The Agency faces increasing challenges in its mission to explore and develop space for both commercial and strategic governmental uses. These challenges continue to test NASA's management of its resources, including human capital.

Our report for this period is aligned with the Top Ten Management Challenges. Those challenges, identified in Appendix IV, represent our assessment of the highest vulnerabilities and risk to NASA's missions and programs. Among others, significant areas of concern during this period continue to include safety and mission assurance, information technology (IT), and procurement.

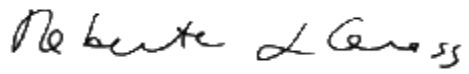
For example, although safety is to be considered a number one priority in NASA programs, an audit disclosed long standing safety risks across many areas, including the safety of workers, space hardware and software, and two buildings—the Space Station Processing Facility and the Operations and Checkout building at the Kennedy Space Center (Kennedy). While management authorized variances allowing the use of noncompliant, potentially hazardous materials in those buildings, neither the Kennedy nor the contractor safety office performed risk analyses to support the variances, which could have identified, documented, and appropriately mitigated the risks of using those materials.

In testimony before the Senate Committee on Governmental Affairs, I provided comments to S.1993, the Government Information Security Act of 1999. The Act recognizes that IT security is one of the most important issues in shaping future Federal planning and investment. My office will continue to focus significant resources in the areas of information technology security and information systems security because we continue to find significant vulnerabilities in this area. For example, an inspection of personal computer hard drives found residual sensitive information on some that were designated for excess or transfer. We issued a security alert, *Clearing Computer Information from Your Computer's Hard Drive*, that provides guidelines for assuring information on computer hard drives is erased and unrecoverable. We also made awareness presentations to the security community regarding this concern. In addition, we distributed the pamphlet to all Inspectors General as well as NASA congressional oversight and appropriations members. Audit work also demonstrated vulnerabilities in the IT security arena. For example, audits of recovery plans for human space flight mission-related systems following a natural or other disaster indicated a need for improvement as well as the need for management to place stronger emphasis on disaster recovery planning.

The Government Accounting Office repeatedly identifies NASA contract management as a major management challenge and program risk. Because NASA expends a significant portion of its annual budget on procurement, my office continues to review the effects of the changing NASA procurement process on the Agency's programs and projects. Our work found weaknesses in many aspects of the procurement process that have left the Agency vulnerable to crime, fraud, unreasonable prices, poor quality goods and services, and other negative mission impacts. To increase awareness of Agency and other Federal contract managers to the indicators of fraud, waste, and abuse in Government contracting, the Assistant Inspector General for Inspections, Administrative Investigations, and Assessments and I personally have conducted several outreach activities emphasizing detection and prevention to the contract management community. The audit and investigations staff also conduct outreach activities to the procurement community.

This report represents our work for the period October 1, 1999, through March 31, 2000. My office will continue to monitor those areas representing significant management challenges to the Agency with particular focus on safety, information technology, and procurement.

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



Roberta L. Gross
Inspector General

The Agency

The National Aeronautics and Space Administration (NASA) is a Federal research and engineering agency with a stated mission to:

- Advance and communicate scientific knowledge and understanding of the Earth, the solar system, and the universe and use the environment of space for research.
- Explore, use, and enable the development of space for human enterprise.
- Research, develop, verify and transfer advanced aeronautics, space, and related technologies.

NASA's budget authority for fiscal year (FY) 2000 is $13.6 billion.

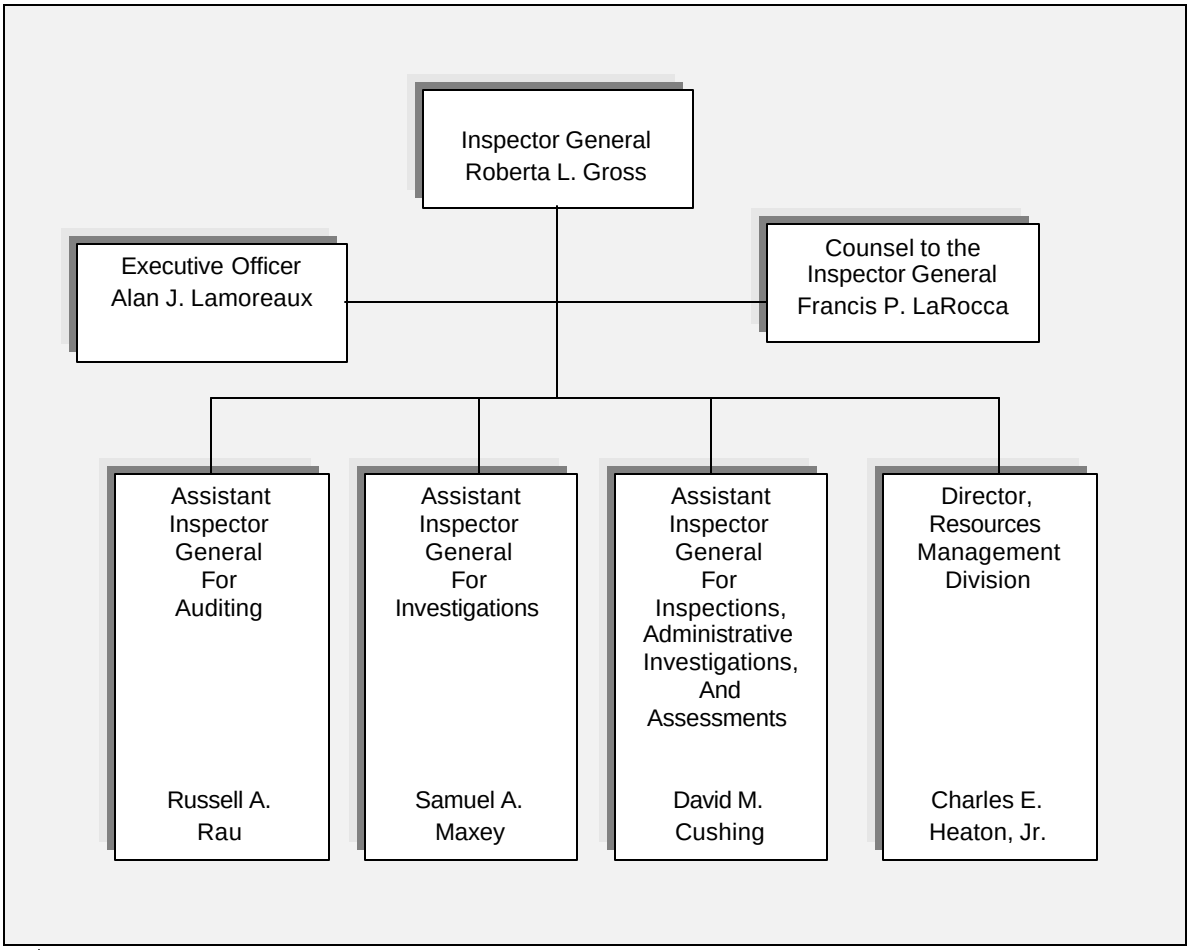
NASA accomplishes its space, aeronautics, science, and technology programs through its nine Centers, the Jet Propulsion Laboratory (JPL), and contractors located throughout the country. NASA also relies on partnerships with large and small off-site contractors; members of the academic community; other Federal, state, and local agencies; and other space agencies throughout the world. Approximately 19,000 NASA employees are dispersed among Headquarters and NASA's field locations. The management of NASA programs is organized around four Strategic Enterprises:

- Space Science,
- Earth Science,
- Human Exploration and Development of Space, and
- Aerospace Technology.

The Office of Inspector General

The Office of Inspector General (OIG) is a diverse multidiscipline workforce located at Headquarters and in offices at all NASA Centers, JPL, and other sites throughout the country. The current organizational structure focuses resources on those areas representing the Agency's highest vulnerabilities, especially procurement, IT, telecommunications activities, and export of sensitive technology controls and processes. Under the general direction of the Inspector General, the Assistant Inspectors General (AIG's) for the OIG's three major program offices (Office of Audits; Office of Criminal Investigations; and Office of Inspections, Administrative Investigations, and Assessments) develop, implement, and manage their respective programs. The Counsel to the Inspector General and 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 Executive Officer to the Inspector General serves as the congressional liaison.

The Director, Resources Management Division, 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. (Reference Sections 6(a)(6), (7), and (8) of the Inspector General Act, 5 U.S.C. [United States Code] Appendix III)



OIG Organization

Office of Audits

The Office of Audits provides a broad range of professional audit and advisory services of NASA and contractor activities that focus on key issues impacting the NASA mission, and are responsive to congressional and administration leadership. During this period, the OIG issued 31 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 Department of Defense (DoD) contractors, the services of the Defense Contract Audit Agency (DCAA) are relied upon for some audits. Information on all DCAA reports issued and action taken by NASA management during the 6-month period is contained in Appendix III. In addition, we continue to reengineer 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 or state auditors, and assure that those auditors meet Government audit standards. Our goal is to enhance the protection of NASA personnel and resources through published reports; consulting engagements; commentary on NASA policies; and deterrence of fraud, waste, and abuse.

Office of Inspections, Administrative Investigations, and Assessments

The Office of Inspections, Administrative Investigations, and Assessments (IAIA) staff provides timely and constructive evaluations of Agency programs, projects, and organizations. The IAIA staff conducts assessments of policies, processes, structures, and operations to determine whether resources are effectively managed and applied toward accomplishing NASA's missions. Other IAIA projects include focused reviews of specific management issues and plans. The IAIA staff also conducts administrative investigations.[1] These investigations include misuse of Government equipment and other resources, employee violations of the Standards of Conduct, and other forms of misconduct.

The IAIA staff continued its support of the Office of Criminal Investigations (OCI), partnering with special agents in the conduct of criminal cases and providing technical insight and advice in areas such as procurement and engineering.

[1] Inquiries involving non-criminal allegations or administrative wrongdoing.

Office of Criminal Investigations

Although OIG investigations originate from many sources, a majority of investigations are predicated on information provided by NASA, contractor employees, or other Federal agencies. The OIG continues to focus investigative resources on preventing and detecting fraud, criminal activity, and waste in NASA's procurement activities and 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 Computer Crimes Division (CCD) not only detects computer intrusions, but also works with the Agency to protect the integrity and enhance the security of NASA's IT systems.

Counsel to the Inspector General

The Counsel to the Inspector General is the central official for the review and coordination of all legislation, regulations, Freedom of Information Act (FOIA) requests, and legal matters requiring OIG attention. The OIG legal staff provides advice and assistance to senior OIG management, staff auditors, inspectors, and investigators, and serves as counsel in administrative litigation in which the OIG is a party.

Executive Officer to the Inspector General

The Executive Officer to the Inspector General is the primary point of contact for congressional relations.

Acquisition Reform

Acquisition reform has had a significant impact on NASA. Over the last 5 years NASA has consistently expended almost 87 percent of its annual budget on procurement of goods and services—nearly $12.7 billion in FY 1999.

The Government has reengineered its acquisition process through congressional passage of the Federal Acquisition Streamlining Act (FASA), Federal Acquisition Reform Act (FARA), Clinger-Cohen Act, and the Federal Activities Inventory Reform (FAIR) Act. Since NASA awards a significant percentage of its budget in contracts, grants, and other agreements, the effect of these changes on NASA's business processes is magnified. The OIG continues to focus on the NASA procurement process and how changes in the process have affected Agency programs and projects. Our audits, inspections, and investigations have identified the following acquisition issues that require management's attention.

Human Capital

Since the early 1990's, NASA has undergone a significant reduction in its most valuable asset—people. NASA's procurement staff has been reduced by 28 percent. While NASA has consolidated many of its contracts, the number and dollar value ($113 million over those of FY 1998) of NASA awards has actually increased. This further compounds the impact of the loss of human capital. NASA's procurement expenditures in FY 2000 are projected to increase even more. Further, NASA has implemented numerous procurement initiatives such as performance-based contracting (PBC), electronic commerce, and risk-based acquisition management. NASA must make certain that the Agency has sufficient personnel with the proper skills to effectively manage its acquisitions.

The reduction in human capital is not unique to the NASA procurement community; many other NASA organizations have been affected. To offset this reduction in resources, NASA has been shifting work from Government personnel to the private sector. The percentage of funds spent on service contracts has risen more than 50 percent during the 1995 to 1999 period.[2] The shifting of work from civil servants to private industry is an acceptable practice; in fact, it is encouraged by both the Office of Management and Budget (OMB) Circular A-76 and the FAIR Act, when appropriate. However, increased performance of services, particularly on-site services, by the private sector personnel must be managed carefully by Federal agencies to avoid issues related to personal services contracting and inherently governmental functions. An ongoing assessment about the use of NASA support service contractors indicates that both personal services and inherently governmental issues exist at NASA.

[2] Sources: FY 1995 and FY1999 NASA Annual Procurement Reports.

Loss of Government Oversight

With acquisition reform, cutbacks in procurement personnel, and increased emphasis on PBC, NASA's philosophy has shifted from one of contract oversight to one of providing contract insight. Oversight is labor intensive and requires increased Government involvement in the day-to-day contractor operations. Insight primarily involves the monitoring of customer-identified performance metrics and contracted milestones.

NASA may have been too zealous in its reduction of contractor oversight thereby increasing program and contractor performance risks. Recent OIG audits of NASA programs and practices identified several risks resulting from the reductions in contractor oversight. Specifically, we found instances where critical testing and contract and subcontract oversight activities were not performed. For example, a recent audit[3] identified problems in the designing, building, and safeguarding of hardware, as well as employee noncompliance with quality system procedures. The contractor did not act on these problems in a timely manner, due in part to the lack of oversight activity.

Our review of NASA's performance management of the International Space Station (ISS) program, conducted at the request of the NASA Administrator, found that the performance management needed improvement. The review disclosed that from October 1998 to February 1999, the ISS contractor reported unrealistically low estimates of projected cost overruns to NASA management. Ample evidence of the contractor's continued degradation of cost performance was available to NASA management at all levels: Headquarters, Johnson Space Center (Johnson), and the ISS Program Office. However, management officials did not effectively challenge the contractor's estimates, which resulted in the payment of $16 million in unearned incentive fee.

Contract Administration Reductions

The Defense Contract Management Agency (DCMA) (formerly the Defense Contract Management Command), the DCAA, and DoD administrative contracting officers provide contract administration support to NASA at most contractor locations. Similarly, the Office of Naval Research fulfills the responsibilities at most grantees. Like NASA, these agencies have also undergone significant human capital cutbacks, which compounds NASA's risk associated with contractor performance. For example, ongoing NASA OIG audits of health care costs and the professional and consultant services are finding little, if any, review of costs charged to NASA contracts.

Lack of Competition

Competition is key in reducing the cost of goods and services for the Government. The Competition in Contracting Act requires full and open competition on Government contracts to the maximum extent practicable. Of the approximately $12.7 billion in NASA procurements in FY 1999, over $3 billion were not available for competition.[4] Of the remaining $9.6 billion, almost $4.2 billion (43.3 percent) were not openly competed. An audit concluded

[3] Audit IG-99-054, September 28, 1999, "JPL Management of Subcontractor Technical Performance."
[4] This $3 billion includes procurements such as the use of mandatory sources (i.e., the National Institutes for the Blind and Severely Handicapped), set-aside programs (i.e., the Small Business Administration's 8(a) program), and contracts with providers of utilities.

that although NASA's noncompetitive procurement actions were adequately supported, technical analyses for many of those actions were inadequate. [5] We identified similar inadequacies in technical analyses associated with the ISS. Without technical input, the contracting officer's ability to develop a sound and supportable pre-negotiation position is diminished, which may in turn weaken the likelihood that the Government is getting the most favorable price from the contractor. Recent audits of the purchasing systems of two Johnson contractors indicated similar weaknesses in contractor purchasing systems. [6] While contractors appropriately awarded and managed subcontracting activities on their NASA contracts, they did not provide adequate supporting documentation for noncompetitive procurements. Recent DCMA purchasing system reviews also indicated that few subcontracts were competed. The lack of competition at both the prime contract and subcontract levels reduces NASA's assurance that the Agency is receiving the best available price for goods and services.

S.1993, Government Information Security Act of 1999

The Inspector General headed a President's Council for Integrity and Efficiency/Executive Council for Integrity and Efficiency (PCIE/ECIE) working group to consolidate and provide the Inspector General community's comments on the bill. She also testified on the merits of this legislation before the Senate Committee on Governmental Affairs on March 2, 2000.

The purpose of this bill is to provide a comprehensive framework for establishing and ensuring the effectiveness of controls over information resources that support Federal operations and assets. It contemplates strengthening responsibilities and communication among OMB, agency heads, Chief Information Officers (CIO's), and Program Managers to ensure better control and oversight of IT systems. It also recognizes the highly networked nature and vulnerability of the current Federal computing environment and provides for Government-wide management and oversight of civilian, national security, and law enforcement communities. The bill also requires an annual independent evaluation of agency information security program by the agency's Inspector General, the General Accounting Office (GAO), or an independent external evaluator.

In her testimony, the NASA Inspector General provided various PCIE/ECIE working group recommendations, as well as her experiences with information security challenges at NASA. The recommendations included:

- Ensuring that Offices of Inspector General are provided necessary resources (staff budgets, training, travel, etc.) necessary to accomplish their annual evaluations of agencies' information security programs.

[5] IG-99-056, September 28, 1999, "NASA Noncompetitive Procurements."
[6] IG-00-002, December 21, 1999, "Raytheon Subcontract Management;" and IG-99-042, September 16, 1999, "Allied-Signal Subcontract Management."

- Clarifying that the Act would apply to all PCIE and ECIE Inspectors General. As written, the bill may not have applied to all statutory Inspectors General.

- Providing agency CIO's with necessary leverage and control of resources to successfully develop, implement, and evaluate their agencies' information security programs.

- Recommending that the Senior Agency Information Security Officer, a position required by the bill, report to the agency CIO.

- Reporting security incidents, specifically to the agency Inspector General, as well as other law enforcement offices, as appropriate.

- Reporting only significant deficiencies instead of reporting all deficiencies, so agencies could discern the true condition of their systems and controls and focus attention on the greatest risks.

During her testimony, the Inspector General reported that NASA's management of network security created vulnerabilities. The OIG has repeatedly recommended increased authority for the CIO and questioned the effectiveness of decentralizing and fragmenting IT security functions. NASA's organizational approach to security, which in our opinion is based on management by consensus, results in delayed issuance and implementation of needed policies and procedures. Our recent information systems audits are highlighting security concerns with some of NASA's most critical systems and applications.

In summary, the Inspector General supported S.1993 as a positive step in highlighting the importance of centralized oversight and coordination in responding to risks and threats to IT security. The Inspector General community has already been involved in IT security oversight and criminal investigation of network intrusions. S.1993 provides an even greater role. This task will require Inspector General commitment of staff and other resources. The agencies, OMB, and Congress must provide the leadership and budgetary support for all the key players the Act enlists to defend the Nation's network systems.

Potentially Hazardous Materials Used in Kennedy Payload Processing Facilities
(See Page 17)

An audit disclosed that ground workers in the Space Station Processing Facility and the Operations and Checkout building are using potentially hazardous materials without exercising proper control and safety precautions. Findings indicate that the contractor safety personnel have not performed adequate inspection of the facilities and neither Kennedy nor contractor safety personnel have reviewed documents authorizing use of these materials. Consequently, NASA lacks assurance that associated safety risks are adequately identified, documented, reviewed, and mitigated.

Performance Management of ISS Prime Contract Needs Improvement
(See Page 18)

The audit of the ISS prime contract showed that Boeing reported unrealistically low estimates of projected cost overruns and presented the cost data to indicate that no additional overruns would occur. Also, Boeing did not promptly advise NASA of potential increases due to Boeing's reorganization. The reorganization may result in NASA's being charged an estimated $35 million in reorganization costs for the ISS Program through contract completion.

UNIX Security Controls Need Improvement
(See Page 19)

An audit of a UNIX-based critical system development environment identified weaknesses in security controls that could expose that environment to compromise.

Process for Validating NASA's Performance Data Under GPRA [Government Performance and Results Act] Can Be Improved
(See Page 21)

Twenty-two percent of the targets reviewed did not have written assessment of performance that accurately reflect supporting data and actual results. Management took responsive action to our recommendations for improvement.

An audit showed NASA has not adequately performed strategic planning for the Space Transportation mission. We also found that program documentation approving the X-34 Project and the Future-X Program was not completed, and appropriate procedures and internal controls were not in place to ensure cost/benefit analyses were included in decisions related to the X-34.

Improvements are Needed in Space Transportation Strategic Management and X-34 Program/Project Management

(See Page 22)

NASA Lacks Assurance Contractors are Exporting Controlled Technologies in Accordance with Applicable Laws and Regulations

(See Page 24)

Our audit found that NASA's current export policies do not clearly define the Agency's oversight responsibilities regarding its contractors who export controlled technologies. Additionally, the Agency has not established contract requirements for contractors to notify NASA when they deem it necessary to obtain an export license in furtherance of a NASA program, or when exports are effected against those licenses.

Findings in an audit indicate that up to $3 billion of NASA programs/projects reviewed potentially could be exposed to increased costs due to noncompliance of those programs with NEPA.

NASA's Implementation of the National Environmental Policy Act (NEPA) Can Be Improved

(See Page 25)

Inspection of Center Computer Hard Drives Finds Residual User Data

(See Page 45)

Our inspection found residual user data and copyrighted software on the hard drives of computers designated for disposal, transfer, or excess. We issued a management alert concerning the risks associated with this condition, which we have published as a personal computer user information pamphlet. The pamphlet provides insight into the risks associated with improper clearing of files from computer storage devices and offers instructions on the proper methods to delete computer files.

$38.0 Million Settlement in Qui Tam Lawsuit
(See Page 53)

To avoid the cost of further litigation, a NASA contractor agreed to settle a qui tam lawsuit for $38.0 million. The contractor allegedly passed on to the Government unallowable sale and leaseback charges for the contractor's corporate headquarters.

Indictment Alleges $1.2 Million Criminal Forfeiture
(See Page 53)

A former contractor employee and a former owner of an electronics business were indicted for allegedly conspiring to rig bids for computer equipment and committing multiple acts of theft, wire fraud, money laundering, and payment of kickbacks. The indictment alleged a criminal forfeiture against both subjects of more than $1.2 million.

Subcontractor Ordered to Pay $885,519 in Restitution
(See Page 53)

A company was ordered to pay $885,519 in restitution to NASA for violating the Major Fraud Act. To obtain a $3.2 million contract under the small business set-aside program, the company had falsely certified it was a Small, Woman-owned Business.

[Photograph in the original.]

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 period there were no such instances.

Disagreement on Proposed Actions

Section 5(a)(12) of the Inspector General Act, as amended requires reporting of any significant management decisions with which the Inspector General disagrees. The following summarizes two reports on which the Inspector General disagrees with management's decisions.

PCIE AUDIT OF AIRCRAFT MANAGEMENT
March 28, 1995
Report No. LA-95-001

The one remaining open recommendation dealt with performing cost analyses in accordance with OMB Circular No. A-76. We estimated that NASA could save $5.8 million annually by using commercial airlines instead of NASA aircraft. Although management agreed with the recommendation, follow-up reviews during 1995 through 1998 for several aircraft found that management had not performed a cost analysis that complied with OMB Circular A-76 for any of its aircraft. In March 1999, management provided a cost analysis for one aircraft that they believed complied with OMB Circular A-76. For our follow-up, we reviewed this cost analysis under a separate assignment and issued report IG-99-057, which is summarized below.

AIRCRAFT MANAGEMENT NEEDS IMPROVEMENT
September 30, 1999
Report No. IG-99-057

Marshall Space Flight Center (Marshall) officials prepared an OMB Circular No. A-76 study of NASA-3, an aircraft used by Marshall. Circular No. A-76 requires cost effectiveness analyses in order for agencies to justify retention of aircraft. Our audit, found that NASA's use of the NASA-3 aircraft to transport personnel and equipment did not qualify as one of the purposes for which Federal policies authorize agencies to own or lease aircraft. We estimated that the costs for using commercial airlines is $2.9 million less than the costs for operating NASA-3 over the 5-year period covered by the A-76 study. We also found that NASA was evaluating a plan to replace three mission management aircraft, including NASA-3, and upgrade a fourth aircraft. Management had not performed an A-76 study supporting the proposed aircraft purchase and upgrade, which would cost $43.9 million. We recommended that management dispose of NASA-3 and use commercial airlines to satisfy Marshall's transportation requirements, revise Agency policy to conform with OMB requirements, evaluate commercial airlines and other aviation services when conducting A-76 studies for aircraft, and

terminate plans to replace the existing mission management aircraft. Management either nonconcurred or proposed nonresponsive actions to the report's five recommendations.

Management Decision

Because of the continuing disagreement, we referred both reports to the Audit Followup Officer (AFO). On December 21, 1999, the AFO stated that management would not institute the corrective actions cited in the reports. We strongly disagree with management's position. As a result of the AFO decision, we believe, and NASA management disagrees, that NASA is in noncompliance with Federal policy regulating aircraft operations, as well as 41 Code of Federal Regulations 101-37, *Government Aviation Administration and Coordination*. In addition, NASA will continue to spend several million dollars more each year to operate dedicated aircraft rather than use less expensive commercial alternatives.

Safety and Mission Assurance

Potentially Hazardous Materials Used in Kennedy Payload Processing Facilities Report No. IG-00-028

At the request of the House of Representatives Committee on Science, the OIG conducted an audit to determine whether (1) safety responsibilities between Boeing, Kennedy's Payload Ground Operations Contractor (PGOC), and NASA are clearly defined; (2) hazardous materials are being used in Kennedy's processing facilities; and (3) hazardous materials that are used are properly controlled. A January 1997 contract modification revised Boeing's PGOC statement of work to clarify and establish safety responsibilities for Boeing, NASA, and other contractors at various Kennedy processing facilities. Those facilities include the Space Station Processing Facility (SSPF) and the Operations and Checkout (O&C) building where Boeing performs payload-processing activities for the Space Shuttle (Shuttle), expendable launch vehicles (ELV), and flight elements of the ISS. We found that ground workers in both the SSPF and the O&C building are using potentially hazardous materials without exercising proper control and safety precautions. Improper use of these materials poses a potential hazard to ground workers and increases the risk of damage to Shuttle payloads and other equipment. Findings indicate that Boeing safety personnel have not performed adequate, contract-required inspections of the facilities and neither Kennedy nor Boeing safety personnel have reviewed the Materials Usage Agreements (MUA's) authorizing use of these materials. As a result, NASA lacks assurance that associated safety risks are adequately identified, documented, reviewed, and mitigated. We recommended that management (1) implement procedures to ensure the safe use of excepted materials that do not meet basic standards for flammability resistance and electrostatic discharge, (2) clarify instructions for preparing MUA's, and (3) increase surveillance of Boeing's inspection procedures. We also recommended that the PGOC Contracting Officer (1) determine whether there is a basis to withhold contract costs related to noncompliant plastics, foams, and adhesives, and (2) ensure that proper contract award fee action is taken based on Kennedy's increased surveillance of the PGOC. Management concurred with the recommendations. Kennedy has planned or implemented additional procedures to ensure the safe use of materials that do not meet standards for flammability and electrostatic discharge. The Center has also agreed to clarify the procedures for preparing MUA's and to increase surveillance of the PGOC. Kennedy management also provided extensive comments on our findings, including characterizing the materials as "noncompliant" rather than "potentially hazardous."

Inefficiencies in Quality Assurance for Space Shuttle Spare Parts Report No. IG-00-011

The audit of quality assurance for space flight hardware suppliers showed that quality assurance processes for the orbiter vehicles were effective but not always efficient. In keeping with Government downsizing and the advent of the performance-based Space Flight Operations Contract, the Space Shuttle Program (SSP) Manager and NASA safety and mission assurance

officials reduced "Government Mandatory Inspection Points" for Shuttle processing and vehicle manufacturing and took significant steps to ensure the safety of Shuttle operations. However, the SSP Manager has not updated or streamlined criteria for eliminating unnecessary inspection points at spare parts suppliers, and has not consolidated quality assurance requirements using a program-level approach. As a result, NASA has redundant Government quality assurance resources at some locations that could be used more efficiently to perform other quality assurance functions. We recommended that NASA management establish policies and procedures to improve the efficiency of quality assurance at the supplier level. While management concurred with the report finding, the proposed corrective actions are not responsive to the report recommendations. We requested management to review further its position on the report recommendations and provide additional comments.

International Space Station

Performance Management of the ISS Prime Contract Needs Improvement
Report No. IG-00-007

At the request of the NASA Administrator, the OIG evaluated the performance management of the ISS prime contract with The Boeing Company (Boeing). The review showed that Boeing reported unrealistically low estimates of projected cost overruns and presented the cost data to indicate that no additional cost overrun would occur. Although the Program Office was aware and had evidence of cost overruns and schedule slippages, it did not refute the contractor's estimate. As a result, Boeing received unearned incentive fees totaling $16 million that the Agency later recouped. Also, Boeing did not promptly notify NASA about the potential cost increases due to Boeing's reorganizations. NASA will be charged an estimated $35 million in reorganization costs for the ISS Program through contract completion. The contractor submitted its proposals too late to be negotiated prior to the provisional billing rates being adjusted upward and paid by NASA at the higher levels. The proposed increases were submitted with little or no forewarning to NASA. As a result, NASA may be paying higher costs than necessary before the Government completes its review and negotiation of the proposed pricing and billing rates.

We made 14 recommendations to strengthen ISS performance management and minimize or eliminate the cost impact to NASA of contractor restructuring activities. For example, we recommended that the Program Office (1) develop policies and procedures to ensure that Program cost estimates are realistic, and (2) designate a point-of-contact to coordinate significant issues with Boeing and DCMA corporate officials to ensure that ISS Program interests are adequately addressed.

Management concurred or partially concurred with all recommendations and initiated responsive corrective actions. We are monitoring six of the recommendations for reporting purposes pending implementation of agreed-to corrective actions.

Information Technology

UNIX Security Controls Need Improvement
Report No. IG-00-014

In December 1996, NASA approved and provided funding for a major system upgrade project. The operating system supporting the environment in which programmers develop software for the project is UNIX-based. Due to the criticality of the system, the UNIX environment should provide an appropriate level of security and integrity for the development of the system and subsequent migration of the system into production. An OIG audit in the system development environment identified weaknesses in the area of UNIX security controls. Without adequate UNIX security controls, the system development environment could be compromised by an unauthorized source without detection. We found that management needs to review the weaknesses identified and improve controls in certain areas.

Some issues will remain open pending completion of actions identified by management in their response.

Opportunities to Improve Disaster Recovery Plan and Physical and Environmental Controls Identified
Report No. IG-00-017

An audit at Johnson of a mission-related system disaster recovery plan (the Plan) and the physical and environmental controls identified 14 weaknesses that require corrective action. Johnson can improve its disaster recovery planning and capability in the areas of documentation, risk assessment, extended backup strategy, testing, server backup and off-site storage, and training. In addition, management should improve physical access and environmental conditions. Management concurred with most of the recommendations. For example, management agreed to develop test plans and procedures and exercise them at least annually. In addition, they will develop detailed backup procedures for servers and hosts. Yet, management committed only to evaluating the feasibility of storing system documentation related to disaster recovery off-site. Additionally, management does not agree with the necessity for additional controlled access to a client-server room, installation of a fire suppression system in certain processing rooms, and construction of fire retardant walls in a data processing area.

We asked management to reconsider its position on the open recommendations and provide additional comments to the final report.

Procurement

Government and Contractor to Strengthen Oversight of Noncompetitive Procurements
Report No. IG-00-002

Raytheon provides development, maintenance, operations, and sustaining engineering for the Space Station Training Facilities and the Part Task Trainer under a cost plus award fee contract. The contract requires Raytheon to subcontract on a competitive basis to the maximum practical extent. To facilitate compliance with the requirement, Raytheon required requesting organizations to prepare written justifications for procurements awarded on a noncompetitive basis. An audit showed Raytheon's purchasing policy did not require Raytheon personnel to keep documentation supporting justifications for noncompetitive procurements. As a result, Raytheon officials did not always maintain adequate documentation to support those justifications. Additionally, Government oversight reviews of the contractor's procurement system did not include examinations of supporting documentation for noncompetitive procurements; therefore, NASA had reduced assurance that the contractor maximized the competition of its subcontracts. We recommended that NASA management direct Raytheon to maintain adequate documentation to support justifications for noncompetitive procurements. We also recommended that management ask the NASA Contracting Officer and the DCMA to include reviews for supporting documentation in their next purchasing system reviews. Management concurred with the recommendations and initiated responsive corrective actions.

Testing for the Procurement Module to NASA's IFMP Can Be Improved by Including Tests of Erroneous Data
Report No. IG-00-016

Prior to cessation of activities associated with the Integrated Financial Management Program (IFMP), we audited the procurement module. The module incorporates three major procurement subprocesses (presolicitation, solicitation and award, and contract administration). The three subprocesses consist of eight activities. We judgmentally selected one activity in each of the three subprocesses and reviewed testing of the selected activities. For the three activities we reviewed, the test team developed adequate test scripts using transactions with valid data. However, validation testing of the procurement module did not include adequate testing of controls over transactions with erroneous data. We found that (1) NASA did not specifically require tests using transactions with erroneous data in the validation phase, and (2) the test team has not documented specific tests and data to process during internal control testing. Without adequate testing of controls over processing of erroneous data, NASA has less assurance that the procurement module will adequately identify, reject, and report erroneous data that could corrupt the database. We recommended that the Associate Administrator for Procurement ensure internal control testing includes adequate tests of erroneous data.

Management concurred with the recommendation and plans to take corrective action.

Fiscal Management

Process for Validating NASA's Performance Data Under GPRA Can Be Improved
Report No. IG-00-020

The OIG performed an audit to evaluate the accuracy and reliability of NASA's performance information under GPRA. Of the 23 performance targets we reviewed, 5 (22 percent) had written assessments of performance that did not accurately reflect supporting data and actual results. Factors contributing to this condition included (1) a lack of effective procedures to verify and validate supporting data and the results, (2) poor phraseology in identifying some targets, and (3) a general lack of formal guidance for preparing and reporting performance targets. Since the planned reported performance on the five targets we reviewed cannot be considered fully reliable, this may limit its usefulness to NASA, OMB, and the Congress for decision-making. Consequently, the reliability of reported performance for some of the 122 targets not reviewed might also be unreliable. We recommended establishing formal policies for developing performance goals and targets and validating data on actual achievements. We also recommended NASA management review the actual performance to be reported on the targets we did not review to ensure that all the information included in the 1999 Performance Report is accurate and reliable. Management concurred with all recommendations and their proposed actions were considered responsive and closed upon issuance of our final report.

Program and Project Management

X-38/CRV Project Needs Greater Emphasis on Risk and Performance Management
Report No. IG-00-005

As part of an international memorandum of understanding, the United States has agreed to provide a crew-return capability for the ISS. The Crew Return Vehicle (CRV) would be used to return up to seven crew members in the event of crew injury or illness, Space Station failure, or Shuttle unavailability. NASA's X-38/CRV Project Office is designing and testing the X-38 and will contract for design and production of the CRV from the X-38. Generally, management of the X-38/CRV Project has been effective, but the Project's rapid prototyping strategy entails significant risk in return for a potentially high payoff as compared to the traditional approach of sequential design, development, test, and engineering/evaluation. To reduce risk and increase assurance of meeting the crew-return capability commitment, the lead Center needed to develop criteria by which to measure readiness to progress through major Project phases. The criteria needed to include performance metrics and alternative actions or strategies. Absent such criteria, the Project risks not achieving the

maturity necessary to move to subsequent Project phases. Management concurred with the recommendation. The X-38/CRV Project Office developed entry/exit criteria for progressing through the major Project phases.

Improvements Are Needed In Space Transportation Strategic Management and X-34 Program/Project Management
Report No. IG-00-029

The Office of Aerospace Technology and Marshall Space Flight Center (Marshall) lead the Agency's search for a second-generation Reusable Launch Vehicle (RLV) to reduce launch costs. The $200 million X-34 Project is one of several existing and planned technology demonstrator (X-vehicle) programs being pursued to mature required technologies needed for the next-generation RLV. As part of the OIG's audit coverage of the critical mission area of Space Transportation, we reviewed the X-34 Project's contribution to next-generation RLV technology requirements. To evaluate NASA's planned use of X-34 technologies, we reviewed strategic planning for Space Transportation and the role X-34 was to play in meeting Agency Space Transportation technology requirements. The audit showed NASA has not adequately performed strategic planning for the Space Transportation mission. Specifically, improvements are needed at all levels in preparing effective strategic plans and in the procedures for managing those technologies necessary in developing the next-generation RLV. The needed improvements include developing appropriate metrics to measure and report technology progress. The audit also showed that program documentation approving the X-34 Project and the Future-X Program (which includes the X-34) was not completed, and X-34 program management lacked appropriate procedures and internal controls to ensure decisions related to X-34 flight tests were properly documented to include cost/benefit analyses. We recommended strategic planning be improved; program documentation be completed timely; and flight test requirements be revalidated, eliminating any unnecessary flight tests or engines. Management concurred and agreed to implement all 16 recommendations. Management's actions should significantly improve the effectiveness of Space Transportation programs and projects management. Those actions should also ensure that Agency and Enterprise Strategic Plans comply with Agency directives and effectively address required technologies, that flight programs cost-effectively meet X-34 needs, and that basic program documentation is promptly finalized and approved.

Launch Vehicles

Staffing Not Aligned with Goals of the ELV Program Office
Report No. IG-00-009

On October 1, 1998, Kennedy assumed full responsibility as the Program Office for the Acquisition and Management of ELV services contracts. An OIG audit showed that management oversight of staffing plans during and following the consolidation of the ELV Program Office to Kennedy was inadequate and will affect Kennedy's ability to meet strategic goals and may adversely affect the cost and scheduling of future Earth Science and Space Science missions. We recommended that the Associate Administrator for Space Flight (1) establish clear, realistic staffing goals that align with the strategic performance goals of the ELV Program Office at Kennedy; and (2) develop strategic human resources management strategies to ensure continuity of needed skills and abilities. We also recommended the Chief Engineer incorporate a clear link between strategic performance goals and the resources that will accomplish those goals, as well as the strategic human resources management strategies needed to ensure continuity of needed skills and abilities into the NASA Procedures and Guidelines 7120.5A, "NASA Program and Project Management Processes and Requirements." Our recommendation to the Chief Engineer remains open pending management's implementation of proposed corrective actions.

International Agreements

NASA's Information on International Agreements is Incomplete and Inaccurate
Report No. IG-00-004

The Space Act permits the NASA Administrator to engage in international cooperative programs pursuant to the Agency's mission. NASA's international agreements are formal written commitments of NASA resources to a cooperative project with one or more partners who is not a U. S. citizen or entity. As of May 1999, NASA had about 3,200 non-reimbursable and 300 reimbursable international agreements. An OIG audit identified that documentation and information related to NASA's international agreements were neither complete nor accurate. For example, over 20 percent of the agreements listed in the International Agreements database were not on file in the External Relations International Agreements Library. In addition, agreements related to the Space Station, one of NASA's most significant international programs, were not in the library and were not recorded in the database. As a result, the Agency is relying on incomplete and inaccurate information when drafting new international agreements or responding to inquiries. OIG auditors also found that the Agency has held a deposit of about $200,000 from a foreign government corporation for more than 15 years for launches of two satellites that never occurred. The Agency may not be entitled to the funds. We recommended that NASA management establish controls to ensure the completeness and accuracy of documentation and information in the

international agreements library and database, promptly review and disposition the funds in the foreign deposit account, and identify other reimbursable accounts with no recent cost activity. Management concurred with the recommendations and initiated responsive corrective actions.

NASA Lacks Assurance Contractors are Exporting Controlled Technologies in Accordance with Applicable Export Laws and Regulations Report No. IG-00-018

NASA's international activities often involve the transfer of commodities, software, or technologies to foreign partners not only by NASA, but also by its contractors. The transfers are generally subject to export control laws and regulations, regardless of whether they occur in the United States, overseas, or in space. NASA's contractors are also responsible for adherence to the same U.S. export laws and regulations. The OIG conducted an audit to assess Government oversight of contractor processes for exporting controlled technologies. The audit found that NASA export, program, and contracting personnel at the Goddard Space Flight Center (Goddard), Johnson, and Marshall could not readily identify the types and amounts of NASA-funded controlled technologies that contractors export in support of NASA programs. This condition exists because NASA's current export policies do not clearly define the Agency's oversight responsibilities regarding its contractors who export controlled technologies. In addition, NASA has not established contract requirements for contractors to notify NASA when they deem it necessary to obtain an export license in furtherance of a NASA program, or when exports are effected against those licenses. Consequently, NASA does not have assurance that contractors are exporting controlled technologies in accordance with applicable U.S. export laws and regulations. We recommended that management include guidance in either a NASA Federal Acquisition Regulation (FAR) Supplement amendment, Procurement Information Circular, or NASA Procedures and Guidelines that all appropriate NASA contracts require the contractors to deliver (1) a plan for obtaining any required export licenses to fulfill contract requirements, (2) a listing of the contractor licenses obtained, and (3) a periodic report of the exports effected against those licenses. We also recommended revision of the draft NASA Policy Directive concerning NASA's export control program to incorporate the oversight responsibilities of appropriate NASA officials for those cases in which NASA or its contractors obtain export licenses on behalf of a NASA program. Management concurred with each recommendation and initiated responsive corrective actions.

Environmental Management

NASA's Implementation of NEPA Can Be Improved
Report No. IG-00-030

Of 13 mission-related programs/projects reviewed at three NASA Centers (Kennedy, Marshall, and the Glenn Research Center [Glenn]), the audit concluded that 11 (85 percent) did not consider environmental impacts as required by NEPA and NASA guidance. In addition, although nine of the construction of facilities projects considered environmental impacts, two did not fully comply with NASA guidance for implementing NEPA. Up to $3 billion of the programs/projects we reviewed potentially were exposed to increased costs, project delays, missed opportunities for preferable alternatives and/or public involvement, and adverse public perception and reaction. Specifically, failure to meet NEPA requirements can, in certain situations, open a program/project to court challenges that can cause delays and additional costs. In addition, failure to consider NEPA in the planning stage of a program/project limits the choices for environmentally preferable alternatives. Finally, failure to follow NEPA requirements relating to public involvement hinders full and fair consideration of environmental impacts. Management concurred with six of the nine recommendations we made concerning needed improvements in planning, oversight and training. However, management did not concur with three recommendations concerning the Agency's level of noncompliance with NEPA. We requested management to reconsider its position on those three recommendations and provide additional comments.

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In accordance with the requirements of Section 5(a)(8) and (9), Inspector General Act, as amended, the following two tables summarize the status of management decisions as of September 30, 1999.

Audits With Questioned Costs

	Number of Audit Reports	Total Costs Questioned
No management decision made by beginning of period	8[1]	$ 22,245,020[1]
Issued during period	0	0
Needing management decision during period	8	$ 22,245,020
Management decision made during period:	3	$ 4,872,021
amounts disallowed		$ 13,350
amounts not disallowed		$ 4,858,671
No management decision at end of period:	5	$ 17,372,999
less than 6 months old	0	0
more than 6 months old	5	$ 17,372,999

[1]Includes two reports with funds put to better use of $2,184,338 reported as resolved in a previous period.

Audits With Recommendations Funds Be Put To Better Use

	Number of Audit Reports	Total Costs Questioned
No management decision made by beginning of period	6	$105,115,000
Issued during period	1	$ 7,000,000
Needing management decision during period	7	$112,115,000
Management decision made during period:	5	$ 69,465,000
amounts management agreed be put to better use		$ 9,061,000
based upon proposed management action		$ 9,061,000
based upon proposed legislative action		0
amounts which management disagreed be put to better use		$ 60,403,400
No management decision at end of period:	2	$ 42,650,000
less than 6 months old	0	0
more than 6 months old	2	$ 42,650,000

Audits Issued Prior To October 1, 1999, For Which No Management Decision Has Been Made

Report Number, Title, and Date	Reason for No Management Decision
Information Technology	
IG-99-017 Disaster Recovery Planning at Kennedy Space Center March 31, 1999	Management nonconcurred with two recommendations and proposed actions that were not fully responsive to the report's third recommendation. We are working with management to resolve the issues.
Procurement	
IG-98-038 Commercial Use of the Santa Susana Field Laboratory September 30, 1998	Management concurred with the report's four recommendations but has not agreed to an amount of questioned costs related to one recommendation. Management is awaiting a DCAA audit that will evaluate rent for past commercial use of the NASA-owned facilities in an area of the Santa Susana Field Laboratory. We will continue to work with management to reach an agreement on the questioned costs.
IG-98-041 Consolidated Network Mission Operations Support Contract, Transition and Implementation September 30, 1998	The OIG recommended the contracting officer seek recoupment of overstated savings. Management has requested DCAA to conduct a review of the contractor's claimed savings. This action was agreed to by the OIG to resolve the recommendation. The DCAA audit fieldwork has been completed. DCAA and the contractor are currently discussing the findings and recommendations. DCAA provide a report to the NASA contracting officer during the next reporting period.
IG-99-053 Contractor-Leased Facilities at Marshall Space Flight Center September 27, 1999	Management concurred with recommendations to review the allowability of lease costs, establish procedures to review the allowability of lease costs, establish procedures to periodically review facility requirements, review lease classifications, recoup unallowable costs, and request DCAA review of lease costs. Of the report's five recommendations, three remain open pending our review of cost savings sustained by management.

Audits Issued Prior To October 1, 1999, For Which No Management Decision Has Been Made

Report Number, Title, and Date	Reason for No Management Decision
Fiscal Management	
IG-99-001 X-33 Funding Issues November 3, 1998	The OIG recommended that management review and revise X-33 funding practices. Management nonconcurred with some of the specific recommendations but agreed to perform a review that was to be completed by December 31, 1998. Management completed the study on March 31, 2000. According to management's analysis, the funding practices likely violated the bona fide needs rule (31 U.S.C. 1502(a)) but not the Antideficiency Act (31 U.S.C. 1341(a)). We are reviewing the analysis to determine the additional actions required.
Arthur Andersen FY 1998 Management Letter February 3, 1999[1]	The OIG contracted with Arthur Andersen LLP, an independent public accounting firm, to conduct the audit of NASA's FY 1998 financial statements. Based on the results of its audit, Arthur Andersen issued a management letter to NASA that contained 14 recommendations for improvement. The recommendations related to four areas: (1) information security, (2) financial management and accounting matters, (3) financial management systems, and (4) property management. As of March 31, 2000, management had not implemented three of the fourteen recommendations. Arthur Andersen is working with management to resolve the issues.
IG-99-024 NASA's Full-Cost Initiative Implementation March 31, 1999	The OIG recommended that NASA develop and consistently use a methodology for distributing the costs of the Space Shuttle Program, as well as service-oriented programs, to programs that benefit from the services. Management nonconcurred, stating that the recommendations are impractical. We disagreed and requested that management reconsider its position. Management continues to nonconcur. We have requested a management decision from the AFO.

[1]Since Arthur Andersen LLP prepared the report, it does not have an OIG report number.

Audits Issued Prior To October 1, 1999, For Which No Management Decision Has Been Made

Report Number, Title, and Date	Reason for No Management Decision
Fiscal Management	**(Continued)**
IG-99-059 Matching Disbursements to Obligations September 30, 1999	Management nonconcurred with three recommendations to revise policy to establish procedures that would enable financial management activities to properly match disbursement to obligations in the correct appropriation and program year. The OIG is continuing to work with management to resolve the recommendations before requesting a formal management decision from the AFO.
Program and Project Management	
IG-97-026 Commercial Use of NASA's Tracking and Data Relay Satellite System June 24, 1997	Management has not agreed to an amount of questioned costs to recover from the contractor. The recommendation remains unresolved pending completion of legal remedies being pursued by the NASA General Counsel.
IG-99-037 Earned Value Management at NASA-EOSDIS Core System September 10, 1999	The OIG recommended that management revise NASA policy to require an integrated baseline review within 180 days of contract award, the exercise of significant contract options, or the incorporation of major contract modifications. Management stated that prior to accepting the recommendation they would have to review comments from Agency organizations on the proposed policy revision. Management has not completed their analysis of these comments.
IG-990-54 JPL Management of Subcontractor Technical Performance September 28, 1999	The OIG recommended that management direct the JPL Director to revise subcontract management policies. Management partially concurred with the recommendations but did not identify specific corrective actions. The OIG granted an extension for management to respond until the Mars Polar Lander and Mars Climate Observer investigative reports have been issued and summarized.
IG-99-058 Earned Value Management at NASA September 30, 1999	Three recommendations to revise earned value management policies are unresolved because management has not provided a response to the report. We are working with NASA management to set up a meeting with the AFO to attempt to resolve the recommendations.

Audits Issued Prior To October 1, 1999, For Which No Management Decision Has Been Made

Report Number, Title, and Date	Reason for No Management Decision
Environmental Management	
IG-98-024 Cost Sharing for Santa Susana Field Laboratory Cleanup Activities August 18, 1998	The OIG made four recommendations concerning a cost-sharing agreement, recovery of costs, and allocation of future preventive costs. NASA is currently developing its position on the four open recommendations. We have agreed to provide management with additional documentation gathered as a result of our follow-up work. We will continue to monitor management's actions.

[Photograph in the original.]

Section 5(a)(3) of the Inspector General Act, as amended, requires an identification of each significant recommendation described in previous semiannual reports on which corrective action has not been completed.

Subject	Report Number	Recommendation(s) Corrective Pending Action
Safety and Mission Assurance		
Agency Needs to Provide for Contingency of Crew Return Vehicle Operational Testing	IG-99-036	Three independent review groups expressed concerns about the need to rate the CRV for use by humans. We recommended that management revise the CRV Project Plan to provide for the contingency of CRV operational testing and include CRV operational testing in the Space Station risk management system as a primary risk. Management concurred. During this reporting period, management has taken action to baseline the Production Vehicle Space Test Decision milestones and has included CRV operational testing as a primary risk in ISS Program risk management. We will continue monitoring implementation of management's corrective actions.
Several Safety Concerns Exist at the Goddard Space Flight Center	IG-99-047	Our work disclosed safety risks at Goddard. We made five recommendations for improvement. Management is currently working to implement corrective actions, including major cultural transformation activities to heighten employee awareness and dedication to safety. All recommendations will remain open pending management's completion of its corrective actions.
International Space Station		
Boeing Can Improve Space Station Performance Measurement Reports	IG-99-007	Boeing's ISS cost and schedule variances and corrective action plans have not been used effectively to control negative variances. We recommended management (1) ensure adequate surveillance of Boeing's EVM System, (2) require the DCMA to prepare required contract administration reports, and (3) improve the quality of corrective action

Subject	Report Number	Recommendation(s) Pending Corrective Action
International Space Station		(continued)
		plans. Management took action including assigning a budget analyst to review and validate the quality of DCMA's monthly variance analysis reports. DCMA also took some positive steps. Recommendations 2 and 3 will remain open pending completion of corrective actions. We will continue to monitor those issues.
Contingency Plans for Space Station Assembly Need Attention	IG-99-009	Our audit showed that the Space Station Program Office had not developed an integrated, comprehensive plan to address risks to the assembly of the ISS caused by possible delay or default by international partners. We recommended management establish (1) an ISS contingency plan that complies with Agency guidance for effective risk management, and (2) a process to ensure the contingency plan is kept current. Management has taken action to update the ISS contingency plan to respond to our recommendations. During the next reporting period, we will review management's revisions to the plan to verify adequacy of the corrective actions.
Information Technology		
Disaster Recovery Planning at Marshall Space Flight Center's NASA Automated Data Processing Consolidated Center	IG-99-043	The NASA Automated Data Processing Consolidation Center at Marshall is primarily responsible for computer operations, systems reliability, systems software, configuration management, and strategic planning for NASA-wide administrative systems and for several program support systems. We made eight recommendations to improve disaster recovery strategies, procedures, and training. We also recommended development of a user contingency plan. We continue to monitor

Subject	Report Number	Recommendation(s) Pending Corrective Action
Procurement		
Costs Not Recovered for Commercial Payloads Flown on the SPACEHAB Module	IG-98-028	management's actions to implement corrective actions to those recommendations. Our audit of the SPACEHAB contract found that because NASA has no clear guidance on how to determine consideration for transportation costs allocable for non-NASA shared payload capacity on Shuttle missions, the Agency has no assurance that sufficient consideration was received. We recommended that management develop guidance for calculating transportation fees for non-NASA payloads flown on the Shuttle's SPACEHAB module. Management concurred with the recommendation and has made progress toward developing a pricing strategy. We will continue to monitor management's activities toward final disposition of the recommendation.
NASA Needs Adequate Analyses of Critical Single-Source Suppliers for Space Shuttle Projects	IG-98-030	Our audit found the Space Shuttle Program Office has not adequately developed analyses of critical, single-source production and logistics suppliers. We recommended and management concurred that (1) the Shuttle Program Manager revise analyses and reporting requirements for critical, single-source suppliers; (2) the Shuttle Program Manager include the revised requirements in appropriate contracts; and (3) the Headquarters Chief Engineer revise NASA Policy Guidance (NPG) 7120.5A to include a requirement for performing rigorous analyses of and reporting on all critical, single-source suppliers, making no distinction between logistics and production suppliers. Recommendation 3 remains open pending publication of the revised. We will monitor management's progress in closing this recommendation.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Procurement		(continued)
Contractor Using NASA-owned Property Rent Free for Commercial Business	IG-98-038	An audit showed that Marshall authorized a contractor to use NASA-owned production property at the Santa Susana facility on a rent-free basis in support of a commercial launch vehicle effort. We recommended that Marshall charge a contractor rent for both its past and future commercial use of the NASA-owned production property at the Santa Susana facility. Marshall had authorized rent-free usage based upon the Commercial Space Launch Act. Marshall has withdrawn its authorizations and notified the contractor that future commercial use of the property is subject to appropriate compensation, as required by the FAR. Management is still awaiting DCAA evaluations on two points concerning rent for past commercial use of the property. First, the contractor believes improvements made to the facilities constituted adequate rent compensation for past commercial use. Second, the Chief Financial Officer (CFO) official's believes the past rent charges should have been greater than the amount identified in our report. We continue to monitor management's progress toward resolution.
Marshall's Management of Facility Leasing Can Be Improved	IG-99-053	Audit work found that Marshall's contractor-leased facilities were not always effectively utilized. We recommended that management review the allowability of lease costs, establish procedures to periodically review facility requirements for those contractors with leased facilities, review lease classifications to ensure leases are appropriately classified, recoup any unallowable costs, and ensure the contracting officer requests DCAA to review facility lease costs. Of these five recommendations, three remain open pending OIG review of cost savings sustained by management.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Fiscal Management		
Management and Administration of Grants Need Improvement	IG-98-019	An OIG audit of grant reporting and recording practices at four Centers showed that financial reports were often late and Centers did not always record grant data accurately and promptly. We made 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 for the open recommendations requires coordination among several organizational elements. We will continue to monitor management's actions.
Poor Billing Practice on X-33 Program	IG-99-001	An audit disclosed that 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. According to management's analysis, funding practices might have violated the bona fide needs rule (31 U.S.C. 1502(a)) but not the Antideficiency Act (31 U.S.C. 1341(a)). We are reviewing the analysis to determine the additional actions required.
NASA is Experiencing Material Delays and Cost Increases in Implementing the Integrated Financial Management Project	IG-99-026	Our audit work revealed that performance problems with the IFMP contract will prevent NASA from meeting Federal financial management system requirements and result in material costs to the Agency. NASA management performed a detailed mapping of the IFMP requirements to Federal financial management system requirements and issued a cure notice requesting the contractor, KPMG, to correct its deficiencies or face default. As a result we closed two of our three recommendations. We will continue to monitor NASA's negotiations with KPMG.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Fiscal Management		(continued)
Disbursements Are Not Properly Matched to Obligations	IG-99-059	An audit found that NASA financial management personnel did not properly match disbursements to obligations. Therefore, authorized funds may not have been used for their authorized purposes. We recommended that management require (1) NASA contractors to submit accounting information on their invoices, (2) procurement offices to provide payment instructions to NASA financial management activities, and (3) disbursements to be properly matched to obligations. Management did not concur with our recommendations. Additional meetings were held with the CFO officials. Although management agreed to correct the specific deficiencies concerning the cost issue noted in the report, they continued to disagree with the reported disbursement issue. We will continue to work with officials to resolve the recommendations.
Program and Project Management		
Amendments to Commercial Revenue Sharing Agreement were not in NASA's Best Interest	IG-97-026	Our audit showed that Columbia Communications Corporation (CCC) had claimed unreasonable marketing and operations costs, improperly used C-band revenues to pay profits, and did not comply with the lock box provision of its commercial revenue-sharing agreement with NASA. 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 operations expenses be fully documented, (3) pursue 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.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		(continued)
		Office of Space Flight corrective actions resulted in closure of three recommendations. Although recommendation 3 was open at the end of the period, based upon actions taken in April 2000, the recommendation will be closed for the next reporting period.
Review of the Aeronautics and Astronautics Coordinating Board Implementation Results	P&A-98-003	The Aeronautics and Astronautics Coordinating Board (AACB) is a joint DoD and NASA senior management review and advisory body. Our review concluded that the AACB identified 34 recommendations having potential to effect savings and increase efficiency and effectiveness. Approximately half the recommendations remain open. We recommended implementation of the open recommendations and the assurance of funding for that implementation. Management informed us that NASA and DoD drafted a new memorandum of understanding that will change the AACB structure. NASA signed the memorandum, which is currently being processed by DoD. We will continue to follow this issue.
Software Problems Cause Launch Delay of Chandra X-Ray Observatory	IG-99-016	Our audit of the Chandra X-Ray Observatory showed that 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. We recommended that management (1) revise the new NPG7120.5A (Program and Project Management) to require program managers to update Risk Management Plans as high-risk issues arise, and (2) assign personnel with necessary expertise to be on-site at contractor locations when a particular area becomes a significant management risk. In December 1999, management issued a revised draft

Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		(continued)
		NPG 7120.5B for internal comment that did not include our recommended revisions. We commented on the revised NPG reaffirming the need for inclusion or our audit recommendations in the final version of the policy. A final revision of the NPG will not be issued until completion of the NASA Integrated Action Team's report.
Use of Cooperative Agreement on X-33 Program Has Limited Success	IG-99-019	An audit disclosed that although use of a cooperative agreement on the X-33 Program provided certain benefits, it has also contributed to program management problems. We made nine recommendations to improve program management and to ensure effective program management practices are followed on future cooperative agreements. Management actions were responsive to all but two recommendations. We reaffirmed our position on the need for (1) an Agency-unique risk assessment plan, and (2) periodic Estimate at Completion Analyses. We are working with management toward resolution.
JPL Subcontractor Surveillance Needs Improvement to Prevent or Mitigate Technical Problems	IG-99-054	Our audit of JPL management of subcontractor technical performance showed that JPL's most significant subcontracts were not subjected to adequate surveillance. We recommended the NASA Management Office direct JPL to revise policies to require project management assessment and monitoring of subcontractors to ensure procedures are designed and functioning to prevent, detect, and correct technical problems. We believe management's response did not identify specific corrective action or policy to require assessments of subcontract monitoring needs and development and implementation of those procedures. The recommendation is open.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		(continued)
NASA's Progress in Implementing the Results Act	IG-99-055	GPRA requires Federal agencies to focus on program performance and results. NASA has made substantial progress in implementing GPRA; however, our review identified two areas needing improvement (1) providing adequate senior management oversight of overall progress on the established FY 1999 performance targets, and (2) establishing appropriate procedures to ensure data used to measure and describe final results were accurate and reliable. Management agreed. One recommendation to revise a policy guide to address senior management oversight will remain open pending completed action, which is anticipated June 30, 2000.
Earned Value Management (EVM) is not an Integrated Part of Program and Project Management	IG-99-058	Earned value information provides insight into the status of a program or project and provides valid, timely, and auditable contract performance information on which to base management decisions. We recommended that NASA (1) issue EVM policy as program and project management directives, (2) establish procedures for reporting comprehensive EVM information to senior management, and (3) delegate authority to implement EVM policy to the Associate Administrators or Center Directors. Management nonconcurred with recommendation 1 and did not respond to either 2 or 3. We are working with management to arrange meetings with the AFO to resolve the recommendations.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Research and Technology Demonstration/Application		
National Technology Transfer Center's (NTTC) Mission Needs to be Defined	IG-98-031	The NTTC fosters NASA and Federal technology transfers with U.S. industry and provides business with access to information, expertise, and facilities. Our audit showed that when NASA directed a shift in technology transfer focus from national to strictly NASA without formally defining NTTC's revised mission its mission became similar to that of NASA's Regional Technology Transfer Centers. Also, NTTC is not fully integrated into NASA's technology transfer organization. We recommended that NASA (1) clearly define the NTTC's mission, (2) acquire services using the appropriate award instrument, (3) revise monthly report format to include sufficient performance information, and (4) recover $19,500 of unallowable costs to the NASA cooperative agreement with Wheeling Jesuit University (site of the NTTC). We will continue to monitor management's actions on the two recommendations that remain open.
Commercial Sector Not Efficiently Utilized to Obtain Remote Sensing Data	IG-99-023	An audit showed that although the Commercial Remote Sensing Program Office has successfully developed the commercial remote sensing industry, it has not leveraged this industry to provide products that meet baseline scientific requirements. We recommended management (1) publish a baseline of scientific requirements to foster competition in the remote sensing industry, and (2) use this baseline in initiatives to fulfill NASA's Earth Science objectives at the lowest cost. Management has drafted a baseline document. We will continue to monitor this issue.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Research and Technology Demonstration/Application		(continued)
Cost Reasonableness of the X-33 Program	IG-99-052	NASA is using a cooperative agreement for the X-33 Program. Our audit showed that NASA did not adequately address cost reasonableness and cost risk for the X-33 Program. We recommended that NASA improve its evaluation processes for cost reasonableness and cost risk. The estimate to complete the program should be updated to reflect cost uncertainties and determinations made of how remaining work will be funded. Management's issuance of a Grant Information Circular requiring an analysis be performed using proposal analysis techniques found in the FAR. (Circular applies to cooperative agreements with commercial firms in which the recipient does not share at least 50 percent of the cost or the total value of the agreement is greater than $5 million.) As a result of this action we have closed one recommendation. However the others remain open pending implementation of planned and ongoing corrective actions.
International Agreements		
Program Offices to Tighten Management Controls Over Export-Controlled Technologies	IG-99-020	An audit found that NASA (1) has not identified all export-controlled technologies related to its major programs, (2) does not maintain a catalog of classifications for transfers of those technologies, and (3) needs improved oversight of training for personnel in the Export Control Program. We made six recommendations to improve management controls. All recommendations remain open pending publication of a NASA Policy Directive (NPD) and an NPG on export control. We will continue to monitor management's actions.

Subject	Report Number	Recommendation(s) Pending Corrective Action
Environmental Management		
NASA Overpaid Contractor $16.4 Million for Environmental Remediation Costs	IG-98-024	Environmental laws require past and present owners, operators, and generators of hazardous waste to clean up the waste sites. Our audit of the Santa Susana facility showed that as one of the owners, NASA has paid remediation costs to clean up the facility but has been unable to negotiate a cost-sharing agreement with the other owners or operators involved in the facility. We made recommendations to negotiate that arrangement and to obtain an equitable distribution of preventive costs. Management is developing its position on the four open recommendations. We have agreed to provide management additional documentation gathered during our follow-up work and will continue to monitor management's actions.

Information Technology

Inspection of NASA Center Computer Hard Drives
Report No. G-99-006

During a spot check inspection of personal computer hard drives designated for transfer or excess at a Center, we discovered sensitive residual user data and copyrighted software on the hard drives sampled. We determined that procedures were not being followed. We made recommendations to improve the implementation of data deletion procedures. We recommended management alert appropriate NASA installation officials as to the risks associated with inadequate removal of data and licensed software from IT storage devices. We recommended management implement action to ensure computer hard drives are properly cleared of information prior to disposal, transfer or excess. We further recommended management take steps to improve the environmental and security conditions at the Center property warehouse. Management concurred with all of the report's recommendations and either has or is in the process of completing corrective actions.

Program and Project Management

Review of NASA's Decision to Reject NASA Watch's Application for Press Accreditation
Letter to:
Hon. F. James Sensenbrenner, Jr.

NASA Watch is a web site that publishes information about NASA and non-NASA space activities on a daily basis. *NASA Watch* has been operational since 1996. The editor of *NASA Watch* applied twice for press accreditation from NASA and was rejected both times. In response to a request from Congressman Sensenbrenner, Chairman of the House Science Committee, we reviewed issues associated with NASA's decision to reject *NASA Watch*'s application for press accreditation.

We found that the NASA Public Affairs Office rarely rejects applications for press credentials from "legitimate press." Further, Public Affairs sometimes appears liberal in its interpretation of what constitutes legitimate press. However, when *NASA Watch*'s editor applied for press credentials in August 1999, Public Affairs instituted a new policy for press accreditation and cited this policy to deny him credentials. Public Affairs issued its denial even before determining whether *NASA Watch* met the new policy's accreditation requirements. Public Affairs is currently reassessing its policy for press accreditation and has formed a team to recommend changes to the policy.

NASA's Compliance with Language in Conference Report 106-379 Concerning the Triana Project
Letter to:
Hon. George R. Nethercutt, Jr.
Re: Report No. G-99-013

The Triana Project intends to send a spacecraft to the Lagrangian Point 1 (L1) between the Sun and the Earth to take pictures of the sunlit hemisphere of the Earth and transmit them to the Internet. In response to a letter from Congressman Nethercutt, we reviewed NASA's compliance with NASA FY 2000 appropriations report language regarding the Triana Project. The report language directed NASA to suspend all work on the development of the Triana satellite using funds made available by the appropriation until the National Academy of Sciences completed an evaluation of the scientific goals of the Triana mission. The language also directed that NASA not launch Triana before January 1, 2001.

We found that NASA interpreted the report language as applying only to the Earth Sciences section of NASA's appropriation. This interpretation allowed the Agency to use civil servants and spend FY 2000 funds from other appropriation accounts on activities that support Triana. As a result, the Agency was able to continue work on the Triana mission, albeit at a reduced pace. We also found that, as directed, the Agency had postponed the launch of Triana past January 1, 2001.

Safety and Mission Assurance

Follow-up on Assessment on 1997 Inspection of the NASA Aerospace Safety Advisory Panel
Report No. G-99-020

This assessment is a follow-up of an earlier inspection of the Aerospace Safety Advisory Panel (ASAP). Actions taken by NASA management based on our inspection report recommendations resulted in improvements in the balance and diversity of ASAP membership. However, we also recommended the Associate Administrator for Safety and Mission Assurance and the ASAP Chairman develop and implement a recruitment plan. The plan should include provisions for advertising and widely circulating a request for nominees inside NASA and in external publications and organizations. NASA management concurred with this recommendation.

Information Technology

Follow-up on Assessment of NASA's Automated Systems Incident Response Capability
Report No. G-99-007

We are conducting follow-up activities relating to our assessment of NASA's Automated Systems Incident Response Capability. The objective of the initial assessment was to examine NASA's capability to respond to incidents and attacks involving NASA's automated information and telecommunications systems. Our report addressed the adequacy of the Agency's incident reporting, response, handling, coordination, and information-sharing capabilities. We are reviewing the status of the 11 recommendations in that report with which NASA management concurred.

Follow-up on NASA's Implementation of a Public Key Infrastructure
Report No. G-99-006

Strong information security is achieved through the encryption, authentication, and digital signature capabilities provided by a Public Key Infrastructure (PKI). In response to this need, NASA moved forward in implementing encryption solutions by selecting one vendor's products to meet key requirements. This follow-up to our previous inspection will evaluate NASA's progress in implementing PKI.

Follow-up on Lewis Security Management Inspection Report No. G-98-007

We conducted a comprehensive follow-up review at Glenn (formerly the Lewis Research Center) to evaluate Glenn's responsiveness to the recommendations we made in our prior inspection. That inspection evaluated information technology processes, physical security, and security guard force functions at Glenn. This review disclosed that Glenn has implemented corrective actions to most recommendations made in the inspection report.

Program and Project Management

Follow-up on Assessment of NASA Property Survey Boards and Officers Report No. G-96-020

We conducted a follow-up assessment to our inspection report addressing property survey boards and their associated officers. We reviewed revisions made specifically to NPG 4200.1E as well as other Agency guidance. NASA management updated and included OIG recommended language in the revised NPG. This action closed six of the eight recommendations made in the report.

Ongoing Activity	Focus
Safety and Mission Assurance	
Inspection of: NASA's Badging Program and Physical Access Controls --at the Marshall Space Flight Center, Assignment G-99-001 --at the Wallops Flight Facility, Assignment G-99-014 --at the Goddard Space Flight Center, Assignment G-00-004	The overall objective of these inspections is to assess compliance with applicable access controls to sensitive and limited access facilities and/or controlled information and materials.
International Space Station	
International Space Station Program Implementation of Communications Security and Automated Information Security Measures, Assignment G-99-010	This inspection is evaluating whether NASA management has accurately identified communications security and automated information security requirements necessary for mission assurance and safe operations of the ISS, and whether appropriate processes and safeguards are effectively implemented. Two initial activities are focused on: –Assessment of the Portable Computer System and Data Display Process The Portable Computer System (PCS) is the primary interface of the ISS crew for command and control of the ISS. The PCS also provides the crew with caution and warning information. We are assessing the usability and accuracy of the PCS and the processes used to develop the displays used by the PCS. –International Space Station Command and Control Communications Security This assessment will evaluate the planned encryption upgrades for the ISS command, control, and communications uplinks. We are assessing whether there are upgrade alternatives that may be less expensive and more secure than the options being considered by NASA.

Ongoing Activity	Focus
Information Technology	
Computer Banner Inspection, Assignment G-99-015	This ongoing inspection is evaluating whether NASA's computer security warning banner policies and procedures have been adequately implemented. During the period ending March 31, 2000, we issued three alert memorandums citing systems that did not display the required computer security warning banners.
Procurement	
NASA Computer Support Inspection, Assignment G-99-009	This inspection is evaluating the Headquarters installation computer support contractor. The current emphasis of the inspection focuses on processes involving information technology security and acquisition/small purchases.
Inspection of: Center Exchange Activities –at Glenn Research Center, Assignment G-99-016 –at Langley Research Center, Assignment G-00-001 –at Ames Research Center, Assignment G-00-003 –at Goddard Space Flight Center, Assignment G-00-005 –at NASA Headquarters, Assignment G-00-006	The overall objective of these inspections is to evaluate whether Center Exchange operations are meeting employee needs and conducting operations in a manner consistent with NPD 9050.6E and other statutory or regulatory controls. In addition, we are also reviewing Exchange activities to assure that operations and activities are managed effectively and in accordance with applicable policies, regulations, and statutes.
Use of Support Service Contractors at the Glenn Research Center, Assignment G-99-017	We are conducting a review of the use of support service contractors at Glenn, focusing on on-site contractor support and the use of contractors for general clerical, administrative, and secretarial support.

Ongoing Activity	Focus
Fiscal Management	
Intergovernmental Personnel Act Assignments to NASA, Assignment G-99-018	We are reviewing NASA's use of the Intergovernmental Personnel Act (IPA) mobility program because many individuals assigned to NASA under the IPA hold key decision-making positions. Nevertheless, they are not required to file financial disclosure reports. Also, they are neither required to attend ethics briefings nor to discuss their financial issues and outside activities with an Agency Ethics Counselor. We also found that one NASA Center funds its IPA positions through a fund source designated for civil servants, even though for most purposes the IPA assignees remain employees of their parent organization. Our draft report makes three recommendations to improve the financial disclosure process for detailees to NASA as well as to ensure that appropriate fund sources are used to account for IPA detailees.
International Agreements	
NASA Support of Biotechnology Research, 1995-1997, Assignment G-00-007	This activity responds to allegations that funding provided Russia to support biotechnology research was inappropriately redirected to fund germ warfare activities. This joint review will examine internal controls, to include ensuring good end products.

[Photograph in the original.]

Procurement/Kickbacks

$38.0 Million Settlement in Qui Tam Lawsuit

A NASA contractor agreed to pay a $38 million settlement of a qui tam lawsuit to avoid the cost and risk associated with further litigation. The contractor allegedly passed on to the Government unallowable sale-leaseback charges related to its corporate headquarters. The NASA OIG, the Air Force Office of Special Investigations (AFOSI), the Naval Criminal Investigative Service (NCIS), the Environmental Protection Agency, the Army Criminal Investigations Division (CID), and the Department of Energy conducted the joint investigation.

Indictment Alleges $1.2 Million Criminal Forfeiture

A former employee of a NASA prime contractor and a former owner of a computer company were indicted for conspiracy to commit wire fraud. The indictment alleged that the defendants conspired to rig bids for computer equipment and committed multiple acts of theft, wire fraud, money laundering, and payment of kickbacks to carry out their scheme. In addition, the indictment alleged a criminal forfeiture against both defendants of $1,289,485.

By using the company as a front, the subjects allegedly conspired to rig bids for computer equipment. Their collective goal was to obtain Federal funds by presenting $1,289,000 in fraudulent and inflated claims to NASA for information technology and services. The NASA OIG, Federal Bureau of Investigation (FBI), and NCIS conducted the joint investigation. Trial in this case is pending.

Subcontractor Ordered to Pay $885,519 in Restitution

A NASA subcontractor pled guilty to a one count criminal information for violating the Major Fraud Act and was ordered to pay $885,519 in restitution to NASA and a $200 special assessment. The owner of the company devised a scheme to obtain small business set-aside contracts at Kennedy. The company falsely certified that it was a small, woman-owned business to obtain a $3.2 million NASA subcontract to refurbish a shuttle launch pad and was also awarded an $850,000 subcontract to perform electrical modifications at Kennedy. Under the two subcontracts the company filed numerous false claims resulting in overpayments of approximately $885,519. The NASA OIG and the FBI conducted the joint investigation.

Former Contractor Employee Pleads Guilty

A former NASA contractor employee at Kennedy pled guilty to accepting $10,000 in kickbacks from a subcontractor. The former employee provided information to a computer maintenance company that resulted in the company being awarded a NASA subcontract. NASA OIG and the Internal Revenue Service CID conducted the joint investigation. Sentencing in this matter is scheduled for April 2000.

Former Contractor Employee Sentenced for Receiving Unlawful Gratuity

A former NASA contractor employee at the Wallops Flight Facility, Wallops Island, Virginia, pled guilty to one count of receiving an Unlawful Gratuity (18 U.S.C Section 201(c)(1)(A)), and making a False Declaration Before a Grand Jury (18 U.S.C. 1623). The former employee admitted accepting $5,000 from another NASA contractor in exchange for proprietary Government information concerning the auction of a C-130 airplane. He was sentenced to 5 years probation, 100 hours of community service, and ordered to pay a fine of $2,000. The NASA OIG and the FBI conducted the joint investigation.

Product Substitution

$320,000 Settlement in Qui Tam Lawsuit

A NASA contractor agreed to pay $320,000 to settle a qui tam lawsuit regarding allegations that it did not properly perform required testing on electronic components. The components were for use on NASA's Cassini Deep Space Transponder, Near Earth Asteroid Rendezvous, and the Mars Pathfinder spacecraft. Under the False Claims statute the qui tam relator will receive $48,000 of the settlement. The NASA OIG, Defense Criminal Investigative Service (DCIS), AFOSI, NCIS, and Army CID conducted the joint investigation.

$148,089 In Restitution Ordered for Product Misrepresentation

The former president of a NASA contracting firm misrepresented the origin and quality of chemicals used in the testing of engines for the NASA Orbiter. The former company president pled guilty to two counts of making False Claims (18 U.S.C. 287) and was sentenced to 33 months incarceration, 3 years supervised release, and ordered to pay $148,089 in restitution to the Government. The NASA OIG, DCIS, and FBI conducted the joint investigation.

Subcontractor Pleads Guilty to False Statements

The owner of an electronic components and fasteners firm was indicted and pled guilty to one-count of making False Statements (18 U.S.C. 1001). The company sold nonconforming fasteners to NASA and DoD prime contractors and falsely certified that the fasteners met military specifications. The NASA OIG and DCIS conducted the joint investigation.

Computer Intrusions/Crimes

Computer Cracker Ordered to Pay $20,000 in Restitution

A juvenile pled guilty to six counts of juvenile delinquency. He was sentenced to 3 years probation and ordered to pay $20,000 restitution to NASA. An OIG investigation disclosed the youth had illegally compromised NASA computer systems resulting in damage and lost computer time while the systems were reconfigured for normal operation.

Contractor Employee Sentenced for Unauthorized Computer Use

Following a guilty plea to one count of violating NASA regulations, a violation of 18 U.S.C. 799, a NASA contractor employee was sentenced to 1-year probation, a $250 fine, and ordered to pay a special court assessment of $50. The investigation, conducted by the OIG and the Goddard Security Branch determined the employee used Government-owned computer and peripheral equipment for the unauthorized purpose of accessing, viewing, downloading, and disseminating pornographic material during working hours.

Guilty Plea for Illegal Interception of NASA Employee's E-mail

A retired military officer pled guilty to a one-count criminal information of violating 18 U.S.C. 1030(a)(2), Fraud and Related Activity in Connection with Computers, for the interception of a NASA Center employee's e-mail. Sentencing is pending.

Employee Misconduct

NASA Employee Charged with Possession of Child Pornography

A NASA employee was charged in a three-count criminal information for possession of child pornography. The investigation disclosed that the subject transferred several hundred images of child pornography from his personal computer to his NASA-owned computer equipment and peripherals. Prosecutive activity in this case is pending.

Other

Former Security Guard Pleads Guilty to Theft

Three OIG search warrants resulted in the recovery of stolen property valued at approximately $23,000. Some of the recovered property was computers containing research data. The suspect, a former security guard at the NASA Glenn Research Center, pled guilty in U.S. District Court, Northern District of Ohio, to one count of violating 18 U.S.C. 641, Theft or Conversion of Property of the United States. Sentencing is scheduled for June 2000.

Computer Intrusions/Crimes

Two Charged for Computer Hacking
Previously Reported: September 1999

Two Swedish hackers were charged for hacking into NASA and U.S. military computers. The hackers were charged with violating the Swedish equivalents of 18 U.S.C. 1029 (Fraud and Related Activity in Connection with Access Devices), 18 U.S.C. 2511 (Wiretapping), and 18 U.S.C. 641 (Theft). The hackers allegedly attempted to infect the systems with a computer virus. Damages to NASA were estimated to be $159,100.

Update: On February 28, 2000, the hackers were each sentenced to 2 years probation and fined $10,200.

Network Intruder Arrested
Previously Reported: September 1999

An individual who had compromised or obtained unauthorized access to over 140 computers belonging to NASA, DoD, other U.S. Government agencies, foreign countries, and various educational institutions was arrested. The NASA OIG conducted an on-site analysis of electronic evidence and found that the hacker possessed 9,000 data records containing identifying information, including Social Security Numbers.

Update: The subject was charged in a three-count criminal information for violation of 18 U.S.C. 2511(1)(a), Illegal Interception and Possession of Electronic Communications Transmitted to and through a U.S. Government Computer; 18 U.S.C. 1030(a)(5)(B), Illegal and Intentional Access and Damage of a Computer Used in Interstate and Foreign Commerce; and 18 U.S.C. 1362, Willful and Malicious Interference of a Working Communications System Operated and Controlled by the U.S. Government.

Canadian Hacker Arrested
Previously Reported: September 1999

A Canadian hacker's illegal intrusion altered the network server that allows public access to the NASA World Wide Web causing a denial of service and an estimated $70,000 in repair costs to NASA. Other victims included the National Oceanographic and Atmospheric Administration, Hughes STX (a NASA contractor), as well as several universities and private Web sites in Canada. The perpetrator was held over for trial on 47 counts of illegal intrusions and hacking.

Update: The subject pled guilty to 12 counts of computer crime charges relating to intrusions into U.S. Government computer systems and was sentenced to 6 months incarceration on each of the 12 counts to run concurrently.

Bribery/Kickbacks

Contractor Official Pays More Than $32,000 in Kickbacks
Previously Reported: September 1999

To receive a painting subcontract associated with the Space Shuttle program at the Kennedy Space Center, Florida, a subcontractor employee paid kickback monies to a NASA prime contractor's procurement manager. With the help of the procurement manager, the subcontractor submitted an inflated false claim that was subsequently charged to prime contracts with NASA and DoD.

Update: The subcontractor employee pled guilty to a one-count information for violating the Anti-Kickback Act. He was sentenced in U.S. District Court, Middle District of Florida, to 12 months supervised probation, payment of $16,000 restitution to NASA, a $1,000 fine, and a special assessment of $100.

Employee Misconduct

Former NASA Employee Pleads Guilty
Previously Reported: September 1999

A former NASA employee charged in a criminal information with embezzling approximately $17,700 from the Employee Morale Association subsequently pled guilty to one count of embezzlement of Government funds.

Update: The former employee was sentenced to 5 years probation, 4 months home confinement with electronic monitoring, and ordered to pay restitution in the amount of $17,166.60 and a special assessment fee of $100.

Other

Fraudulent Moon Rock Scheme Results in Indictment and Arrest
Previously Reported: September 1999

A disbarred attorney was charged in a 24-count indictment for attempting to sell bogus moon rocks. The Lunar Curator at Johnson Space Center determined the rocks were not of lunar origin.

Update: The attorney pled guilty to one count of Conspiracy to Commit Wire Fraud (18 U.S.C. 371). Sentencing is pending.

Legislation

S. 1993, *Government Information Security Act of 1999*

Generally, this bill is a positive step towards recognizing the importance of centralized oversight and coordination in responding to risks and threats to IT security. The bill would amend 44 U.S.C. by adding new sections concerning information security. This bill would strengthen the role of the agency CIO. The CIO would be responsible for training and overseeing personnel with significant responsibilities for information security. The CIO can designate a senior information security officer to administer all information security officers. We recommend that this individual report directly to the CIO.

Under the bill the agency would be required to establish a program containing procedures for detecting, reporting, and responding to security incidents. The agency would be required to mitigate risks associated with such incidents before substantial damage occurs, and would be required to notify and consult with law enforcement and other offices and authorities concerning security incidents. Section 3534(b)(2)(E)(ii) should expressly refer to procedures for notifying and consulting with the agency's Inspector General. Under Section 3534(c)(2), deficiencies in policies, procedures, or practices of the agency concerning information security would be reportable as "material weaknesses" under the Federal Managers' Financial Integrity Act. We recommend that this provision be modified. Not all deficiencies in this area are material. Reporting immaterial deficiencies could cloud the true condition of an agency's systems and controls.

We had other recommendations to strengthen this bill. The Inspector General testified on the merits of this legislation before the Senate Committee on Governmental Affairs on March 2, 2000. Overall, this bill would go far in remedying the fragmented approach to IT security currently in place at NASA. The expanded role and authority of the CIO can only provide for better coordination concerning security incidents among the NASA Centers. Mandatory coordination and consultation with law enforcement components such as the Inspector General's Computer Crime Division will greatly assist in the preservation of evidence and prosecution of computer felonies. The requirement to conduct annual evaluations underscores the Inspector General's expressed need for greater resources in this area, as reflected in the Inspector General's budget submissions to OMB.

HR 2413, *Computer Security Enhancement Act*

We do not support this bill as presently drafted. This bill in its current form would not enhance the ability of the National Institute of Standards and Technology (NIST) to improve computer security. The bill, intended to reinforce NIST's role in developing encryption standards needed to ensure cost-effective security in Federal computer systems, would instead weaken it.

The bill creates a perception that NIST be an advocate for private industry computer security products rather than a Federal agency responsible for ensuring the security of unclassified information in Federal computer systems.

If the purpose of this bill were to actually reinforce the role of NIST in ensuring the security of unclassified information in computer systems, a national policy role in computer security should be announced. Instead, the only reference to policy is a statement contained in Section 5, entitled, "Computer Security Implementation," which states, the Institute shall "emphasize the development of technology-neutral policy guidelines for computer security practices by the Federal agencies." We are unsure what "technology neutral" means.

Section 13(a) of the bill, entitled, "Electronic Authentication Infrastructure" is unclear. It calls for guidelines and standards that contain, "protection profiles for cryptographic and non-cryptographic methods of authenticating identity for electronic authentication products and services." Authentication is a communications security or cryptographic technique. As such, we are unaware of any non-cryptographic method of authentication approved by the Government.

Enhancement of the NIST mission regarding proposed promotion of national information security; electronic authentication infrastructure guidelines and standards, and a study of PKI can and should be conducted under current NIST responsibilities. Separate legislation is not required.

Report Pursuant to House Report 105-610

We submitted a report during this semiannual period setting forth our human resource statistics, pursuant to a request of the Appropriations Committee. The Committee is concerned over workforce diversity. The Committee recognized that increasing inclusiveness among employees can be a challenging task; and Federal personnel rules and practices may sometimes make the task more difficult. We continue making strides in increasing the diversity of our workforce.

Regulations

During this period, the OIG reviewed 41 Agency regulations.

Comments on Health and Human Services Proposed Standards for Privacy of Individual Identifiable Health Information

We commented on the Health and Human Services proposed regulation, published in the Federal Register of November 3, 1999 (Volume 64, Number 212), pages 59917-59966. The proposed rule, as written, is impractical insofar as it might be read to apply to the Inspectors General. This is because, in the normal course, NASA OIG may issue a subpoena for any of several purposes; to wit, conducting "health oversight activities," for use in a "judicial or administrative proceeding," or for a "law enforcement proceeding of inquiry." The proposal, as currently written, might mistakenly be understood to set forth different standards for Inspector General access depending upon the purpose for which the information is sought. These standards are more restrictive than the case law currently applicable to Inspector General subpoenas.

The proposed rule is contrary to existing law and congressional intent. We recommend that it be modified to conform to §201(a)(5) of the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which expressly provides that neither the HIPAA nor its implementing regulation be construed so as to limit the authority of the Inspectors General under the Inspector General Act of 1978.

NASA OIG Hotline Poster Clause
Updated from September 1999

We proposed a clause for NASA contracts that would require that NASA Hotline posters be displayed at NASA aerospace contractor facilities. The purpose of the clause is to provide an avenue for contractor employees to submit information to the Inspector General on issues concerning potential crimes, mismanagement, and wasteful expenditures of Federal funds. In this era of Federal downsizing and diminished oversight, it is even more imperative that employees know that there is a venue to address their complaints without fear of retribution. We resolved the concerns of the Office of General Counsel regarding consistency with other similar initiatives. The hotline poster proposal has been submitted to OMB for approval.

Inspector General Access Clause
Updated from September 1999

We submitted a proposal to the General Counsel and the Associate Administrator for Procurement to include a standard Inspector General access clause in Government contracts. The clause would reduce the need to commence enforcement actions for Inspector General access to contractor data in the courts. We are fine-tuning our proposal to comply with a request from the Agency for additional background.

Other

FAIR Act Challenge and Appeal

We received one challenge and a subsequent appeal of our determination under the Federal Activities Inventory Reform Act. In our response to the appeal from the U.S. Chamber of Commerce, we indicated which activities have already been contracted out within the OIG, and asserted that the remaining functions are inherently governmental.

Freedom of Information Act Matters

During this reporting period, the OIG processed 21 requests. We also processed 3 appeals of an initial determination during this timeframe.

Subpoenas

During the reporting period, the Inspector General issued 39 subpoenas. No enforcement actions were filed.

OIG Legal Newsletter and Web Site

Lunar Material: During this semiannual period, our newsletter featured an article on allegations of wrongful possession of lunar materials. The mail and wire fraud statutes are utilized when con artists who peddle plain earthen dirt as moon rock have victimized individuals.

Allowability of Legal Fees: Another newsletter article discussed when Government contractors could charge the legal defense costs to Government contracts when they are investigated for fraud. We discussed the requirements of FAR 31.205-47. This cost principle makes the allowability of these legal fees dependent upon the outcome of legal proceedings. Proceedings include investigations by the Inspector General. A criminal conviction or a finding of liability in a civil fraud action renders the legal fees and their associated costs (administrative, clerical, accountants, consultants, and experts) unallowable on Government contracts. If the investigated conduct results in a termination of a contract for default by reason of a violation of law or a decision to debar or suspend a contractor or to rescind or void a contract, the legal costs associated with the investigation are unallowable as well.

The Department of Justice may enter into an agreement with the contractor on the extent of allowability as part of a settlement or plea bargain. The legal costs will be recognized as provided in the agreement. Where the contractor prevails in a legal proceeding (e.g., an acquittal, or a finding of no liability), the costs may be allowable, assuming that they are reasonable and otherwise allocable to the contract. However, contracting officers can negotiate a ceiling on the payment of these costs. In no event shall reimbursement exceed 80 percent of otherwise allowable legal costs associated with the fraud proceeding.

Both articles are available on the OIG Web site at:
<http://www.hq.nasa.gov/office/oig/hq/legalitems.html>.

[Photograph in the original.]

We appreciate the outstanding assistance provided by Steve Trautwein of the Defense Contract Management Agency, Seattle, Washington, in support of the OIG and the International Space Station Program. As the Defense Corporate Executive for the Boeing Company, Mr. Trautwein had an in-depth knowledge of the company's operations, which he freely shared with our staff to provide insights into how Boeing's organizational changes were affecting NASA's programs.

During the OIG's assessment of performance management on the International Space Station, Mr. Trautwein, oriented the audit team to the issues surrounding Boeing's reorganization activities and the potential impact on the Space Station. He also facilitated the team's meetings with the key officials of The Boeing Company, the Defense Contract Audit Agency, and the Defense Contract Management Agency to ensure that the team obtained a thorough understanding of the corporate restructuring and accounting practice changes that were impacting Space Station costs.

The NASA OIG also appreciates the excellent efforts put forth by Assistant U.S. Attorney Donna C. Maizel, Civil Fraud Section, Central District of California, Los Angeles, and Roy D. Robinson, Senior Auditor, DCAA, in support of the NASA OIG.

During this period Ms. Maizel successfully negotiated a $38,000,000 settlement of sale-leaseback charges improperly billed to Government contracts. Mr. Robinson was instrumental in determining the damages due to the Government in this investigation.

We commend Ms. Maizel and Mr. Robinson for their dedication and commitment to this investigation and look forward to continuing a long and productive relationship with these dedicated professionals.

[Photograph in the original.]

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.

Audits

OIG Leads PCIE Initiative on Presidential Decision Directive 63 (PDD-63)

In November 1999, the NASA OIG initiated a "kick-off" conference for a PCIE/ECIE Review of the Nation's Critical Infrastructure Assurance Program. Offices of Inspector General from more than 20 agencies are participating in Phase 1 of the 4-phase review and will address their respective agency's critical infrastructure assurance efforts in the context of the President's Policy on Critical Infrastructure Protection: PDD-63. The NASA OIG is coordinating the work of the participating agencies and will be consolidating the results of their reviews. In April 2000, the NASA OIG will host a mid-point conference to discuss the progress on Phase 1 of the initiative. Phase 1 is scheduled for completion in September 2000.

OIG Participates on NASA Teams to Trace Payments to Russia

A representative from the OIG Audit staff participated on a NASA team established to determine whether NASA funds paid to Russia for joint space development and operations were reaching their intended destination. Specifically, the team determined whether funds paid for the Russian Space Station Mir and the International Space Station were properly routed through the Bank of New York to the Russian Space Agency (RSA), appropriately converted into Russian rubles, and promptly paid to Russian subcontractors to support accomplishment of contract milestones. The team concluded that U.S. dollars paid by NASA from June 27, 1997, through June 30, 1999, were received by RSA, properly converted to Russian rubles, and paid to first-tier subcontractors in a timely way to support accomplishment of contract milestones.

A representative of the OIG Audit staff also participated on a separate NASA team, formed at the request of the Associate Administrator for Space Flight, to determine whether NASA funds that the RSA paid to Biopreparat, a major Russian pharmaceutical firm, were properly used for space biotechnology scientific research. The team reviewed the funding process for biotechnology research under the NASA contract with RSA. Within the scope of the verification performed, the NASA team saw no indication that the funds were used for other than the intended purpose. The Inspections staff, however, is examining NASA's internal controls for oversight of the funds.

OIG Continues in its Leadership Role in the Federal Audit Community

The Federal Audit Executive Council (FAEC) was chartered to discuss and coordinate issues relating to audit policy and operations affecting the Federal audit community. FAEC members include the AIGA's from Federal agencies, as well as, the Director, DCAA, and the Auditors General of the military services.

The FAEC has sponsored training to disseminate information on a variety of topics including strengthening Federal financial management; GAO, OMB, Joint Financial Management Improvement Project, and Federal Accounting Standards Advisory Board updates; human capital, and computer and environmental crime. At the request of the PCIE Audit Committee, the FAEC also initiated a review of the Inspector General Auditor Training Institute curriculum to ensure the course mix will fulfill the Federal audit community's training needs in FY 2001 and beyond. In addition, the FAEC is working to consolidate GAO and PCIE financial statement Government guidance, ensure effective peer quality reviews of Federal audit organizations, and update auditor position classification guidance.

OIG Participates in FAEC Training Coordinators' Roundtable

The OIG is participating on an interagency OIG roundtable. The purpose of the roundtable is to discuss concerns and the means to meet the OIG auditor and accountant's training requirements in an environment of decreasing resources. The discussions address the training needs from the entry-level to the senior employee.

OIG Participates on PCIE Audit Committee Task Force

The OIG is participating on a task force of the management level PCIE Audit Standards Committee concerning, Single Audit Monitoring, to revise the Federal Cognizant Agency Audit Organization Guidelines (Orange Book). The activity will revise the Orange Book to address the changes in the Single Audit Act Amendments of 1996 and create uniformity among Federal audit organizations in discharging responsibilities associated with cognizant and oversight agency assignments.

OIG Participates in Federal Audit Clearinghouse Users Group

The OIG participates on an interagency user group that addresses problems and concerns regarding the Federal Audit Clearinghouse database of single audit reports. The database, available through the Internet to the Government and the public, identifies the OMB Circular A-133 audit reports that were received by the Federal Audit Clearinghouse. It also contains information about the results of audit, such as the type of opinions expressed, findings, questioned costs, and major programs audited.

OIG is Evaluating Data Mining Concept for Application to NASA's Financial Management

The OIG initiated an evaluation of the applicability of data mining to NASA's financial management processes. Data mining applies technology to an organization's information assets to reveal patterns and relationships within the business activity. Data mining tools are used in industry and government to solve problems in engineering, science, and business. Our emphasis was on the use of these techniques to improve NASA's financial management, including detection of fraud. We contacted Federal agencies and private sector companies to learn about their experiences in applying Data mining processes. We also considered to what extent data mining has been or could be applied to financial management in NASA. Our evaluation of data mining will likely result in a more extensive OIG survey of NASA's administration of databases in FY 2001.

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 Chief Financial Officers Act of 1990 requires NASA's financial statements to be audited according to generally accepted Government auditing standards. The Act also requires reports on NASA's system of internal controls and compliance with laws and regulations. The OIG contracted with Arthur Andersen LLP, an independent public accounting firm to conduct the audit of NASA's FY 1999 financial statements. The contract required that the audit be done in accordance with Government auditing standards and with OMB Bulletin 98-08, "Audit Requirements for Federal Financial Statements." To fulfill our oversight responsibilities, the OIG performed a quality control review of Arthur Andersen's audit, including the audit reports and related working papers, to determine whether the audit was performed in accordance with applicable standards and requirements. The review showed that Arthur Andersen conducted the audit in accordance with Government auditing standards and provisions of OMB Bulletin 98-08. In its reports dated February 2, 2000, Arthur Andersen (1) rendered an unqualified opinion on NASA's principal financial statements and (2) found no material weaknesses or reportable conditions related to internal controls.

Educational and Non-Profit Organizations Audits

Quality Control Reviews

The OIG performed quality control reviews of the working papers that support the OMB Circular A-133 audits of Brandeis University (IG-00-025, FY 1998), Dartmouth College (IG-00-026, FY1998), Hampton University (IG-00-012, FY 1998), Old Dominion University Research Foundation (IG-00-021, FY 1998), and Universities Space Research Association (IG-00-001, FY 1999 and Follow-up on FY 1998).

Referrals

The OIG referred one Certified Public Accounting firm and its partner to the Virginia Board of Accountancy and the American Institute of Certified Public Accountants. The actions of the audit firm and the partner meet the PCIE's definition of a referable action under PCIE Position Statement 4, "IG [Inspector General] Quality Control Referral Procedures."

Nonappropriated Fund Activities Audits

NASA policy requires annual audits of the financial statements of exchanges operated by NASA Headquarters and field Centers. The OIG established a quality control program to ensure the audits comply with applicable standards. We plan to review the exchange audits on a 3-year cycle. This program includes (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 corrective actions taken in response to selected recommendations resulting from the audits. In the first half of FY 2000, we completed quality control reviews at Langley Research Center (IG-00-013, FY 1998) and Stennis Space Center (IG-00-023, FY 1998), and conducted fieldwork for a quality control review at Ames Research Center. We will continue to coordinate the exchange quality control reviews with the exchange inspections conducted by staff of the AIGIAIA.

Inspections, Administrative Investigations, and Assessments

Information Pamphlet: *Clearing Information from Your Computer's Hard Drive*

In January 2000, the NASA OIG published and distributed an IT Security Alert entitled, *Clearing Information from Your Computer's Hard Drive*. The publication alerts the user to the need to be vigilant when excessing personal computers. For example, the pamphlet explains that a computer's delete key or mouse is not an effective means of erasing a file from the computer's storage media. The pamphlet warns that performing Government work on home computers poses potential security risks because files on your home computer are just as vulnerable to being recovered. The reader is further enlightened that their own personal and private matters may be at risk if their computer's hard drives are not effectively cleared of stored information. Finally, the pamphlet instructs the reader on what should be done to ensure that data is unrecoverable when files are erased.

Inspections and Evaluations Roundtable

In support of the Roundtable, the inspections staff sponsored a meeting of the Federal OIG web curators. The OIG Webmasters group will share best practices, improve common web site design and maintenance processes, and develop effective information outreach techniques, for example to address electronic FOIA (e-FOIA) and access requirements. Other planned training initiatives for the coming calendar year include researching the Internet and other resources, interviewing techniques, and writing and editing.

Procurement Managers Outreach

The inspections staff presented, "The OIG and You: Working Together for A Better NASA," to the Free State Chapter of the National Contract Management Association at Goddard. The presentation stressed the joint roles of the OIG and contract professionals in both NASA and in the NASA contractor firms in preventing crime, fraud, waste, abuse, and mismanagement. Our presentation team also developed a listing of procurement "red flags" and "fraud schemes" to help sensitize the audience to contract crime.

Alerts Issued Regarding NASA Exchange Sale of Tobacco

Our NASA Exchange inspections disclosed that some NASA Centers are selling tobacco products in their local Center Exchange stores. We pointed out that such sales undermine NASA's efforts to promote national policy and the Agency's health and safety initiatives to assist employees to quit smoking. As a result of our alert, NASA made appropriate policy changes that will proscribe sales of tobacco products in its Exchange stores and visitors centers in 2001.

Ethics Briefings for Exchange Councils

As an outgrowth of our inspection of NASA Exchanges we discovered that Exchange officials might be taking action contrary to regulation or law because they mistakenly believed that ethics statutes and standards of conduct do not apply since Exchange activities involve nonappropriated funds. We developed a presentation package of our findings and observations and made copies of the package to NASA Center Exchange Councils and ethics officials. Several Centers used our materials as a base or component in special Exchange Council ethics briefings.

Continuing Activities

- We continue to represent the OIG on NASA's Critical Infrastructure Protection Team (CIPT). NASA created the CIPT to develop and implement the Agency's Critical Infrastructure Protection Plan as required by PDD-63. IAIA staff also continued to assist the OIG Office of Audits in their review of PDD-63 processes.
- The IAIA staff continues its lead role in editing the *NASA OIG Review (Review)* to highlight and summarize key OIG reports and activities. The *Review* is distributed to NASA management and key external organizations such as OMB, GAO, and congressional staffs. The *Review* also appears on the OIG web page. We also continued our practice of updating key NASA communities (OIG liaisons, security staff, and OIG staff in other organizations) through electronic mail communications.
- We are participating in the Presidential Management Intern (PMI) Career Development Group (CDG) #11. The CDG, consisting of 22 PMI's from different Federal departments and agencies, provides a framework for training and development activities for the PMI's.

Office of Criminal Investigations

OIG Promotes Awareness Associated with Science Fraud

During this semiannual period, the OIG took an active role in supporting the NASA Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) programs with the following activities:

- An OCI staff member spoke to the NASA SBIR/STTR Program Managers and employees. We made recommendations to implement changes to the SBIR/STTR process of awarding contracts to deter fraud in the program.

- OCI staff attended an inter-agency discussion of the SBIR/STTR program that centered on a universal site to apply for SBIR funds. The OIG representative recommended that the agencies include a link to their OIG Hotline on SBIR/STTR Home Pages.

- In conjunction with the AUSA's from the Eastern District of Virginia, OCI staff presented to the U.S. Attorney's Affirmative Civil Enforcement Conference in Washington, DC, the unique nature of investigating and prosecuting SBIR (science) fraud; and how the SBIR Task Force can assist investigators and prosecutors.

OIG Actively Conducts Fraud Awareness Briefings

OIG Special Agents regularly present fraud awareness briefings to DCAA, NASA management, NASA procurement personnel, and NASA prime and subcontractors. These briefings distinguish the various divisions of the OIG and their functions, as well as provide examples of suspect activities and the various criminal statutes that we typically investigate. We also communicate examples of OIG cases through OIG News Releases.

OIG Special Agents at the Johnson Space Center provide briefings to Contracting Officer's Technical Representative (COTR) trainees to provide them with a general understanding of fraud and how the OIG might help respond to potential fraud encountered during their duties as COTR's.

During the course of this semiannual period, an OCI Agent at the Dryden Flight Research Center provided fraud awareness briefings to seven separate organizations, involving some fifty participants who were briefed on the various functions of the OIG and the nature of typical frauds perpetrated against NASA. The agent shared the OIG's process for protecting the identity of cooperating witnesses and how one might communicate concerns of potential fraud to the OIG.

Computer Crimes Division

OIG Conducts Computer Forensics Training for Investigators and Prosecutors

As part of its ongoing mission to work cooperatively with other investigative agencies and to educate field agents and Federal prosecutors, OCI and CCD, in conjunction with the Office of the U.S. Attorney, Northern District of Ohio, Computer Crime Response Team, conducted a 2-day seminar for all Federal investigative agencies in the Greater Cleveland area. The seminar focused on computer forensics unique to the Linux operating system environment.

OIG Initiates International Effort to Develop Forensic Analysis Tools

The CCD has initiated an international collaborative effort to develop forensic analysis tools for the law enforcement community. The goal is to develop tools that meet current needs and the demand of future technology and environmental conditions. The OIG effort involves law enforcement bodies, both globally and throughout the United States. This initiative furthers the ongoing research and development effort the OIG has with the Defense Computer Forensic Laboratory, Baltimore, Maryland.

Legal

Working Group on Unlawful Conduct in the Internet

The OIG staff participated on the working group on unlawful conduct on the Internet. The working group was established by Executive Order 13133. We provided input giving recognition to computer crime capabilities within some of the Offices of Inspectors General. We recommended additional training for law enforcement officers and system administrators. The latter are often the first line of defense against unlawful computer intrusions. We also recommended that IG audit components should play a larger role in preventing and detecting unlawful conduct on the Internet. Auditors are well positioned to recommend preventative controls that over time could ameliorate unlawful conduct.

"Defending America's Cyberspace: National Plan for Information Systems Protection," Version 1.0

This plan is the first attempt by any national government to design a way to protect its cyberspace. Attacks upon our nation's cyberspace could crash electrical power grids, telephone networks, transportation systems and financial institutions. Protection of these computer systems requires a real public-private partnership. While the Government strives to be a model of computer security, it will not dictate solutions. The NASA OIG provided input into this White House document. We discussed the role that the Offices of Inspectors General could play in defending Federal agency systems against felonious intrusions.

Training and Other Outreach Activities

During this reporting period, the OIG legal unit conducted video-teleconference training in the areas of money laundering, the Right to Financial Privacy Act, the Inspector General Act, Federal Appropriations Law, Procurement Law 1999 the Year in Review, and the Hatch Act. We also made presentations on Federal personnel law to the managers of the criminal investigations office, and discussed electronic FOIA and web policy issues with a group of OIG webmasters.

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Appendices

[Photograph in the original.]

Audit Activities

OIG Audit Reports Issued	**31**

Audit Impact

Recommended Better Use of Funds	**$7.0 million**
Audit Dollar Impact[1] TOTAL	**$7.0 million**

[1]No amount reportable for Questioned Costs

Status of A-133[1] Findings and Questioned Costs Related to NASA Awards[2]

Total Audits Reviewed		**25**
Audits with Recommendations		**7**
Audits Unresolved Over 6 months Old		**3**
Total Disallowed/Questioned Costs[3]		**$221,396**
Total Disallowed/Questioned Costs Recovered/Sustained		**$ 53,000**
Recommendations:	**Beginning Balance**	**26**
	New Recommendations	**0**
	Recommendations Dispositioned	**23**
	Ending Balance	**3**
Average Age of Recommendations Not Completed		**7 months**

[1]OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations,* requires Federal agencies to audit non-Federal entities expending Federal awards.
[2]Data prepared by NASA Office of Procurement for the financial reporting period ending March 31, 2000.
[3]Questioned costs include $12,864 of overpayments to Central State University employees. The State of Ohio has been trying to recoup these payments since early 1999. Legal action may be required. NASA will continue to pursue this issue.

Administrative Investigations Activities

Cases Opened	**87**
Cases Closed	**98**
Cases Pending	**141**
Referred to Management	**16**
Closed	**2**
Pending	**14**
Referred to Investigations	**4**

Inspections/Assessments Activities

Activities Opened	**9**
Activities Closed	**3**
Activities Pending	**17**
Management Letters/Alerts	**3**

Criminal Investigations Activities

Cases Opened	**101**
Cases Closed	**88**
Cases Pending	**325**
Hotline Complaints Received	**58**
Referred to Audits or Investigations	**30**
Referred to Inspections and Assessments	**14**
Referred to NASA Management	**3**
Referred to Other Agencies	**1**

Criminal Investigations Impact[1]

Indictments/ Informations	**22**
Convictions/Plea Bargains/ Pretrial Diversions	**14**
Cases Referred for Prosecution	**53**
Cases Declined	**22**
Cases Referred to NASA Management for Action	**21**
Cases Referred to Other Agencies for Action	**37[2]**
Suspension/Debarments	
Individuals	**8**
Firms	**4**
Administrative Actions	
NASA Employees	**2**
Contractor Employees	**15**
Potential Cost Impact/Special Assessments	**$28.2 million**
Investigations Dollar Impact[4]	
TOTAL	**$74.6 million[3]**

[1]Includes results from joint investigations
[2]Includes referrals to State, local and other Federal law enforcement agencies
[3]Includes recoveries, fines and penalties, restitutions, settlements and judgements
[4]No amount reportable for Funds Put to Better Use

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Section 5(a)(6) of the Inspector General Act, as amended, requires a listing of each OIG audit report issued during the reporting period. Where applicable, the total dollar values of questioned costs, including separate identification of unsupported costs, and recommendations that funds be put to better use is to be included.

For this reporting period, a total of 31 OIG audits identifies $7.0 million in questioned costs.

Report	Report Title & Monetary Amount
IG-00-001	Quality Control Review of Ernst & Young LLP Audit of the Universities Space Research Association (USRA) for Fiscal Year Ended June 30, 1999, and Follow-up of Audit of USRA for Fiscal Year Ended June 30, 1998
IG-00-002	Raytheon Subcontract Management
IG-00-003	NASA's Year 2000 Day One Planning
IG-00-004	Management and Administration of International Agreements at NASA
IG-00-005	X-38/Crew Return Vehicle Project Management
IG-00-006	Verification of Payments to the Russian Space Agency
IG-00-007	Performance Management of the International Space Station Contract
IG-00-008	Electronic Commerce: NASA's Acquisition of Office Supplies
IG-00-009	Staffing of the Expendable Launch Vehicle Program Office at the Kennedy Space Center
IG-00-010	NASA Contract Audit Follow-up System at Marshall Space Flight Center
IG-00-011	Spare Parts Quality Assurance for the Space Shuttle
IG-00-012	Quality Control Review of KPMG LLP Audit of Hampton University for Fiscal Year Ended June 30, 1998
IG-00-013	Quality Control Review of Eggleston Smith P.C. Audit of National Aeronautics and Space Administration Langley Research Center Exchange Financial Statement for Fiscal Year Ended September 30, 1998
IG-00-014	UNIX Operating System Security and Integrity at Kennedy Space Center
IG-00-015	Space Flight Operations Contract Phase II—Cost-Benefit Analysis

(Continued)

Audit Reports Issued

(Continuation)

Report	Report Title & Monetary Amount
IG-00-016	Procurement Module Testing of NASA's Integrated Financial Management Program
IG-00-017	General Controls at Johnson Space Center's Mission Control Center
IG-00-018	NASA Oversight of Contractor Exports of Controlled Technologies
IG-00-019	Johnson Space Center Exchange Use of Appropriated Funds for Exchange Activities
IG-00-020	Validating FY 1999 Performance Data to Be Reported Under the Government Performance Results Act (GPRA)
IG-00-021	Quality Control Review of Goodman & Company, LLP Audit of Old Dominion University Research Foundation for Fiscal Year Ended June 30, 1998
IG-00-022	Quality Control Review of Arthur Andersen LLP Audit of the NASA Financial Statements for Fiscal Year Ended September 30, 1999
IG-00-023	Quality Control Review of the H. Larry Jordan Review of Stennis Space Center Exchange Financial Statements for Fiscal Year Ended September 30, 1998
IG-00-024	UNIX Operating System Security and Integrity at Goddard
IG-00-025	Quality Control Review of the PricewaterhouseCoopers LLP Audit of Brandeis University for Fiscal Year Ended June 30, 1998
IG-00-026	Quality Control Review of the PricewaterhouseCoopers LLP Audit of Dartmouth College for Fiscal Year Ended June 30, 1998
IG-00-027	Verification of Payments to Biopreparat
IG-00-028	Safety Concerns With Kennedy Space Center's Payload Ground Operations
IG-00-029	X-34 Technology Demonstrator (*$7,000,000)
IG-00-030	Compliance With the National Environmental Policy Act
IG-00-031	Implementation of Security Software at Johnson Space Center

*Funds Put to Better Use.

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 which 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 DCAA on reports involving NASA activities, results of NASA actions on those reports, and significant reports that have not been completely resolved.

DCAA Audit Reports Issued

During the period, DCAA issued 291 audit reports (excluding pre-award contractor proposal evaluations) on contractors who do business with NASA. The results of these audits are shown in DCAA-provided figures in the following tables. DCAA also issued 148 reports on audits of NASA contractor proposals totaling $374 million, which identified cost exceptions totaling about $11.4 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.

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 reporting period. During this period, NASA management resolved 53 reports with $12,689,000 of questioned costs, and 30 reports with $207,622,000 of funds put to better use. NASA management sustained 52.2 percent of DCAA's questioned costs and 87.1 percent of the funds put to better use.

DCAA Audits with Questioned Costs

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made by beginning of period	**511**	**$246,339,000**
Issued during period	**35**	**$ 6,008,000**
Needing management decision during period	**546**	**$252,347,000**
Management decision made during period:	**53**	**$ 12,689,000**
Amounts agreed to by management		**$ 6,629,000**
Amounts not agreed to by management		**$ 6,060,000**
No management decision was made by end of period:	**493**	**$239,658,000**
No management decision prior to period and still unresolved at end of period	**473**	**$234,001,000**
Reports issued during reporting period and unresolved at end of period	**20**	**$ 5,657,000**

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	**122**	**$385,810,000**
Issued during period	**29**	**$ 50,143,000**
Needing management decision during period	**151**	**$435,953,000**
Management decision made during period:	**30**	**$207,622,000**
Amounts agreed to by management		**$180,894,000**
Amounts not agreed to by Management		**$ 26,728,000**
No management decision was made by end of period:	**121**	**$228,331,000**
No management decision prior to period and still unresolved at end of period	**92**	**$178,188,000**
Reports issued during reporting period and unresolved at end of period	**29**	**$ 50,143,000**

Significant Contract Audits

Forward Pricing Proposal/$26.6 million DCAA Assignment No. 3231-1998P21000004

The audit and negotiation of a $2 billion cost-plus-award fee/ incentive fee proposal for Production Buy 4 of reusable solid rocket motors resulted in $31 million of savings to the Government. During the evaluation, fact-finding, and negotiation activities, significant coordination between the NASA representatives and DCAA auditors took place. NASA technical evaluation of labor hours was combined with the DCAA audit of forward pricing rates, materials, vendor quotes, and other direct costs to develop the Government negotiation objective. An important aspect of this evaluation was the NASA invitation to and attendance by DCAA auditors at negotiation meetings.

Incurred Cost/$6.2 million ($860,000 NASA) DCAA Assignment No. 4901-1997P10150001

An audit of the California Institute of Technology (Caltech) final indirect cost rate proposal resulted in savings to the Government of $6.2 million, of which $860,000 will be saved on NASA contracts and grants. Major audit exceptions included (1) overstated depreciation expenses on observatory optical equipment and movable equipment; (2) non-capital rehabilitation expenses that should have been capitalized and depreciated; (3) improper allocation of operations and maintenance expenses to research; (4) unallowable costs for investment services, tuition remission for non-Caltech students, contributions, and civic organization membership dues; (5) misclassified student service administration expenses that were allocated to research; (6) reclassification and adjustments to Caltech's space survey; and (7) unreasonable early retirement option payouts. The auditors worked closely with the administrative contracting officer and provided support during a week of negotiations. As a result, the contractor agreed to most of the issues and the Government sustained over 86 percent of the audit exceptions.

Operations Audit/$4.7 million ($675,000 NASA) DCAA Assignment No. 4011-1998A10501002

As part of a comprehensive audit of Lockheed Martin Space Systems Company/Missiles & Space Operations (LMSSC/M&SO) (formerly Lockheed Martin Missile and Space), DCAA reviewed the economy, efficiency, and effectiveness of the contractor's facilities management operations. DCAA recommended that LMSSC/M&SO increase space utilization by pursuing opportunities to vacate or sublease leased buildings and to sell or close underused owned buildings. Our audit was conducted during the period March through August 1998.

DCAA conducted a follow-up audit during the period September 1999 through January 2000 in which DCAA determined that LMSSC/M&SO took actions based on the audit that will result in annual savings of $4.7 million. LMSSC-M&SO vacated 16 buildings through lease termination,

building and land sale or closure. NASA's portion of the cost avoidance was $675,000, representing 14.4 percent of the $4.7 million cost avoidance sustained.

Operations Audit/$2.7 million ($652,000 NASA) DCAA Assignment No. 4461-1999A10601001

An operations audit recommended that the contractor take action to reduce its office vacancy rate of 13 percent to an acceptable level. The contractor had not taken action to reduce the excess space that it had identified in an office utilization report. DCAA and DCMA jointly conducted perambulations in selected office areas to confirm the existence of the excess space. After issuance of our audit report, the contractor took action to consolidate its Southern California facilities and reduced its vacancy rate to 2 percent. By reducing the underutilized space, the contractor effectively saved $2.7 million, of which $652,000 was saved on NASA contracts.

Incurred Cost/$227,000 DCAA Assignment No. 6311-1999C10250735

An audit of the contractor's fiscal year 1997 incurred cost submission resulted in savings to NASA totaling $227,000. The audit questioned numerous expenses claimed by the contractor such as unallowable organization costs (FAR 31.205-27(a)(1), unallowable entertainment costs (FAR 31.205-14), unallocable year-end accruals (FAR 31.201-4) and consultant costs not supported by an identifiable work product (FAR 31.205-33(f)). In addition, the contractor excluded certain elements from the allocation base for general and administrative (G&A) costs thereby overstating the G&A rate charged to NASA contracts. The elements excluded by the contractor were unallowable overhead expenses and costs associated with an unincorporated joint venture. The exclusion of these elements caused NASA contracts to bear a disproportionate share of G&A costs. The contractor concurred with the audit determination.

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Safety and Mission Assurance

NASA began an Agency Safety Initiative (Initiative) with a goal of making the Agency the nation's leader in the safety and occupational health of its workforce and the safety of the products and services it provides. The Initiative's four Core Process Requirements are to promote and ensure safety for (1) the public, (2) astronauts and pilots, (3) employees on the ground, and (4) high-value equipment and property. Space exploration involves risk, including the risk of failure. Without risk, there can be little discovery, and discovery is NASA's principle mission. To maximize the likelihood of success, NASA must become an informed risk taker by identifying, understanding, and managing risk as part of all activities.

The Aerospace Safety Advisory Panel (Panel) 1998 Annual Report highlighted concerns with the potential effects on safety of workforce reductions and the continued transition of Space Shuttle functions to the Space Flight Operations Contract. The Panel concluded that although safety is well served for the present, the picture is not as clear for the future.

Audits and reviews performed by the NASA OIG and other organizations support our reporting of Safety and Mission Assurance as a significant area of management concern. An audit of NASA's Safety Program Management has identified issues that could affect Goddard's overall safety, and also its preparation for obtaining certification under the Department of Labor's Occupational Safety and Health Administration Voluntary Protection Program. We plan to evaluate the issues identified during this audit, particularly contractor safety, in greater detail from a NASA-wide standpoint in future audits.

PDD-63 calls for a national effort to assure the security of the nation's critical infrastructures such as telecommunications, transportation, and essential Government services. Increased automation and inter-linking of these infrastructures has created new vulnerabilities due to equipment failures, human error, weather, and physical and cyber attacks. Through PDD-63, the President intends that the United States take all necessary measures to swiftly eliminate any significant vulnerability to both physical and cyber attacks on the nation's critical infrastructures especially, its cyber systems.

As one of 20 agencies subject to PDD-63, NASA has prepared a draft Critical Infrastructure Protection Plan that establishes security requirements for all NASA critical infrastructures, including physical and information assets. Although we will initiate a review of the Agency's PDD-63 program in FY 2000, prior reviews have shown weaknesses in information asset protection. In the event its mission critical systems were subjected to disaster situations, we found that NASA was not prepared to invoke contingency procedures in a manner that would satisfy Agency processing requirements. Various organizations, including NASA, OMB, and NIST, require that mission critical systems have disaster recovery plans and capabilities in place.

Based upon tests in which some of NASA's mission-critical systems were successfully penetrated, the GAO recommended that NASA implement an effective Agencywide security program to include

improvements in five categories. Those categories include: assessing risks and evaluating needs, implementing policies and controls, monitoring compliance with policy and effectiveness of controls, providing computer security training, and coordinating responses to security incidents.

NASA also needs to assure that flight tests of launch vehicles, particularly experimental vehicles, are conducted in the safest manner, and that all precautions are taken. Our assessment of NASA's Flight Termination Systems (FTS) concluded that the majority of NASA's FTS do not provide adequate safeguards to prevent unauthorized command and inadvertent activation of NASA launch vehicles and do not comply with national policy. NASA should mitigate risk through the use of a secure FTS or choose alternatives based on thorough risk assessments.

OIG reviews have also identified software development and the delegation of quality control functions as conditions that either have or could contribute to problems with the success of major NASA programs. We found that software development problems contributed to a launch delay on the Chandra X-ray Observatory, the third of NASA's four "Great Observatories" intended to observe the universe in the four electromagnetic spectrum regions. The 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.

Numerous software development issues remain problematical for the ISS. For example, the OIG is assessing issues concerning the usability and effectiveness of the portable computer system, which is the primary command and control interface for the ISS crew members.

In consideration of our concerns, we believe Safety and Mission Assurance should be reported as a significant area of management concern.

International Space Station

Our reviews have found significant concerns related to the ISS cost, contingency planning, and the CRV. The ISS contracts continue to experience significant cost growth and the cost to operate the ISS after assembly is uncertain. In March 1999, Boeing, the prime contractor, announced the third major increase in reported overruns within 2 years, for a total increase of $708 million.

In April 1999, the GAO testified that the non-prime portion of the program's development budget increased from $8.5 billion in 1994 to $12.4 billion by April 1999. GAO also reported in August 1999 that NASA's $13 billion cost estimate to operate the ISS from 2005 to 2014 is uncertain because the estimate does not consider full cost accounting, end of mission costs, or the potential cost of Russia's being unable to fulfill its obligations.

Our recent report on *Space Station Contingency Planning for International Partners* disclosed that the plan did not contain cost and schedule impacts and did not clearly identify mitigation measures and primary

consequences of the contingencies. Further, the Program Office did not have a process that ensured the contingency plan was kept current, did not include some actions being taken to prevent further Russian delays, and did not address the Year 2000 date conversion problem. Until the Program contingency plan is complete, NASA cannot fully reduce ISS risks.

Another significant concern related to the ISS is that although three independent review groups have expressed concerns about human rating the CRV without operational testing, NASA has neither planned nor provided for this testing. While NASA plans to conduct an X-38 space flight test and other risk mitigation activities, our review indicates the criticality of the CRV to the safety of ISS crew members requires immediate contingency planning for CRV operational testing.

Based upon the substantial cost overruns and risk management concerns, we believe ISS should be a significant area of management concern.

Information Technology

Last year we recommended that NASA report the IT area as a material weakness. We continue to believe that IT should be reported as a material weakness due to concerns with security, and outsourcing.

Information Technology Security: Our activities continue to find a fragmented IT security program without clear lines of authority, inadequate policies and guidelines, and ineffective enforcement of existing policies and guidelines. We believe NASA's policy of having separate organizations to handle classified and unclassified IT security causes confusion, inhibits the implementation of a workable IT security program, and leads to duplication of effort, when better solutions are available. We are also concerned that having separate organizations to handle classified and unclassified IT security will contribute to an increase in security violations and compromises of automated information systems used to process classified information.

We remain concerned about fragmentation of the NASA's IT security mission area components. The division of responsibilities for IT security among multiple Centers leads to serious coordination problems and lack of effective oversight. While the Ames Research Center has primary responsibility for IT security, several functions are performed elsewhere. For example, Kennedy handles one component of communication security, while Headquarters performs all other communication security functions.

The number and severity of IT incidents has increased dramatically. While NASA has taken many positive steps to enhance computer security and its response to IT attacks, the Agency needs to take additional actions to fully address increasing threats, including delineation of NASA Automated Systems Incident Response Capability roles and responsibilities. As noted in our concern for safety and mission assurance, many of NASA's launch vehicles that require an FTS utilize a non-secure system. The non-secure FTS

does not provide adequate safeguards to prevent unauthorized command and inadvertent activation, and does not comply with national policy.

Although some improvements have been made in the IT security program, we believe significant improvement cannot be achieved under the current management model. We also believe the Agency will need to carefully consider and balance the potential benefits of outsourcing against serious disadvantages as it makes future IT decisions.

Procurement

Procurement continues to be a significant support process for all of NASA's Enterprises and its overall mission. NASA's procurement obligations accounted for over 87 percent of the Agency's total obligations in FY 1998, just as they have for the last 5 years. NASA procures over $12.7 billion in goods and services annually. In January 1999, the GAO identified NASA contract management as a major management challenge and program risk. The GAO stated, in part, that NASA lacks adequate systems and processes to oversee procurement activities and to produce accurate and reliable management information in a timely manner. NASA's procurement workload, combined with the significant reductions in procurement personnel, continues to challenge the remaining staff's ability to adequately administer contracts and implement new procurement initiatives.

As NASA places more reliance on contractors to administer programs, we continue to find problems in a variety of areas, such as leasing, noncompetitive procurements, subcontract management, and use of contractors for on-site support. NASA also faces risks as the Agency moves toward the greater use of electronic commerce. During FY 1998, NASA made over 113,600 credit card purchases, totaling $66 million. In addition, as it outsources various functions, particularly IT functions, NASA faces many challenges. While strategic processes and core oversight activities must remain in-house, other functions can be outsourced. Activities that may be outsourced include expert IT advice, specific applications, education, maintenance, aspects of software/physical security, and disaster recovery. Advantages of outsourcing include potentially lower costs and faster access to new technology. Outsourcing brings with it considerable risks unless the Agency carefully provides for establishing internal controls.

Given NASA's significant contract activity and its decreased ability to perform oversight, we consider procurement to be a significant area of management concern.

Fiscal Management

NASA has not successfully implemented IFMP due to contractor non-performance. The IFMP was intended to be a NASA-wide, fully integrated, transaction-driven financial management system intended to provide full-cost accounting and other budget information. Failure to implement the new system will result in continued reliance on outdated systems that do not efficiently and effectively provide the financial and management information that the Agency needs. Also, NASA will not be able to effectively implement full cost management as planned, and will instead incur substantial costs to maintain legacy systems that the new system would replace.

The Agency faces other obstacles in implementing full cost management, budgeting, and accounting. The objective of full costing is to establish the true mission costs of programs and activities, thereby enabling NASA managers and other users of financial statement information to make more reliable business decisions in performing critical work with fewer resources. On the basis that it is premature to redistribute such costs at this stage in the evolution of its full cost practices; NASA disagrees with our recommendations that it needs to develop a methodology for distributing Shuttle Program costs to benefiting programs. However, NASA prepared a recent draft "Interim Approach to Implementation of Full Cost Management, Budgeting and Accounting" stating, "FY 2000 activities will focus on ensuring that all Agency direct costs, including NASA direct labor costs, at the project level are rigorously and consistently captured and assigned to NASA projects." We agree, and our recommendations regarding accounting for Shuttle program costs are consistent with the draft interim approach document. OMB has similarly requested a costing methodology.

Other concerns with NASA's fiscal management include the need to (1) improve documentation of obligations including the timeliness of recording so that financial records are complete and current for purposes of preventing overobligation and ensuring fund availability for expenditures, (2) ensure that appropriated funds have been used for their intended purposes through matching disbursements to proper obligations, (3) perform proper cost analyses, (4) continue steps taken to strengthen internal controls to ensure compliance with Financial Management Manual requirements for timely debt collection and to measure this compliance through the establishment of performance metrics related to the debt collection process, and (5) improve oversight and management of NASA Exchange procedures.

Based upon our findings in those areas previously mentioned, we believe fiscal management should be reported as a significant area of concern.

Program and Project Management

NASA issued NPG 7120.5A, *NASA Program and Project Management Processes and Requirements*, to improve program and project management, but the majority of current NASA contracts are being administered under the previous NASA Management Instruction (NMI) guidance. Over the past several months the Agency has been transitioning to full implementation of the NPG.

Since NASA has an increased reliance on contractor support in monitoring contracts, we believe NPG 7120.5A should be revised to emphasize contractor performance monitoring and technology transfer and include specific requirements related to technical monitoring, communications, and contractor performance. Based on our FY 1998 review of new technology reporting, NPG 7120.5A should be revised to incorporate the requirements and responsibilities of program and project managers regarding new technology reporting.

NASA also needs to issue or revise other policies to support effective program management. For example, to effectively use EVM as a management tool, it should be an integrated part of program and project management. The NPG for Implementation of NEPA and Executive Order 12114, when issued will establish standard procedures for implementing NEPA and the Agency's overall environmental planning process. These processes and procedures are important for program and project management, but the NPG is yet to be issued. Also, the Agency plans to revise the NASA FAR Supplement (NFS) to include various risk management considerations and encompass safety, security (including IT security), health, export control, and environmental protection, within the acquisition process. These are important program and project management considerations, but the change will require several months to incorporate into the NFS and, thereafter, implement.

Contracts still being managed under the auspices of the NMI Program have project management issues that range from inadequate Contracted Advisory and Assistance Services to a lack of NASA oversight on its major programs and projects. Those issues were not attributable to contracts awarded under the new NPG. With regard to deficiencies identified under NMI managed programs, our office took a proactive approach in recommending corrective action. We reviewed the new NPG to ensure that it would reduce the occurrence or eliminate the problems that occurred under the old NMI.

Based upon our findings related to this area and until new policies are in effect, we believe that program and project management be reported as a significant area of management concern.

Launch Vehicles

NASA uses two types of launch vehicles, the ELV and the RLV. The ELV's do not carry people, and each vehicle can be used only once. There are various types of ELV's used by NASA, depending upon the mission requirements. The Commercial Space Act generally requires the Federal Government to acquire space transportation services from U.S. commercial providers. NASA depends upon commercial sector suppliers for the ELV.

We are reviewing NASA's management of the availability of small ELV's to ensure schedule milestones and cost effectiveness, particularly launches for NASA's Offices of Earth Science and Space Science "smaller, faster, better, cheaper" satellites. Some of these small ELV's have experienced technical problems, resulting in launch delays and cost increases when alternative launch capabilities had to be acquired. Since NASA acquires launch services commercially, the Agency does not maintain the same level of control as compared to in-house operations. Estimating costs and committing to scheduled launches are major challenges in this environment.

In contrast to ELV's, the RLV, currently the Shuttle, provides access to space using the same vehicle multiple times. NASA has several programs and projects ongoing for the design and development of RLV technology demonstrators (for example, X-33, X-34, and X-37) that seek to improve performance and lower the cost of space access. Current access costs significantly impact NASA's budget and the commercial growth of the aerospace sector.

Initially NASA's goal was to work with industry to develop the necessary technology so that the commercial sector could then build the new RLV. NASA is using a cooperative agreement for the X-33 program, a first for a major technology program. The work being performed under the current cooperative agreement is to build a demonstrator vehicle. Once the technologies are demonstrated, a full-scale RLV will be developed. NASA would be a customer for launch services rather than own and operate the vehicles. However, the technical and financial risks are still too high at this time to attract substantial industry investment in the development of the new RLV.

Moreover, a recent NASA in-house study concluded NASA does not have sufficient knowledge at this time to make a decision on a next-generation RLV. Since other programs, such as the Space Shuttle and ISS will be affected by decisions on the RLV, launch vehicles should be a significant area of concern.

Research and Technology Demonstration/Application

One of NASA's primary functions is to conduct research that reduces risk so that the industrial community can successfully commercialize new technology. The commercial technology process involves multiple stages. In the initial stages, NASA identifies promising new technologies. Through Agency projects, researchers conduct demonstrations to validate the new technology and establish its readiness for further application and commercial potential. In the next stages of the commercialization process, NASA works with industry, sometimes through partnerships, to further develop the technology and reduce risk. After risk is sufficiently reduced, industry is responsible for the remaining steps of the commercialization process.

Each NASA Enterprise is responsible for technology demonstration and the Commercial Technology Division, Office of Aerospace Technology, has Agencywide responsibility for commercialization. Technology demonstration projects must compete with other projects for scarce resources. Funding limits will restrict NASA's ability to perform technology development and commercialization activities. FY 2000 funding for commercial technology activities has been cut severely.

Because of these concerns, we recommend that research and technology demonstration/ application should be a significant area of concern.

International Agreements

Since its inception, NASA has entered into approximately 3,500 international agreements. These agreements span every NASA Enterprise and involve numerous programs and projects with the most notable being the ISS Program. NASA's international agreements also often provide for foreign nationals and representatives to have access to NASA facilities and information. NASA's Office of External Relations is responsible for determining the appropriateness and level of access. Inherent in a decision to grant foreign personnel access is the risk of sabotage or disclosure of information of military or economic importance.

NASA has not identified all export-controlled technologies related to its major programs and did not maintain a catalog of classifications for transfers of export-controlled technologies. Agency oversight of and training for personnel in the Export Control Program needed improvement. NASA needs a comprehensive export control identification, classification, and cataloging process to control all the Agency's export-controlled technologies to preclude the prospect of unknowingly exporting export-controlled technology, which could result in damage to NASA and the national security.

NASA NPG 1371.2, *Procedures and Guidelines for Processing Requests for Access to NASA by Foreign Nationals or Representatives,* provides standard procedures for timely and accurate processing of various types of foreign visits and other access requests. While helping NASA fulfill its responsibilities for facilitating visits that support U.S. national and international program interests, it also provides guidance in

screening visit requests to determine whether they conform to Agency and national policies. However, NASA personnel designated as sponsors of foreign national visitors should ensure that all applicable procedures are followed, especially those procedures related to access approval and to escorts and badging.

Our assessments of felonious intrusions of NASA's computer systems indicate that NASA is at risk for loss of sensitive technologies. NASA needs to improve systems administration, program configurations, and firewalls, as well as ensure the presence of a dedicated, skilled security staff. NASA's process of excessing computers also lends itself to the loss of sensitive technology. We have found and alerted management to the presence of controlled, proprietary information on computers deemed by the Agency to be ready for excess.

The Agency has taken steps to address these concerns. For instance, the NASA Administrator has requested the FBI to conduct surveys at each of NASA's principle field Centers to help assure that the Agency's counterintelligence and technology transfer postures are sufficient. Based upon those surveys, the FBI plans to make recommendations on how the Agency can strengthen its counterintelligence programs, ensure consistent high standards at all Centers, and link the programs with the intelligence and law enforcement communities.

The GAO conducted a review at the request of the House Science Committee to provide information on the U.S. Government's international science and technology agreements that support and encourage international cooperation in research and development. The GAO was asked to specifically identify at seven Federal agencies (1) the number of international science and technology agreements active during FY 1997, and (2) the number of these agreements that resulted in research projects or other activities. NASA was unable to easily provide the GAO with a total universe of its active agreements, but did identify those that were approved during FY's 1995 through 1997. Of those identified for NASA, 98 percent subsequently resulted in research projects or other research-related activities.

Based upon the large number of international agreements and substantial risks, we believe international agreements should be reported as a significant area of management concern.

Environmental Management

NASA management has been slow in negotiating cost sharing and cost recovery agreements for the JPL and Santa Susana Field. In reports issued in FY's 1997 and 1998, we recommended that NASA pursue these negotiations. While negotiations have begun for JPL, they have progressed slowly. Negotiations have not begun for the Santa Susana. According to management, NASA has only limited legal grounds to require other Government agencies to negotiate cost sharing agreements for Resource Conservation and Recovery Act (RCRA) sites. Management also stated that a recent DCAA opinion that the contractor's "practice of allocating environmental cleanup costs as part of the general and administration expense pool is in compliance with applicable Cost Accounting Standards." We disagree with management's assessment.

The Comprehensive Environmental Response, Compensation, and Liability Act and RCRA laws and regulations provide bases for negotiating fair cost sharing agreements between Government agencies and have been used in such negotiations. DCAA's decision does not impact two Government agencies negotiating a fair cost sharing agreement. NASA should pursue owners and operators and negotiating cost sharing and/or cost recovery agreements. NASA is paying millions of dollars to clean up its facilities that were often contaminated by other Government agencies and/or contractors.

Another environmental concern relates to NASA's decommissioning of the Plum Brook Reactor Facility in Sandusky, Ohio. In 1997 we recommended that NASA begin the process of decommissioning the facility, thereby saving millions of dollars in future maintenance and disposal costs. NASA agreed and has made progress on the decommissioning. The Agency submitted a decommissioning plan to the Nuclear Regulatory Commission on December 20, 1999, to terminate the license for the Reactor Facility at the end of 1999, and to complete the decommissioning activities by the end of 2007. The decommissioning is a sensitive issue, and the estimated costs (over $100 million) are significant.

Last year, NASA reported equitable environmental cost sharing as a significant area of concern. We recommend that environmental cost sharing and the Reactor Facility decommissioning issues be combined as a significant area of concern and reported under Environmental Management.

14 CFR 1206	Availability of Agency Records to Members of Public (FOIA Regulations) Amend 1206.610 to delete para. (e)(4)
14 CFR Part 1204	Conduct or Trespass, and Inspection of Persons and Personal Subpart – 10 rev. Effects
45 CFR Parts 160 through 166	Standards of Privacy for Individually Identifiable Health Information
HQPG 3713.3	NASA HQ Workplace ADR Program
NASA FAR Supplement 1804.470-2 1804.470-3 1852.204-76	Proposed Changes on Information Technology
NHB 1101.3	Code C Reorganization
NHB 1101.3 Change 63	Code E Organizational Change
NHB 1101.3 Change 60	Code I Organizational Change
NHB 1101.3 Change 61	GRC Organizational Change
NHB 1101.3 Change 62	Code H Organizational Change
NPD 1090 (Rev.)	NASA Communicate Knowledge Process Policy for Programs and Projects
NPD 1200.1A (New)	Internal Management Controls and Audit Liaison and Followup
NPD 1383.1A	Release and Management of Audiovisual Products and Services
NPD 1387.1E	NASA Exhibits Program
NPD 1387.2F	Use, Control, and Disposition of Lunar Materials for Public and Educational Purposes
NPD 1600.2B	NASA Security Policy
NPD 2190	Export Control Program Policy (Draft)
NPD 4300	Use of Space Shuttle Materials as Mementos
NPD 5000.2A	Uniform Methodology for Determination of Small Disadvantaged Subcontracting Goals
NPD 5101.32A	Procurement

Directives Reviewed by the OIG

NPD 7120.4B	Program/Project Management (Originator response to comments)
NPD 7620.1F	Official Names for Major NASA Projects
NPD 8010.2C	Use of the Metric System of Measurement in NASA Program
NPD 8800.16	NASA Environmental Management
NPD 8870	NASA Policy for Disposition for the Flight and Disposal in Space of Human or Animal Remains
NPD 8900.3E	Astronaut Medical and Dental Observation Study and Care Program
NPD 9050 (Draft 1)	Administrator's Fund
NPD 9501.1G	NASA Contractor Financial Management Reporting System
NPG 1000 (Draft 2)	NASA Organization
NPG 1400.1B	NASA Directives System Procedures and Guidelines
NPG 1450.10C	Correspondence Procedures and Guidelines (Final version)
NPG 1810	Health Services for International Travel or Assignment
NPG 3792.1A	Plan for a Drug-Free Workplace
NPG 5101.33	Procurement Guidance
NPG 7120.5B	Management Processes and Requirements
NPG 8621 Draft 1 as of February 25, 2000	Mishap Reporting, Investigating and Record Keeping
NPG 8715	Emergency Preparedness Plan
NPG 8735 (Draft 2)	Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts
NPG 8831.2C	Facilities Maintenance Management
NPG 8840	Implementing the National Environmental Policy Act and EO 12114
NPG 9050 (Draft 2)	Administrator's Fund

I. Introduction

The Government Performance and Results Act (Results Act), P.L. 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.[7] The Results Act requires each executive agency to develop and prepare:

1. Multi-year strategic plans.
2. Annual performance plans.
3. Annual performance reports.

The 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.[8]

The NASA 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.[9]

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.

[7] 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.
[8] Congressional request made by the Honorable Richard Armey, Daniel Burton, Stephen Horn, and Peter Sessions.
[9] NASA's processes to assess program performance are listed in Appendix 2 of this plan.

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 submitted our Results Act Review Plan in the semiannual report for the period ending March 31, 1999. We will update the plan and report accomplishments annually as of March 31.

III. Results Act Review Plan Strategy, Goals, Methodology, and Accomplishments

Strategy

The OIG will 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 and Accomplishments

The following table details the activities, methodology, and accomplishments in conducting our Results Act Review.

Activities, Methodology, and Accomplishments

Activity	Methodology	Accomplishments March 31, 1999, through March 31, 2000
Include NASA's Results Act requirements in the OIG's annual work planning process	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.	The OIG considers the Agency's strategic plan and annual performance plan in planning new assignments and in setting objectives for each review. For FY 2000, the OIG has organized the annual plan by the Agency's Top Ten Management Challenges, which will ensure coverage of each area. For the FY 2001 planning process we are realigning the top ten areas to correspond to changing challenges facing NASA.
Incorporate the review of the Agency's performance measures into work assignments	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).	We consider the need for coverage of performance measures in each audit and have reviewed performance measures in selected assignments. For example, we reviewed the strategic plans and metrics for the X-34 Program. Our FY 2000 report on this program showed that NASA had not adequately performed strategic planning for the Space Transportation mission and needed to develop technology metrics. We will continue to evaluate performance measures in other assignments and brief the results of our evaluations at the conclusion of each survey and audit.
Conduct review of data sources and information collection for performance reporting	For selected audits and reviews, we will assess controls over databases and associated performance measurement data relating to Agency programs.	In FY 1999 we reviewed NASA's verification and validation of selected data sources, information collection and accounting systems that support the Agency's strategic and performance plans and performance reports. We recommended that NASA verify and validate data and supporting information before they are used by Agency managers to assess progress, and before the data are included in the annual Performance Report. Management concurred and has initiated corrective actions. In FY 2000, we validated NASA's FY 1999 performance data to be reported under the Results Act and found that the reported performance on 22 percent of the performance targets examined was not fully reliable because the data reviewed did not accurately support the results being described. We recommended that NASA (1) ensure that all targets are clear, specific, and measurable; and (2) establish a

(Continued)

Activities, Methodology, and Accomplishments (continuation)

Activity	Methodology	Accomplishments March 31, 1999, through March 31, 2000
		policy to validate and certify supporting data and final results before inclusion in the Agency's annual performance report.
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	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.	We conducted special outreach initiatives with NASA management in the areas of security, procurement, and information technology. In the financial management area, we worked jointly with NASA management on the Security and Internal Controls Working Group to ensure proper controls will be established in the Agency's Integrated Financial Management Information System.
Coordinate OIG review of performance measures with independent public accountant's review of performance measures associated with the Agency financial statement audit	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 accountant's verification and validation of performance measures included in the NASA Accountability Report. We will coordinate our review with the independent public accountant, Arthur Andersen, to avoid duplication of effort.	We reviewed NASA's efforts to develop and use performance measures for determining progress toward achieving the performance goals and program outcomes in the Agency's performance plans and reports. We recommended NASA performs interim progress tracking and takes corrective action in areas not achieving satisfactory progress. Management concurred with the recommendations. Arthur Andersen verified the performance measures included in the Agency's Accountability Report to the source documents provided by NASA, and did not report any discrepancies based upon this review.
Review NASA technology planning and performance measures	We will conduct an in-depth review of NASA's 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.	OIG Aerospace Technologists assisted in the development of the OIG's Technology Oversight Project, examined the Triana mission's science efforts, and provided technical insight and advice to auditors, inspectors, and criminal investigators. We also reviewed NASA's control of Export-Controlled Technologies and made recommendations for improving the identification, classification, and cataloging of these technologies. Management concurred with our recommendations. Additionally, we completed a review of Contractor Control of Sensitive Technologies and found that NASA lacks assurance that contractor export activities are performed in accordance with applicable laws and regulations. We made recommendations to improve NASA control and oversight of contractor technology export activities.

(Continued)

Activities, Methodology, and Accomplishments (continuation)

Activity	Methodology	Accomplishments March 31, 1999, through March 31, 2000
Monitor the Integrated Financial Management Project and Full Cost Accounting	We will continue our coverage of these processes through various reviews and through participating with Agency management in the process-related working groups.	Our report on Full-Cost Implementation recommended that NASA develop and use a methodology for distributing the costs of the Space Shuttle Program, as well as service-oriented programs, to programs that benefit from the services. Management disagreed with the recommendations. In December we referred this issue to the Audit Resolution Official for a decision. We also reported on NASA's implementation of the Integrated Financial Management Project (IFMP). We recommended that NASA take steps to protect its interests, including issuance of a cure notice to the contractor, and receive adequate consideration due to the contractor's nonperformance. Management agreed and has initiated corrective actions. At NASA's direction, the IFMP contractor, KPMG, stopped work on March 10, 2000. NASA plans to implement and integrate the remaining IFMP modules on its own. We will continue to monitor NASA's work on this project.
Include ISO 9001 Certification Initiative in appropriate reviews	We will ensure that our reviews involving the Agency's quality assurance initiatives encompass the status of ISO 9001 certification.	NASA Headquarters and all NASA Centers have been successfully certified as ISO 9001 compliant. The OIG appointed an ISO 9001 coordinator to monitor NASA's continuing efforts to maintain their quality programs.
Monitor activities related to Presidential Decision Directive (PDD-63), which mandates the strengthening of the nation's defenses against emerging, unconventional threats to the United States	The OIG will participate as an active member of the Critical Infrastructure Protection Team (CIPT) to help the Agency to 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 infrastructures.	The OIG provided a representative to NASA's CIPT and participated in the development of the Agency's plan. The OIG reviewed and commented on the plan and related Agency policies and guidelines. In addition, the NASA OIG briefed members of the Federal Audit Executive Council on a proposed "model role" for the IG community. Based upon that briefing, we received support from the PCIE for establishing an initiative on critical infrastructure assurance. The NASA OIG is leading and will consolidate the results of the PCIE Critical Infrastructure Assurance initiative. Over 20 Federal agencies are participating in this 4-phase project. Completion of Phase I of the initiative is scheduled for September 2000.

(Continued)

Activities, Methodology, and Accomplishments (continuation)

Activity	Methodology	Accomplishments March 31, 1999, through March 31, 2000
Monitor the Agency's response to the OIG's annual top ten management challenges	We will incorporate follow-up activities into the annual planning process. We will organize the yearly OIG Federal Managers' Financial Integrity Act submission in terms of the top ten challenges. We will request formal responses from the Agency on addressing these issues.	The FY 2000 Annual Plan is organized by the top ten management challenges. On September 14, 1999, we submitted our annual identification of significant internal control weaknesses in terms of the top ten list.

(Appendix 1)
Agencywide Initiatives and Presidential Decision Directive 63

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

1. **Integrated Financial Management Project**. 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 non-integrated 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 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 dialogue 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. 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.[10] 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.

[10] The 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.

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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 which were questioned by auditors and which 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 which management has committed to achieve as the result of investigations during the reporting period; (2) recoveries where 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.

† These definitions are derived from P.L . 100-504, The Inspector General Act Amendments of 1988.

Glossary

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.

Glossary

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 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 grantee; (5) avoidance of unnecessary expenditures noted in preaward reviews of contract or grant agreements; or (6) any other savings which 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 OIG because OIG found that, at the time of the audit, such cost is not supported by adequate documentation.

Acronyms

AACB	Aeronautics and Astronautics Coordinating Board
AFO	Audit Followup Officer
AFOSI	Air Force Office of Special Investigations
ASAP	Aerospace Safety Advisory Panel
AUSA	Assistant United States Attorney
CCC	Columbia Communications Corporation
CCD	Computer Crimes Division
CDG	Career Development Group
CFO	Chief Financial Officer
CID	Criminal Investigations Division
CIO	Chief Information Officer
CIPT	Critical Infrastructure Protection Team
CLCS	Checkout and Launch Control Systems
COMSEC	Communications Security
COTR	Contracting Officer's Technical Representative
CRV	Crew Return Vehicle
DCAA	Defense Contract Audit Administration
DCIS	Defense Criminal Investigative
DCMA	Defense Contract Management Agency
DoD	Department of Defense
ECIE	Executive Council for Integrity and Efficiency
ELV	Expendable Launch Vehicle
EPA	Environmental Protection Agency
EVM	Earned Value Management
FAEC	Federal Audit Executive Council
FAIR	Federal Activities Inventory Reform
FAR	Federal Acquisition Regulations
FARA	Federal Acquisition Reform Act
FASA	Federal Acquisition Streamlining Act
FBI	Federal Bureau of Investigation
FOIA	Freedom of Information Act
FTS	Flight Termination System
FY	Fiscal Year
G&A	General and Administrative
GAO	General Accounting Office
GPRA	Government Performance and Results Act
HIPAA	Health Insurance Portability and Accountability Act

Acronyms

IFMP	Integrated Financial Management Project
IPA	Intergovernmental Personnel Act
ISS	International Space Station
IT	Information Technology
LMSSC/M&SO	Lockheed Martin Space Systems Company/Missiles and Space Operations
MUA's	Materials Usage Agreements
NASA	National Aeronautics and Space Administration
NCIS	Naval Criminal Investigative Service
NEPA	National Environmental Policy Act
NFS	NASA FAR Supplement
NIST	National Institute of Standards and Technology
NMI	NASA Management Instruction
NPD	NASA Policy Directive
NPG	NASA Policy Guidance
NTTC	National Technology Transfer Center
O&C	Operations and Checkout
OCI	Office of Criminal Investigations
OGC	Office of General Counsel
OMB	Office of Management and Budget
PBC	Performance-based Contracting
PCIE	President's Council on Integrity and Efficiency
PCS	Portable Computer System
PDD	Presidential Decision Directive
PGOC	Payload Ground Operations Contractor
PKI	Public Key Infrastructure
P.L.	Public Law
PMI	Presidential Management Intern
RCRA	Resource Conservation and Recovery Act
RLV	Reusable Launch Vehicle
RSA	Russian Space Agency
SBIR	Small Business Innovation Research
SPI	Single Process Initiative
SSP	Space Shuttle Program
SSPF	Space Station Processing Facility
STTR	Small Business Technology Transfer
U.S.	United States
U.S.C.	United States Code