The Office of Inspector General (OIG) values your comments and recommendations about the OIG and its mission. If you have questions or want further information about the OIG or its mission, you may contact the following individuals:

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Reporting Requirements

The Inspector General Act of 1978, as amended, specifies reporting requirements for semiannual reports. The requirements are listed below and cross-referenced to this report.

IG Act Citation	Requirement	Page(s)
Section 4(a)(2)	Review of Legislation and Regulations	75-83 and Appendix VI
Section 5(a)(1)	Significant Problems, Abuses, and Deficiencies	17-27 and 55-57 and 65-69
Section 5(a)(2)	Recommendations for Corrective Actions	17-27 and 55-57 and 65-69
Section 5(a)(3)	Prior Recommendations Yet to Be Implemented	37-56
Section 5(a)(4)	Matters Referred to Prosecutive Authorities	Appendix I
Sections 5(a)(5) and 6(b)(2)	Summary of Refusals to Provide Information	None
Section 5(a)(6)	List of OIG Audit Reports	Appendix II
Section 5(a)(7)	Summary of Significant Audit Reports	17-27
Section 5(a)(8)	Table—Questioned Costs	29
Section 5(a)(9)	Table—Funds Be Put to Better Use	29
Section 5(a)(10)	Summary of Prior, Unresolved Audit Reports	31-35
Section 5(a)(11)	Significant Revised Management Decisions	30
Section 5(a)(12)	Significant Management Decisions With Which the Inspector General Disagreed	30

Debt Collection

The Senate Report accompanying the supplemental Appropriations and Rescissions Act of 1980 (P.L. [Public Law] 96-304) requires Inspectors General to report amounts due the agency, and amounts that are overdue and written off as uncollectible.

The Financial Management Division provides this data each November for the previous fiscal year. For the period ended September 30, 1999, the receivables due from the public totaled $4,508,000, of which $2,002,311 is delinquent. The amount written off as uncollectible for the period October 1, 1998, through September 30, 1999, was $21,950.

As we begin our fiscal year 2001 odyssey, the Office of Inspector General continues to direct its planning and resources toward major NASA programs and activities that we believe present the greatest challenges to Agency management. Those areas are identified as the Top Ten Management Challenges, and include: safety and mission assurance, International Space Station, information technology, procurement, fiscal management, program and project management, launch vehicles, technology development, international agreements, and environmental management. Significant areas of concern during this period continue to include safety and mission assurance, information technology, and procurement.

For example, although the stated number one core value at NASA remains safety, during this period an audit of contract safety requirements at two Centers disclosed that a majority of contracts reviewed had not applied existing basic safety provisions. Senior NASA management has subsequently reinforced these requirements.

NASA relies heavily on information systems to support its mission-critical activities, including Shuttle launch processing, mission control, and satellite operations. We have completed several audits that identified vulnerabilities inherent in these systems as well as the absence of security plans for many of the Agency's most important systems. Other reviews in this area identified that disaster recovery and contingency planning was insufficient and physical and communications security could be improved. Inspection teams found buildings and rooms housing high-value computer and telecommunications equipment were not secure and that NASA needed to consider upgrade alternatives for secure communications links to the Space Station. Spot checks continue to find sensitive user data and copyrighted software on transferred or excessed hard drives.

We continue to strengthen our computer crimes investigations capabilities and apprehend those who illegally access NASA's computer systems. The Computer Crimes Division of the Office of Criminal Investigations works closely with NASA officials and with other law enforcement agencies to respond to and investigate cyber attacks. When suspected perpetrators of an attack on a NASA information technology system are prosecuted by the Department of Justice or local prosecutors, we publicize the convictions. Publicizing the prosecution serves as a deterrent to potential wrongdoers by emphasizing the serious nature of the infraction and the consequences for those whom the law prosecutes. A recent *SecurityPortal.com*[1] article echoed this sentiment by suggesting that private sector security professionals study the Computer Crimes Division program to gain insight into effective means in combating computer crime, including prosecuting the offender and publicizing the outcome.

[1]*Security Portal.com* posted "NASA Takes on Computer Crime," by Ronald Mendell, on September 19, 2000.

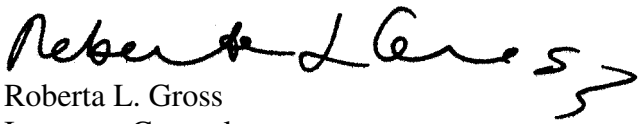
The Office of Audits and the Office of Inspections, Administrative Investigations, and Assessments refer any suspected information technology-related criminal activities, including cyber attacks identified during audits and inspections, to the Computer Crimes Division. Additionally, the Computer Crimes Division may refer potential information technology vulnerabilities to the Office of Audits and/or the Office of Inspections, Administrative Investigations, and Assessments.

My office continues to focus significant investigative resources on procurement issues, since NASA spends a significant portion of its budget on procurement. Our work has led to good results for the American public. For example, a NASA contractor was fined $1,638,000, and 2 of its corporate officers were incarcerated, fined, and/or received other penalties for falsifying test reports on aerospace hardware over a 16-year period. Also, a NASA contractor agreed to compensate the Government $415,000 for improperly billing the Government for subcontract costs.

I had several opportunities during this period to testify before or otherwise recommend legislation to the Congress on: reducing conflicts of interest and ethics violations of Intergovernmental Personnel Act detailees; attracting and maintaining a skilled workforce, especially in the information technology area; and recommending a change to Office of Personnel Management guidelines which would allow us to meet our challenges in hiring information technology auditors and criminal investigators.

The issues previously highlighted are just a sampling of our work contained in this report for the period April 1, 2000, through September 30, 2000. As we look to the first 6 months of the new fiscal year, my office will continue to focus its resources on those areas identified as management challenges for the Agency.

I look forward to working with the Administrator and the Agency to assure successful and cost effective aerospace, aeronautics-space technology, earth science, and space science programs.



Roberta L. Gross
Inspector General

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Appendices

Photographs:
Cover: Digital artist's concept shows the International Space Station after all assembly is completed.

Page 12: Workers at Launch Complex 17B on Cape Canaveral Air Station get one final look at the Mars Pathfinder before it is sealed inside a protective payload fairing for flight. (KSC-96PC-1315)

Page 16: The Cassini spacecraft is on view for the media in the Payload Hazardous Servicing Facility at Kennedy Space Center, Florida. (KSC-97PC-1273)

Page 28: The Mars Surveyor '98 Climate Orbiter, which is entering the final stages of testing this summer at Lockheed Martin Astronautics, Denver, CO, is shown here during acoustic tests that simulate launch conditions. (98-H-199)

Page 36: In the Payload Hazardous Servicing Facility, workers remove the Stardust spacecraft's solar panels for testing. (KSC-98PC-1727)

Page 58: A clear sky is the perfect setting behind Space Shuttle *Endeavor* as it hurtles into space. (KSC-00PP-0223)

Page 60: Twin columns of flame flow from the solid rocket boosters, lighting the billows of steam behind them, as Space Shuttle *Endeavor* roars into space on mission STS-99. (KSC-OOPP-0228)

Page 64: Astronaut Jeffrey N. Williams, mission specialist, appears suspended over Earth in this photograph documenting part of the 6-hour, 44-minute space walk he shared with astronaut James S. Voss and which began on May 21 and ended on May 22, 2000. (STS101-724-075)

Page 70: After tower rollback just before dawn on Launch Pad 36A, Cape Canaveral air Force Station, NASA's Tracking and Data Relay Satellite sits bathed in spotlights before liftoff atop an Atlas IIA/Centaur rocked. (KSC-OOPP-0822)

Page 74: Inside the Vehicle Assembly Building, Space Shuttle *Atlantis* stands ready for rollout to Launch Pad 39A. (KSC-OOPP-0404)

Page 84: After rollback of the rotating Service Structure at Launch Pad 39A, Space Shuttle *Atlantis* awaits a fourth attempt on mission STS-101. (KSC-OOPP-0635)

Appendix 1: In the Vehicle Assembly Building, both solid rocket boosters are shown on the mobile launcher platform as part of the stack for *Discovery* and Shuttle mission STS-92. (KSC-OOPP-0861)

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 was $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 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 five Strategic Enterprises:

- Space Science
- Earth Science
- Human Exploration and Development of Space
- Biological and Physical Research
- Aerospace Technology

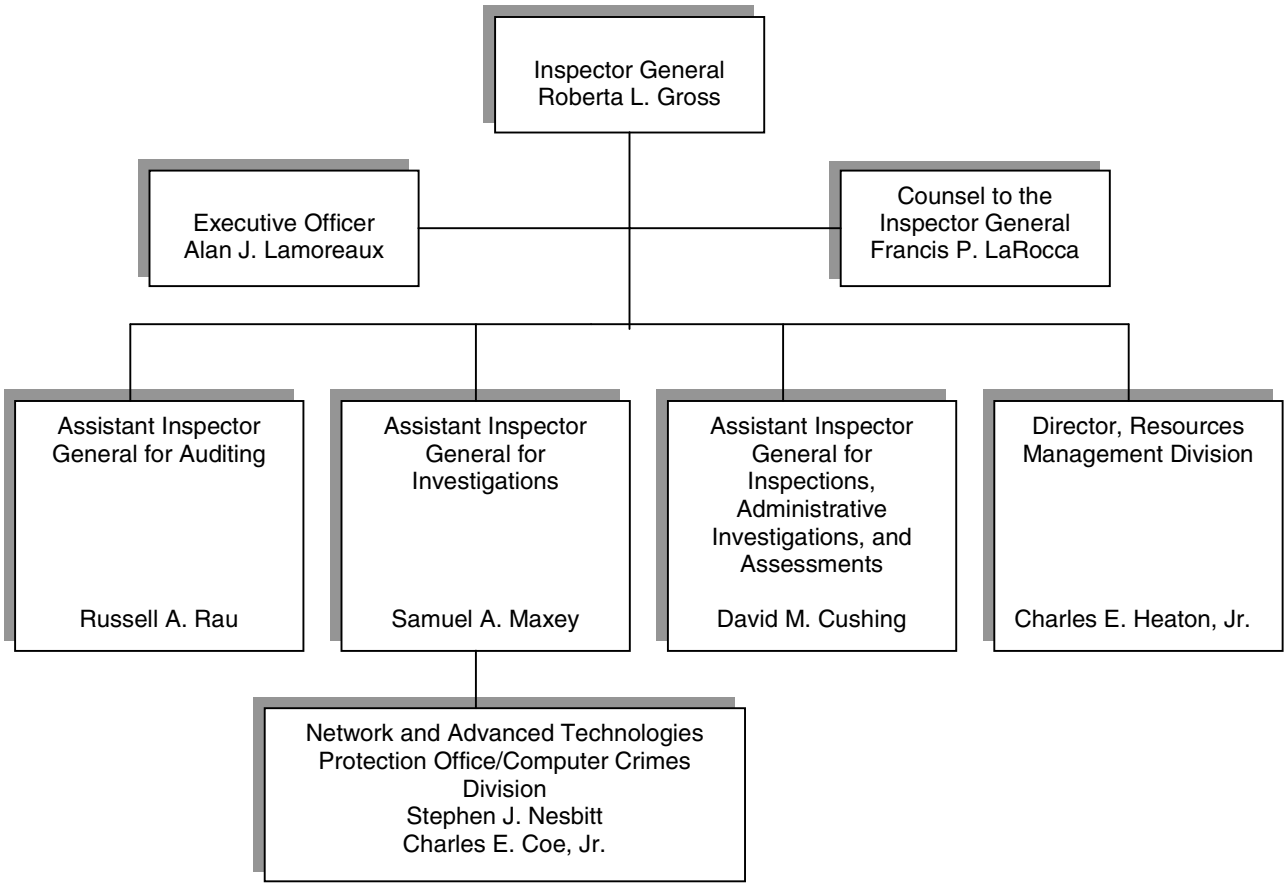
The Office of Inspector General

The Office of Inspector General 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 safety, procurement, information technology (IT) security, 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 and coordinates outreach activities.

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 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 concerns. 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 crime, 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, programs, and operations to determine whether resources are effectively managed and applied toward accomplishing NASA's missions. Other IAIA projects include special reviews of specific management issues and plans. The IAIA staff also conducts administrative investigations.[2] These investigations include misuse of Government equipment and other resources, violations of the Standards of Conduct, and other forms of misconduct.

The IAIA staff provides technical expertise in various specialties such as procurement, information technology security, personnel, and aerospace technology to OIG auditors, attorneys, and other staff. For instance, IAIA staff continued its support of the Office of

[2] Inquiries involving non-criminal allegations of administrative wrongdoing.

Criminal Investigations by partnering with special agents in conducting cases.

The IAIA office continues its focus on outreach and education activities by managing the OIG Web site; overseeing production and distribution of several key OIG publications, such as the Semiannual Report to Congress and the *NASA OIG Review* newsletter; and contributing to OIG outreach initiatives, such as the OIG contract fraud program.

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. Incidents of computer intrusion are increasing. The Computer Crimes Division (CCD) not only detects computer intrusions, but also works with the Agency to assist it in protecting the integrity and enhancing the security of NASA's IT systems.

Counsel to the Inspector General

The Counsel to the Inspector General is the central official for reviewing and coordinating 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 manages special projects and is the single point of contact for OIG congressional relations and outreach to external entities.

Safety and Mission Assurance

The NASA Administrator has stated that the Agency's number one core value is safety. NASA's Agency Safety Initiative established a goal to make 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 principal 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.

In April 1999, NASA took action to ensure its contractor workforce is supportive of and accountable for safety by establishing risk-based acquisition management as a NASA procurement initiative. Risk-based acquisition management applies vigorous risk management to programs and projects to reduce the likelihood and severity of impact from unforeseen events. A key element of the initiative includes revising the NASA Federal Acquisition Regulation (FAR) Supplement to incorporate risk management, including safety and security considerations, as the core concern of all contracting actions excluding the purchase of commercial off-the-shelf items.

Taking steps to update its policy guidance regarding contractor safety, NASA management issued Procurement Notice 97-46, "Risk Management" (PN 97-46). This procurement notice emphasizes consideration of risk management, including safety, security (including IT security), health, export control, and damage to the environment, within the acquisition process for new contracts.

The OIG has several safety and mission assurance audits, both ongoing and completed. During this period, we completed an audit of contract safety requirements at the Kennedy Space Center (Kennedy) and Marshall Space Flight Center (Marshall). Although this audit indicates that NASA's risk-based acquisition management initiative is a positive step toward ensuring the Agency's contractor workforce is supportive of and accountable for safety, 15 of the 25 contracts reviewed had not applied existing basic safety provisions such as: required contract safety clauses, contractor safety plans at contract award, and Center safety office involvement in the procurement process.

In response to our findings, Kennedy and Marshall management are: (1) identifying and determining whether all open contracts that involve potentially hazardous operations or exceed $1 million in value have the required safety clauses and contractor safety plans; (2) determining either the cost-effectiveness of modifying contracts or assessing the risk of not modifying those

contracts, and subsequently making the modifications deemed cost-effective and necessary; and (3) obtaining assistance from the Center safety office in performing an appropriate level (based on assessed risk) of contractor surveillance for each current applicable contract.

The Associate Administrator for Procurement reinforced the need to correct the deficiencies identified by the audit in a September 19, 2000, memorandum to all Centers. The memorandum stated, to enhance the probability of mission success without compromising safety, NASA needs to ensure Agencywide application of risk management principles to existing contracts as well as new contracts. To help accomplish this goal, the Associate Administrator directed the procurement officers for all NASA Centers to implement the same actions that Kennedy and Marshall are currently undertaking. In addition, NASA management revised NASA FAR Supplement 1816.405-274 (c)(1) to require that the award fee technical factor, if used, must include consideration for risk management (including mission success, safety, security, health, export control, and damage to the environment, as appropriate). Procurement officers were also requested to review this new award fee provision for the possibility of incorporating appropriate risk management considerations into existing as well as new contracts, where applicable.

The actions initiated in response to our audit demonstrate NASA management's commitment to safety and the incorporation of the principles of risk management to all NASA contracts.

The OIG conducted an inspection of the International Space Station's (Space Station) Portable Computer System (PCS) and Data Display Process. The PCS is the crew's primary interface for command and control of the Space Station. We are concerned with the PCS and the accuracy of PCS displays. We believe improvements are needed to enhance PCS usability including: eliminating erroneous information, making application commands consistent, and reducing cumbersome system navigation. The OIG also found that the Space Station Program does not have a coordinated, well-defined process for software engineering and software management. NASA responded that the report addressed issues and management practices that had been the subject of continued and proactive management and technical attention over the last several years, and that the Space Station Program Office had been diligent in resolving problems and addressing PCS issues.

Information Security

NASA relies heavily on information systems to support its mission-critical activities including shuttle launch processing, mission control, and satellite operations. NASA's systems represent an attractive target for computer hackers and other intruders desiring to access or damage NASA information. Accordingly, maintaining a secure computing environment is essential to the accomplishment of NASA's critical missions.

Host-Based Security — A computer network interconnects many computer processors called hosts. Each host is capable of supplying computer services to network users. Host-based security is a common model for computer security whereby the security of each host machine is implemented separately.

The OIG Information Assurance Directorate within the Office of Audits has completed several audits of host operating system security in selected NASA mission-related systems. Similar audits of operating system and data base security are currently being conducted. These audits focus on security and integrity controls to help protect NASA systems, data, and information from unauthorized access from within NASA as well as from intruders who are successful in circumventing network and perimeter controls.

The host security audits identified vulnerabilities that increase the probability that an intruder could access NASA system and application software, data, and information if network and perimeter controls are successfully circumvented. Examples of such vulnerabilities include inadequate:

- Security monitoring to identify that an unauthorized user is attempting to access or has obtained access.
- Password management.
- Protection of critical system directories and files.
- Implementation of vendor-supplied security options.
- Control over powerful system capabilities that could allow a user to bypass security and auditing controls.

Information Security Planning — In FY 2000, an OIG audit identified weaknesses in NASA's IT security planning efforts. We found that NASA did not have security plans for many of its special management attention (SMA) systems[3] and many of its computers that host publicly accessible Web sites. In fact, major elements of one of NASA's five major IT investments did not have security plans, contingency plans, or risk assessments. Where security plans were in place, NASA did not adequately address the security planning requirements of Office of Management and Budget Circular (OMB) No. A-130, "Management of Federal Information Resources," February 8, 1996. Common problems involved lack of: information on system rules of behavior,[4] initial and periodic training, personnel controls, identifying and reporting security incidents, continuity of service, technical security, and system interconnection.[5] These deficiencies have reduced the effectiveness of NASA's IT security program and increased

[3] "Special management attention" is a NASA term for information that is considered to be the most important to NASA to accomplish its mission. Increased oversight of these systems is required due to the risk and magnitude of harm that would result from the loss, misuse, unauthorized access to or modification of the data in a system.
[4] Refers to the responsibilities of all persons who have access to a system.
[5] Refers to how the information technology systems are connected to each other.

security risks to many of NASA's SMA IT systems and other IT resources. The increased risks due to the failure to comply with Federal IT security requirements leave NASA vulnerable to security violations, both internal and external. NASA plans to have all security plans for SMA systems in place by September 30, 2000. We will confirm the status of this issue in subsequent follow-up work.

Continuity of Operations — The OIG has also conducted several audits of disaster recovery and contingency planning for mission-related systems. Generally, the audits concluded that the systems did not have sufficient plans or capabilities to resume operations in the event of a disaster. The inadequate or missing elements included provisions for extended backup, disaster recovery testing, risk assessments, training of key personnel, and off-site storage. Inadequate disaster recovery planning leaves NASA's mission-critical systems susceptible to internal or external threats including natural disasters and hostile attacks.

In a separate report, we recommended that the NASA Chief Information Officer (CIO) conduct an Agencywide assessment of this problem. The CIO concurred and directed the Centers to perform self-assessments of their SMA IT systems by December 31, 2000. The CIO will also ensure that corrective actions are taken for any significant deficiencies identified.

Communications Security — Communications security is defined as those measures and controls taken to deny unauthorized persons information derived from telecommunications and ensure authenticity of such telecommunications. Communications security includes security measures designed to protect the integrity and transmission of information.

An inspection of the International Space Station Command and Control Communications Security found that NASA has not fully considered all possible upgrade alternatives to the current Space Station communications uplink[6] encryption algorithm. Also, the options NASA currently has considered address upgrades to Space Station encryption technology, but do not automatically provide an acceptable authentication capability. Without a strong method of authentication, the Space Station could be susceptible to receiving unauthorized command and control instructions. NASA subsequently tasked contractors to assess the Space Station International Partner command paths and include in that study a detailed analysis of authentication approaches and vulnerabilities of ground and radio frequency transmission of critical core commands to the Space Station. NASA is also committed to hiring a permanent Space Station Communications Security engineer as soon as it receives new authority for outside hiring.

[6]An uplink is the communication connection from the ground station to the space vehicle.

Physical Security — Weak physical control over the facilities in which computer and communications systems are housed as well as over the equipment itself increases the risks to information security. Inspections at several Centers found weak physical security over the facilities. For example, at one Center we found 90 percent of the buildings unlocked during non-duty hours. Buildings and rooms housing high-value computer and telecommunications equipment were unlocked, exposing vital communications systems to possible violation by unauthorized personnel. We also found one Center's IT security policies and procedures were outdated.

Another inspection found weak controls over the data stored on computer hardware. In keeping with technological advances in computer hardware and software, NASA frequently replaces employee workstations and laptops. Rather than destroy replaced computers, in most cases NASA: (1) transfers them to other Federal users or contractor users, (2) donates the computers to educational institutions, or (3) sells the computers to the public. Before disposing of its computers, NASA should remove all sensitive, private, or administratively controlled information stored on the computer hard drive.

As in previous years, we performed random inspections of personal computer hard drives designated for transfer or excess. At one NASA Center, we discovered sensitive user data and copyrighted software on hard drives waiting to be dispositioned. We also found that NASA was not properly clearing user information from laptop computers loaned to NASA employees. Although NASA used commercially available tools to remove information, we found the laptops still contained some sensitive, private, and administratively controlled information. Sensitive information contained on a computer hard drive could be used to launch hostile attacks against NASA and other IT systems. This is particularly true in the case of a lost or stolen laptop because of its communication and network capabilities.

The Intergovernmental Personnel Act

Through the Intergovernmental Personnel Act (IPA), NASA brings numerous individuals from academia and state and local governments to the Agency to provide scientific, administrative, and managerial expertise. While many of these individuals hold key decision-making positions, they are not required by law or Agency procedures to file financial disclosure reports. Also, they were not required to attend ethics briefings or to discuss their financial issues and outside activities with an Agency Ethics Counselor. The IPA detailees come to NASA from institutions where conflict of interest and other ethics guidelines may differ significantly from those of the Federal Government. A lack of awareness of Federal guidelines, coupled with the lack of requirements to make a financial disclosure, may increase the risk of the detailee violating conflict of interest or ethics laws. Further, NASA may be exposed to loss or embarrassment should a detailee violate the law or ethics regulations.

We recommended to NASA legislation that would expand financial disclosure requirements to cover IPA detailees. In a positive step, the Administrator issued a memorandum on September 25, 2000, requiring all IPA detailees receive annual ethics training. NASA employees who supervise IPA detailees are required to file financial disclosure reports and receive annual ethics training as well. All new IPA agreements or extensions must reflect the training requirement, and must be reviewed by local Agency legal counsel for conflicts of interest based on anticipated duties.

Federal Employee Recruitment and Retention

In May 2000, the Inspector General testified before the Senate Subcommittee on Oversight of Government Management, Restructuring and the District of Columbia. Her testimony on Federal employee incentives, both to attract and maintain a skilled workforce, focused primarily on issues relating to information technology. In her testimony, the Inspector General encouraged Federal executives and managers to use existing incentives effectively, and to provide even more flexibility to attract and retain the very best Federal employees.

The Inspector General identified several possible incentives to improve the ability of the NASA OIG and other Federal agencies to recruit and retain talent. One suggestion was to modify the law to permit individuals with seniority in non-Federal careers to enter the civil service workforce with enhanced annual leave accrual rates, rather than requiring them to accrue leave at the rate specified for more junior employees. The Inspector General recommended pay banding, which consolidates General Schedule (GS) grades into broader pay bands, thereby providing increased flexibility for starting salaries and linking pay with employee performance. She also recommended that new employees be covered immediately by the Federal Government's Thrift Savings (Retirement) Plan, instead of potentially having to wait until the second open season, up to 1 year later. Difficulties in recruiting IT criminal investigators and analysts in the high-cost San Francisco Bay area prompted a recommendation to increase the amount of available recruitment, relocation, and retention bonuses, as well as offering a form of housing allowance in those locales identified as high-cost areas.

Related to the overall recruiting problems associated with hiring IT professionals, the Inspector General sent a letter to the Associate Director, Workforce Compensation and Performance Service at the Office of Personnel Management (OPM). Her letter detailed the difficulties experienced by her office in recruiting IT auditors and computer crimes criminal investigators.

OPM has since released a draft position classification standard for IT professionals (GS-2200) including a specific information technology auditor series. If adopted, this standard would alleviate the required 24 hours of accounting currently required for IT auditors under the GS-511 (auditor) series. Since many IT auditors are not typically from accounting backgrounds, the current requirement has significantly hampered IT auditor recruitment.

To address the difficulties in recruiting and retaining computer crime criminal investigators, the Inspector General recommended a parenthetical IT designation under the GS-1811 (criminal investigator) series. The designation would allow these highly skilled and sought after employees to be paid special rates of pay if OPM approval is received for IT special salary rates.

As a result of this letter to OPM, the President's Council on Integrity and Efficiency (PCIE) has begun an effort to determine whether similar recruiting and retention problems are being experienced by other Inspectors General.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

NASA to Improve Its Application of Basic Safety Provisions to Existing Contracts

(See Page 17)

An OIG audit of contract safety requirements at Kennedy Space Center and Marshall Space Flight Center found that in the existing contracts we reviewed, the Agency had not applied basic safety provisions. As a result, all NASA contractors, including some involved in hazardous operations, may not be supporting the same safety goals as NASA.

NASA Can Expand and Improve Use of the Outsourcing Desktop Initiative

(See Page 18)

We found that the desktop seat[7] prices at JPL significantly exceeded those paid by other NASA installations using the Outsourcing Desktop Initiative (ODIN) contract. If JPL uses the ODIN contract to acquire desktop services after its current contract expires, NASA could save as much as $33 million over a 3-year period. We also recommended NASA evaluate its employee desktop seat assignment process.

NASA Can Improve Its Planning for Presidential Decision Directive 63

(See Page 19)

NASA has made progress toward protecting the Agency's critical infrastructure assets. However, NASA has not identified the actions needed to achieve an initial operating capability by December 31, 2000, as required by PDD-63. Until NASA identifies and implements needed actions, the Agency lacks assurance that it is adequately protecting its critical cyber-based infrastructure assets.

NASA's System Information Technology Security Planning Can Be Improved

(See Page 19)

We reviewed a sample of 38 information technology security plans for special management attention IT systems and 30 plans for computers that host publicly accessible Web sites at 8 NASA installations. We found that NASA has not adequately complied with the Computer Security Act of 1987 and OMB Circular A-130, "Management of Federal Information Resources."

[7]A seat is the hardware, software, and maintenance required to support the user of one desktop computer.

Cost Benefit Analysis and Award Fee Structure Improvements Needed on Consolidated Space Operations Contract

(See Page 21)

An audit disclosed that NASA did not perform cost benefit-analyses prior to modifying the Consolidated Space Operations Contract to add new work. The estimated $1.2 billion of savings from consolidating requirements may not be achieved if cost benefit is not a factor in the consolidation decisions.

Status of NASA's Independent Cost Estimating Capability

(See Page 23)

An audit disclosed that the Agency's reporting and funding structures for the independent cost estimating activities provided no assurance that cost estimates were independent in fact and/or appearance.

Controls Over Access to NASA Centers by Foreign Visitors Need Strengthened

(See Page 25)

An OIG audit of foreign national visitors at NASA Centers found controls over access to NASA Centers by these visitors needed to be strengthened and uniformly applied on an Agencywide basis.

Portable Computer System for the International Space Station Needs Improvement

(See Page 55)

Our inspection found that the on-board Portable Computer System, which is the crew's primary interface for command and control of the International Space Station, PCS usability needed to be improved.

$1.6 Million Fine Levied Against NASA Contractor

(See Page 65)

A NASA contractor was convicted of falsifying test reports on aerospace hardware over a 16-year period. The company was fined $1,638,000, and 2 of its corporate officers incarcerated, fined, and/or received other penalties for their involvement.

Contractor Enters into $415,000 Settlement Agreement

(See Page 65)

A NASA contractor agreed to compensate the Government $415,000 for improperly billing the Government for subcontract costs.

Juvenile Hacker to Serve Time

(See Page 67)

A juvenile, who illegally accessed NASA computers and obtained proprietary software valued at approximately $1.7 million, was charged with 2 counts of juvenile delinquency and sentenced to serve 6 months in a detention facility. This case marks the first time the Department of Justice has sought to sentence a juvenile computer hacker to serve time.

Hacker Indicted in Multiple Computer Intrusions

(See Page 68)

A New York man was arrested for "hacking" into NASA and other institutional computer systems. The man was charged, in part, with gaining unauthorized access to a NASA computer system at the Jet Propulsion Laboratory in Pasadena, California, and tampering with the system.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

Safety and Mission Assurance

NASA to Improve Its Application of Basic Safety Provisions to Existing Contracts
Report No. IG-00-035

An OIG audit of contract safety requirements at Kennedy Space Center and Marshall Space Flight Center found that NASA is taking action to ensure its contractor workforce is supportive of and accountable for safety. Through the Risk Based Acquisition Management Initiative, the Agency is revising the updated NASA FAR Supplement to ensure that risk is the core concern of all new contracting actions, except for the purchase of commercial off-the-shelf items. Although this is a positive step toward improving the safety practices of NASA contractors, the initiative does not apply to existing contracts. In 15 of 25 existing contracts we reviewed, we found that the Agency had not applied basic safety provisions such as required contract safety clauses, contractor safety plans at contract award, and Center safety office involvement in the procurement process. As a result, all NASA contractors, including some involved in hazardous operations, may not be supporting the same safety goals as NASA. We recommended that management: (1) identify all open contracts that either involve potentially hazardous operations or exceed $1 million in value, and determine whether those contracts have the required safety clauses and contractor safety plans; (2) determine the cost-effectiveness of modifying those contracts determined deficient, assess the risk of not modifying the contracts, and make those modifications deemed cost-effective and necessary; and (3) direct Center safety offices to assist the responsible Center official in performing an appropriate level (based on assessed risk) of contractor surveillance for each current applicable contract. Management concurred with the recommendations and initiated responsive corrective actions.

Agency Needs to Clarify Goals and Measurement Baselines for Aviation Safety Initiative
Report No. IG-00-053

The 1997 report, "White House Commission on Aviation Safety and Security," recommended a national goal to reduce the aviation fatal accident rate by a factor of 5 (80 percent) within 10 years (2007). NASA responded to the report by initiating a major program planning effort involving industry, Government, and academic organizations to define the research the Agency will conduct. The recommendations of the planning effort provided the foundation of the NASA Aviation Safety Initiative. The Initiative is a combination of redirected research and technology base activities and the creation of the focused Aviation Safety Program (Safety Program). The Safety Program will provide the research and technology needed to help the Federal Aviation Administration (FAA) and the aerospace industry to achieve the national goal. An audit showed that NASA has not portrayed its goals and identified all measurement baselines for its Aviation Safety

Initiative consistently. Further, NASA has not adequately emphasized the risks involved with developing and implementing various safety technologies and how those risks affect program success. The Agency has also inconsistently integrated its goal and baseline with the FAA. We recommended that NASA clarify its contribution toward the national aviation safety goal and revise its plans, including those with the FAA, and goals accordingly to ensure various Agency documents and Web sites are consistent with NASA's intended performance. We also recommended that the Agency establish baselines to measure its performance relative to established goals and place more emphasis on informing stakeholders about the development and implementation risks that could adversely affect program success. Management concurred with the recommendations and has initiated responsive corrective actions.

Information Technology

NASA Can Expand and Improve Use of the Outsourcing Desktop Initiative
Report No. IG-00-060

NASA chartered the Outsourcing Desktop Initiative for NASA (ODIN) to develop an outsourcing arrangement that would provide support for the majority of NASA's desktop and intra-installation communication services. In 1998, NASA awarded a master contract for ODIN to seven companies. Also in 1998, JPL awarded a 5-year $110 million outsourcing contract to a non-ODIN contractor. We found that the desktop seat prices at JPL significantly exceeded those paid by other NASA installations using the ODIN contract. Because the JPL outsourcing contract was based on adequate price competition, we did not question the basis of JPL's desktop seat prices. However, if JPL uses the ODIN contract to acquire desktop services after its current contract expires, NASA could put to better use as much as $33 million over a 3-year period. We also found that NASA had not assessed the effectiveness of two approaches used in making desktop seat assignments or issued guidance for determining seat selections at various Agency installations. Accordingly, NASA lacks assurance that it has assigned seats to employees in the most efficient and effective manner. We recommended that NASA ensure that JPL includes ODIN among competitors when awarding the installation's future desktop outsourcing contract. We also recommended that the ODIN Program Manager assess the effectiveness of the two seat assignment approaches and issue guidance to all installations for use in selecting an appropriate approach. Management concurred with the report recommendations and initiated responsive corrective actions.

NASA Can Improve Its Planning for Presidential Decision Directive 63 Report No. IG-00-057

In May 1998, the President issued Presidential Decision Directive 63 (PDD-63) calling for a national effort to assure the security of the Nation's critical infrastructures. Our objective was to determine whether NASA has developed and implemented a plan to protect the Agency's cyber assets consistent with the requirements of PDD-63. This audit represents the first of a four-phase project being conducted by the PCIE. Overall, NASA has made progress toward protecting the Agency's critical infrastructure assets. However, NASA has not identified the actions needed to achieve an initial operating capability by December 31, 2000, as required by PDD-63. Until NASA identifies and implements needed actions, the Agency lacks assurance that it is adequately protecting its critical cyber-based infrastructure assets. Also, the Agency list of minimum essential infrastructure assets contains errors and inconsistencies. As a result, NASA lacks assurance that it can provide appropriate oversight of PDD-63 vulnerability assessment and risk mitigation activities. We recommended that NASA develop a clear definition of an initial operating capability and provide guidance and attainable milestones for achieving it. We also recommended that NASA issue additional guidance to ensure that installations accurately and consistently identify their minimum essential infrastructure assets and that NASA eliminate errors and inconsistencies in its list of those assets. NASA either concurred or partially concurred with the findings and recommendations and initiated appropriate actions.

NASA's System Information Technology Security Planning Can Be Improved Report No. IG-00-055

Successful accomplishment of NASA's mission depends heavily on automated information resources. As technology evolves, these resources are increasingly vulnerable to external and internal attack. The OIG conducted an audit of system IT security planning, including the adequacy of existing policy and implementation. The overall objective was to determine whether NASA had established and implemented effective security plans for general-support systems and major applications, including publicly accessible Web sites. We reviewed a sample of 38 IT security plans for special management attention (SMA) IT systems and a sample of 30 plans for computers that host publicly accessible Web sites at 8 NASA installations. The audit found that NASA has not adequately complied with the Computer Security Act of 1987 and OMB Circular A-130, "Management of Federal Information Resources." NASA Headquarters and the Centers had no IT security plans for 17 of the 38 SMA systems and for 13 of the 30 Web site host computers in our samples. JPL has no IT security plans for its IT systems. None of the IT security plans in either sample fully complied with OMB Circular A-130. In addition, there were no security plans, contingency plans, or risk assessments for five major elements of a major information system. The lack of adequate IT security plans significantly reduces the

effectiveness of the IT security programs for those systems. The Centers and JPL intended to complete the IT security plans for SMA systems by September 30, 2000. We will confirm the status of these plans in upcoming audit work.

The audit also found that initial and periodic personnel screening requirements in NASA Procedures and Guidelines (NPG) 2810.1, "Security of Information Technology," do not comply with OMB Circular A-130 requirements. Inadequate personnel screening may degrade the security of NASA's IT systems. We recommended that NASA management establish a process to manage the development and implementation of IT system security plans and revise Agency IT security policy on personnel screening requirements. We consider the noncompliance with the Computer Security Act and OMB Circular A-130 to be a potential material management control weakness reportable in accordance with OMB Circular A-123, "Management Accountability and Control," and NASA policy.

Management concurred with seven of the report's ten recommendations. Actions completed for three recommendations were sufficient to close those recommendations for reporting purposes. Management partially concurred with recommendations to report the Federal noncompliance conditions at JPL, Langley Research Center (Langley), and NASA Headquarters to the Agency's Internal Control Council as significant areas of concern. Management stated that Langley and NASA Headquarters were scheduled to have fully compliant IT security plans for all SMA systems by September 30, 2000. With the completion of these plans, there is no need to report noncompliance conditions as a significant area of concern. We have requested that management provide additional information on the completion of SMA system IT security plans at the two locations. When management provides the additional information, we will review the security plans to ensure they are effective and fully compliant with requirements. In addition, management stated that the condition of IT security plans at JPL is a contractual issue and not a Federal Managers' Financial Integrity Act issue. We agree that JPL does not participate in the Agency's internal control process; however, the NASA officials who manage the programs conducted at JPL do participate. JPL manages a significant amount of IT resources that are essential to the conduct of Agency programs. NASA managers are ultimately responsible for the security of NASA's IT resources. We have asked that management reconsider its position on the reporting of significant areas of management concern related to functions performed by contractors.

Procurement

Cost Benefit Analysis and Award Fee Structure Improvements Needed on Consolidated Space Operations Contract
Report No. IG-00-043

NASA consolidated most existing space operations contracts under one contract valued at more than $3.4 billion over 10 years. Additional services may be transitioned to the contract through exercising one or more of the remaining contract options. An audit disclosed that NASA did not perform cost benefit-analyses prior to consolidations to ensure that the Consolidated Space Operations Contract (CSOC) is the best approach for fulfilling space operations requirements and that $1.2 billion of savings would be achieved. The audit also showed that improvements are needed in the "lookback" provision of the CSOC Award Fee Plan. In addition to 6-month evaluations, the award fee plan includes a lookback provision to evaluate the contractor's performance on the integrated operations architecture. We recommended that: NASA establish performance criteria for the lookback award fee pool; after criteria are established and meaningful evaluations can be performed, reallocate $14 million of award fee that could be inappropriately awarded; establish lookback award fee periods that do not exceed 12 months; and revise the CSOC Award Fee Plan to increase emphasis on cost control that would ensure an additional $1.6 million of fee would be placed on cost control. Finally, we recommended that NASA require progress reports on the architecture baseline.

NASA concurred in principle with our recommendations to perform a cost benefit analysis prior to exercising any contract options, and to evaluate at least annually whether projected benefits have been realized. NASA concurred and initiated corrective actions to address progress reporting on the architecture baseline. NASA nonconcurred on the four recommendations to improve the award fee structure. We reaffirmed our position and requested additional comments in the final report.

Property Administration Delegations Should Be Resolved
Report No. IG-00-054

The OIG performed an audit to determine whether NASA and its delegated agencies appropriately manage Government property held by contractors. We determined that NASA is not assured that over $ 1.9 billion in contractor-held property is managed appropriately. NASA can either delegate property oversight to Department of Defense agencies or it can retain the oversight function. Property administration delegations were not completed for the property in question. As a result, NASA is not assured that Government property held by contractors is appropriately managed. We recommended that NASA resolve the issues of oversight of Government-owned/contractor-held property by either delegating or retaining the property administration function. We also

recommended that NASA strengthen its delegation controls to ensure that property administration functions are completed for future contracts involving contractor-held property. Management concurred with our four recommendations and their proposed actions were considered responsive. The property oversight issues will remain open pending formal delegation or retention of the property administration functions.

Fiscal Management

Transfer of External Tank Display to Kennedy Space Center Visitor Complex Report No. IG-00-044

In February 1997, the Center Directors of Kennedy and Stennis Space Center (Stennis) entered into a bilateral agreement whereby Stennis agreed to transfer a full-scale replica Space Shuttle external tank mock-up display from the Stennis Visitor Center to the Kennedy Visitor Complex for use as a major exhibit. In return for the external tank, Kennedy directed its Visitor Complex Concessionaire, Delaware North Parks Services of Spaceport, Inc. (Delaware North), to pay $500,000 in nonappropriated funds to the Stennis Exchange. An OIG audit of the transaction found that senior management officials at Kennedy and Stennis did not follow established policies for transferring property between NASA Centers without reimbursement of property cost. Consequently, Delaware North made an unauthorized payment of $500,000 in nonappropriated funds to the Stennis Exchange. The Stennis Public Affairs Office used the $500,000 to fund a construction project and additional public exhibits at the Stennis Visitor Center, which resulted in an unauthorized augmentation of NASA's appropriation. We recommended that management: (1) reimburse the Stennis Exchange from appropriated funds, an amount equal to all nonappropriated funds obligated by the Stennis Exchange that were used to augment NASA's appropriation; (2) refund the $500,000 payment received for the external tank transfer and the accumulated interest to Delaware North; and (3) direct Delaware North to redeposit the $500,000 and the accumulated interest received from the Stennis Exchange. Management nonconcurred with the report's findings, conclusions, and recommendations. Management stated that the OIG used a narrow interpretation of the broad authority given to the Agency in the Space Act and disputes the underlying premise of the report. Management stated that the transfer of the external tank to Kennedy and the payment of nonappropriated funds to the Stennis Exchange were two separate transactions. We do not agree with management's position and believe it is based on an overly broad and liberal interpretation of not only the Space Act, but also of Kennedy's concession agreement with Delaware North. The documentation supporting this transaction clearly shows that the payment of $500,000 to the Stennis Exchange was dependent on delivery of the external tank to Kennedy and was, in substance, a single transaction

rather than two separate and unrelated events. We reaffirmed our position with respect to both the findings and recommendations in the final report and requested management to reconsider its position and provide additional comments.

Insufficient Supporting Documentation for Deobligations
Report No. IG-00-061

Financial management officials at Langley and Marshall processed deobligations in a timely manner; however, of the 60 statistically sampled deobligations, 33 (55 percent) were not adequately documented to support the transactions. We also found that 8 (44 percent) of the 18 judgmentally selected deobligations reviewed were not adequately documented to support the transactions. Financial management officials were not adequately documenting transactions because neither the NASA Financial Management Manual nor the Center-specific financial procedures provide adequate guidance for processing and documenting deobligations. As a result, we could not attest to the validity of 17 (28 percent) of the 60 deobligations, valued at about $3.4 million. In addition, we could not attest to the validity of 2 (22 percent) of the 9 deobligations judgmentally selected at Marshall and valued at $4 million. We recommended that criteria for processing and documenting deobligations be added to the Financial Management Manual and Center financial management procedures. We also recommended that the Centers review the unsupported transactions identified in this report to ensure that they are valid and adequately documented. Management concurred with the recommendations on establishing criteria and their proposed actions were considered responsive.

Program and Project Management

Status of NASA's Independent Cost Estimating Capability
Report No. IG-00-045

In 1996, when the Systems and Cost Analysis Division was moved to Langley, the cost estimators remained at Headquarters. Eventually, as the cost estimator positions at Headquarters were vacated, NASA lost its capability to develop independent cost estimates. NASA recently took steps to reestablish its independent cost estimating capability by adding eight cost estimators to the Independent Program Assessment Office (IPAO) at Langley and establishing a Systems Management Office (SMO) with independent cost estimating capability at each Center. A review disclosed that the planned organizational structures for the independent cost estimating function in the IPAO at Langley and the SMO at each Center may not provide for independent reporting of findings directly to the approving official unless the report is specifically requested by the

approving official. Also, the IPAO and SMO's are funded through the Centers—a process that may hinder the offices' independence. Consequently, the Agency has no assurance that the opinions, conclusions, and recommendations made to the Administrator on acquisitions for Agency programs and projects are independent in fact and appearance. The review also showed that NASA had not identified the cost estimating and cost analysis function as a discipline with a specific job series, had not established career development plans for its cost estimators, and did not have a requirement to develop independent cost estimates for all major reviews. We recommended that NASA: (1) provide direct reporting of independent cost estimating to the approving official, (2) establish an independent funding and reporting structure for the independent cost estimate function, (3) revise NPG 7120.5A to require an independent cost estimate for each major review, (4) identify a specific job series for cost estimators/analysts, and (5) develop career development plans for the profession.

NASA concurred with our recommendation to require independent cost estimates for all major reviews and to develop core training requirements for cost estimators. NASA nonconcurred or partially nonconcurred with our recommendations to provide for direct reporting of independent cost estimates to the approving official and to establish an independent funding source for all independent cost estimating activities. Although the IPAO is funded as a Headquarters function through the Center by the Office of the Chief Engineer (Code AE), and funds are earmarked for the IPAO, Code AE has no way to determine how the funds are distributed. The Center is accountable to Code AE only at the end of the year and may move funds among programs. Centers are only required to notify Headquarters when more than 10 percent of the funds are moved among programs. Management also nonconcurred with our recommendation to identify a specific job series for cost estimators and analysts. We reaffirmed our position and requested additional comments to the final report.

Research Flight Operations Terminated Prematurely Report No. IG-00-037

A review of research flight operations at the Glenn Research Center (Glenn) indicated that NASA prematurely terminated research flight operations at Glenn without adequately evaluating all of the alternatives, performing cost-benefit analyses, or developing a long-term plan for conducting its icing research program.[8] Management stated that they terminated flight operations because the former Associate Administrator for the Office of Aerospace Technology was concerned that the reduced number of aircraft and the lower flight rate at the Center would create safety problems. However, as a result stopping research flight operations before adequately evaluating the impacts on the research and evaluating alternatives may result in increased costs for that research and decreased research productivity. We recommended that NASA suspend its plans to transfer aircraft from

[8]Glenn conducts research on how ice forms on the wings and tail of an aircraft to provide training for pilots on how to react when icing occurs.

Glenn until management performs a cost-benefit analysis of the alternatives and prepares a long-term plan for conducting the icing research project.

NASA management continues working to complete the corrective actions necessary to close all four recommendations. Glenn continues to fly proficiency flights of two aircraft. A cost-benefit analysis was conducted by Glenn and presented to NASA Headquarters management. Management decided that NASA officials outside of Glenn would conduct an independent assessment. The draft long-term plan for icing research should be completed before December 2000.

International Agreements

Controls Over Access to NASA Centers by Foreign Visitors Need Strengthened Report No. IG-00-034

NASA has a responsibility under the National Aeronautics and Space Act of 1958 to cooperate with other nations in the conduct of its activities. NASA hosts foreign national visitors to: attend meetings or conferences, perform intermittent or regular work on a program related to an international agreement, conduct scientific research under a cooperative educational program, or work for a support contractor. An OIG audit of foreign national visitors at NASA Centers found controls over access to NASA Centers by these visitors needed to be strengthened and uniformly applied on an Agencywide basis. Controls over access by foreign national visitors varied among the Ames Research Center, Goddard Space Flight Center (Goddard), Johnson Space Center (Johnson), and Langley. Disparities among the four Centers related to: (1) which foreign nationals were controlled, (2) the types of Government records checks made, (3) how visitors were escorted on-site, and (4) how foreign national visitors were badged. The audit also showed that the Agency lacks a foreign national visitor management information system. Improvements are needed to ensure that NASA Centers and information are adequately protected against unauthorized access by foreign national visitors. We recommended that management: (1) revise the definition of a foreign national in NASA policy guidance to ensure controls are in effect at NASA Centers for all visitors who are not U.S. citizens, (2) revise existing policy to establish NASA-wide requirements and procedures for obtaining National Agency Checks and for escorting foreign visitors, and (3) establish a NASA-wide policy for badging foreign nationals. We also recommended the Agency develop and implement a NASA-wide management information system to support the foreign national visitor program. Management concurred with each recommendation and planned responsive corrective actions.

Exports on Behalf of Space Station Program May Not Be in Compliance with Applicable Laws and Regulations
Report No. IG-00-048

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 responsible for following the same U.S. export laws and regulations. An OIG audit of three major contractors found that TRW Space and Electronics Group and Lockheed-Martin Michoud Space Systems, have adequate export control programs in place to ensure that exports of controlled technologies are effected in compliance with applicable laws and regulations. However, the audit showed that the third contractor, Boeing Space and Communications Group (Boeing) might not have complied with applicable export laws and regulations when exporting controlled items on behalf of the International Space Station program. Specifically, Boeing was unable to readily produce records related to exports of controlled technologies. Further, on two of the six NASA-obtained export licenses related to the Space Station, Boeing potentially effected exports of controlled technologies beyond the scope of the licenses. NASA, therefore, lacks assurance that Boeing's export activities on behalf of the Agency for the International Space Station Program are being performed in full compliance with applicable export laws and regulations. We recommended that management require Boeing to establish an appropriate export control program and a detailed company-wide export policy that comply with applicable laws and regulations prior to authorizing Boeing to utilize NASA-obtained export licenses on behalf of the International Space Station Program. We also recommended that management periodically review both Boeing and Boeing subcontractors' export control programs to ensure that exports effected against NASA-obtained licenses in support of the International Space Station Program are being accomplished in accordance with applicable U.S. export laws and regulations. Management questioned whether some of the examples detailed in the report were in fact export violations. We reaffirmed our position that the examples of export shipments detailed in the report could represent possible export violations because of the disparities in explanations provided by management and the inconsistencies in the available supporting documentation. Management concurred with both of the report's recommendations and planned corrective actions that were responsive.

Launch Vehicles

1998 Shuttle Flight Rate Credit Analysis Not Fully Documented
Report No. IG-00-039

NASA cannot be assured it received fair and reasonable pricing on the Space Flight Operations Contract (SFOC) because the FY 1998 flight rate credit analysis was not fully documented in the contract file in accordance with FAR requirements. Specifically, the SFOC file did not contain the evidence of technical, price, or cost analysis, or verification of direct and indirect rates that the contracting officer should have used to determine whether the FY 1998 flight rate credit of $33.3 million was fair and reasonable. Absent documentation for activity-based costing, there is no basis on which to conclude that adequate technical, price, or cost analysis was performed. As a result, NASA cannot be assured that the $33.3 million credit negotiated with United Space Alliance represented a full contract price reduction from two cancelled flights. Consequently, NASA may be paying United Space Alliance more incentive fee than necessary.

We recommended that the Director, Johnson Space Center, determine whether Johnson should continue to use activity-based costing. If activity-based costing is to be used, management should establish policies and procedures that explain how that process can be used to comply with FAR requirements; perform an adequate technical, cost, or price analysis on each SFOC pricing action and document the analysis in the contract file; and verify that the appropriate forward pricing rates are used in the FY 1999 flight rate credit proposal, and document the verification in the SFOC contract file. Management concurred with all recommendations. The Director, Johnson Space Center, has determined that the activity-based costing process is a viable option, has begun the process of updating and expanding guidance for activity-based costing, agreed to strengthen the contract file documentation, and will verify that the contractor has used the correct forward pricing rates in its flight rate credit proposal for FY 1999.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

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, 2000.

Audits with Questioned Costs

	Number of Audit Reports	Total Costs Questioned
No management decision made by beginning of period	5	$17,372,999
Issued during period	0	0
Needing management decision during period	5	$17,372,999
Management decision made during period:	1	
amounts disallowed	—	0
amounts not disallowed	1	$ 108,265
No management decision at end of period:	4	$17,264,734
less than 6 months old	0	0
more than 6 months old	4	$17,264,734

Audits with Recommendations Funds Be Put to Better Use

	Number of Audit Reports	Total Costs Questioned
No management decision made by beginning of period	2	$42,650,000
Issued during period	1	$33,600,000
Needing management decision during period	3	$76,250,000
Management decision made during period:	0	—
amounts management agreed be put to better use:	—	0
based upon proposed management action	—	0
based upon proposed legislative action	—	0
amounts which management disagreed be put to better use	—	0
No management decision at end of period:	3	$76,250,000
less than 6 months old	1	$33,600,000
more than 6 months old	2	$42,650,000

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.

During this period there were no such instances.

In accordance with the requirements of Section 5(a)(10), Inspector General Act, as amended, the following tables summarize the status of audit reports for which no management decision has been made by September 30, 2000.

Audits Issued Prior to April 1, 2000, for Which No Management Decision Has Been Made

Report Number, Title, and Date	Reason for No Management Decision
Information Technology	
IG-00-017 Opportunities to Improve Disaster Recovery Plan and Physical and Environmental Controls Identified at Johnson Space Center March 21, 2000	An audit of a Johnson mission-related disaster recovery plan and the physical and environmental controls, found that planning for continuity of computing support in the event of a disaster was inadequate. Two of the reports fourteen recommendations to improve controls remain unresolved. 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 initially concurred with the report's four recommendations but has not agreed to an amount of questioned costs related to one recommendation. The contractor has continued to use NASA-owned property rent-free. In July, the contractor presented data to NASA management that indicated the Government has received adequate consideration to support rent-free use of the NASA facilities for the contractor's commercial business. On September 28, 2000, the NASA contracting officer formally provided the OIG with the Agency's request to close the recommendation based on the contractor response. We are reviewing this latest information, as well as, NASA's request before deciding how to resolve and disposition this matter.
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 report has been issued. DCAA and the Goddard contracting officer are currently discussing the findings, recommendations, and a negotiation approach.

(Continued)

Audits Issued Prior To April 1, 2000, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, and Date	Reason for No Management Decision
Procurement	**(continuation)**
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. Two recommendations remain unresolved pending a determination of the estimated savings. We are reviewing management actions to resolve the leasing issues.
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 on both recommendations but agreed to perform a review that was to be completed by December 31, 1998. After several additional inquiries, we received management's review on March 31, 2000. Management acknowledged that they may have violated the bona fide needs rule.[1] However, management did not agree to take actions on the OIG's recommendations. We will request a management decision from the Audit Followup Official.
Arthur Andersen FY 1998 Management Letter February 3, 1999[2]	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,

[1]The bona fide needs rule, 31 U.S.C. 1502, governs the availability of appropriations. It specifies, "…[a] fiscal year appropriation may only be obligated to meet a legitimate…need arising in…the fiscal year in which the appropriation was made."
[2]Since Arthur Andersen LLP prepared the report, it does not have an OIG report number.

(Continued)

Audits Issued Prior to April 1, 2000, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, and Date	Reason for No Management Decision
Fiscal Management	**(continuation)**
	and (4) Property Management. As of September 30, 2000, management had not implemented 1 of the 14 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 Shuttle services. Management nonconcurred, stating that the recommendations are impractical. We disagreed and requested that management reconsider their position. Management continues to nonconcur. We have requested a management decision from the Audit Followup Official.
Program and Project Management	
IG-99-037 Earned Value Management at NASA-ECS Performance Measurement Baseline 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. We met with NASA management on the unresolved recommendations in June 2000 and continue to work with them to resolve the issues. NASA management stated that the issues would be addressed by December 2000.
IG-99-054 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. We requested management to provide additional comments in response to the final report. The OIG granted an

(Continued)

Audits Issued Prior to April 1, 2000, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, and Date	Reason for No Management Decision
Program and Project Management	**(continuation)**
	extension for management to respond until the Mars Polar Lander and Mars Climate Observer investigative reports are issued and summarized and recommendations by the NASA Independent Assessment Team are agreed upon.
IG-99-058 Earned Value Management (EVM) at NASA September 30, 1999	Three recommendations to revise earned value management policies are unresolved. The unresolved recommendations concern: (1) issuing EVM as a program and project management policy, (2) establishing procedures to report EVM in Program Management Council status briefings, and (3) delegating authority to implement and measure compliance with EVM policy to Associate Administrators and Center Directors. Management provided a response to the original report, and in June 2000 we met with NASA management on the unresolved recommendations. We continue to work with them to resolve the issues. NASA management stated that the issues would be addressed by December 2000.
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 has completed its analysis of recommendations addressing preventive costs and plans to request closure of these recommendations. NASA has not begun negotiations of a cost-sharing agreement for remediation costs and plans to request closure of these recommendations without negotiating a cost-sharing agreement. NASA's current position is that the Agency has no legal basis for recovering remediation costs due to the nature of the laws under which cleanup actions have commenced. In addition, NASA admits to having a liability for cleaning up only one of the four

(Continued)

Audits Issued Prior to April 1, 2000, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, and Date	Reason for No Management Decision
Environmental Management	**(continuation)**
	contaminated sites at the facility. The remaining sites are the responsibility of other parties. NASA plans to present their rationale for closure of the four recommendations in a memorandum to the OIG.
IG-00-030 Compliance with the National Environmental Policy Act (NEPA) March 31, 2000	Management did not concur with two of nine recommendations. The two recommendations deal with the Agency's level of noncompliance with NEPA. Although management agrees that NEPA guidance, training, and managerial controls are inadequate, management believes that the OIG report exaggerates the nature and scope of NEPA noncompliance and violations of the Council on Environmental Quality and NASA regulations. NASA management and the OIG opinions differ as to the types of NEPA violations that should be reported to the NASA Internal Control Council and the actions needed to bring the programs/projects identified during the audit into compliance with NEPA. We are working with the Agency to resolve the nonconcurrences.
Quality Control Reviews	
IG-00-023 H. Larry Jordan Review of Stennis Space Center Exchange Financial Statements for Fiscal Year Ended September 30, 1998 March 29, 2000	The Stennis Space Center proposed nonresponsive actions to the report's three recommendations. They also proposed nonresponsive actions to our request for reconsideration. We recommended that the Stennis Exchange, beginning with the FY 1999 financial statements, (1) require that annual audits be performed in accordance with Government auditing standards by the established due date and that the engagement for the audit be competitively awarded to Certified Public Accountants licensed to practice in the State of Mississippi, (2) follow established accounting principles in providing adequate disclosures in the notes accompanying the financial statements, and (3) establish a constitution and bylaws at the Exchange. We will refer the unresolved recommendations to the Associate Administrator for Space Flight.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

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) Pending Corrective 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 crew return vehicle (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, but the recommendation remains open pending management's preparation of a test plan. Management estimates completion of this action by May 2005.
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 continues to work to implement corrective actions, including major cultural change activities to heighten employee awareness and dedication to safety. All recommendations will remain open pending management's completion of its corrective actions.
Potentially Hazardous Materials Used in Kennedy Payload Processing Facilities	IG-00-028	During an audit requested by the House of Representatives Committee on Science, we found that ground workers in both the Space Shuttle Processing Facility and the Operations and Checkout building are using potentially hazardous materials without exercising proper control and safety precautions. 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 material usage agreements, and (3) increase

(Continued)

Subject	Report Number	Recommendation(s) Pending Corrective Action
Safety and Mission Assurance		**(continuation)**
		surveillance of Boeing's inspection procedures. We also recommended that the contracting officer for the payload ground operations contract (PGOC) (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. During this reporting period, management has taken action to implement nearly all of the corrective actions outlined in its March 23, 2000, response to the OIG. Included among those actions are (1) new Space Station Processing Facility work area rules regarding the use of plastics, foams, and adhesives (PFA's) in each work area footprint, (2) informing all contractor and NASA processing personnel as to the governing documents controlling PFA usage in all work areas, (3) rewriting procedures regarding the preparation of material usage agreements, and (4) increased surveillance of contractor personnel. Management is still working on revising its procurement procedures to include specific procedures for the control and safety over PFA's. Management stated that this last action should be completed in October 2000, at which time they will notify us officially that all actions have been completed. These recommendations will remain open pending our review and verification of the corrective actions taken.
International Space Station		
Boeing Can Improve Space Station Performance Measurement Reports	IG-99-007	Boeing's Space Station cost and schedule variances and corrective action plans have not been used effectively to control negative

(Continued)

Subject	Report Number	Recommendation(s) Pending Corrective Action
International Space Station		**(continuation)**
		variances. We recommended management (1) ensure adequate surveillance of Boeing's EVM System, (2) require the Defense Contract Management Agency (DCMA) to prepare required contract administration reports, and (3) improve the quality of corrective action 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. These recommendations will remain open pending completion of corrective actions. In March 2000, we again requested management provide evidence to support completion of the agreed-to actions for those recommendations. Management is working to provide evidence to support closure of the recommendations.
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 Space Station caused by possible delay or default by international partners. We recommended management establish (1) a Space Station contingency plan that complies with Agency guidance for effective risk management, and (2) a process to ensure the contingency plan is kept current. Management concurred. In September 2000, we again requested that management provide evidence to support completion of the agreed-to actions for the recommendations and are awaiting their response.
Performance Management of the International Space Station Prime Contract Needs Improvement	IG-00-007	At the request of the NASA Administrator, the OIG evaluated the performance management of the Space Station 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

(Continued)

Subject	Report Number	Recommendation(s) Pending Corrective Action
International Space Station		**(continuation)**
		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. 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 Space Station performance management and minimize or eliminate the cost impact to NASA of contractor restructuring activities. Eight of the recommendations were closed with the issuance of the final report. Four additional recommendations were closed September 18, 2000. The remaining two recommendations are being monitored awaiting results of an OIG audit and determination by the Space Station Program Office on what will replace the independent annual reviews.
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. Management is implementing corrective action for these recommendations, and we will continue to monitor the issues.

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Information Technology		**(continuation)**
UNIX Security Controls Need Improvement	IG-00-014	An audit found that UNIX operating system security and integrity controls in a mission-related system require improvement. As a result, the computing environment is vulnerable to unauthorized access and potential system compromise. We made twelve recommendations to improve controls. Management either concurred or partially concurred with our recommendations. We consider four of the twelve recommendations closed for reporting purposes. The remaining eight will remain open until agreed-to-corrective actions are completed and we have assessed their adequacy.
Opportunities to Improve Disaster Recovery Plan and Physical and Environmental Controls Identified	IG-00-017	An audit of a Johnson mission-related disaster recovery plan and the physical and environmental controls, found that planning for continuity of computing support in the event of a disaster was inadequate. We made 14 recommendations to improve controls. Management concurred with nine recommendations and partially concurred or non-concurred with others. We asked management to reconsider their position on certain recommendations and to provide additional comments in response to the final report. Management provided a copy of the revised disaster recovery plan, which is being reviewed by the OIG. We are working with management to resolve the issues.
Procurement		
Costs Not Recovered for Commercial Payloads Flown on the SPACEHAB Module	IG-98-028	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

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Procurement		**(continuation)**
		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. We 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 the (1) Shuttle Program Manager revise analyses and reporting requirements for critical, single-source suppliers; (2) Shuttle Program Manager include the revised requirements in appropriate contracts; and (3) Headquarters Chief Engineer revise 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. This last recommendation remains open pending publication of the revised NPG, which is expected by January 2001.
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 rent to a contractor 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. Management initially concurred with the report's four recommendations. However, the contractor continued to use the NASA-owned property

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Procurement		**(continuation)**
		rent-free and presented data to NASA, DCMA, DCAA, and the OIG in a July 2000 presentation. The data supported their position that the Government had received adequate consideration to support rent-free use of the NASA-owned facilities for the contractor's commercial business. On September 28, 2000, the NASA contracting officer formally provided the Agency's request to close the recommendation based on the contractor response. We are reviewing this latest information, as well as NASA's request, before deciding how to disposition this matter.
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 the report's five recommendations, three remained open at the beginning of this reporting period. During the period, management took action that closed one recommendation on their reviewing facility requirements. The remaining two recommendations remain open, and we are reviewing management's actions to resolve the leasing issues.
Fiscal Management		
Management and Administration of Grants Needs Improvement	IG-98-019	An OIG audit of grant reporting and recording practices at four Centers showed that grantee 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

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Fiscal Management		**(continuation)**
		management and administration of grants. Three recommendations remain open. During the next period, we will review the status of corrective actions on the remaining open recommendations.
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 Integrated Financial Management Project (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.
Program and Project Management		
Software Problems Cause Launch Delay of Chandra X-Ray Observatory	IG-99-016	Our audit of the Chandra X-Ray Observatory showed that its delayed launch was caused by problems in software development and inadequate time scheduled for integration and

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		**(continuation)**
		test activities for the observatory's flight and ground software. We recommended that management (1) revise the new NPG 7120.5A (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. The OIG provided input for changes to the planned revision of NPG 7120.5A, NPG 7120.5B. The revised NPD is to be issued in February 2001.
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. Management subsequently concurred with these two recommendations. We will continue to monitor management's actions on the seven recommendations that remain open. The failure of the composite hydrogen tank and other program problems has resulted in the restructuring of the X-33 Program. These activities have impacted the completion of the recommended actions.
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

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		**(continuation)**
		subjected to adequate surveillance. We recommended the NASA Management Office direct JPL to revise policies to require project man-agement assessment and monitoring of subcontractors to ensure procedures are designed and functioning to prevent, detect, and correct technical problems. Management partially concurred with the recommendations but did not identify specific corrective actions. The OIG granted an extension for manage-ment to respond until the Mars Polar Lander and Mars Climate Observer investigative re-ports are issued and summarized and recommendations by the NASA Independent Assessment Team are agreed upon.
NASA's Progress in Implementing the Results Act	IG-99-055	The Government Performance and Results Act (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. Man-agement agreed. One recommendation to revise a policy guide to address senior man-agement oversight will remain open pending completed action.
Earned Value Management Is Not an Integrated Part of Program and Project Management	IG-99-058	Earned value management information provides insight into the status of a program or project and pro-vides valid, timely, and auditable contract performance information on which to base management decisions. We recommended that NASA (1) issue EVM

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		**(continuation)**
		policy as program and project management directives, (2) establish procedures for reporting com-prehensive EVM information to senior management, and (3) delegate authority to implement EVM policy to the Associate Administrators or Center Directors. Manage-ment nonconcurred with recommendation 1 and did not respond to either 2 or 3. We met with NASA management on the open issues in June 2000 and continue to work with them to resolve the open recommendations. NASA management stated that the issues would be addressed by December 2000.
Improvements Are Needed in Space Transportation Strategic Management and X-34 Program/Project Management	IG-00-029	The Office of Aerospace Technology and Marshall Space Flight Center 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 technol-ogy 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 require-ments. To evaluate NASA's planned use of X-34 technologies, we reviewed strategic planning for Space Transportation and the role the X-34 was to play in meeting Agency Space Transportation technology require-ments. We recommended strategic planning be improved, program documentation be completed timely, flight test requirements be revalidated, and any unnecessary flight tests or engines be eliminated. Management concurred with all 16 recommendations, agreeing to implement recommended actions,

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		**(continuation)**
		which should significantly improve the overall effectiveness of Agency management of Space Transportation programs and projects. Three of the recommendations have been closed. We will continue to monitor management's actions on the 13 recommendations that remain open. The X-34 Project is currently being restructured. These activities have impacted completing the recommended actions.
X-38/CRV Project Needs Greater Emphasis on Risk and Performance Management	IG-00-005	As part of an international memorandum of understanding, the United States has agreed to provide a crew-return capability for the Space Station. The CRV would be used to return up to seven crewmembers 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 is at risk of not achieving the maturity necessary to move to subsequent Project phases. Management concurred with the

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Program and Project Management		**(continuation)**
		recommendation. The X-38/CRV Project Office developed entry/exit criteria for progressing through the major Project phases. During the next reporting period, we will evaluate management's corrective action.
Launch Vehicles		
Staffing Not Aligned with Goals of the Expendable Launch Vehicle (ELV) Program Office	IG-00-009	Our audit found that management oversight of staffing plans during and following consolidation of the ELV Program Office to Kennedy Space Center 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 management (1) establish clear and realistic staffing goals that align with the strategic performance goals of the ELV Program Office at Kennedy; (2) develop strategic human resources management strategies to ensure continuity of needed skills and abilities; and (3) incorporate these strategies into NPG 7120.5A. NASA has completed corrective actions for two of the three recommendations. A corrective action for the open recommendation requires coordination among several organizational elements. We will continue to monitor management's actions.
Technology Development		
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

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Technology Development		**(continuation)**
		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). Two recommendations remain open. Management recently reported that they have taken corrective actions on these two recommendations. During the next reporting period, we will review management's actions to determine whether they are sufficient to close the recommendations.
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 issued 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.) We closed one recommendation upon issuance of the circular. However the others remain open pending implementation of planned and ongoing corrective actions.

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Subject	Report Number	Recommendation(s) Pending Corrective Action
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.
NASA's Information on International Agreements is Incomplete and Inaccurate	IG-00-004	An OIG audit identified that documentation and information related to NASA's international agreements were neither complete nor accurate. 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. 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. During this reporting period, management completed a review that identified a total of 259 international agreements, which had an earnest money deposit on hand, and 132 that had no cost activity since receipt of the initial deposit. The second phase of the review was to determine the proper disposition of each deposit. As of the end of this reporting period, there remains a

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Subject	Report Number	Recommendation(s) Pending Corrective Action
International Agreements		**(continuation)**
		total of 120 agreements with no cost activity since receipt of the deposits. Each of these 120 agreements is under the cognizance of the Headquarters Space Operations Branch (Code MRP). To date, Code MRP has identified seven agreements that should be cancelled. The remaining 113 are considered active reservations for Space Shuttle services. Code MRP has requested a legal opinion from the NASA General Counsel to determine whether the deposits relating to active agreements can be used to finance current program costs, even though the specific payload may not fly until a future year. This opinion, which will be issued early in the next reporting period, will determine whether the deposits will remain in the Headquarters deposit account or be forwarded to performing installations to finance current program costs. This recommendation will remain open.
NASA Lacks Assurance That Contractors Are Exporting Controlled Technologies in Accordance with Applicable Export Laws and Regulations	IG-00-018	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 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. We recommended that management issue guidance specifying 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 NPD concerning NASA's export control program to incorporate the oversight responsibilities of appropriate NASA officials

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Subject	Report Number	Recommendation(s) Pending Corrective Action
International Agreements		**(continuation)**
		for those cases in which NASA or its contractors obtain export licenses on behalf of a NASA program. Management concurred with both recommendations. Management has actions in process to implement both of the report's recommendations. For example, management now requires that Centers issue written contractual direction when contractors are involved in effecting exports under NASA-obtained export licenses, and that copies of these direction letters be provided to the Office of External Relations (Code I) at NASA Headquarters. Code I also requests the Centers provide copies of Shippers Export Declarations related to NASA-obtained export licenses, regardless of whether the export is effected by a contractor or by the NASA Center. Both the NPD and NASA Procedures and Guidelines documents for the NASA Export Control Program are in the review and concurrence process. Both recommendations will remain open during the next reporting period until completion and issuance of the agreed to policies and procedures.
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 of the facility. The OIG made four recommendations concerning a cost sharing agreement, recovery of costs, and allocation of future preventive costs. NASA has

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Subject	Report Number	Recommendation(s) Pending Corrective Action
Environmental Management		**(continuation)**
		completed its analysis of recommendations addressing preventive costs and plans to recommend closure of these recommendations. NASA has not begun negotiations of a cost sharing agreement for remediation costs and plans to recommend closure of these recommendations without negotiating a cost sharing agreement. NASA's current position is that the Agency has no legal basis for recovering remediation costs due to the nature of the laws under which cleanup actions have commenced. In addition, NASA admits to having a liability for cleaning up only one of the four contaminated sites at the facility. The remaining sites are the responsibility of other parties. NASA plans to present their rationale for closure of the four recommendations in a letter to OIG management.
NASA's Implementation of NEPA Can Be Improved	IG-00-30	NASA program and project managers did not adequately consider environmental impacts as required by the National Environmental Policy Act and NASA environmental guidance. We made nine recommendations addressing needed improvements in NEPA planning, oversight, and training. Management has proposed corrective actions that resolve seven of the nine recommendations. Management did not concur with two recommendations concerning the Agency's level of NEPA noncompliance. NASA management and the OIG opinions differ as to the types of NEPA violations that should be reported to the NASA Internal Control Council and the actions needed to bring the programs/projects identified during the audit into compliance with NEPA. We will continue to work with management to resolve the remaining two recommendations.

Safety and Mission Assurance

NASA's Badging Program and Physical Access Controls at NASA Centers
Report No. G-99-001, Report No. G-99-014, and Report No. G-00-004

NASA implements badging programs and physical access controls at each NASA Center to control access to Center facilities. We examined these programs and controls at three Centers, with a focus on determining whether the policies and procedures in place to control access to mission critical locations and facilities containing sensitive or controlled information or materials are adequate and whether the Centers are implementing those policies and procedures. At each Center we found weaknesses in physical security. In the three reports, we made at total of 35 recommendations to improve security controls and operational effectiveness. NASA concurred with all 35 recommendations.

International Space Station

Assessment of the Portable Computer System and the Data Display Process
Report No. G-99-010A

The on-board PCS is the crew's primary interface for command and control of the International Space Station. We found problems with the PCS and the accuracy of displays developed for the PCS. We found that PCS usability should be improved and made recommendations to address these problems such as eliminating erroneous information, making consistent application commands, and reducing cumbersome system navigation. We also determined that the International Space Station program did not have a coordinated, well-defined process for software engineering and software management. Management was not completely responsive to the report's recommendations, concurring with four recommendations and partially concurring with the remaining seven recommendations. We have asked management to reconsider its position.

International Space Station Command and Control Communications Security Report No. G-99-010B

NASA intends to upgrade the encryption of the Space Station's primary command and control communications uplink. We found that NASA did not consider all possible upgrade options, which might result in the selection of a more costly, insufficiently secure option. Also, the options NASA currently has considered address upgrades to Space Station encryption technology, but do not automatically provide an acceptable authentication capability. Our inspection suggested the Space Station Program should ensure an appropriate level of expertise for individuals involved in Space Station communications security issues. NASA concurred with the report's five recommendations.

Fiscal Management

Intergovernmental Personnel Act Assignments to NASA Report No. G-99-018

The OIG reviewed the Intergovernmental Personnel Act (IPA) Mobility Program as it relates to assignments to NASA. Through the IPA Program, NASA temporarily brings individuals from academia and state and local governments to the Agency to provide scientific, administrative, and managerial expertise. We found that while many individuals assigned to NASA under this program hold key decision-making positions, they are not required to file financial disclosure reports by law or Agency practices. Also, neither the law nor Agency practices require them to attend ethics briefings or to discuss their financial issues and outside activities with an Agency Ethics Counselor.

NASA management partially concurred with our recommendation to seek a legislative solution but did not agree that, absent a government-wide solution, NASA should seek legislation that would allow NASA to apply the same financial disclosure requirements to IPA detailees as are applied to permanent Agency employees. The Agency initially nonconcurred with the recommendation that, until legislative authority is approved, IPA detailees be required to discuss financial interests and outside activities with their Ethics Counselor on an annual basis. To address both of these recommendations, the Agency proposed adding an annual ethics training requirement to all IPA agreements. In addition, the Agency proposed screening all incoming IPA detailee agreements prior to execution for potential conflicts arising out of the detailee's employment interest in the sponsoring non-Federal organization.

Because of the potential for serious conflicts of interest in which IPA detailees may become involved, we asked the Agency to reconsider its position regarding recommendations 1 and 2. We also recommended legislation that would expand financial disclosure requirements to cover IPA detailees. In a September 25, 2000, memorandum, the Administrator required that all IPA detailees receive annual ethics training. NASA employees who supervise detailees are required to file financial disclosure reports and receive annual ethics training as well. All new IPA agreements or extensions must reflect the training requirement, and must be reviewed by local counsel for conflicts of interest based on anticipated duties.

Program and Project Management

Glenn Research Center Exchange Activities Report No. G-99-016

The Glenn Research Center Exchange (Exchange), an instrumentality of the Government, is responsible for operating activities that contribute to the efficiency, welfare, and morale of Glenn employees. The Exchange's activities and operations are primarily funded with nonappropriated funds. The Exchange operates two cafeterias, vending machines, a retail store, and a visitor's center gift shop. We found that Center management used Exchange funds for activities for which appropriated funds were available. These activities included providing meals and refreshments to visiting foreign government delegations, providing meals or refreshments to visiting NASA and other Federal officials, and paying for training seminars and professional meetings. We recommended that NASA Headquarters issue supplemental guidance on the use of the Administrator's Fund for official reception and representational expenses and made 11 other recommendations to Glenn to improve the operations of the Exchange. NASA management concurred with all recommendations and provided planned actions along with their estimated completion dates.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

Information Technology

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

We continue to conduct follow-up activities relating to our assessment of NASA's implementation of a Public Key Infrastructure (PKI) to support input into the "Response to Senate Report 106-161 - NASA's Vulnerabilities To Hostile Attacks" (Audit Assignment No. A0004700). Strong information security is achieved through the encryption, authentication, and digital signature capabilities provided by a 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 Assessment of NASA's Automated Systems Incident Response Capability Report No. G-99-007

We continue to conduct follow-up activities relating to our assessment of NASA's Automated Systems Incident Response Capability to support input into the "Response to Senate Report 106-161 - NASA's Vulnerabilities To Hostile Attacks" (Audit Assignment No. A0004700). 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.

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Ongoing Activity	Focus
Information Technology	
Computer Banner Inspection Assignment No. G-99-015	This ongoing inspection is evaluating whether NASA's policies and procedures to display a computer security warning banner have been adequately implemented. During this period we transmitted a sixth banner notification and recently received confirmation of resolution from the IT security manager at the facility.
NASA Special Aeronautics Program Assignment No. G-99-019	We are conducting a physical and IT security review of a special aeronautics program. This inspection is being conducted in partnership with the Office of Audits, which is addressing contract compliance and financial management issues. The purpose of the IAIA activity is to determine whether NASA is appropriately protecting program information.
Internet-Based Spacecraft Commanding Assignment No. G-00-017	Several NASA initiatives are underway to enable scientists and mission controllers to command spacecraft or payloads over the Internet. The objective of this inspection is to determine whether information security is adequately addressed as part of these initiatives and whether NASA's IT security infrastructure can provide the required security solutions.
Assessment of Information Technology Security Training and Development and Other Human Resources Considerations Assignment No. G-00-019	This activity is being conducted in conjunction with the Audit of IT Security Planning (A0003700). The IAIA activity specifically addresses IT security training and development and the recruitment and retention of IT security professionals. The objective is to review the Agency's compliance with existing laws and regulations, and NASA policies, plans, and procedures relating to IT security personnel training and development. In addition, we will assess Agency metrics for IT security training and development and review Agency progress. We will also assess mechanisms the Agency uses to recruit and retain IT security professionals.

(Continued)

Ongoing Activity	Focus
Procurement	
Use of Support Service Contractors at the Glenn Research Center, Assignment No. 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.
Inspection of: Center Exchange Activities –at Langley Research Center, Assignment No. G-00-001 –at Ames Research Center, Assignment No. G-00-003 –at Goddard Space Flight Center, Assignment No. G-00-005 –at NASA Headquarters, Assignment No. G-00-006	The overall objective of these inspections is to determine whether the NASA Exchanges are meeting employee needs and conducting operations in a manner consistent with NPD 9050.6E and other statutory and regulatory controls. We are evaluating Exchange activities to ensure that operations and activities are managed effectively and in accordance with applicable policies, regulations and statutes. The inspections will include, but will not be limited to, Exchange-supported functions, activities, internal controls, investments and financial documents.
Agencywide Use of Support Service Contractors Assignment No. G-00-016	The overall objectives of this inspection are to determine whether: (1) contractors are performing support service activities within the scope of their contracts, (2) NASA contract administrators and technical monitors are providing adequate surveillance of support service contractors to ensure avoidance of personal services or inherently governmental services by contractors personnel, and (3) there is sufficient delineation between the functions performed by contractors and civil servants.
Program and Project Management	
Review of JPL/CalTech Policies on Ethical Conduct, Self-Governance and Law Enforcement Referral Processes Assignment No. G-00-009	The overall objective of this assessment is to review JPL and the California Institute of Technology (CalTech) policies to assure that JPL is operated in the public interest with objectivity and independence, free from organizational conflicts of interest, and have full disclosure of its affairs to NASA. We are using Defense Federal Acquisition Regulation Supplement and Defense Industry Initiative Principles for guidelines on best practices for contractor ethics program reviews. We will also research other self-governing or self-reporting programs to benchmark best practices and compare them with JPL/CalTech programs.

(Continued)

Ongoing Activity	Focus
Program and Project Management	**(continuation)**
NASA Use of the Metric System Assignment No. G-00-021	Following the September 1999 loss of the Mars Climate Orbiter due to a problem involving units of measurement, we initiated a review of the Agency's use of the metric system. The objective of this assessment is to review Agency compliance with Federal laws and regulations and NASA guidance relating to the metric system.
International Agreements	
NASA Support of Biotechnology Research, 1995-1997 Assignment No. G-00-007	From 1994 to 1997, NASA funded Russian scientists to conduct space-related research. News reports alleged that some of this funding had been diverted to institutions associated with Russia's covert biological weapons program. The objective of the assessment is to determine whether NASA exercised appropriate oversight of the NASA-funded Russian biotechnology research, and whether the funding of Russian biotechnology research achieved NASA's goals. Our report will be issued early in FY 2001.
Assessment of Crew Medical Transport Barter Arrangement Assignment No. G-00-015	This assessment is evaluating the proposed requirement for a dedicated Boeing 737 aircraft to provide medical transport for the crew of the International Space Station. The assessment is also examining the effectiveness and legitimacy of the proposed arrangement with the National Space Development Agency (Japanese Space Agency) and the Government of Japan to receive the aircraft in exchange for the rights to a future rocket launch. Our report will be issued early in FY 2001.

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Product Substitution

Company Fined $1.6 Million for Falsifying Aerospace Hardware Test Reports

An investigation conducted by the OIG, the Defense Criminal Investigative Service (DCIS), and the Department of Transportation OIG resulted in the conviction of a NASA contractor and two of its employees in La Mirada, California. The investigation disclosed that during the period 1981 to 1997, the company improperly heat-treated, aged, and falsified quality testing on aerospace hardware that was used in the Space Shuttle and Space Station programs, as well as commercial and military aircraft, and missile programs.

The company was fined $1,638,000. The company president, who was also the quality control manager, was ordered to pay a fine of $70,000 and a $600 assessment fee, and was also sentenced to 3 years probation and 4 months home detention. The company vice president was sentenced to 55 months confinement, 3 years probation, and ordered to pay a $350 assessment fee.

Procurement

Contractor Agrees to $415,000 Civil Settlement

A NASA contractor entered into a civil settlement agreement in which the contractor agreed to compensate the Government in the amount of $415,000. The contractor violated the FAR when it improperly billed subcontract costs by billing those costs at a time when they had not been incurred. Special agents from the OIG, Environmental Protection Agency OIG, DCIS, and the Naval Criminal Investigative Service conducted the investigation.

Contractor Employees Charged and Convicted in Kickback and Theft Schemes

A joint investigation by the OIG and the Federal Bureau of Investigation (FBI) resulted in the indictment of seven former NASA subcontractor employees and suppliers at the Stennis Space Center, Mississippi. The employees, who worked for the prime maintenance contractor at Stennis, ordered substantial quantities of building supplies for their personal use and were paid kickbacks by the supplier in return for their orders. The charges include Conspiracy to Violate the Anti-Kickback Act and Theft of Government Property. One individual was also charged with Making False Statements to Federal Agents.

Individuals awaiting sentencing on their guilty pleas include: two individuals for receiving kickbacks, another employee charged with theft, and three others charged with both receiving kickbacks and theft. One of those previously indicted has also been charged in a criminal information with an additional violation of the Anti-Kickback Act.

Contractor Employee Forfeits Property Purchased with Contract Funds

A complaint of civil forfeiture *in rem* was filed in U.S. District Court for a former NASA contractor employee's residence and personal automobile. The complaint alleged the former employee diverted NASA contract funds totaling $243,109, which he then used to purchase the residence and the automobile.

Travel Agency Owner Sentenced for Theft Scheme

The owner of a travel agency pled guilty in Maryland District Court to a one-count Theft Scheme, a violation of Maryland State Statute Article 27 Section 342. The owner was sentenced to 18 months incarceration, with a suspended sentence; 2 years supervised probation; and ordered to pay $7,300 in restitution. The OIG investigation disclosed that the Goddard Employees Welfare Association contracted with the travel agency to arrange and fund a cruise. However when she did not complete the contract, the owner did not refund the full amount paid to her by the Association.

Computer Intrusion/ Crimes

Computer Hacker Convicted for Felony Possession of Access Devices

An individual pled guilty to one count of felony possession of access devices[9] in violation of 18 U.S.C. 1029(a)(3). The individual was sentenced to 6 months home detention with electronic monitoring and was ordered to pay $10,744 in restitution to the victims of his hacking exploits, which included NASA.

Juvenile Computer Hacker Sentenced to Serve Time

A juvenile hacker pled guilty and was sentenced to 6 months in a detention facility for 2 acts of juvenile delinquency. The juvenile illegally accessed NASA computers and obtained proprietary software valued at approximately $1.7 million. The software supported the International Space Station's physical environment. The juvenile also hacked into military networks where he illegally obtained more than 3,300 electronic messages and 19 user names and passwords. Under adult statutes, those acts would have been a violation of Federal wiretap and computer abuse laws for intercepting electronic communications on military computer networks and for illegally obtaining information from NASA computer networks. This case marked the first time the Department of Justice has sought to sentence a juvenile computer hacker to serve time.

Juvenile Arrested for Hacking NASA Computers

A juvenile was arrested after being charged with the unlawful access of NASA computer systems maintained at the Goddard Institute for Space Studies in New York City, New York, and a computer system at the Langley Research Center, Hampton, Virginia. The youth, charged with one count of Computer Tampering, Second Degree, and one count of Computer Tampering, Third Degree, tampered with Langley's Web page.

[9] An "access device" usually relates to usernames and passwords, which are used to gain access to computer systems. Possession of 15 or more counterfeit or unauthorized access devices with intent to defraud is a felony.

Contractor Employee Sentenced for Unauthorized Computer Use

A former NASA contractor employee at the John H. Glenn Research Center, Ohio, pled guilty to one count of violating NASA regulations, a violation of Title 18 U.S.C. 799, for using a NASA computer to access various pornographic Internet Web sites and chat rooms, as well as facilitating remote access of the computer system for an unauthorized user. The former employee was sentenced to 2 years probation and ordered to pay $1,500 in restitution.

New York Man Charged for Hacking NASA Computer in California

The head of a hacker group identified as "#conflict" was arrested after being charged with five counts of illegally accessing NASA computers located at JPL in Pasadena, California. After gaining access to the system, the man allegedly installed a program allowing him to engage in chat room discussions with other group members. The subject also allegedly gained unauthorized access to college computer systems. The OIG CCD, the FBI, and the Police Department of New Rochelle, New York, participated in this investigation.

Canadian Hacker Convicted for Denial of Service Attack

A joint investigation, conducted by the NASA OIG and other Federal agencies, resulted in the arrest and conviction of a Canadian juvenile. The juvenile hacker performed distributed denial of service[10] attacks on large commercial Web sites such as Yahoo, eBay, and CNN, thereby denying customers access to those Web sites.

[10] A denial of service attack attempts to shut a system down by flooding the network server (or individual) with an excessive amount of "noise" or traffic causing the network server or individual machine to freeze or lock up. Distributive denial of service attacks happen when multiple machines on a network are compromised and set-up to attack a particular machine hence flooding it with more data than the target can handle and subsequently shutting it down.

Workplace Violence

NASA Employee Convicted of Assault

A NASA employee at the Goddard Space Center, Maryland, was convicted of one count of Assault within Maritime and Territorial Jurisdiction, under Title 18 U.S.C. 113, for physically assaulting another NASA employee at the Goddard fitness center. The assailant was sentenced to 2 years of supervised probation and ordered to pay a $500 fine.

Other

Man Pleads Guilty to Attempted Sale of Shuttle Challenger Part

An Ohio man pled guilty to one count of illegally possessing, with the intent to convert to his own use, one heat shield he obtained from the wreckage of the 1986 Space Shuttle Challenger disaster. The man, who was on the recovery crew aboard a U.S. Navy ship, took the heat shield without authorization and attempted to sell it 14 years later. He was sentenced to serve 2 years probation.

Man Charged with Making Bomb Threat

A prison inmate in Boise, Idaho, was charged in a one-count indictment with communicating a bomb threat to the Kennedy Space Center. A local law enforcement official overheard the inmate telephoning bomb threats to the Center. During those phone calls, the inmate threatened to kill people at the Center. No bomb was found on the Center.

[Note: This page in the original document contains a photograph. For size of transmission purposes, this page is not included in this electronic copy.]

Computer Intrusions/ Crimes

Network Intruder Arrested
Previously Reported: September 1999

An individual arrested for unauthorized access to computers belonging to NASA, DoD, other U.S. Government agencies, foreign countries, and various educational institutions 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.

Update: The hacker pled guilty to the three-count criminal information. Sentencing is pending.

Guilty Plea for Illegal Interception of NASA Employee's E-mail
Previously Reported: March 2000

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 intercepting of a NASA Center employee's e-mail.

Update: The subject was sentenced to 2 years of supervised probation, 100 hours community service, and ordered to pay a fine of $1,000 and a special assessment of $25.

Bribery/Kickbacks

Former Contractor Employee Pleads Guilty
Previously Reported: March 2000

A former NASA contractor employee at the Kennedy Space Center pled guilty to accepting $10,000 from a subcontractor for providing information that resulted in the company being awarded a NASA subcontract.

Update: The contractor employee was sentenced to serve 1 year of probation, fined $2,000, and voluntarily paid $10,000 in restitution to NASA. Two other individuals have been charged as a result of this investigation. One subcontractor employee was charged in a one-count criminal information with violating Title 18, U.S.C., for allegedly receiving confidential bid information to gain award of a NASA subcontract. Another subcontractor employee was charged with submitting false claims totaling $38,487, for which he later pled guilty and was sentenced to 2 years probation, 180 days home detention, ordered to pay full restitution, and pay a $2,000 fine.

Child Pornography

Former NASA Employee Charged with Possession of Child Pornography
Previously Reported: March 2000

An OIG investigation resulted in a former NASA employee being charged in a three-count criminal information with possession of child pornography. The employee had transferred child pornography images from his personal home computer to a NASA computer.

Update: The former employee pled guilty to two counts of the criminal information and was sentenced to serve 41 months imprisonment to be followed by 3 years probation. He was also ordered to pay a $200 assessment fee.

Other

Fraudulent Moon Rock Scheme Results in Indictment and Arrest
Previously Reported: March 2000

Two individuals were 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. One of the individuals, a disbarred attorney, pled guilty to one count of Conspiracy to Commit Wire Fraud.

Update: The disbarred attorney was sentenced to 6 months in jail, 10 months community confinement, 3 years supervised release, and ordered to pay a $4,000 fine. A co-conspirator was sentenced to 3 years probation, 150 hours of community service, and also ordered to pay a $4,000 fine.

Former Security Guard Pleads Guilty to Theft
Previously Reported: March 2000

A former NASA security guard at the Glenn Research Center pled guilty to one count of Theft of Government Property, in violation of Title 18 U.S.C. 641. The former guard had stolen property valued at nearly $23,000.

Update: The former guard was sentenced to serve 6 months home detention, 2 years supervised release, and ordered to pay restitution of $844.80 and a special assessment fee of $150.

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Legislation

Inspector General Jurisdiction

The NASA General Counsel has played a significant role in clarifying for the Agency the guiding principles which delineate Agency responsibilities in the counter-intelligence arena in light of the OIG's investigative mission. The Inspector General's Computer Crime Division (CCD) investigates alleged criminal activity associated with NASA's computer and network systems. This can include denial of service attacks by hackers or unauthorized use of NASA computers by civil servants and contractor employees. Hackers sometimes disguise the source of their attacks, which can be routed through other entities' computer systems, including overseas systems. If an attack appears to be state-sponsored, we coordinate any further activity with the National Security Agency, the Central Intelligence Agency, and the FBI.

NASA commissioned a study that, among other things, recommended NASA establish an in-house counter-intelligence capability. In an unclassified segment of the report, the Inspector General's role was characterized as traditionally responsible for regulatory investigations affecting Agency programs. The report cites a March 1989, Department of Justice (DoJ) Office of Legal Counsel (OLC) opinion, commonly referred to as the "*Kmiec* memorandum," which states that Inspectors General do not have authority to conduct regulatory investigations, which other components of the agency are charged statutorily with investigating. The *Kmiec* argument is misplaced, however, because there is no entity within NASA that enforces regulatory statutes.

Moreover, there have been many opinions from the Office of Legal Counsel and case law subsequent to the *Kmiec* memorandum which have expounded upon the expansive jurisdiction of the OIG's. A May 29, 1990, Office of Legal Counsel opinion addressed to FBI Director Louis Freeh affirmed that OIG investigators are law enforcement officers, for the purposes of the wiretap statute (See 14 Op. O.L.C. 121, 1990 OLC LEXIS 34). The NASA OIG derives its criminal investigative authority from the Inspector General Act. Currently, through its 1997 Memorandum of Understanding with the Department of Justice, NASA has been conferred Special Deputy U.S. Marshal status on all OIG criminal investigators. Finally, the Deputy Attorney General had occasion to issue a follow-up letter to clarify the scope of the *Kmiec* memorandum. He concluded that Inspectors General have authority to conduct criminal investigations "so long as these are related to the Inspector General's agency's programs and operations." (See letter dated July 17, 1990, to Deputy Director, Office of Management and Budget, from William P. Barr, Acting Deputy Attorney General.) Consistent with recent case law, the NASA OIG conducts criminal investigations and other inquiries, so long as they "relate" to NASA's programs and operations. Clearly, our investigations into alleged felonious intrusions into NASA computer systems and resources relate to NASA operations.

A corollary issue is which entity at NASA should be the official point-of-contact with the traditional law enforcement community for investigations. Reflecting the Inspector General Act, NASA's policy directive, NPD 9800.1 states in part:

> …the IG [Inspector General], or designee, will be the focal point for referring matters to the U.S. Department of Justice pertaining to violations of Federal criminal and civil statutes, except those directly related to security (such as unauthorized disclosure of classified information, falsification of security questionnaires and applications for employment, and nonlaw enforcement aspects of sabotage and espionage). The IG [Inspector General] will remain the focal point for referrals of all violations of Federal, criminal, and civil statutes related to computer system intrusions.…

While we recognize that anyone can contact the DoJ on routine issues, it is generally good policy that the Agency speak with a single, coordinated voice on criminal investigations. Otherwise, investigations can be jeopardized and targets of opportunity may be lost. We have agreed as an Agency that the OIG is a primary point of contact within the Agency for Federal law enforcement on potential crimes affecting NASA programs and operations, including the point of contact on potential crimes relating to information technology intrusions. NASA and the OIG have agreed to coordinate to ensure that Agency and OIG responsibilities in the information technology security area are fulfilled properly. We have agreed that all concerned offices, including a new counter-intelligence office, must work cooperatively to formalize an effective coordination process. NASA and the OIG agreed to coordinate in all areas of concern to the OIG and management, including cybercrime, counter-intelligence, and other IT systems intrusions.

S. 870, the IG Act Amendments

We were asked to comment on this bill for OMB and the PCIE. These proposed amendments would abolish cash awards and bonuses for Inspectors General, require external reviews of OIG's, and require annual instead of semiannual reports to the Congress. We noted that there is no mention of law enforcement deputation in this bill. We would recommend that deputation be included. In July, the DoJ testified that the U.S. Marshals Service has been having difficulty supervising the numbers of special deputations given to the Inspector General organizations throughout the Government. Consequently, it is DoJ's present intention to permit the current deputations of NASA OIG special agents to lapse on January 31, 2001. We are concerned about the impact on our caseload and would urge passage of the bill with full law enforcement authority for Inspectors General, or the continuation of the special deputations.

The NASA Inspector General's Office of Criminal Investigations (OCI) conducts criminal and civil investigations of reported or suspected fraudulent or criminal acts by contractors,

employees, and others that impact NASA programs and operations. OCI places a major emphasis on procurement cases, including product substitution, bribery, and kickbacks. These cases have potential life-threatening consequences for astronauts. Also, they may result in destruction of multi-million dollar unique aerospace assets. Other OCI investigations concern matters affecting the integrity of NASA programs and personnel, such as corruption, misappropriation of Government property, child pornography, and environmental crimes. Many times these cases involve joint taskforces with the Departments of Defense, Transportation, and Energy as well as the FBI. Although much investigative emphasis is placed on major procurement fraud, we have substantially increased our involvement in the detection and prevention of computer-related crimes.

The OCI CCD responds to attacks against NASA's vast telephony, Internet, and space systems networks. Reactive response to cyber attacks requires that CCD work closely with Agency officials as well as with other law enforcement organizations. The lapse of law enforcement authority would seriously hamper criminal investigations performed by OCI and the CCD.

Senator Fred Thompson has indicated an interest in sponsoring a bill giving Inspectors General statutory law enforcement authority. The PCIE legislation committee is working with congressional staff on the appropriate language.

As a result of outsourcing by the Federal Government, the Inspectors General do not have the same level of access to contractors' personnel, records, and places as they do within the Federal service. We would recommend that the Inspectors General be given the same right of access under section 6(a) of the Inspector General Act to outsourced activities, by contractual or grant provision.

Section 4 of S. 870 calls for external reviews of Inspector General operations which "at a minimum" require certain evaluations. The "at a minimum" language in the bill may impinge upon certain sensitive areas, e.g., open criminal investigations, which would be more appropriate for peer review rather than external review. The scope of the review beyond the minimum should be at the discretion of the Inspector General.

Under section 5(a) of the bill, there is no data element for the reporting of significant programmatic reviews, other than a narrative summary. This may drive Inspectors General to work only in areas where there are quantifiable measures. There would be little incentive to work in areas such as information technology security or the environment, where quantifiable results are difficult.

HR 1654, NASA Authorization for FY 2000

This bill would mandate an annual audit by the Inspector General with respect to export technologies and compliance with export control laws. This provision is similar to language contained in Senate Report 106-161. We stated that an assessment, review, inspection, or evaluation would be more flexible than a structured audit, which tends to be more formal and time consuming, and thus less responsive to congressional needs. Another provision of the bill proposes a review of Space Station costs by both the General Accounting Office and the Inspector General. We recommended a single review by the Inspector General.

Legislative Proposals for NASA Authorization for FY 2002

We were asked by the NASA General Counsel to submit proposals for the draft NASA Authorization Act for FY 2002. We submitted two proposals. The first concerns financial reporting for Intergovernmental Personnel Act detailees, who are not presently required to submit financial disclosures to the Agency. Our proposal is patterned after a similar provision applicable to the National Science Foundation. The second proposal concerns the allowability under NASA contracts of restructuring costs as a result of business combinations. This proposal is patterned after an existing requirement under DoD contracts.

Federal Chief Information Officer Legislation

We reviewed two bills that would create a Government-wide Chief Information Officer: HR 4670 and HR 5024. We also reviewed two proposed testimonies, one from OMB and the other from the Department of Treasury, on creation of a Federal Chief Information Officer (CIO). We suggest that the Federal CIO be placed within OMB and empowered with actual authority and a budget to initiate, approve, and oversee the direction and funding of information technology initiatives that affect more than one Federal agency. The position should also have responsibilities concerning information technology security. The legislation should also address how national security information would fit under the authority of the Federal CIO. An analogy is the placement of the responsibility of Controller of the United States in OMB as the head of the Office of Federal Financial Management. This arrangement has worked well and provided the necessary leadership and direction in such areas as implementation of the Chief Financial Officers Act (CFO Act), the Federal Financial Management Improvement Act, and the Single Audit Act. A similar arrangement does not exist for implementation of the Clinger-Cohen Act, Computer Security Act, Government Paperwork Elimination Act, and numerous other key pieces of information technology legislation.

If S. 1993, the Government Information Security Act, becomes law, it will require the sustained focus of OMB similar to what took place after passage of the CFO Act. A Federal CIO with broad responsibility and authority within OMB could be the source of this sustained focus and the successful implementation of the spirit of the Clinger-Cohen Act on a Federal Government-wide basis as we have seen in the CFO community.

We note that HR 5024 contains, at chapter 37, many of the provisions of the Government Information Security Act of which the NASA Inspector General previously testified in favor. HR 4670 does not contain information technology security provisions, which is one of the strengths of HR 5024. Both bills would place the Federal CIO outside of OMB but within the Executive Office of the President. For the reasons set forth above, we believe the Federal CIO should reside within OMB.

Senate Governmental Affairs Committee E-Government Initiatives

On May 18, 2000, Senators Fred Thompson and Joseph Lieberman unveiled a Web site proposing dozens of e-government initiatives at http:cct.georgetown.edu/development/eGov/. We commented on some of those initiatives. We indicated the problems associated with establishing a centralized online portal to generate Web pages for the entire Federal Government. We also pointed out some of the measures that need to take place to assure the fairness of commercialization and partnerships with private industry for development of online services.

Regulations

During this period, the OIG reviewed 35 Agency regulations, some of which are highlighted below.

NPD 1600.2B, NASA Security Policy

We continue to express our concern with NASA's lack of an adequate policy on communications security. We are concerned that NASA Policy Directive 1600.2B (NPD 16002.B) does not provide enough specificity regarding information assurance or communications security. A separate NPD addressing information assurance/communications security stands a better chance of adequately addressing the critical issues. Also, we are concerned about the timeframe for rewriting NASA Procedures and Guidelines 1600.6A (NPG 1600.6A), "NASA Communications Security Procedures and Guidelines." We believe that the NPG is critically inadequate in its coverage of information assurance/communications security. NASA indicates that certain events (for example, national policy updates) need to take place before an NPG rewrite will begin. We believe that the NPG rewrite should start immediately. Updates can be made as events unfold. This should not be a major impediment given the typical timeframes for NPG drafts.

NPD 1200.1A, Internal Management Controls and Audit Liaison and Follow-up

On June 1, 2000, NASA issued its revised policy directive. The Agency declined to include language making it NASA policy for management to timely reply to OIG audit recommendations. We had requested that the following emphasized language be added to the NPD: "Efforts will be made to resolve potential nonconcurrences on OIG audit recommendations through a process of escalating reviews between management and OIG staff prior to responding to the draft report, within the requested time frames." Without a time limit, the issuance of final reports and the resolution of recommendations may be unnecessarily extended. This delay will diminish the value of the audit process and potentially delay implementation of timely corrective actions, to the detriment of the Agency.

IG Hotline Poster

Our clause to require NASA contractors to display NASA OIG Hotline posters was published as a proposed rule in the May 22, 2000, Federal Register. One comment was received. The respondent was generally in favor of the proposed rule but recommended that NASA allow contractors to post internal Hotline posters as is permitted by the Defense Federal Acquisition Regulation Supplement. We have provided an analysis of the comment to the NASA procurement staff for use in the final rule publication.

IG Access Clause

We are continuing our efforts to have a standard Inspector General access clause inserted into Government contracts covered by the FAR. We have provided a detailed analysis of the problem and need for the clause to the NASA General Counsel and Associate Administrator for Procurement to enlist their support for a Defense Acquisition Regulation case on this issue.

Code of Conduct on the International Space Station

We were requested to comment on a proposed addition to 14 CFR [Code of Federal Regulations] 1214, which would establish a code of conduct for International Space Station crewmembers. We commented on the applicability of the proposal to certain bilateral partners and also indicated that the proposal should mention specifically which flight rules are applicable to a given situation. We made other suggestions that we consider to be in the best interests of the Agency and the Space Station crewmembers.

OMB Draft E-SIGN Guidance

On June 30, 2000, President Clinton signed into law the Electronic Signatures in National and Global Commerce Act (E-SIGN), which takes effect October 1, 2000. E-SIGN does not govern activities that are primarily governmental, which are covered under the Government Paperwork Elimination Act. However, E-SIGN applies broadly to Federal agencies and an inter-agency task force recommended guidance to OMB for application to the public sector. OMB asked the Inspectors General to comment on the draft guidance.

In its guidance, OMB is giving agencies considerable leeway to set standards for accessibility and records retention. We suggested that OMB, perhaps through the PCIE, should provide uniform guidance that facilitates Federal audit, investigative, and inspection activities. These should be minimum requirements. For example, the present draft states that agencies have the authority to set their own standards for accessibility and retention of electronic records and authentication of electronic signatures.

Such latitude may not meet the collective needs of the various disciplines within an Inspector General organization or within the Federal law enforcement community. Since electronic records are increasingly the main source of evidence compared to paper documentation, OMB should provide uniform guidance that facilitates Federal investigative and audit activities.

Electronic records should be retained in a complete and unaltered form and organized such that information can be analyzed and retrieved in a prompt and reliable manner. Further, a basis for authentication of records should be established. Without clear direction from OMB, agencies may end up with widely varying policies that can impair the audit and investigative missions by restricting access to information. We suggested that OMB be more proactive and not leave this important role to the agencies alone.

We suggest that OMB set the minimum standards in cooperation with the DoJ and the PCIE.

Draft Department of Justice Guidance on Electronic Processes

We were asked to review a draft document circulated by DoJ concerning practical guidance on legal considerations related to agency use of electronic filing and record keeping under the Government Paperwork Elimination Act. We consider the product to be a well thought out and comprehensive legal treatment of the issues. We support a rebuttable presumption that an agency electronic record is reliable. We stated that it would be ever more important to retain in electronic format prior versions of regulations, forms and contract clauses, so that the controlling rules would be maintained for a particular transaction. Agencies would need to develop methods of storing data in incorruptible read-only format that

would be widely trusted by the public. We suggested a feedback loop for data submitted to the Government. If a submitter is provided a copy of data as received by the Government agency and provided an opportunity to correct the data as submitted, this would enhance the reliability of the electronic record.

Other

Access Issues at the Jet Propulsion Laboratory

Caltech operates JPL as a Federally Funded Research and Development Center under contract with NASA. The OIG has been working with representatives of Caltech to resolve issues concerning the scope of the Inspector General's authority to engage in oversight and investigative activities at JPL.

During a recent inspection at JPL, laboratory management strongly objected to OIG personnel conducting random, anonymous interviews of JPL employees without having management representatives present at the interviews. Caltech even went so far as to seek DoJ intervention in the inspection. In subsequent meetings held to address these issues, Caltech has questioned the OIG's authority to carry out an inspection program at JPL, although they have nevertheless pledged to cooperate with the OIG's inspection program. Caltech has proposed a set of protocols to govern the implementation of the inspection program at JPL, and further meetings on the access issue are planned.

Freedom of Information Act Matters

During this reporting period we received 21 FOIA requests for records and one appeal. One matter is in litigation in United States District Court.

Subpoenas

During this reporting period we processed 16 Inspector General subpoenas. We referred one matter to the Department of Justice for litigation. It was subsequently resolved without the necessity of a court filing.

Legal Training

During this semiannual period, we offered training on legal topics of interest to auditors and investigators through NASA's video-teleconferencing facilities. We offered training on: the legal use of data in the National Criminal Information Center Database, the Fair Credit Reporting Act, computer matching, developments in FOIA law, legal liability of Federal employees, the use of "investigative auditors," the National Aeronautics and Space Act of 1958, and misuse of the NASA name and initials. We also presented a session on the relationship of law enforcement to the media and OIG press policies.

Personnel

A new staff attorney joined the OIG legal team in August 2000. She is stationed at the Johnson Space Center and will provide legal support to OIG staff at Johnson and other NASA Centers.

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We appreciate the outstanding efforts of Assistant U.S. Attorney Jay Golden, Southern District of Mississippi, Biloxi, Mississippi, in support of the NASA OIG.

Jay Golden
Assistant U.S. Attorney
Southern District of Mississippi

Mr. Golden successfully spearheaded the prosecution of multiple targets at Stennis Space Center, Mississippi. The prosecution lead to the indictment of multiple current and former NASA contractor and subcontractor employees in a major kickback scheme, and theft of NASA property—all perpetrated at Stennis Space Center.

During the course of the investigation, by Special Agents of NASA Inspector General's Office of Criminal Investigation and the Federal Bureau of Investigation, Mr. Golden provided oversight to ensure all evidence developed and collected would be admissible for subsequent court proceedings.

To date, through Mr. Golden's efforts and support of the NASA OIG, six individuals have pled guilty to charges of violating the Anti-Kickback Act and/or Conspiracy to Violate the Anti-Kickback Act and/or Theft of Government Property.

We commend Mr. Golden for his dedication and commitment to this investigation and look forward to continuing a long and productive relationship with him.

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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

Peer Review

The NASA OIG Office of Audits completed its peer review of the Department of Education OIG. The NASA OIG Office of Audits provided electronic working paper training to the Department of Commerce, which will enhance the ability of the Department of Commerce to perform its peer review of the NASA OIG this year.

OIG Participates in Federal Audit Clearinghouse Users Group

The NASA OIG Office of Audits is a member of the Federal Audit Clearinghouse (FAC) User Group. The purpose of the User Group is to address the positive and negative aspects of the Office of Management and Budget Circular A-133 Data Collection Form and the FAC database. The form summarizes the significant information in the audit report for dissemination to the public through the Internet. Responsible officials from the audited entity and the audit organization sign the form certifying to the information presented. The information (in a database) identifies the OMB Circular A-133 audit reports that were received by the FAC. The database also contains information about the results of audit, such as the type of opinions expressed, findings, questioned costs, and major programs audited. The User Group formed a task force to address necessary changes to the Data Collection Form.

OIG Participates in PCIE Peer Review Working Group

The NASA OIG chairs the PCIE peer review working group. The purpose of the group is to determine whether the current guidance for the peer review needs to be revised.

Financial Audit Manual

The NASA OIG Office of Audits is a member of the Federal Financial Audit Manual Working Group. The working group was established to develop a single manual that can be used as a primary guide for Federal financial statement audits conducted by the President's Council on Integrity and Efficiency (PCIE) community and the General Accounting Office, beginning with the FY 2001 statements.

Professional Development Forums

The NASA OIG hosted two Professional Development Forums for the PCIE:

- Internet-Based Electronic Audit Management (I-BEAM), which identified lessons-learned in the transition to I-BEAM and the use of Internet, an Intranet, and other electronic technology.
- Federal Financial Statement Audits, which gave an overview and update on regulations and guidance related to Federal financial statement audits.

Accountability Report

The NASA OIG participates in the Association of Government Accountants Certificate of Excellence in Accountability Reporting Program. The purpose of the Program is to determine whether an Agency's financial statement report is at the level of excellence that merits a Certificate of Excellence in Accountability Reporting.

Information Security

The NASA OIG Office of Audits accepted an invitation from the World Markets Research Centre, London, England, an independent publisher of research reports for governments and trade organizations, to serve on a senior level advisory panel for its upcoming Infosecurity report. The panel will review strategic, economic, as well as social and technological issues related to information security. The report is being prepared in conjunction with the Information Systems Security Association, the Information Technology Association of America, and the World Information Technology Service Alliance. The report will be distributed globally to their memberships as well as to relevant corporate and information technology managers.

PCIE/ECIE [Executive Council for Integrity and Efficiency] Review of Agencies' Critical Infrastructure Assurance Programs (PDD-63)

The NASA OIG is leading a PCIE/ECIE review of the nation's critical infrastructure assurance program based on PDD-63. More than 20 OIG's participated in Phase I of the 4-phase review. Phase I relates to planning and assessment activities for cyber-based infrastructures, Phase II relates to implementation activities for cyber-based infrastructures, Phase III relates to planning and assessment activities for physical minimum essential infrastructure, and Phase IV relates to implementation activities for physical minimum essential infrastructure. The NASA OIG is coordinating the work of the participating OIG's and plans to issue a letter report based upon the results of the reviews of Phase I to OMB in November 2000. The participating OIG's are to begin work on Phase III November 2000. Phase II work will begin in 2001 after the agencies have made sufficient progress, for OIG review purposes, in implementing their cyber security plans.

OIG Participates in Federal Audit Executive Council Training Coordinators' Roundtable

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 Assistant Inspectors General for Auditing from Federal agencies, as well as, the Director, Defense Contract Audit Agency, and the Auditors General of the military services. We are participating on an interagency OIG FAEC training coordinators' roundtable. The purpose of the roundtable is to discuss concerns related to and the means necessary 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 Committee to Revise Federal Guidelines for OMB Circular A-133 Audits

The OIG participates on the PCIE committee to revise the "Federal Cognizant Agency Audit Organization Guidelines." The purpose of the committee is to assist the cognizant and oversight agency in developing a clear understanding of audit responsibilities, and to promote a uniform policy for carrying out cognizant responsibilities as described in OMB Circular A-133.

Oversight of Audit Services

Some of NASA's investment in audit services goes to audit organizations that are external to NASA and the OIG. The IG Act requires the OIG to ensure that any work performed by non-Federal auditors complies with Government auditing standards. To ensure compliance with these standards, gain insight into the quality of the audit services provided, and ensure that maximum benefits of these audits are achieved, the OIG conducts quality control reviews of external auditors work.

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 2000 financial statements and is actively monitoring its work. In addition, the OIG is monitoring NASA's progress toward implementing recommendations made by Arthur Andersen during previous years' audits.

DCAA External Quality Control Review Report Issued

In our A-133 quality control reviews of the audit work performed by the DCAA for the Jet Propulsion Laboratory (IG-99-045) and the Smithsonian Institution (draft report issued September 11, 2000), we noted that DCAA had not obtained an external quality control review that meets generally accepted Government auditing standards. Organizations performing audits in accordance with these standards are required to obtain an external quality control review at least once every 3 years. The review determines whether the organization's internal quality control system is in place and operating effectively to provide reasonable assurance that established policies and procedures and applicable standards are being followed. DoD Directive 7600.2, section 6.16, dated February 2, 1991, requires the Office of Assistant Inspector General for Audit Policy and Oversight, DoD Office of Inspector General, to perform the external quality control reviews of DCAA at least once every 3 years.

As the result of discussions we held with the DoD Office of Inspector General and DCAA Headquarters management, the DoD Office of Inspector General performed the required external quality control review and issued its report, "External Quality Control Review of the Defense Contract Audit Agency," report reference D-2000-6-010, on September 27, 2000.

Educational and Non-Profit Organization Audits

Quality Control Reviews

The OIG performed quality control reviews of the audit reports and working papers that support the OMB Circular A-133 audits of Morehouse College (IG-00-042, FY 1999), University of Georgia Research Foundation (IG-00-040, FY 1999) and San Jose State University Foundation (IG-00-062, FY 1999). The problems we identified included the failure to perform risk assessments and inadequate documentation of the audit work performed to support significant conclusions and judgements.

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. During this period, we completed a quality control review at Ames Research Center (IG-00-041, FY 1998), and conducted fieldwork for quality control reviews at Goddard and Headquarters. The Audit program will continue to coordinate these reviews with the Exchange inspections conducted by OIG inspections staff.

Inspections, Administrative Investigations, and Assessments

Research Integrity and Misconduct

The OIG is a member of PCIE/ECIE Misconduct in Research working group. The group is sharing approaches and discussing issues to implement new Federal regulations governing science research integrity and misconduct. The group also includes representatives from the National Science Foundation, Department of Health and Human Services, Department of Energy, and other Federal organizations actively involved in science research.

Continuing Activities

- In conjunction with the PCIE and the Inspections and Evaluations Roundtable, the NASA OIG staff initiated the OIG Webmasters Working Group. The group represents curators and other staff involved in maintaining OIG Web sites throughout the Federal Government. The group periodically meets to discuss Web site design and operation, legal requirements, and best practices.

- We are continuing our advisory role in Presidential Management Intern (PMI) Career Development Group #11. The group consists of 20 PMI's from different Federal departments and agencies. We developed and made two presentations, including "A Guide to Federal Ethics" and "A Survivor's Guide to Federal Personnel." The OIG hosted a PMI from the National Institutes of Health for a 5-month rotational assignment.

- The IAIA information technology security staff initiated working contacts with the U.S. Air Force Office of Special Investigations. The two organizations work together and share information on matters relating to both NASA and the Air Force.

- We conduct regularly monthly meetings with the staff of the Agency's Management Assessment Division to share the status of inspection reports and recommendations, and Agency responses and follow-up actions.

- We presented an overview of the OIG mission and operations to an audience of Headquarters executives and other supervisors at the Headquarters Executive Briefing on Human Resources Management and Policies.

- The IAIA information technology security team and representatives of the Computer Crimes Division continued their work on raising the awareness of Federal computer users to properly clearing information from computer hard drives about to be discarded or transferred. The team briefed General Services Administration officials responsible for operating the Government's "Computers to Schools" program on the need to remove electronic information before assigning computers to schools and other organizations outside the Government.

- We provided an overview of our NASA OIG Exchange inspection and audit activities to the NASA Exchange Council Conference at the Johnson Space Center in June 2000. The topics included: OIG observations, findings, recommendations, and best practices.

- The IAIA procurement analysis team assisted the Inspector General with her presentation to the annual conference for NASA procurement specialists. The presentation stressed the joint and cooperative roles of OIG and NASA procurement specialists in preventing and detecting contract fraud.

- An IAIA staff member represented the OIG on the NASA Headquarters secretarial and clerical awards panel.

Office of Criminal Investigations

OIG Participates in Development of New Inspector General Academy Training Courses

Representatives from the NASA OIG participated with other agency OIG's in the development of two new training programs to be incorporated into the Inspector General Academy's curriculum. The courses are designed to train Inspector General criminal investigators on the many facets of conducting covert investigations. Both courses will be offered at the Federal Law Enforcement Training Center, Brunswick, Georgia.

OIG Hosts Specialized Fraud Training

The OIG continues to provide valuable fraud training on current fraud schemes that have an adverse economic impact on governmental programs and society. During this semiannual period, the OIG hosted training for the Inspector General and procurement community, which highlighted the current trends in contract fraud and anti-trust crimes. Assistant U.S. Attorney Peter Goldberg, Anti-Trust Division, U.S. Department of Justice, presented the training.

OIG Provides Career Briefings to Students

The OIG participated in Career Day briefings for young students in San Jose, California. Members of the OCI staff presented an overview of the OCI mission and described the duties of a NASA OIG criminal investigator.

Computer Crimes Division

OIG Visits George Mason University to Discuss Recruiting and Teaching

In a continuing proactive effort to stimulate outstanding students to look to the NASA OIG for career opportunities, the Inspector General, her OIG Executive Officer, and the Directors of Computer Crimes Operations and Technical Services visited George Mason University. Discussions with university leaders focused on the various internship programs and approaches that are offered by the University which might invigorate the recruitment of information systems security talent by the OIG.

Also discussed were alternatives for teaching opportunities, in conjunction with Department of Justice computer crimes attorneys, to graduate and undergraduate computer science majors interested in information systems security and computer crimes investigations.

OIG Expands Computer Crimes Forensic Analysis Network

The OIG continues to develop more national and international relationships in the intelligence, law enforcement, and research and development communities. We currently work with the Royal Canadian Mounted Police, the United Kingdom Serious Fraud Office, the U.S. Department of Defense Computer Forensics Laboratory, the Netherlands Computer Forensics Laboratory, and the Australian Department of Defense Research and Development Section to develop new tools and techniques for combating computer crimes.

Legal

Voluntary Disclosure Program

Unlike the Department of Defense, NASA does not have a voluntary disclosure program. These programs are designed so that entities will voluntarily step forward and bring to light wrongdoing and other irregularities concerning Federal contracts and programs. We have consulted with the NASA General Counsel, the Associate Administrator for Procurement, DoD officials, and the Department of Justice concerning the establishment of such a program at NASA. DoD has been helpful in sharing information about how their program operates. We are continuing our efforts to establish a similar program at NASA.

Other

OIG Hosts Summer Interns

The OIG hosted summer interns from the National Association for Equal Opportunity in Higher Education Summer Internship Program. The interns, who came from Morgan State University and Bowie State University, were involved in a variety of work assignments within the audit and inspections areas and received training and orientation on NASA and Federal Government activities.

The audit staff also worked with a summer intern student on a risk-based model to identify high-risk procurement and fraud issues, and tutored undergraduate students in financial management, math, quantitative analysis, and history.

Recognition of Achievement

At the Annual PCIE/ECIE award program in September 2000, several members of the OIG were recognized for their efforts during this period. An OIG auditor was recognized with an Award for Individual Achievement for her outstanding efforts and significant achievements as the Executive Director of the Federal Audit Executive Council. Also, an OIG special agent received a Career Achievement Award for sustained outstanding performance throughout his career and for saving and recovering millions of dollars in NASA funds through his investigative efforts. An Award for Excellence was presented to the NASA OIG Procurement Analysis Team for their outstanding contributions to the PCIE's outreach and education efforts, and the team's special contribution to improving OIG products dealing with Federal acquisitions.

We commend the staff for their hard work and dedication.

From Left to Right: Elaine M. Slaugh, Auditor; Joseph R. Gutheinz, Special Agent; Roberta L. Gross, NASA Inspector General; and Diane M. Frazier, Procurement Analyst

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Appendices

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Audit Activities

OIG Audit Reports	31

Audit Impact

Recommended Better Use of Funds	$33.6 million
Audit Dollar Impact[1] TOTAL	$33.6 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		170
Audits with Recommendations		21
Audits Unresolved Over 6 Months Old		3
Total Disallowed/Questioned Costs[3]		$180,200
Total Disallowed/Questioned Costs Recovered/Sustained		$ 0.00
Recommendations:	Beginning	3
	New Recommendations	45
	Recommendations Dispositioned	19
	Ending Balance	29
Average Age of Recommendations Not Completed		5 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 September 30, 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 has now been initiated. NASA will continue to pursue this action.

Statistical Highlights

Administrative Investigations Activities

Cases Opened	78
Cases Closed	60
Cases Pending	159
Referred to Management	8
Closed	6
Pending	2
Referred to Investigations	8

Inspections/Assessments Activities

Activities Opened	8
Activities Closed	9
Activities Pending	16
Management Letters/Alerts	5

Criminal Investigations Activities

Cases Opened	68
Cases Closed	87
Cases Pending	306
Hotline Complaints Received	79
Referred to Audits or Investigations	43
Referred to Inspections and Assessments	20
Referred to NASA Management	3
Referred to Other Agencies	3
No Action Required	10

Criminal Investigations Impact[1]

Indictments/ Informations	45
Convictions/Plea Bargains/ Pretrial Diversions	23
Cases Referred for Prosecution	25
Cases Declined	15
Cases Referred to NASA Management for Action	14
Cases Referred to Other Agencies for Action	19[1]
Suspension/Debarments	
Individuals	28
Firms	9
Administrative Actions	
NASA Employees	1
Contractor Employees	21
Recoveries	$3.0 million[2]
Potential Impact	$1.6 million
Investigations Dollar Impact	
TOTAL	$4.6 million[3]

[1]Includes referrals to State, local and other Federal law enforcement agencies.

[2]Includes Administrative Recoveries, Fines and Penalties, Restitutions, Settlements and Judgements.

[3]Includes Funds Put to Better Use and Potential Cost Impact.

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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 identified $33.6 million in funds put to better use.

Report	Report Title & Monetary Amount
IG-00-032	NASA Contract Audit Follow-up System at Johnson Space Center
IG-00-033	Relief Granted to Contractor for Overpayment of General and Administrative Costs
IG-00-034	Foreign National Visitors at NASA Centers
IG-00-035	Contract Safety Requirements at Kennedy Space Center and Marshall Space Flight Center
IG-00-036	Final Summary Report: Disaster Recovery Planning Audits
IG-00-037	Review of Research Flight Operations at the Glenn Research Center
IG-00-038	NASA's Organizational Structure for Implementing the Clinger-Cohen Act
IG-00-039	Space Flight Operations Contract Phase II
IG-00-040	Deloitte & Touche LLP Audit of University of Georgia Research Foundation, Inc. for Fiscal Year Ended June 30, 1999
IG-00-041	Strother & Associates Audit of National Aeronautics and Space Administration Ames Research Center Exchange Financial Statements for Fiscal Year Ended September 30, 1998
IG-00-042	KPMG LLP Audit of Morehouse College, Fiscal Year Ended June 30, 1999
IG-00-043	Consolidated Space Operations Contract – Cost-Benefit Analysis and Award Fee Structure
IG-00-044	Transfer of External Tank Display to Kennedy Space Center Visitor Complex
IG-00-045	NASA's Independent Cost Estimating Capability

(Continued)

Audit Reports Issued
(Continuation)

Report	Report Title & Monetary Amount
IG-00-046	NASA Settlement of DCAA's Incurred Cost Audits at Goddard Space Flight Center
IG-00-047	Kennedy Space Center Proposed Media Center
IG-00-048	Contractor Exports of Controlled Technologies
IG-00-049	Health Care Costs at NASA Contractors
IG-00-050	NASA's Use of SmartPay Purchase Cards
IG-00-051	Contractor Travel Costs
IG-00-052	Report on the External Peer Review of the Department of Education Office of Inspector General Audit Services
IG-00-053	NASA's Aviation Safety Program
IG-00-054	Property Administration Delegations for Contractor-Held Property
IG-00-055	System Information Technology Security Planning
IG-00-056	Information Assurance Controls for Headquarters Windows NT 4.0 Systems
IG-00-057	NASA's Planning and Implementation for Presidential Decision Directive 63 - Phase I
IG-00-058	Virtual Memory Systems Operating System Security and Integrity Controls at Goddard Space Flight Center
IG-00-059	Software Assurance
IG-00-060	Configuration Controls in Desktop Outsourcing ($33.6 million)*
IG-00-061	Internal Controls Over Processing Deobligations
IG-00-062	Grant Thornton LLP Audit of San Jose State University Foundation, Fiscal Year Ended June 30, 1999

*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 754 audit reports (excluding pre-award contractor proposal evaluations) on contractors who do business with NASA. DCAA also issued 173 reports on audits of NASA contractor proposals totaling $634 million, which identified cost exceptions totaling about $8.2 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 188 reports with $81,918,000 of questioned costs, and 65 reports with $73,871,000 of funds put to better use. NASA management sustained 71.3 percent of DCAA's questioned costs and 60.9 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	465	$261,795
Issued during period	122	$ 67,201
Needing management decision during period	587	$328,996
Management decision made during period:	188	$ 81,918
Amounts agreed to by management		$ 58,367
Amounts not agreed to by management		$ 23,551
No management decision was made by end of period:	399	$247,078
No management decision prior to period and still unresolved at end of period	334	$208,903
Reports issued during reporting period and unresolved at end of period	65	$ 38,175

DCAA Audits with Recommendations Funds Be Put to Better Use

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made at beginning of period	162	$365,892
Issued during period	37	$ 43,347
Needing management decision during period	199	$409,239
Management decision made during period:	65	$ 73,871
Amounts agreed to by management		$ 45,001
Amounts not agreed to by management		$ 28,870
No management decision was made by end of period:	134	$335,368
No management decision prior to period and still unresolved at end of period	102	$302,048
Reports issued during reporting period and unresolved at end of period	32	$ 33,320

Significant Contract Audits

Incurred Cost/$1.7 million ($180,000 NASA) DCAA Assignment No. 1271-1998U10100186

The audit of Calendar Year 1998 incurred costs at UTC Pratt & Whitney, Florida Operations, resulted in savings to the Government of $1.7 million, of which $180,000 was saved on NASA contracts. The audit found that: (1) certain assets should have been capitalized in accordance with Cost Accounting Standard 404 and the contractor's disclosed practices, (2) the claim included FAR Part 31 unallowable labor (absence with pay) costs, educational expenses (pilot's courses, vocational training, stock awards), and (3) overhead costs relating to non-government work (other UTC entities) understated.

Billing System Internal Controls/$1.5 million DCAA Assignment Nos. 3121-2000K11010001, 3112-99K11010001

A review of the contractor's billing system internal controls determined the contractor did not have procedures for periodically reviewing overage accounts receivable reports. The review identified an outstanding credit voucher (approximately 5-years old) of $1.5 million due to NASA. The auditor coordinated with NASA and the contractor to determine the cause of the problem and corrective action to resolve the overage credit. As a result, the contractor remitted a $1.5 million check to NASA. The contractor strengthened its internal controls to review accounts receivable aging reports to preclude future problems.

Estimating System Internal Controls/$950,000 DCAA Assignment No. 4461-1999A10601001

A review of the contractor's estimating system internal controls identified an internal control deficiency in change order proposal preparation. The contractor's correction of the deficiency resulted in a $950,000 proposed price adjustment to a NASA program. The company and NASA had a Change Partnering Agreement establishing the requirements of change order proposals. However, in this case the contractor did not follow the established change order requirements.

Incurred Cost/$10.1 million ($5.7 million NASA) DCAA Assignment Nos. 4231-1988M14010133, 4231-1989M16990112, 4231-1990M16990143, 4231-1991M16990107, 4231-1991M16990117, 4231-1992B16990010, 4231-1994M16990016, 4231-1994M16990017, 4231-1995A10250417

Audits of the Marquart Company/Ferranti Group (TMC) final indirect rate proposals for fiscal years 1984 through 1992 questioned and sustained costs of approximately $39.1 million, which result in net savings to the Government of approximately $10.1 million, of which $5.7 million was saved on NASA contracts. The majority of the savings were achieved by questioning increased "stepped-up" depreciation costs claimed by the contractor to recoup the purchase price paid by it, and a predecessor owner, for the assets of TMC. The audit team's position to recommend the disallowance of "stepped-up" depreciation costs was in accordance with the Defense Acquisition Regulation Cost Principles. The Armed Services Board of Contract Appeals and the Circuit Court upheld the audit position in Case No.'s 29888, 44731, and 44826. The contracting officer sustained the audit position in total during final negotiations held in January 2000. Additionally, the audits disclosed numerous other unallowable claimed expenses including entertainment costs, lobbying costs, legal expenses, and reorganization costs. The focused audit support over an extended period of time was pivotal in achieving the savings on NASA contracts.

Incurred Cost/$8 million ($448,000 NASA) DCAA Assignment Nos. 6701-92G14010025, 6701-92G14010004, 6701-92G14010039, 6701-93G14010001

This past year, negotiated final rates were established for fiscal years 1989 through 1992 at Carnegie Mellon University sustaining DCAA questioned cost associated with departmental administration expenses, cost sharing expenses, and utility study depreciation. The $8 million of DCAA questioned cost sustained by the Office of Naval Research for the 4-year period resulted in a NASA recovery of $448,000.

Incurred Cost/$225,000 ($12,500 NASA) DCAA Assignment No. 6701-1999P10150028

The audit of the Pennsylvania State University FY 1998 incurred costs resulted in $255,000 of questioned costs. The audit disclosed differences between the claimed and actual floor space used as an allocation base to distribute physical plant and other indirect expenses. Specifically, the audit revealed that the university had excluded certain classroom space from the instruction base used to allocate equipment depreciation. The audit reallocated 262,414 square feet of classroom space from research to the instruction base resulting in a $12,500 net savings to NASA contracts.

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Under the authority of the Inspector General Act, the NASA OIG conducts and supervises independent audits, investigations, inspections, and other reviews to promote economy, efficiency, and effectiveness and prevent and detect fraud, waste, and mismanagement. To fulfill that mission and help NASA achieve its scientific and technology goals we have aligned our programs to focus on those areas representing the Agency's highest vulnerabilities. We have identified those areas as NASA's top ten management challenges, to include:

1. Safety and Mission Assurance
2. International Space Station
3. Information Technology
4. Procurement
5. Fiscal Management
6. Program and Project Management
7. Launch Vehicles
8. Technology Development
9. International Agreements
10. Environmental Management

The NASA OIG has a positive role in helping the Agency meet its goals and address NASA's top ten challenges. NASA management has worked cooperatively with the OIG in addressing many of the top ten management challenge issues. In addition, the Agency has made significant progress implementing the Government Performance and Results Act requirements, which cut across all challenge areas.

Current information on prior work addressing NASA ten most serious management challenges can be found in our December 1, 1999, report to Congress. In addition, our planned work addressing these challenges is outlined in our Fiscal Year 2001 Annual Plan and detailed in the functional area version of the plan. These documents are available on the NASA OIG Homepage <http://www.hq.nasa.gov/office/oig/hq/reports.html>, or by contacting any of the persons listed in the Points of Contact on page i of this report.

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Appendix V
Material Weaknesses and Significant Areas of Concern

As required by the Federal Managers' Financial Integrity Act, NASA reports material weaknesses, which are major internal controls deficiencies in a system, function, program or other area. NASA also reports significant areas of management concern, which are less serious than material weaknesses. In September 2000, the OIG recommended that management report the following material weaknesses and significant areas of concern:

Material Weaknesses

Information Technology

NASA has a fragmented information technology security program that lacks clear lines of authority, policies, guidelines, and enforcement. NASA has separate organizations that handle classified and unclassified IT security. We are also concerned about fragmentation of the IT security mission area components because NASA policies and procedures do not effectively integrate computer and communication security. In addition to fragmenting the mission area components, NASA had divided IT security responsibilities among multiple Centers. For example, the Kennedy Space Center handles one component of communications security while Headquarters performs all other communication security functions. Several other Centers have specific IT security functions. We believe this fragmentation has caused confusion and inhibited implementation of an effective IT security program.

Our audits and other reviews have identified numerous IT weaknesses. For example, we found that NASA did not have security plans for many of its special management attention systems and many of its computers that host publicly accessible Web sites. Our audits of disaster recovery plans for 10 mission critical systems found that some of the plans' elements were either inadequate or missing. Our assessment of command and control communications for a major NASA program found that the Agency had not fully considered alternatives, which might result in the program's communication being susceptible to unauthorized command and control instructions. As it has in prior years, our work this year identified weaknesses in the physical security controls related to NASA's major data centers. In addition, this year we conducted audits of several mission-critical information systems to determine whether NASA had implemented adequate controls at the host computer level. We found that NASA had not implemented adequate basic controls in areas such as system access, protection of critical files, system backup and restore procedures, and system audit and monitoring capabilities. These deficiencies increased the risk of unauthorized access that could result in loss of mission support, loss of mission data, and illegal use of computer systems.

Material Weaknesses and Significant Areas of Concern

Environmental Management

In audit reports issued in 1997 and 1998, we recommended that NASA pursue cost sharing and cost recovery agreements with the Jet Propulsion Laboratory (JPL) and the Santa Susana Field Laboratory (Santa Susana). While NASA has made slow progress in negotiating cost sharing and cost recovery agreement for JPL, negotiations have not begun for Santa Susana, although the Defense Contract Audit Agency recently issued an audit position. Management has also been slow in complying with Agency policies for identifying principal responsible parties and negotiating cost sharing and cost recovery agreements. In a recent audit we found that NASA has not conducted the preliminary analyses necessary to start the principal responsible parties identification and cost sharing agreement process for many of NASA's contaminated sites. As a result, NASA has not identified all contaminated sites where the Agency should be seeking cost sharing or cost recovery arrangements. NASA estimates that the sites awaiting completion of a preliminary or full analysis of principal responsible parties will cost about $506.2 million to clean up. For these sites we estimate that NASA could avoid at least $49.5 million through cost sharing.

We also found deficiencies in NASA's compliance with the National Environmental Protection Act (NEPA). Although NASA has established procedures for implementing NEPA requirements, 11 (85 percent) of 13 mission-related programs and projects did not comply with NEPA requirements or NASA guidance. In addition, although nine 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 and projects we reviewed did not fully comply with NEPA requirements and were potentially exposed to increased costs, project delays, missed opportunities for preferable alternatives and/or public involvement, and adverse public perception and reaction. The Agency's lack of compliance with NEPA law and/or NASA guidance can also have adverse environmental impacts, such as lost opportunities to consider reasonable alternatives and their environmental impacts early in the program or project planning stages.

Significant Areas of Management Concern

Safety and Mission Assurance	Our audits have identified numerous safety concerns, particularly in the area of contractor compliance with safety procedures and requirements.
Contract Administration	NASA procures over $12.5 billion in goods and services annually. We continue to find problems with contractor and subcontractor noncompetitive procurements; lack of adequate market surveys, technical analyses, and cost/benefit evaluations; improper use of support service contracts; and inadequate contract audit services.
International Space Station Program Management	Our reviews have found significant problems related to Space Station cost growth, contingency planning, and the X-38/Crew Return Vehicle.

Material Weaknesses and Significant Areas of Concern

X-33 and X-34 Program Management and Restructuring

Our audit of the X-33 cooperative agreement found that the use of a cooperative agreement contributed to a variety of program management problems that adversely affected program planning, execution, resource management, and property control. The X-33 program is currently undergoing a major restructuring due to the failure of a major hardware component. Our audit of the X-34 Technology Demonstrator found that NASA had not established mission-specific requirements for each of the planned X-34 flights nor properly documented numerous changes to the proposed flight test program.

Access to NASA Facilities and Technology

Several audits and other reviews have found weaknesses related to foreign national visitors at NASA facilities and the export of NASA technology.

Appendix VI
Directives Reviewed by the OIG

Directive	Directive Topic
5 CFR Part 430	Senior Executive Service Performance Management
14 CFR 1250 through 1252	Title VI of Civil Rights Act
14 CFR Part 1204	Inspection of Persons and Personal Effects on NASA Property
14 CFR Part 1214.4	Code of Conduct for International Space Station Crew
14 CFR Sec. 1214.9	Use of Small Self-Contained Payloads
HQPD 1152.4G	NASA Headquarters Small and Disadvantaged Business Programs Council and the Small Business Specialist
HQPG 3713.3	NASA Headquarters Workplace Alternative Dispute Resolution Program (Response to originator's comments)
HQPG 9630.1C	NASA Headquarters Time, Attendance, and Leave Reporting Guide
NHB 1101.3	Code R Organizational Change
NHB 1101.3, Change 62	Code S Organizational Change
NPD 1200.1A	Internal Management Controls and Audit Liaison and Follow-up (Response to originator's comments)
NPD 1600.2B	NASA Security Policy (Response to originator's comments)
NPD 8010.2C	Use of the Metric System of Measurement in NASA Programs (Response to originator's comments)
NPD 8709 DRAFT 1	Safety and Mission Assurance Policy for NASA Spacecraft, Instrument, and Expendable Launch Vehicle Missions
NPD 9050.6F	NASA Exchange Activities
NPD 9501.3A (revised)	Earned Value Management
NPD 9740	Delegation of Authority (1) to Grant Exemptions from the Mandatory Use of the Government Contractor-Issued Travel Card, and (2) to Approve Conference Lodging Allowances for Conferences
NPD 9740 DRAFT 1 (revised)	Delegation of Authority to Approve Conference Lodging Allowances for Conferences

(Continued)

Directives Reviewed by the OIG
(continuation)

Directive	Directive Topic
NPD 9741 DRAFT 1	Delegation of Authority to Grant Exemptions from the Mandatory Use of the Government Contractor-Issued Travel Card
NPG 1000 Change 68	Code A Roles, Mission Statement and Organization Chart Change
NPG 1000 Change 31	Code R Organizational Change
NPG 1000 (Draft 2)	NASA Organization (Response to originator's comments)
NPG 1000, Change 67	Code I Change
NPG 1000.3	Administrative Issues Board Charter
NPG 1000.3, Change 72	Change to Code C Roles and Mission Statement
NPG 1000.3, Change 69	Code Q Change
NPG 1810	Health Services for International Travel or Assignment (Response to originator's comments)
NPG 1820	Hearing Conservation (Response to originator's comments)
NPG 1840 (Draft 1)	Management of Workers' Compensation Injuries and Illnesses
NPG 8570 (Draft 1)	Energy Efficiency and Water Conservation Technologies and Practices
NPG 8621 Draft 1 (as of February 25, 2000)	Mishap Reporting, Investigating, and Record Keeping (Response to originator's comments)
NPG 8705	Risk Management Procedures and Guidelines
NPG 8735 (Draft 2)	Management of Government Safety and Mission Assurance Surveillance Functions for NASA Contracts (Response to originator's comments)
NPG 8831.2D	Facilities Maintenance Management
unnumbered	National Information Assurance Policy for United States Space Systems

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.[11] 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.[12]

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, the OIG has used this Results Act review plan to establish the strategies and methods used to review the Agency's implementation of the Results Act over the past 18 months.

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.

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.

[11] 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.
[12] Congressional request made by the Honorables Richard Armey, Daniel Burton, Stephen Horn, and Peter Sessions.

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. Require a review (as determined by the Inspector General) 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, and included an interim progress report of our accomplishments in the semiannual report for the period ending September 30, 1999. We provided a full first year report of our review plan accomplishments in our March 31, 2000, semiannual report. We continue to use our Results Act Review Plan to assess NASA's accomplishments. However, because NASA management has made a commitment to fully implementing the Results Act, and our work to date has shown significant progress toward achieving that commitment, we will report on Results Act review accomplishments for a final time in the semiannual report for the period ending March 31, 2001. We will continue to review NASA implementation and commitment to the Results Act and will report on management's performance through our audit reporting process. Following the issuance of our March 31, 2001, semiannual report, we will not include a separate Results Act Review Plan or list the review plan accomplishments in our semiannual reports.

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
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.
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 audit and review 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).
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.
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.
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.
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.

(Continued)

Activities, Methodology, and Accomplishments (continuation)

Activity	Methodology
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 LLP, to avoid duplication of effort.
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.
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.
Monitor activities related to the Presidential Decision Directive, which mandates 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 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.
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.

(Appendix 1)

Agency Performance Assessment Process

NASA carries out its space and aeronautics programs and activities through its Strategic Enterprises and crosscutting processes.[13] 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.

[13] 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 and Acronyms

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.

Glossary and Acronyms

Acronyms

AIG	Assistant Inspector General
CCD	Computer Crimes Division
CFO	Chief Financial Officer
CFR	Code of Federal Regulations
CIO	Chief Information Officer
CRV	Crew Return Vehicle
CSOC	Consolidated Space Operations Contract
DCAA	Defense Contract Audit Agency
DCIS	Defense Criminal Investigative Service
DCMA	Defense Contract Management Agency
DoD	Department of Defense
DoJ	Department of Justice
ECIE	Executive Council for Integrity and Efficiency
ELV	Expendable Launch Vehicle
EVM	Earned Value Management
FAA	Federal Aviation Administration
FAC	Federal Audit Clearinghouse
FAEC	Federal Audit Executive Council
FAR	Federal Acquisition Regulation
FBI	Federal Bureau of Investigation
FOIA	Freedom of Information Act
FY	Fiscal Year
GPRA	Government Performance and Results Act
GS	General Schedule
IAIA	Inspections, Administrative Investigations, and Assessments
IFMP	Integrated Financial Management Project
IPA	Intergovernmental Personnel Act
IPAO	Independent Program Assessment Office
IT	Information Technology
JFMIP	Joint Financial Management Improvement Project
JPL	Jet Propulsion Laboratory
MCC	Mission Control Center
MUA	Material's Usage Agreement
NASA	National Aeronautics and Space Administration
NEPA	National Environmental Protection Act

Acronyms

NPD	NASA Policy Directive
NPG	NASA Procedures and Guidelines
NTTC	National Technology Transfer Center
ODIN	Outsourcing Desktop Initiative
OIG	Office of Inspector General
OLC	Office of Legal Counsel
OMB	Office of Management and Budget
OPM	Office of Personnel Management
P.L.	Public Law
PCIE	President's Council on Integrity and Efficiency
PCS	Portable Computer System
PFA's	Plastics, Foams, and Adhesives
PGOC	Payload Ground Operations Contract
PKI	Public Key Infrastructure
PMI	Presidential Management Intern
RLV	Reusable Launch Vehicle
SFOC	Space Flight Operations Contract
SMA	Special Management Attention
SMO	System Management Office
SSP	Space Shuttle Program
U.S.C.	United States Code

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