services
NPD 8610.12D	Office of Space Flight (OSF) Space Shuttle Services for NASA
NPD 8610.23A	Technical Management of Expendable Launch Vehicle (ELV) Launch
NPD 8610.24A	Expendable Launch Vehicle (ELV) Launch Services Prelaunch Reviews
NPD 8900.4C	NASA Use of Global Positioning System Precise Positioning Service
NPD 9080	Review, Approval, and Imposition of User Charges
NPG 1000.2	NASA Strategic Management Handbook
NPG 1090 (two submissions)	NASA Communicating Knowledge (CK) Process
NPG 1210 Draft 1	Procedures for Use of Gifts and Donations by NASA
NPG 1400.1A	NASA Directives Systems Procedures and Guidelines
NPG 1450.10C	NASA Correspondence Management and Communications Standards and Style
NPG 2810	Security of Information Technology
NPG 7100 Draft 1	Protection of Human Research Subjects
NPG 7500 Draft 1	NASA Technology Commercialization Process
NPG 8621	Mishap Reporting, Investigating, and Recordkeeping
NPG 8715.3	NASA Emergency Preparedness Procedures and Guidelines

Government Results Act Review Plan**I. INTRODUCTION**

The Government Performance and Results Act (Results Act), Public Law 103-62, was enacted in January 1993 to improve the Federal Government's responsiveness to the needs of the American public and to reduce waste and inefficiency in Federal programs.¹ The Results Act requires each executive agency to develop and prepare:

1. Multiyear strategic plans
2. Annual performance plans
3. Annual performance reports

Congress attaches great importance to effective implementation of the Results Act and, therefore, has requested Federal agency Inspectors General to develop and implement, in consultation with appropriate congressional committees and their agency heads, a Results Act review plan.²

The National Aeronautics and Space Administration (NASA) Office of Inspector General (OIG) is committed to assisting Agency management in promoting the economy, efficiency, and effectiveness of its programs and operations. In keeping with our commitment, this Results Act review plan establishes the strategies and methods the OIG will use to review the Agency's implementation of the Results Act.

II. RESULTS ACT REVIEW PLAN REQUIREMENTS

The OIG Results Act Review Plan will examine:

1. 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 Results Act.³
2. NASA's verification and validation of selected data sources and information collection and accounting systems that support NASA's strategic and performance plans and performance reports.

Our reviews will emphasize examination of those performance measures associated with NASA's programs and activities that:

1. Are at high risk of waste, fraud, or mismanagement.
2. As determined by the Inspector General, require a review to assess the adequacy of Agency controls for ensuring that the underlying performance data are accurate and reliable.

We will submit our Results Act Review Plan as part of the April 1999 semiannual report and update that plan at least annually thereafter. We will include findings and recommendations from our Results Act reviews in each subsequent semiannual report, beginning with the September 30, 1999, report.

¹ NASA initiated key Agencywide initiatives and a Presidential Decision Directive that will foster efficient and effective operations. They are detailed in Appendix 1 of this plan.

² Congressional request made by the Honorable Richard Arme, Daniel Burton, Stephen Horn, and Peter Sessions.

³ NASA's processes to assess program performance are listed in Appendix 2 of this plan.

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III. RESULTS ACT REVIEW PLAN STRATEGY, GOALS, AND METHODOLOGY

Strategy

The OIG intends to examine the Agency's implementation of its established performance measures through individual audits and reviews and incorporating, as appropriate, information from the independent public accountant's audit of NASA's financial statements.

Goals

Our goals are to:

1. Encourage the effective use of performance measures by Agency managers as a means to achieve Agency goals and strengthen accountability to the taxpayer.
2. Emphasize needed corrective actions to improve program, project, and process performance and monitor implementation of those actions.
3. Enhance NASA's ability to perform in an increasingly complex environment that is subject to significant business and security challenges.

Methodology

The following table details the activities and methodology we plan to employ.

ACTIVITIES AND METHODOLOGY

ACTIVITY	METHODOLOGY
Include NASA's Results Act requirements in the OIG's annual work planning process Incorporate the review of the Agency's performance measures into work assignments Conduct review of data sources and information collection for performance reporting	Assure that the OIG annual planning process is linked to the Agency's strategic plan and current annual performance plan giving emphasis to the ten most serious Agency management challenges identified annually by the OIG. NASA's performance measures will be evaluated internally by management and externally by organizations such as the NASA Advisory Council and the National Academy of Sciences. Where appropriate, the OIG will include in the scope of work for audits and reviews requirements to assess those performance measures and goals relating to the particular Agency program, project, or crosscutting process emphasizing those performance measures associated with activities identified as high risk (e.g., safety, technology development, and security). For selected audits and reviews, we will assess controls over databases and associated performance measurement data relating to Agency programs.

(Continued)

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ACTIVITIES AND METHODOLOGY (Continuation)

ACTIVITY	METHODOLOGY
<p>Use the OIG Issue Area Coordination Process to coordinate OIG research on Agency management priorities and develop and prioritize OIG work coverage applicable to specific work areas</p>	<p>OIG Issue Area Coordinators will review the Agency's planning and performance measures within their assigned areas, which include procurement, financial management, program/project management, safety, security programs, information technology, infrastructure, science and engineering, and international and interagency agreements.</p>
<p>Coordinate OIG review of performance measures with independent public accountants review of performance measures associated with the Agency financial statement audit</p>	<p>We will cover selected performance measures not reviewed by the independent public accountant in its financial statement audit of the Agency. The scope of work for the Agency's financial statement audit includes the independent public accountants verification and validation of performance measures included in the NASA Accountability Report. We will coordinate our review with the independent public accountant to avoid duplication of effort.</p>
<p>Review NASA technology planning and performance measures</p>	<p>We will conduct an indepth review of NASAs technology development and adoption processes (with a focus on effective use of performance measures) to determine whether the Results Act is being applied effectively at program levels.</p>
<p>Monitor the Integrated Financial Management Project and Full Cost Accounting</p>	<p>We will continue our coverage of these processes through various reviews and through participating with Agency management in the process-related working groups.</p>
<p>Include ISO 9001 Certification Initiative in appropriate reviews</p>	<p>We will ensure that our reviews involving the Agency's quality assurance initiatives encompass the status of ISO 9001 certification.</p>
<p>Monitor activities related to Presidential Decision Directive 63, which mandates the strengthening of the Nations defenses against emerging, unconventional threats to the United States</p>	<p>The OIG will participate as an active member of the Critical Infrastructure Protection Team to help the Agency develop an effective Critical Infrastructure Protection Plan. We will also conduct subsequent reviews to determine whether NASA has implemented the critical steps it identifies as key to protecting its infrastructure.</p>

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Appendix 1

Agencywide Initiatives and Presidential Decision Directive 63

The Agency has taken steps to institute the following initiatives and Presidential Decision Directive 63 to help make decisions, allocate resources, and execute programs safely, effectively, and efficiently.

1. **Integrated Financial Management Project (IFMP).** The Agency initiated IFMP with an objective to implement common Agencywide solutions for many business and administrative processes. The IFMP initiative is designed to eliminate nonintegrated systems and Center-unique procedures.
2. **Full Cost Accounting.** The Agency implemented the full cost initiative in response to the Chief Financial Officer's Act of 1990, the National Performance Review, the Results Act, and the Federal Financial Management Improvement Act. Full Cost Accounting ties all Agency costs to major activities and budgets by managing all activities from a full cost perspective.
3. **ISO 9001 Certification.** The NASA Administrator requested that all Agency installations obtain ISO 9001 certification by September 1999. ISO 9000 is a series of standards and guidelines that define minimum requirements for a quality system to be accepted internationally. ISO 9001 comprises the most detailed certification and contains the most comprehensive set of standard requirements for quality programs established under ISO guidelines.
4. **Presidential Decision Directive (PDD-63) on Critical Infrastructure Protection.** To ensure mission success, NASA must safeguard its ability to perform in an increasingly hostile electronic environment. The Agency has a continuing dialog with the OIG for assuring the security of its proprietary information contained in its electronic and computer-based systems. On May 22, 1998, the President issued PDD-63, which mandated the strengthening of the Nation's defenses against emerging, unconventional threats to the United States. As a result of PDD-63, the Agency established the Critical Infrastructure Protection Team (CIPT). The OIG participates on the CIPT.

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Appendix 2 Agency Performance Assessment Process

NASA carries out its space and aeronautics programs and activities through its Strategic Enterprises and crosscutting processes.¹ Each Strategic Enterprise has identified a unique set of goals, objectives, and strategies to meet the requirements of its primary customers. The crosscutting processes support the goals of the Agency and the Enterprises.

The following documents assess Agency performance at all levels.

1. **NASA Strategic Plan.** The Strategic Plan articulates the Agency's vision, mission, goals, and objectives, as well as Agencywide strategies for achieving them.
2. **Enterprise Strategic Plan.** The Enterprise Strategic Plans are an extension of the Agency's Strategic Plan and provide a more detailed description of each Enterprise's goals, objectives, and implementing strategies.
3. **NASA Performance Plan.** The Performance Plan outlines selected measurements to evaluate progress the Agency intends to make toward the achievement of its strategic goals.
4. **Functional Performance Plan.** The Functional Performance Plans contain the performance goals and measures for Agency functional offices.
5. **Center Director's Performance Plan.** The Center Director's Performance Plan contains performance goals and measures for each NASA Center.
6. **NASA Accountability Report.** The NASA Accountability Report summarizes the Agency's program accomplishments and stewardship over budget and financial resources. This report includes assessments of performance measures and the Agency's financial statements.

¹The crosscutting processes transform the Agency's inputs, such as policies and resources, into outcomes. These processes are (1) Manage Strategically, (2) Provide Aerospace Products and Capabilities, (3) Generate Knowledge, and (4) Communicate Knowledge.

Appendix VII

Glossary and Acronyms

GLOSSARY

DISALLOWED COST	A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the Government.
EXCEPTIONS SUSTAINED	(DCAA definition) Costs that were questioned by auditors and that agency management has agreed are ineligible for payment or reimbursement. Ineligibility may occur for any number of reasons, such as: (1) a lack of satisfactory documentation to support claims, (2) contract provisions, (3) public law, and (4) Federal policies or regulations.
FINAL ACTION†	The completion of all actions management has concluded, in its decision, that are necessary with respect to the findings and recommendations included in an audit report; and in the event that management concludes no action is necessary, final action occurs when a management decision has been made.
INVESTIGATIVE RECOVERIES	Investigations by the OIG that may result in the recovery of money or property of the Federal Government. The amounts shown represent: (1) the recoveries that management has committed to achieve as the result of investigations during the reporting period; (2) recoveries in which a contractor, during the reporting period, agrees to return funds as a result of investigations; and (3) actual recoveries during the reporting period not previously reported in this category. These recoveries are the direct result of investigative efforts of the OIG and are not included in the amounts reported as the result of audits or litigation.
INVESTIGATIVE REFERRALS	Cases that require additional investigative work, civil or criminal prosecution, or disciplinary action. These cases are referred by the OIG to investigative and prosecutive agencies at the Federal, State, or local level or to agencies for management or administrative action. An individual case may be referred for disposition in one or more of these categories.

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MANAGEMENT DECISION†	The evaluation by management of the findings and recommendations included in an audit report and the issuance of a final decision by management concerning its response to such findings and recommendations, including actions concluded to be necessary.
NET SAVINGS	(DCAA definition) Costs determined by DCAA for which expenditures would have been made if the exceptions were not sustained. For incurred costs, this category represents the Government's participation in costs questioned sustained. For successful fixed-price contractor proposals, it represents costs questioned sustained plus applicable profit. For successful cost reimbursement contractor proposals, net savings represents only the applicable estimated fee associated with the costs questioned sustained.
PROSECUTIVE ACTIVITIES	Investigative cases referred for prosecutions that are no longer under the jurisdiction of the OIG, except for cases on which further administrative investigation may be necessary. This category represents cases investigated by the OIG and cases jointly investigated by the OIG and other law enforcement agencies. Prosecuting agencies will make decisions to decline prosecution, to refer for civil action, or to seek out-of-court settlements, indictments, or convictions. Cases declined represent the number of cases referred that are declined for prosecution (not including cases that are settled without prosecution). Indictments and convictions represent the number of individuals or organizations indicted or convicted (including pleas and civil judgments).
QUESTIONED COST†	A cost that is questioned by the OIG because of: (1) alleged violation of a provision of a law, regulation, contract, grant, cooperative agreement, or other agreement or document governing the expenditure of funds; (2) a finding that, at the time of the audit, such cost is not supported by adequate documentation; or (3) a finding that the expenditure of funds for the intended purpose is unnecessary or unreasonable.

QUESTIONED COSTS FOR WHICH A MANAGEMENT DECISION HAS NOT BEEN MADE

Costs questioned by the OIG on which management has not made a determination of eligibility for reimbursement or on which there remains disagreement between the OIG and management. All agencies have formally established procedures for determining the ineligibility of costs questioned. This process takes time; therefore, this category may include costs that were questioned in both this and prior reporting periods.

RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

A recommendation by OIG that funds could be more efficiently used if management took actions to implement and complete the recommendation, including: (1) reductions in outlays; (2) deobligation of funds from programs or operations; (3) withdrawal of interest subsidy costs on loans or loan guarantees, insurance, or bonds; (4) costs not incurred by implementing recommended improvements related to the operations of the establishment, a contractor, or a grantee; (5) avoidance of unnecessary expenditures noted in pre-award reviews of contract or grant agreements; or (6) any other savings that are specifically identified. (*Note:* Dollar amounts identified in this category may not always allow for direct budgetary actions, but generally allow the agency to use the amounts more effectively in accomplishment of program objectives.)

UNSUPPORTED COST†

A cost that is questioned by the OIG because the OIG found that, at the time of the audit, such cost is not supported by adequate documentation.

† These definitions are derived from Public Law 100-504, the Inspector General Act Amendments of 1988.

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ACRONYMS

AACB	Aeronautics and Astronautics Coordinating Board
AFGE	American Federation of Government Employees
AIGA	Assistant Inspector General for Auditing
AIGI	Assistant Inspector General for Investigations
AIGIAIA	Assistant Inspector General for Inspections, Administrative Investigations, and Assessments
AIS	Automated Information Security
ARC	Ames Research Center
AUSA	Assistant United States Attorney
B&P	Bid and Proposal
CCC	Columbia Communications Corporation
CCD	Computer Crimes Division
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CIPT	Critical Information Protection Team
COMSEC	Communications Security
CRSPO	Commercial Remote Sensing Program Office
CSC	Computer Sciences Corporation
CSLA	Commercial Space Launch Act
CSOC	Consolidated Space Operations Contract
DCAA	Defense Contract Audit Agency
DCFL	Defense Computer Forensic Laboratory
DCIS	Defense Criminal Investigative Service
DCMC	Defense Contract Management Command
DoD	Department of Defense
EOS	Earth Observing System
EPA	Environmental Protection Agency
EVMS	Earned Value Management System

FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FBI	Federal Bureau of Investigation
FLRA	Federal Labor Relations Authority
FMFIA	Federal Managers' Financial Integrity Act
FOIA	Freedom of Information Act
FY	Fiscal Year
GAO	General Accounting Office
GRC	Glenn Research Center
GSA	General Services Administration
HPCC	High Performance Computer Cluster
IAIA	(Office of) Inspections, Administrative Investigations, and Assessments
IFMP	Integrated Financial Management Project
IG	Inspector General
ISO	International Organization for Standardization
ISS	International Space Station
IT	Information Technology
JPL	Jet Propulsion Laboratory
JSC	Johnson Space Center
LaRC	Langley Research Center
LeRC	Lewis Research Center (renamed the John H. Glenn Research Center at Lewis Field)
MSFC	Marshall Space Flight Center
NAS	Numerical Aerospace Simulation
NASA	National Aeronautics and Space Administration
NASIRC	NASA Automated Systems Incident Response Capability
NCIS	Naval Criminal Investigative Service
NHB	NASA Handbook
NIPC	National Infrastructure Protection Center
NIS	Nationwide Information System

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NPD	NASA Policy Directive
NPG	NASA Procedures and Guidelines
NPOESS	National Polar-orbiting Operational Environmental Satellite System
NPP	NPOESS Preparatory Project
NTTC	National Technology Transfer Center
OIG	Office of Inspector General
OMB	Office of Management and Budget
OMPS	Ozone Mapper Profiler Suite
ONR	Office of Naval Research
PCIE	President's Council for Integrity and Efficiency
PDD	Presidential Decision Directive
PKI	Public Key Infrastructure
POES	Polar-orbiting Operational Environmental Satellite
RMD	Resources Management Division
SBA	Small Business Administration
SPF	Software Processing Facility
SPI	Single Process Initiative
SSCP	Small Self-Contained Payload
SSFL	Santa Susana Field Laboratory
TCE	trichloroethylene
TOP	Technology Oversight Project
U.S.	United States
U.S.C.	United States Code
Y2K	Year 2000