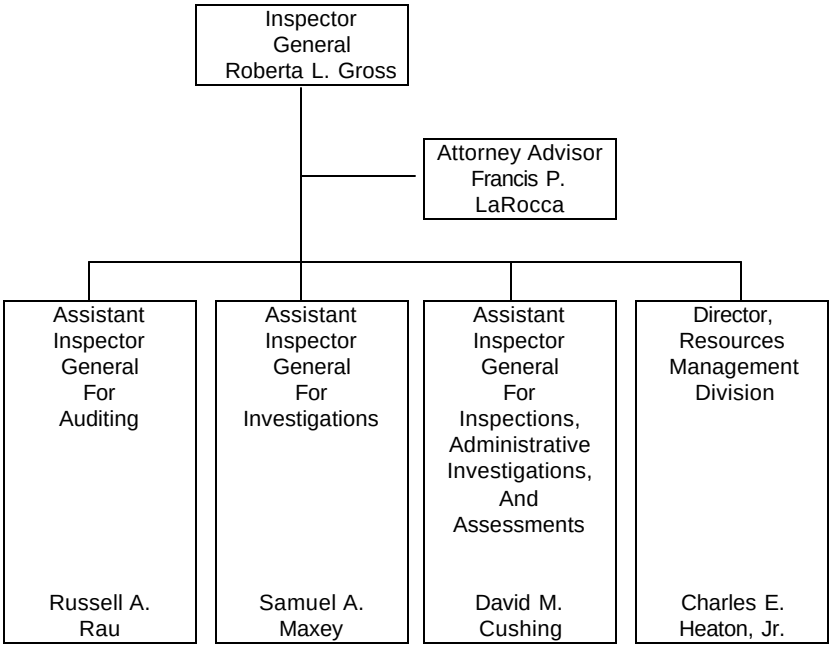
Office of Inspector General
SEMIANNUAL REPORT

National Aeronautics and
Space Administration

April 1, 1999–September 30, 1999



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A Message from the Inspector General

With the confidence of the President, the Congress, and the public, in Fiscal Year (FY) 2000 NASA will carry America's space program into a new era of discovery, exploration, and technological advancement. However, space exploration involves risk. The Administrator is committed to safety in all aspects of NASA's mission and has made safety the Agency's number one core value.

My office continues to focus its work on those areas representing the highest vulnerabilities and risk to NASA's mission and programs. We have identified those vulnerabilities in the Top Ten Management Challenges that are discussed in Appendix IV of this report. Among those issues, we continue to review concerns related to safety and mission assurance, procurement, and the International Space Station. In cooperation with the Agency, we will be diligent in monitoring NASA's export-controlled technology processes to assure that technologies are protected. We have employed significant OIG resources to assess NASA's information technology, program and project management, as well as its implementation of sound fiscal management practices.

With an emphasis on deterrence, we have developed and implemented numerous approaches to assist managers in recognizing fraud, waste, abuse, and other areas of vulnerability in NASA programs. For example, in a *quick pitch* presentation we alerted management to the problems inherent with improper clearing of electronic information from computer hard drives. We met with senior management to propose low cost and no cost solutions to network security. We provided an early warning to NASA management concerning security of hazardous materials and issued our first advisory concerning display of electronic warning banners on Agency computer systems.

In our previous semiannual report, we presented our plan for reviewing NASA's performance measures in response to the Government Performance and Results Act (GPRA). During this period, we examined certain performance measures and the data sources and information collection and accounting systems the Agency uses evaluate its performance. Interim accomplishments are presented in this report as Appendix VI.

This report represents our work for the first semiannual period of FY 1999. As we look to the next semiannual period, my office will focus its resources on those areas identified as management challenges for the Agency. We will monitor the Agency's management of the Space Station Program to assure safety, efficiency, and fiscal processes are sufficient and within budget. As contractors assume more of NASA's work, we will be vigilant to those areas susceptible to fraud and work with management to minimize that susceptibility.

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

Roberta L. Gross
Inspector General

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NASA is composed of an integrated national aeronautics and space program operating from nine Field Centers, the Jet Propulsion Laboratory (JPL), and the Wallops Flight Facility (Wallops). NASA's stated mission is "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; to explore, use, and enable the development of space for human enterprise; and to research develop, verify, and transfer advanced aeronautics, space, and related technologies." To implement that mission and to serve its customers, NASA established four Strategic Enterprises to function as primary business areas. Enterprise Management establishes overall customer requirements and ensures overall customer satisfaction. Working in partnership with the Enterprise Associate Administrators and Center Directors, Functional/Staff Offices ensure that Agency activities are conducted in accordance with all statutory and regulatory requirements, including fiduciary responsibilities. These offices also coordinate central services, including the assurance that procedures are consolidated and standardized across the Agency. NASA employs 18,500 civil servants and generates thousands of high-tech jobs in the private sector. NASA's highly skilled workforce and facilities represent the backbone of the Nation's civil research and development capabilities in aeronautics and space. NASA also relies on partnerships with large and small contractors, members of the academic community; other federal, state and local agencies; and other space agencies throughout the world. NASA's budget authority for FY 1999 is $13.6 billion.

ROLE OF THE INSPECTOR GENERAL

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

Within this organizational structure we perform a balanced independent program of audits, investigations, inspections, and other activities to assist NASA management in promoting economy, efficiency, and effectiveness in the administration of its programs and operations. The OIG directs considerable resources toward increasing procurement effectiveness and identifying fraud and irregularities, as well as assuring the integrity of NASA's information technology (IT) systems. We work jointly with other members of the Inspector General (IG) community, other federal agencies, and other investigative and audit entities when concurrent jurisdiction exists.

ADMINISTRATION

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

Top Ten Management Challenges

The OIG continues to focus its attention on the Top Ten Management Challenges confronting NASA as areas of significant management concern reportable under the Federal Managers' Financial Integrity Act. We have identified the Top Ten Management Challenges as areas that should also be addressed in NASA's implementation of the GPRA of 1993. Our FY 2000 Annual Plan reflects our commitment to invest our limited resources in the areas that offer the greatest potential return to NASA. During this period we identified the following areas of significant concern: (1) safety and mission assurance, (2) procurement, (3) International Space Station (ISS), (4) IT, (5) fiscal management, (6) program and project management, (7) launch vehicles, (8) research and technology demonstration/application, (9) international agreements, and (10) environmental management. Details concerning these issues may be found in Appendix IV.

Year 2000 Date Conversion

The Year 2000 (Y2K) date conversion problem affects computer systems worldwide. In addressing the Y2K problem, the Office of Management and Budget (OMB) required all federal agencies to adopt a five-phase model for implementing the Government's Y2K program: awareness, assessment, renovation, validation, and implementation. During FY's 1998 and 1999, the OIG completed eight audits addressing NASA's Y2K work in the five phases. While NASA's overall Y2K efforts appeared satisfactory, the OIG reported the following concerns.

- Inadequate support for Y2K cost estimates reported to OMB.
- Inadequate documentation of Y2K work performed on selected mission-critical systems.
- Inadequate sharing of information on the status of commercial-off-the-shelf (COTS) products.
- Lack of reasonable assurance that contractors would provide Y2K-compliant data to support NASA's key financial and program management activities.
- Lack of reasonable assurance that research results from grants and cooperative agreements will not be adversely affected by Y2K-date problems.
- Failure to incorporate NASA-directed Y2K requirements into applicable IT operations and maintenance contracts, and to request an exemption for completing system testing that deviated from NASA Y2K testing and certification guidelines and requirements.
- Inadequate NASA test plan guidance and contingency planning and testing.

Except for the issue involving Y2K cost estimates, which was ultimately resolved, management concurred and agreed to take corrective actions on all recommendations made.

OIG Participates on NASA Team to Trace Payments to Russia

A representative from the OIG audit staff participated on a NASA team established to determine whether NASA funds paid to Russia for joint space development and operations were reaching their intended destination. Specifically, the team determined whether funds paid for the Russian Space Station Mir and the ISS were properly routed through the Bank of New York to the

Russian Space Agency, appropriately converted into Russian rubles, and promptly paid to Russian subcontractors to support accomplishment of contract milestones.

Review of Performance Management of Space Station Prime Contract

At the request of the NASA Administrator and senior management, we are evaluating the performance management of the Space Station prime contract with The Boeing Company. Specifically, we are determining whether: (1) cost and schedule performance was promptly and completely reported to senior NASA management; (2) cost and schedule performance reporting processes ensure timely and complete information is provided to NASA management; (3) contract cost, schedule, and technical risks are fully disclosed and appropriate risk mitigation plans are in place; (4) earned value management (EVM) data is effectively utilized for program management; (5) indirect cost rate increases are reviewed for allowability, allocability, and reasonableness; (6) and contractual issues related to contract cost increases are properly addressed. This review has required an intensive effort. The report, which is planned for issuance in November 1999, addresses concerns of the Administrator about Boeing's late announcement of a $203 million increase in its estimate of the contract overrun and the increased overhead rates.

Review of NASA Exchange Operations

During the reporting period, we initiated inspections of NASA Exchange operations. Based on our early findings and observations, as well as related investigative activities, the Inspector General issued two management alerts. In one memorandum, *NASA Exchange Tobacco Sales*, we recommended that the Agency prohibit sales of tobacco products in its Exchange stores to assure consistency with national and Agency health policies. In the other memorandum, *Ethics Counseling for NASA Exchange Councils*, we urged Center Directors and ethics officials to provide Exchange officials and employees with focused ethics briefings to help avoid misconduct or ethical violations in the conduct of Exchange business.

ACTIVITY HIGHLIGHTS

Agency Should Assure Operational Testing of Crew Return Vehicle
Report No. IG-99-036

NASA's X-38/CRV Project Office is designing and testing the X-38 crew return vehicle (CRV). NASA planned to human-rate the CRV based on contractor certification, a space flight test of the X-38, and ground tests. The NASA Administrator has stated that safety is the Agency's highest order and mission. Three independent review groups have expressed concerns about human-rating the CRV without an operational test. Our audit disclosed that although NASA had not ruled out an operational test of the CRV, NASA had not planned for one. We recommended that management revise the Project Plan to provide for the contingency of CRV operational testing and include CRV operational testing in the Space Station Program risk management system as a primary risk. Management concurred with our recommendations.

NASA Could Save $8.6 Million in Lease Costs
Report No. IG-99-053

Marshall Space Flight Center contractor-leased facilities were not always effectively utilized. NASA could unnecessarily spend over $617,000 for excess space over the term of the facility leases. NASA could save more than $8.6 million in excess lease costs over the terms of some facility leases by reclassifying those operating leases to capital leases. Management concurred with our recommendations to 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, and recoup any unallowable costs.

Earned Value Management Should be Incorporated Into Program and Project Management
Report No. IG-99-058

The authority to implement EVM policy should be aligned with the responsibility for program and project management rather than with the fiscal chain of command and fiscal policy directives. NASA's EVM policy results in the unnecessary separation of authority for EVM policy, which has been delegated to the Chief Financial Officer (CFO), while the day-to-day responsibility for EVM implementation rests with the program and project managers. Consequently, agency managers view EVM as a financial reporting tool rather than as a project management tool. Viewing EVM as a financial management tool adversely affects the manner in which EVM analysis is conducted and the way results are used in project management. We recommended that NASA issue EVM policy as program and project management directives and establish procedures for reporting comprehensive EVM information to upper management. We also recommended delegating the authority to implement EVM policy to the Associate Administrators or Center Directors. Management did not provide comments on the draft report. We have requested complete comments from management on the final report.

Important Issues and Activity Highlights

NASA Experiencing Difficulties in Implementing the Integrated Financial Management Project
Report No. IG-99-026

To fully comply with OMB Circular A-127, *Financial Management Systems*, NASA established the Integrated Financial Management Project (IFMP)and awarded a fixed-price contract, valued at $186 million, to KPMG Peat Marwick (KPMG) to provide COTS software for, and to implement NASA-wide, the IFMP. From its inception, the IFMP contract experienced significant performance problems. Within 18 months from the contract award, the project experienced a delivery schedule slip of 11 months with additional schedule slippage pending, and the COTS software that KPMG promised to be available at contract award is still incomplete. The delay in implementing IFMP will prevent NASA from meeting federal financial management system requirements and will result in significant costs to the Agency. Additionally, the IFMP as delivered, may not fulfill federal financial management system requirements. We made recommendations to ensure that NASA takes the necessary steps to protect its interest and receives adequate consideration due to KPMG's nonperformance, and that NASA performs necessary testing to ensure that the final software meets all federal requirements. NASA management concurred and has already started the corrective actions.

Disbursements Are Not Properly Matched to Obligations
Report No. IG-99-059

To comply with fiscal law, NASA is responsible for ensuring that its appropriated funds are used for the purposes authorized by the Congress. The OIG conducted an audit of disbursements to determine whether contract payments were properly matched to obligations citing the correct appropriations and program year. We found that NASA financial management personnel did not properly match disbursements to obligations. Therefore, authorized funds may not have been used for their authorized purpose. We recommended management: (1) require NASA contractors submit accounting information on their invoices, (2) procurement offices provide payment instructions to NASA financial management activities, and (3) require disbursements be properly matched to obligations. Management does not concur with any of the recommendations.

Goddard Space Flight Center Safety Program Needs Improvement
Report No. IG-99-047

The NASA Administrator has mandated safety as the Agency's highest priority and as a result, the Agency established the Agency Safety Initiative (ASI). The basic goal of the ASI is to make NASA the safest organization in the nation with zero tolerance for mishaps. An evaluation of NASA's safety program at the Goddard Space Flight Center found that the Center was making plans to implement the requirements of the ASI and to achieve certification under the Department of Labor's Occupational Safety and Health Administration's Voluntary Protection Program. However, we found that Goddard's safety organization structure needed improvement and contractor safety records were not evaluated prior to contract award, as required by the NASA

Safety Manual. Goddard management concurred with our recommendations to improve safety and has planned or initiated responsive actions.

Disaster Recovery Planning for NASA Automated Data Processing Consolidation Center Needs Improved Report No. IG-99-043

The NASA Automated Data Processing Consolidation Center (NACC), at Marshall Space Flight Center (Marshall) is responsible for developing and implementing a disaster recovery plan to restore all computer operations. An audit showed that while the NACC has implemented a disaster recovery plan that includes most of the necessary provisions for emergency response, extended backup operations, and testing, improvements are needed in the areas of disaster recovery strategy, procedures, and training. Also, a major NACC application user had not developed a formal contingency plan to provide for continuation of operations in the event of loss of NACC support. Management concurred with our recommendations to improve recovery strategies, procedures, training, and development of a user contingency plan.

Cost Reasonableness of the X-33 Program Questioned Report No. IG-99-052

An OIG audit showed that NASA did not adequately address cost reasonableness and cost risk for the X-33 Program. Specifically, NASA did not sufficiently evaluate the cost proposals for reasonableness and the non-advocate review's cost estimate did not include a risk analysis to quantify the technical and schedule uncertainties inherent in the program. Therefore, NASA management approved the program without the benefit of realistic estimates of the probable cost of the X-33 Program. Since this is a cooperative agreement, the recipient may end its part of the partnership should cost overruns become too burdensome or request that NASA invest more money. Management concurred with our recommendations to improve its evaluation processes for cost reasonableness and cost risk to ensure complete and accurate information; that sufficient resources are available; and that the final "agreed to" price is fair and reasonable. Further, the X-33 Program's estimate to complete should be updated to reflect cost uncertainties and determinations made of how remaining work will be funded

Improved Aircraft Management Could Result in Significant Savings to NASA Report No. IG-99-057

An audit of an OMB Circular No. A-76 study conducted at Marshall of NASA-3, a mission management aircraft used by Marshall, found that NASA's use of the aircraft to transport personnel and equipment did not qualify as one of the purposes for which federal policies authorize agencies to own or lease aircraft. We estimated that the costs for using commercial airlines is $2.9 million less than the costs for operating NASA-3 over the 5-year period covered by the A-76 study. We also found that NASA was evaluating a plan to replace three mission management aircraft, including

NASA-3, and upgrade a fourth aircraft. Management had not yet performed an A-76 study supporting the proposed aircraft purchase and upgrade, which would cost $43.9 million.

Contractor Reimburses Over $30.8 Million

As the result of an ongoing OIG investigation, a NASA contractor reimbursed the Agency $30,832,378 for improperly billed costs. The contractor double billed NASA for contract award fees and contract incurred costs. This investigation is continuing.

Corporation Ordered to Pay Government $1.2 Million in Restitution

A major subcontractor on the ISS was ordered to pay $1.2 million in restitution, pay a $500,000 criminal fine, pay a $300 special assessment fee, and was placed on 5-years probation. The company filed false test results for electronic components it supplied to NASA and the Department of Defense (DoD). The company president, on behalf of the company, pled guilty to the counts of filing False Statements.

Swedish Hackers Cause Over $150,000 Damage

Trial in Sweden is pending for two Swedish hackers charged with hacking into the computer systems of NASA and the U.S. military. Our investigation determined estimated damages at two NASA Centers to total $159,100. The hackers were allegedly attempting to infect NASA systems with a computer virus.

Safety of Flight Termination Systems Reviewed
Report No. G-98-011

An assessment of NASA's use of flight termination systems (FTS) recommended improvements to enhance program security and address the Agency's core value—safety. We found the Agency should use appropriate risk-based assessments to reach decisions on whether to use secure FTS.

OIG audits evaluate the economy, efficiency, and effectiveness with which NASA performs and manages its programs and operations. Increasingly, the auditors are assisting management through participation in cooperative activities, which are highlighted in Chapter 5 of this report. During this period, the OIG issued 36 reports that addressed high-risk program and operational areas. Appendix I lists these reports. Because many of NASA's major contractors are also DoD contractors, the services of the Defense Contract Audit Agency (DCAA) are relied upon for most audits of contractors. Information on all DCAA reports issued and action taken by NASA management during the 6-month period is contained in Appendix III. As can be seen in Appendix III, NASA management was able to sustain 59 percent of the $61.9 million questioned by DCAA resulting in $33.4 million being saved by NASA. The OIG, in coordination with the DCAA, has expanded its audit coverage of NASA contractors for many reasons including, the importance of contractors in performing NASA's mission, continued use of on-site contractors to provide support services to NASA, and the significant impact contractor data has on NASA's financial statements. In addition, we are reengineering the process used for fulfilling our statutory responsibilities related to contract audits and audits of NASA grants and contracts at educational and nonprofit institutions that are performed by public state auditors. Our goal is to ensure that NASA receives high quality audit services and properly resolves and acts upon the results of those audits.

The following are summaries of significant audits issued during the 6-month period April 1, 1999–September 30, 1999.

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE

AGENCY NEEDS TO PROVIDE FOR CONTINGENCY OF CREW RETURN VEHICLE OPERATIONAL TESTING
Report No. IG-99-036

As part of an international memorandum of understanding, the United States has agreed to provide a crew-return capability for the International Space Station. NASA's X-38/CRV Project Office is designing and testing the X-38 CRV. NASA will need to human-rate the CRV to assure crew safety. NASA planned to human-rate the CRV based on contractor certification, a space flight test of the X-38, and ground tests. Our audit disclosed that although NASA had not ruled out an operational test of the CRV, NASA had not planned for one. Three independent review groups have expressed concerns about human-rating the CRV without an operational test. The NASA Administrator has stated that safety is the Agency's highest order and mission, and that safety supersedes cost, schedule, and performance. We recommended that management revise the Project Plan to provide for the contingency of CRV operational testing and include CRV operational testing in the Space Station Program risk management system as a primary risk. Management concurred and (1) established test decision milestones that will be baselined into the ISS Program, and (2) directed presentation of the operational test contingency as a program risk to the ISS Program Risk Assessment Board.

Chapter 1

PROCUREMENT

MARSHALL'S MANAGEMENT OF FACILITY LEASING CAN BE IMPROVED
Report No. IG-99-053

Marshall Space Flight Center contractor-leased facilities were not always effectively utilized. Of 24 facilities reviewed, 8 facilities had idle space ranging from 27 to 66 percent of the total space available. NASA could unnecessarily spend over $617,000 for excess space over the term of the facility leases. Also, three contractor leases were not correctly classified as operating leases. NASA could save more than $8.6 million in excess lease costs over the terms of the facility leases by reclassifying those operating leases to capital leases. 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, and recoup any unallowable costs. Management should also ensure contracting officer's request that the DCAA review facility lease costs. Management concurred with all recommendations. We consider management's actions responsive to our recommendations.

EARNED VALUE MANAGEMENT IS NOT AN INTEGRATED PART OF PROGRAM AND PROJECT MANAGEMENT
Report No. IG-99-058

NASA's EVM policy results in the unnecessary separation of authority for EVM policy, which has been delegated to the CFO, while the day-to-day responsibility for EVM implementation rests with the program and project managers. The authority to implement EVM policy should be aligned with the responsibility for program and project management rather than with the fiscal chain of command and fiscal policy directives. The CFO is not responsible for overseeing project management processes and, therefore, is not in the best position to implement EVM policy. EVM is not solely a financial tool. Earned value information provides insight into the status of the program or project and provides valid, timely, and auditable contract performance information on which to base management decisions. However, Agency managers view EVM as a financial reporting tool rather than as a project management tool. Viewing EVM as a financial management tool adversely affects the manner in which EVM analysis is conducted and the way results are used in project management. To increase visibility as a project management tool, EVM policy should be embodied in the program and project management directives. In this manner, EVM can be fostered through other than the encouragement of the NASA CFO. We recommended that NASA issue EVM policy as program and project management directives and establish procedures for reporting comprehensive EVM information to upper management. We also recommended the authority to implement EVM policy is delegated to the Associate Administrators or Center Directors. Management did not provide comments on the draft report. We have requested complete comments from management on the final report.

FINANCIAL MANAGEMENT

NASA IS EXPERIENCING MATERIAL DELAYS AND COST INCREASES IN IMPLEMENTING THE INTEGRATED FINANCIAL MANAGEMENT PROJECT
Report No. IG-99-026

OMB Circular A-127, *Financial Management Systems*, requires federal agencies to maintain a single, integrated financial management system. To fully comply with the circular, NASA established the IFMP. On September 18, 1997, NASA awarded a fixed-price contract, valued at $186 million, to KPMG to provide COTS software for, and to implement NASA-wide, the IFMP. The contract required that the IFMP be implemented at all NASA Centers by July 1, 1999. From its inception, the IFMP contract experienced significant performance problems. Within 18 months from the contract award, the project experienced a delivery schedule slip of 11 months with additional schedule slippage pending, and the COTS software that KPMG promised to be available at contract award is still incomplete. The delay in implementing IFMP will likewise delay NASA from fully meeting Federal Financial Management System requirements and will result in material costs to the Agency. Additionally, the IFMP as delivered, has not been fully tested by KPMG. This has required additional testing by NASA to ensure that federal financial management system requirements are met. We made recommendations to ensure that NASA takes the necessary steps to protect its interest and receives adequate consideration due to KPMG's nonperformance, and that NASA performs necessary testing to ensure that the final software meets all federal requirements. NASA management concurred with our recommendations and has already started the corrective actions.

DISBURSEMENTS ARE NOT PROPERLY MATCHED TO OBLIGATIONS
Report No. IG-99-059

To comply with fiscal law, NASA is responsible for ensuring that its appropriated funds are used for the purposes authorized by the Congress. This requires effective management controls over obligations and disbursements in order to maintain appropriation integrity. Disbursements are payments to the contractor for the items or services received and should be matched to obligations citing funds authorized to make the contract payment. The OIG conducted an audit of disbursements to determine if contract payments were properly matched to obligations citing the correct appropriations and program year. We found that NASA financial management personnel did not properly match disbursements to obligations. Therefore, authorized funds may not have been used for their authorized purpose. Three recommendations were made to management: (1) require NASA contractors submit accounting information on their invoices, (2) procurement offices provide payment instructions to NASA financial management activities, and (3) require disbursements be properly matched to obligations. Management does not concur with any of the recommendations.

NASA'S PROGRESS IN IMPLEMENTING THE RESULTS ACT
Report No. IG-99-055

GPRA was established in 1993 to improve public confidence in the Federal Government by requiring agencies to focus on program performance and results. GPRA requires them to establish a strategic planning process, prepare annual performance plans that describe the expected levels of performance and accomplishments, and publishing annual reports comparing actual results to the planned performance measures. NASA has made substantial progress in implementing GPRA, including preparing and updating its Strategic Plan and issuing Performance Plans for FY 1999 and FY 2000. However, an OIG review of NASA implementation actions identified two areas involving the FY 1999 Performance Plan that need be improved. First, there had not been adequate senior management oversight of overall progress during the year on the established FY 1999 performance targets. Second, appropriate procedures had not been established to ensure the data that would be used (both to measure interim progress and to describe final results in the annual Performance Report) and were accurate and reliable. Management agreed with OIG recommended actions to ensure that senior managers effectively evaluate progress on the established performance goals and that performance data is accurate and reliable.

CROSSCUTTING PROCESSES

SAFETY

SEVERAL SAFETY CONCERNS EXIST AT THE GODDARD SPACE FLIGHT CENTER
Report No. IG-99-047

In an April 1998 Senior Management Council meeting, the NASA Administrator stated that safety is the Agency's highest priority. The Administrator's mandate renewed the Agency's emphasis on safety and culminated in the ASI. The basic goal of the ASI is to make NASA the safest organization in the nation with zero tolerance for mishaps. We conducted an audit to evaluate the management of NASA's safety program. During our work at the Goddard Space Flight Center we found that the Center was making plans to implement the requirements of the ASI and to achieve certification under the Department of Labor's Occupational Safety and Health Administration's Voluntary Protection Program. The Center also restructured the Goddard Safety, Health and Environmental Council, making the Goddard Center Director the chair to ensure management's commitment to safety. However, we identified issues that could affect Goddard's overall safety. We found that Goddard's safety organization structure needed improvement; the mishap reporting process did not ensure that the causes of all mishaps were properly addressed and that all mishaps and related information was adequately reported; and contractor safety records were not evaluated prior to contract award, as required by the NASA Safety Manual. We made five recommendations to improve those safety risks. Goddard management concurred with each recommendation and has planned or initiated responsive actions.

INFORMATION ASSURANCE AND TECHNOLOGY AUDITS

DISASTER RECOVERY PLANNING AT MARSHALL SPACE FLIGHT CENTER'S AUTOMATED DATA PROCESSING CONSOLIDATION CENTER
Report No. IG-99-043

The NACC, at Marshall Space Flight Center (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. The NACC is also responsible for developing and implementing a disaster recovery plan to restore all computer operations. An audit showed that while the NACC has implemented a disaster recovery plan that includes most of the necessary provisions for emergency response, extended backup operations, and testing, improvements are needed in the areas of disaster recovery strategy, procedures, and training. Also, a major NACC application user had not developed a formal contingency plan to provide for continuation of operations in the event of loss of NACC support. System recovery delays could affect users' ability to operate administrative systems and programmatic systems that support the ISS and Space Shuttle Programs. The report contained eight recommendations to improve recovery strategies, procedures, and training. We also recommended the development of a user contingency plan. Management concurred with each of the nine recommendations and initiated responsive corrective actions.

NASA LACKS ASSURANCE THAT IT CAN EFFECTIVELY RESPOND TO Y2K-RELATED FAILURES
Report No. IG-99-044

We evaluated NASA's efforts to prepare contingency plans that include procedures and timetables for continuing Agency operations in the event critical computer systems experience a Y2K-related failure. To help federal agencies prepare for possible Y2K-related failures, the OMB adopted the General Accounting Office (GAO) contingency planning guide entitled *Year 2000 Computing Crisis: Business Continuity and Contingency Planning*. The guide identifies the key elements that a business continuity and contingency plan (BCCP) should contain and the key elements that a contingency test plan should address. Under the leadership of the NASA Chief Information Officer (CIO), the Agency has been actively engaged in developing the BCCP's to prepare for Y2K-related failures. However, as of June 30, 1999, NASA installations had incorporated only some of the key elements prescribed by the GAO into their BCCP's and contingency test plans. The lack of key elements in the BCCP's and the contingency test plans coupled with the lack of timely testing of BCCP's reduces NASA's assurance that it can effectively respond to Y2K-related failures. Management concurred with the report's two recommendations. NASA's completed actions were sufficient to close the recommendations.

NASA CAN IMPROVE YEAR 2000 PROGRAM OVERSIGHT OF ITS GRANTS AND COOPERATIVE AGREEMENTS
Report No. IG-99-048

Recipients of NASA grants and cooperative agreements are responsible for the scientific, administrative, and financial aspects of the supported research activity. This responsibility includes anticipating and reacting to events such as the Y2K problem. We evaluated NASA's efforts to ensure that NASA-funded research done under grants and cooperative agreements will not be adversely affected by the Y2K date problem. NASA requires its recipients to report significant Y2K-related problems, but NASA has not established timeframes for such reporting. Also, the Agency does not require recipients to report on whether recipient computer systems are Y2K compliant. These conditions limit NASA's ability to determine whether Y2K-related problems exist. As a result, the Agency lacks reasonable assurance that it will receive research results that are not adversely affected by Y2K date problems, or notification of such problems in time to take corrective action. We recommended that NASA management should request major recipients (recipients of grants or cooperative agreements having a cumulative award value of at least $2 million) to report to the cognizant NASA procurement office by September 30, 1999, on whether recipient computer systems are Y2K compliant and on significant Y2K-related problems. Also, NASA management should require appropriate remedial actions to address any Y2K-related problems identified by the major recipients. Management concurred with the report's two recommendations. The recommendations remain open pending completion of management's corrective action.

EARTH SCIENCE PROGRAM

PERFORMANCE EVALUATION PLAN NEEDS IMPROVEMENT
Report No. IG-99-038

We evaluated NASA and contractor program and project management processes for the Earth Observing System Data and Information System Core System (ECS) including oversight and administration of related contracts. The audit found that the ECS contractor's performance was not linked to the contract's Performance Evaluation Plan. The award fee plan relied on subjective evaluations by government personnel as the basis for award fee determinations. NASA generally considers this type of evaluation less desirable than a performance-based evaluation plan. The plan did not contain objective measures of performance and, therefore, did not sufficiently link performance objectives to the award fee. Consequently, the contractor could receive inappropriate award fee payments. We recommended that management revise the Performance Evaluation Plan to link award fee payments to specific cost, schedule, and performance objectives in the restructured ECS contract. Management concurred with our recommendation. The recommendation remains open pending completion of the agreed-to corrective actions.

SPACE SCIENCE PROGRAM

JPL SUBCONTRACTOR SURVEILLANCE NEEDS IMPROVEMENT TO PREVENT OR MITIGATE TECHNICAL PROBLEMS
Report No. IG-99-054

JPL is generally managing subcontracting in an effective and efficient manner to achieve program and project objectives. JPL's acquisition strategy process adequately addresses project management requirements, and project managers followed the acquisition strategies in executing the resulting subcontracts. However, subcontracts JPL awarded were not subjected to adequate surveillance in accordance with NASA and JPL policies. Subcontractor data disclosed problems in the designing, building, and safeguarding of hardware, inadequate application of workforce, and employee noncompliance with quality system procedures. JPL did not act on these problems in a timely manner, in part, due to the lack of surveillance activity to identify and correct problems. As a result, subcontractors have incurred excessive costs to correct technical problems that could have been prevented or mitigated to some extent. We recommended that JPL revise current project management policies to require project management assessment and monitoring of subcontractor procedure to ensure that they are designed and functioning to prevent, detect, and correct technical problems. Management partially concurred with the recommendation and will advise JPL to continue to improve their project management policies and practices.

Our final report requested management to identify the policies and procedures that will be revised and when corrective action will be complete. Management responded that, due to the failure of the subcontractor built Mars Climate Orbiter spacecraft, they are withholding further comment until the results of a NASA team review of the incident are known. The team findings, expected by November 3, 1999, may impact the type and degree of corrective actions needed.

AERO-SPACE TECHNOLOGY PROGRAM

COST REASONABLENESS OF THE X-33 PROGRAM
Report No. IG-99-052

NASA is using a cooperative agreement for the X-33 Program, a first for a major technology program ($1.1 billion). Under the terms of the cooperative agreement, NASA will provide about 80 percent of the funds and Lockheed Martin Skunkworks will invest at least 20 percent to demonstrate the X-33. Lockheed is responsible for any costs that exceed or overrun its estimate. An OIG audit showed that NASA did not adequately address cost reasonableness and cost risk for the X-33 Program. Specifically, NASA did not sufficiently evaluate the cost proposals for reasonableness and the non-advocate review's cost estimate did not include a risk analysis to quantify the technical and schedule uncertainties inherent in the program. Therefore, NASA management approved the program without the benefit of realistic estimates of the probable cost of the X-33 Program. A risk analysis would have alerted NASA decision makers to the probability of cost overruns in the program. Cost overruns put NASA's investment in the X-33 Program at risk. Since this is a cooperative agreement, the recipient may end its part of the partnership should cost overruns become too burdensome or request that NASA invest more money. In addition, Lockheed's current estimate at completion is considered overly optimistic.

Due to unforeseen challenges in the development of technology and resulting schedule delays, Lockheed may need to contribute from $120 to $300 million more than planned to complete the work contemplated in the cooperative agreement. We recommended that NASA should improve its evaluation processes for cost reasonableness and cost risk to ensure that decision makers are provided complete and accurate information; that sufficient resources are available; and that the final "agreed to" price is fair and reasonable. Further, the X-33 Program's estimate to complete should be updated to reflect cost uncertainties and determinations made of how remaining work will be funded. Management concurred with the recommendations and has initiated corrective actions.

AIRCRAFT MANAGEMENT NEEDS IMPROVEMENT
Report No. IG-99-057

Marshall officials prepared an OMB Circular No. A-76 study of NASA-3, a mission management aircraft used by Marshall. Circular No. A-76 requires cost effectiveness analyses in order for agencies to justify retention of aircraft. Our audit, conducted as a follow up to report LA-95-001, found that NASA's use of the NASA-3 aircraft to transport personnel and equipment did not qualify as one of the purposes for which federal policies authorize agencies to own or lease aircraft. We estimated that the costs for using commercial airlines is $2.9 million less than the costs for operating NASA-3 over the 5-year period covered by the A-76 study. We also found that NASA was evaluating a plan to replace three mission management aircraft, including NASA-3, and upgrade a fourth aircraft. Management had not yet performed an A-76 study supporting the proposed aircraft purchase and upgrade, which would cost $43.9 million. We recommended that management dispose of NASA-3 and use commercial airlines to satisfy Marshall's transportation requirements, revise Agency policy to conform with OMB requirements, evaluate commercial airlines and other aviation services when conducting A-76 studies for aircraft, and terminate plans to replace the existing mission management aircraft. Management nonconcurred or proposed nonresponsive actions to the report's five recommendations. We have requested that management reconsider its position.

MANAGEMENT DECISIONS

REVISED DECISIONS

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

During this reporting period there were no such instances.

DISAGREEMENT ON PROPOSED ACTIONS

Section 5(a)(12) of the Inspector General Act, as amended, requires information concerning any significant management decisions with which the Inspector General is in disagreement. During this semiannual period, the OIG non-concurred on NASA Policy Directive (NPD)1400.1F, *NASA Directive System* and NASA Procedures and Guidelines (NPG) 8715, *NASA Occupational and Health Programs*. See Chapter 4, "Legislation, Regulations, and Legal Matters."

STATUS OF MANAGEMENT DECISIONS

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

OIG AUDITS WITH QUESTIONED COSTS

Type of Audit	Number of Audit Reports	Total Costs Questioned
No management decision was made by beginning of period	5	$10,845,948
Issued during period	1	$9,214,734
Needing management decision during period	6	$20,060,682
Management decision made during period:	0	$0
Amounts disallowed		$0
Amounts not disallowed		$0
No management decision at end of period:	6	$20,060,682
less than 6 months old	1	$9,214,734
more than 6 months old	5	$10,845,948

OIG AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

Audit Reports	Number of Audit Reports	Dollar Value of Recommendations
No management decision was made by beginning of period	6	$66,615,000
Issued during period	1	$43,900,000
Needing management decision during period	7	$110,515,000
Management decision made during period:	1	$5,400,000
Amounts management agreed to be put to better use		$3,790,000
based on proposed management action		$3,790,000
based on proposed legislative action		0
amounts not agreed to be put to better use		$1,610,000
No management decision at end of period:	6	$105,115,000
less than 6 months old	1	$43,900,000
more than 6 months old	5	$61,215,000

B. Section 5(a)(10) of the Inspector General Act, as amended, requires a summary of each audit report issued before the commencement of the reporting period for which no management decision has been made by the end of the reporting period. The following table summarizes the status of management decisions as of September 30, 1999.

Audit Reports Issued Prior to April 1, 1999, for Which No Management Decision Has Been Made

Report Number, Title, And Date	Reason for No Management Decision
Financial Management	
IG99001 X-33 Funding Issues	The OIG recommended that management review and revise X-33 funding practices. Management nonconcurred with some of the specific recommendations but agreed to perform a review that was to be completed by December 31, 1998. Despite additional inquiries, we have not received management's review and will forward the issue to the Audit Followup Official.
Arthur Andersen FY 1998 Management Letter[1] February 3, 1999	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 15 recommendations for improvement. The recommendations related to four areas: (1) Information Security, (2) Financial Management and Accounting Matters, (3) Financial Management Systems, and (4) Property Management. As of September 30, 1999, management had not identified corrective actions that Arthur Andersen considers responsive to the recommendations. However, NASA has established a new tracking system that will focus management attention on the prompt resolution of financial statement audit recommendations. The OIG expects all recommendations to be resolved prior to issuance of the FY 1999 financial statement audit report.
IG99024 NASA's Full-Cost Initiative Implementation March 31, 1999	The OIG recommended that NASA develop and consistently use a methodology for distributing the costs of the Space Shuttle Program, as well as service-oriented programs, to programs that benefit from the services. Management nonconcurred, stating that the recommendations are impractical at this time. We disagreed and requested that management reconsider their position. Management continues to nonconcur. We will request a management decision from the Audit Followup Official.

(Continued)

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

Audit Reports Issued Prior to April 1, 1999, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, And Date	Reason for No Management Decision
Infrastructure and Support	
IG98024 Cost Sharing for Santa Susana Field Laboratory (SSFL) Cleanup Activities August 18, 1998	The OIG recommended management seek a cost-sharing agreement, recovery of costs, and allocation of future preventive costs. Management is waiting for the completion of cost-sharing negotiations on a related OIG report before proceeding with the SSFL negotiations. Management is also waiting for completion of the contracting officer's review of the contractor's charging practices for environmental preventive costs.
IG98027 NASA Costs Paid to Rehired, Former JPL Employees September 21, 1998	One recommendation cannot be dispositioned because the contractor corrective action is in process and will not be complete until December 1999. Management will keep the OIG apprised of the status of that issue.
IG98035 NASA General-Purpose Vehicles Acquisition and Use September 25, 1998	The OIG made recommendations to establish policy for vehicle usage, disposal and leasing. Management has implemented the recommendations but has not agreed to an amount of funds put to better use. The NASA logistics office has established a reporting requirement to document savings resulting from the new policies.
IG98038 Commercial Use of the Santa Susana Field Laboratory September 30, 1998	Management has not agreed to an amount of questioned costs for one recommendation. Management concurred with and is pursing corrective actions on all recommendations. Because of the effort and coordination required, full implementation of the corrective actions may require several months.
IG99008 Contractor-Acquired Facilities at Johnson Space Center February 17, 1999	One recommendation is unresolved because management has not agreed to the amount of questioned costs. Management has agreed to all corrective actions.
Information Assurance and Technology Audits	
IG99005 Disaster Recovery Planning at Johnson Space Center January 15, 1999	Two recommendations are unresolved because management has not proposed actions that are responsive to the recommendations. We will request that management reconsider its position.

(Continued)

Audit Reports Issued Prior to April 1, 1999, for Which No Management Decision Has Been Made (continuation)

Report Number, Title, And Date	Reason for No Management Decision
IG99017 Disaster Recovery Planning at Kennedy Space Center March 31, 1999	Management nonconcurred with two recommendations and proposed actions that were not fully responsive to the report's third recommendation. We are working with management to resolve the issues.
Space Science Program	
IG98041 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 the DCAA to conduct a review of the contractor's claimed savings. This action was agreed to by the OIG to resolve the recommendation. The DCAA audit fieldwork has been completed. The DCAA and the contractor are currently discussing the findings and recommendations. The DCAA will have a final report to the NASA contracting officer by October 31, 1999.
Aero-Space Technology	
LA95001 PCIE Audit of Aircraft Management March 28, 1995	Management has not agreed to an amount for the OIG's funds put to better use. Management concurred with the corrective action. Management recently completed a cost analysis of one of six aircraft. The analysis did not comply with the requirements of OMB Circular No. A-76 since management did not include the use of commercial transportation alternatives.
IG99019 X-33 Cooperative Agreement March 29, 1999	Management's planned actions were not responsive to two recommendation concerning (1) the need for an Agency-unique risk assessment plan and (2) the need for periodic Estimate-at-Completion Analyses. Management's additional comments, in response to our request for reconsideration, were also not fully responsive to the recommendations. We are working with management to resolve the issues.

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

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. The following summarizes the status of corrective actions on previously reported recommendations.

HUMAN EXPLORATION AND DEVELOPMENT OF SPACE PROGRAM

SHUTTLE PROCESSING SUBCONTRACT AUDIT IDENTIFIES FRAUD INDICATORS
Report No. IG-97-011

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

COSTS NOT RECOVERED FOR COMMERCIAL PAYLOADS FLOWN ON THE SPACEHAB MODULE
Report No. IG-98-028

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

NASA NEEDS ADEQUATE ANALYSES OF CRITICAL SINGLE-SOURCE SUPPLIERS FOR SPACE SHUTTLE PROJECTS
Report No. IG-98-030

In 1996, the NASA Administrator and the Johnson Space Center Director expressed concern that the listings of single-source suppliers may not be up-to-date and directed NASA program offices to develop current lists of single-source suppliers. The Director asked the OIG to review this critical area. The ISS Program Office took prompt corrective actions during our audit to require the contractor to provide critical, single-source suppliers. However, we noted that the Space Shuttle Program Office has not adequately developed analyses of critical, single-source production and logistics suppliers. As a result, risks may not be fully identified, alternatives may

not be available when needed, and corrective actions may not be taken to minimize risks to the mission. Management concurred with our recommendations that: (1) the Space Shuttle Program Manager revise analyses and reporting requirements for critical, single-source suppliers; (2) the Space Shuttle Program Manager include the revised requirements in appropriate contracts; and (3) the Headquarters Chief Engineer revise NPG 7120.5A to include requirements for performing rigorous analyses of and reporting on all critical, single-source suppliers, making no distinction between logistics and production suppliers.

However, recommendation 3 remains open pending the completion of adding language to the risk management section of NPG 7120.5A to document the process. We will continue to monitor management's progress to close this recommendation.

BOEING CAN IMPROVE SPACE STATION PERFORMANCE MEASUREMENT REPORTS
Report No. IG-99-007

The NASA ISS contract requires the prime contractor, Boeing, to have an EVM System (EVMS) that produces an assessment of cost and schedule performance. An audit to assess the adequacy of corrective action plans for addressing ISS cost and schedule variances and to assess the Government's oversight of the plans found that variance analyses and corrective action plans have not been used effectively to control negative variances. In addition, NASA did not provide effective oversight of the Defense Contract Management Command (DCMC) surveillance of the EVMS, including the verification of corrective actions related to cost and schedule variances. Further, NASA did not ensure that Boeing took corrective actions on long standing conditions to properly prepare and submit Variance Analysis Reports. The audit recommended that management (1) ensure adequate surveillance of the EVMS, (2) require the DCMC to prepare required contract administration reports, and (3) improve the quality of corrective action plans.

During the reporting period, the DCMC surveillance monitor successfully completed required courses and obtained the proper certification required by DCMC to ensure adequate surveillance of the EVMS. However, the remaining two recommendations will remain open pending the completion of another OIG review.

CONTINGENCY PLANS FOR SPACE STATION ASSEMBLY NEED ATTENTION
Report No. IG-99-009

An OIG audit showed that the Space Station Program Office had not developed an integrated, comprehensive plan to address risks to the assembly of the ISS caused by the possible delay or default by international partners. In addition, the contingency plan did not contain costs and schedule impacts, did not clearly identify risk mitigation measures and the primary consequences of the contingencies, did not include actions being taken to prevent further delays, and did not address the Y2K computer problem. We recommended that management establish (1) procedures to ensure that the contingency plan complies with Agency guidance for effective risk management, and (2) a process to ensure that the contingency plan is kept current.

During this reporting period, management agreed that the contingency plan should include actions, whether finalized or not, that have been designed to effectively mitigate significant Space Station risks, and describe how the Risk Management System and technical management process are being used to resolve the Y2K problem. Management reaffirmed that it will continue to review regularly and update the contingency plan to ensure it is consistent with the ISS budget revisions and strategies. Further, management stated that, with each budget submission and assembly sequence change, the contingency plan is being updated to include risk mitigation

measures. Although management's actions are responsive to both recommendations, the recommendations will remain open pending completion of corrective actions.

PROGRAM OFFICES TO TIGHTEN MANAGEMENT CONTROLS OVER EXPORT-CONTROLLED TECHNOLOGIES
Report No. IG-99-020

An audit to evaluate NASA's control of export-controlled technologies found that NASA has not identified all export-controlled technologies related to its major programs and does not maintain a catalog of classifications for transfers of export-controlled technologies. The audit also showed that Agency oversight of training for personnel in the Export Control Program needs improvement. Six recommendations were made to management to ensure that a cataloging process for export-controlled technologies is developed, that only qualified personnel perform the export control audits conducted by the Agency, and NASA employees involved directly or indirectly with technology are trained in properly classifying and protecting export-controlled technologies.

NASA has established a file of classifications for export-controlled technologies and has initiated a more rigorous training program. Management is visiting each of the NASA Centers to discuss export control and conduct training. NASA is in the process of preparing an NPD and an NPG on export control. Therefore, all recommendations will remain open pending management's completion of the proposed corrective actions.

ENVIRONMENTAL PROGRAM

NASA COULD RECOVER NEARLY $57 MILLION FOR ENVIRONMENTAL CLEANUP COSTS
Report No. IG-97-024

NASA could reasonably expect to recover nearly $57 million from parties responsible for environmental contamination at JPL. NASA has been paying the full cost to clean up environmental contamination at JPL, which is on the Environmental Protection Agency's National Priorities List as a Superfund site. However, the Agency has not effectively pursued cost sharing agreements with other entities having greater responsibility for the contamination. As a result, NASA could pay approximately $114 million for the full cost to clean up JPL and its neighboring communities.

Caltech, the prime contractor at JPL, manages the environmental cleanup, but is also one of the parties responsible for the contamination. Caltech has a conflict of interest because it has not shared the costs of the cleanup for which it is partially responsible.

One of the six recommendations we made remains open. We recommended that NASA pursue negotiations with all parties responsible for the contamination. NASA has initiated those negotiations, but does not expect to reach settlement for some time due to the technical and legal aspects of this issue. Consequently, we will continue to monitor NASA's progress in resolving this recommendation.

NASA Overpaid Contractor $16.4 Million for Environmental Remediation Costs
Report No. IG-98-024

Between 1954 and 1961, Rocketdyne used trichloroethylene as a cleaning solvent for flushing engines and test stands at the SSFL in Ventura, California, which resulted in significant environmental contamination. Rocketdyne became aware of this contamination in 1984. Environmental laws require past and present owners, operators, and generators of hazardous waste to clean up the hazardous waste sites. As one of the owners of the SSFL, NASA has paid remediation costs and will continue to do so. Our audit showed that NASA has been unable to negotiate a cost-sharing agreement for remediation costs with the other principle responsible parties involved in the SSFL facility. NASA may have overpaid Rocketdyne $16.4 million for the remediation costs, and over the next 40 years, could further pay an annual average of $6.8 million. Also, Rocketdyne's method for distributing environmental preventive costs resulted in NASA potentially overpaying Rocketdyne $1 million during FY 1996 and 1997, and may continue to overpay $.5 million annually for environmental preventive costs over the next 40 years. We made recommendations to negotiate a cost-sharing arrangement for remediation costs and obtain an equitable distribution of preventive costs.

Management is awaiting completion of negotiations concerning environmental clean up cost sharing at another NASA facility before proceeding with negotiations concerning cost sharing at the SSFL. With respect to the preventive costs, management is waiting for the completion of the contracting officer's review of the contractor's charging practices. Our recommendations remain open pending management's actions.

$5.5 Billion Cost Avoidance If NASA Decides to Decommission Its Nuclear Reactor
Report No. IG-97-038

In 1981, NASA agreed that the best course of action would be to decommission the Plum Brook Reactor Facility (Plum Brook). Our audit showed that NASA could avoid the expenditure of approximately $5.5 billion by escalating the decommissioning process of the Plum Brook. However, Plum Brook is in a safe storage mode.

NASA has committed to the Nuclear Regulatory Commission to submit a decommissioning plan to terminate the license for the Reactor Facility at the end of 1999, and to complete the decommissioning activities by the end of 2007. NASA, Office of Management Systems (Code J) has funded a decommissioning plan and a community relation plan. The Glenn Research Center at Lewis Field has awarded contracts for the plans. Additionally, Glenn Research Center hired a Decommissioning Project Manager to manage the decommissioning of the Reactor Facility. Glenn Research Center also is supporting Code J in pursuing alternative funding for the cost of the actual decommissioning. We will continue to monitor management's actions.

PROCUREMENT

Contractor Using NASA-Owned Property Rent Free for Commercial Business
Report No. IG-98-038

The Federal Acquisition Regulation (FAR) requires that contractors pay rent when using government-furnished property for non-government business. An audit showed that Marshall authorized a contractor to use NASA-owned production property at the Santa Susana on a rent-free basis in support of a commercial launch vehicle effort. As the basis for its authorizations,

Marshall cited the Commercial Space Launch Act (CSLA) of 1984, which provides for government agencies to make their launch property available to support the commercialization of these programs. Despite notification from Headquarters that commercial use of production property does not fall under the purview of the CSLA, Marshall did not withdraw its authorizations. The audit determined that Marshall should have collected approximately $3.1 million in rent and recommended Marshall charge the contractor rent for both its past and future commercial use of the property. Management concurred with our recommendations.

Since the issuance of the report, Marshall has withdrawn the authorizations and notified the contractor that future commercial use of the SSFL property is subject to appropriate compensation as required by FAR. During this reporting period, management has initiated actions to review the potential for collecting rent for past commercial use of the facility. We will continue to monitor management's progress toward closing this recommendation.

$3.6 Million in Savings Possible Through Improved Motor Vehicle Management
Report No. IG-98-035

NASA Centers maintain fleets of general-purpose vehicles to meet NASA and contractor transportation needs. An OIG audit at four Centers disclosed that all four had excess vehicles. In addition, two Centers continue to purchase and maintain, rather than lease, vehicles through the General Services Administration (GSA). We determined that NASA could save up to $1.7 million annually be disposing of underused vehicles, and as much as an additional $1.9 million annually by converting its Agency-owned vehicles to GSA leases. The OIG made recommendations to establish policy for vehicle usage, disposal, and leasing.

Management has implemented the recommendations but has not agreed to an amount of funds put to better use. The NASA logistics office established a reporting requirement to document savings resulting from the new policies and plans to provide a savings estimate early in FY 2000.

Facility Leasing Audit at Johnson Space Center Identifies $3.9 Million in Savings
Report No. IG-99-008

Our audit of contractor facility leasing in the geographic vicinity of Johnson Space Center (Johnson) showed that 5 of 28 facilities had idle space exceeding 10 percent of the total leased space. For one of these facilities, NASA negotiated a contract modification for a $4.2 million reduction in cost and fee, of which approximately $1.2 million was directly attributable to idle space. For two other facilities leased by one contractor, changes in contractor performance resulted in a significant reduction of idle space during the audit. We also found that four contractor leases were not correctly classified as capital leases and that NASA could potentially save another $2.7 million in excess lease costs over the terms of the leases by reclassifying the operating leases to capital leases. Management concurred with our recommendations to review the allowability of lease costs, establish procedures to periodically review facility requirements for those contractors with leased facilities, and review lease classifications to ensure that leases are properly classified and subsequently initiated responsive corrective actions.

During this reporting period, NASA management requested that the DCAA review the classifications of the capital versus operating leases addressed in the audit findings and is awaiting completion of DCAA's audits. We will continue to monitor progress on this issue.

CROSSCUTTING PROCESSES

REVIEW OF NASA'S SINGLE PROCESS INITIATIVE/BLOCK CHANGE PROCESS IMPROVEMENTS
Report No. P&A-98-002

The Government and Industry Quality Liaison Panel conceived the Single Process Initiative (SPI)/Block Change, also referred to as the common process initiative. NASA, DoD, and the Federal Aviation Administration (FAA) endorse this initiative, which enables contractors to propose single processes that would meet the needs of multiple government customers. The intent of SPI is to reduce contractor operating costs and achieve cost, schedule, and performance benefits for both the contractor and the Government. The review addressed NASA's involvement and partnering with DoD, the application of SPI at NASA Centers, achievements in reducing contract costs, and contractor participation. We found inconsistent implementation across Centers, minimal cost savings, and inadequate resources for staffing SPI implementation.

We issued the final report on August 17, 1998. In general, management concurred with the report's recommendations. Of the report's seven recommendations, five recommendations are open pending management's implementation of the proposed corrective actions.

INFORMATION ASSURANCE

OPPORTUNITIES TO IMPROVE SOFTWARE PRODUCTION FACILITY DISASTER RECOVERY PLAN IDENTIFIED
Report No. IG-99-005

An audit of the Johnson Space Center Software Production Facility (SPF) disaster recovery plan identified weaknesses in the following areas: (1) extended backup operations procedures, (2) fully developed application contingency plans, and (3) annual plan testing. The SPF is responsible for developing, testing, and manufacturing Shuttle software. Because of it's importance to the Shuttle program, the SPF must have the ability to resume operations in a timely manner in the event of a disaster. The audit found that NASA management needs to develop a strategy or procedures for extended backup operations, including procedures to ensure vendor support and Flight Equipment Interface Devices (FEID's) contingency plans. NASA management also needs to develop fully application contingency plans, including processing priorities and work-around procedures. Finally, NASA management needs to test the disaster plan annually. NASA management agreed with our findings except for (1) ensuring that vendors supply backup resources in a timely manner and (2) establishing contingency plans for the FEID's.

During this reporting period, management provided application contingency plans and work-around procedures. However, the plans and procedures do not contain specific actions to be taken in the event of a disaster. We ask management to reconsider their position on these two recommendations. Additionally, we consider management's comments regarding vendor supplies and contingency plans for the FEID's to be their final decision. As a result, these recommendations are closed.

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

MANAGEMENT TO STRENGTHEN CONTROLS OVER NUMERICAL AEROSPACE SIMULATION FACILITY
Report No. IG-99-010

An audit of the Numerical Aerospace Simulation (NAS) facility, a supercomputing installation at Ames Research Center (Ames), identified major control weaknesses in the areas of: (1) physical and logical access; (2) computer security; (3) file retention, backup, and recovery management; (4) software change management; (5) system accounting and file auditing; and (6) risk assessments. We recommended that Ames (1) establish policies and procedures where needed, (2) review and report on compliance with existing policies and procedures, and (3) establish a backup system for the NAS keypad/keycard entry system. Management generally concurred with 15 of the 16 recommendations we made and initiated responsive corrective actions. Management did not concur with the recommendation to establish a backup system for the facility's keypad and keycard entry system. With respect to this issue, management provided additional information concerning the features of the new card access system that satisfied the intent of the recommendation.

During this period, management provided the OIG with documentation pertaining to corrective actions it had taken in response to the 15 open recommendations. These recommendations will remain open pending our assessment of management's corrective actions.

INFORMATION TECHNOLOGY

AGENCY PLANS ASSESSMENT OF Y2K STATUS OF MAJOR CONTRACTORS
Report No. IG-99-004

An audit found that NASA lacked reasonable assurance that its production contractors would provide Y2K compliant data to support the Agency's key financial and program management activities. This condition occurred because NASA had not asked the two principal DoD audit and contract administration agencies, the DCAA and DCMC, to conduct Y2K reviews at NASA's major contractor locations. As a result, the Agency risks using non-compliant data that may adversely affect the Agency's control, budgeting, program management, and cost accounting activities. Management concurred with the intent of our two recommendations to NASA relating to the Y2K status of its major contractors.

The recommendations remain open pending implementation of planned and ongoing corrective actions.

JET PROPULSION LABORATORY DELAY COULD AFFECT Y2K COMPLIANCE MILESTONES
Report No. IG-99-022

The OIG conducted an audit at six NASA Centers to evaluate the adequacy of renovation and validation efforts, including NASA's Y2K oversight of contractor activities and reporting to OMB. The audit showed that the six locations each included the NASA issued guidance requiring installations to include Y2K compliance requirements in solicitations and new contracts used to acquire IT assets and to modify existing NASA contracts by requiring additions to their statements of work. However, as of January 31, 1999, the JPL had yet to modify 30 percent of its

mission-critical contracts and 40 percent of its nonmission-critical contracts. Untimely inclusion of the Y2K compliance requirements into NASA's IT-related contracts reduces the Agency's assurance that its contractor-operated and contractor-maintained systems will be Y2K compliant on January 1, 2000.

The report recommended that the NASA CFO establish target dates for JPL to incorporate the Y2K requirements into all applicable mission-critical and nonmission-critical contracts. The CIO established a target date of June 30, 1999. This recommendation has been closed.

The report also recommended that the CIO and the NASA Management Office at JPL monitor JPL's progress in meeting the target date established in response to the first recommendation. This recommendation remains open pending completion of corrective actions

AERO-SPACE TECHNOLOGY PROGRAM

SAVINGS POSSIBLE THROUGH IMPROVED AIRCRAFT MANAGEMENT
Report No. LA-95-001

We participated in a PCIE-sponsored audit by the of federal civilian agency use of government aircraft. We identified several areas in which NASA could improve the management and control of its aircraft fleet (for example, using commercial aircraft to transport personnel in lieu of its own aircraft would save NASA $5.8 million annually and selling seven of the eight aircraft having a market value of about $10.6 million and was used exclusively for transporting personnel). We recommended that NASA tighten controls over transporting personnel on NASA aircraft, perform cost-effectiveness studies to justify the retention of aircraft assets, and reevaluate aircraft lease versus purchases options.

Management actions on the 19 recommendations made by the audit have resulted in closure of all but 1. The open recommendation is that NASA perform cost-effectiveness analyses as required by OMB Circular A-76 to justify retention of mission management aircraft. Although management completed an A-76 analysis of one of seven mission management aircraft, our review of the analysis found that it did not meet the requirements of OMB Circular A-76 because management did not consider the use of commercial transportation alternatives.

POLICY AND GUIDELINES NEEDED TO ENSURE THE ADEQUATE RECOVERY OF FACILITY COSTS
Report No. IG-97-040

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

Management has completed actions on seven of the report's eight recommendations. The open recommendation is addressed to the Office of Aero-Space Technology and concerns development of criteria for approving non-reimbursable test agreements. Management is working with the four aeronautics Centers to develop the criteria and anticipates completion within the next few months.

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

MANAGEMENT AND ADMINISTRATION OF GRANTS NEED IMPROVEMENT
Report No. IG-98-019

An OIG audit of grant reporting and recording practices at four NASA Centers showed that financial reports were often late and that Centers did not always record grant data accurately and promptly. The audit also showed that NASA (1) did not adequately monitor report timeliness or close out grants in a timely manner, (2) overstated FY 1997 grant costs, and (3) lacked a centralized data base of information to identify those grantees not meeting financial reporting requirements. These issues could or did lead to inaccurate accounting data, understated grant costs, an unreliable basis for budget and program decision making, and an inaccurate cost carryover position at the fiscal year's end. We made nine recommendations to help improve the Agencywide management and administration of grants.

NASA has completed corrective actions for four of the nine recommendations. Corrective action is under way for the remaining recommendations, but, in many cases, will require coordination among several NASA organizational elements.

NATIONAL TECHNOLOGY TRANSFER CENTER'S MISSION NEEDS TO BE DEFINED
Report No. IG-98-031

An audit of the National Technology Transfer Center (NTTC), one element in NASA's technology transfer network, showed that in 1995 NASA directed the NTTC to shift its technology transfer focus from a national to strictly a NASA focus without formally defining the NTTC's revised mission. As a result, the NTTC's mission was unclear and the NTTC was not fully integrated into NASA's technology transfer organization. The audit also identified that (1) some NASA-specific activities were inappropriate under the cooperative agreement with Wheeling Jesuit University, location of the NTTC; (2) the NTTC's monthly reports did not include enough performance information; and (3) the NTTC charged $19,500 of unallowable costs to the NASA cooperative agreement. We recommended that NASA (1) clearly define the NTTC's mission, (2) acquire services using the appropriate award instrument, (3) revise the monthly report format, and (4) recover the unallowable costs.

During the period, management obtained additional information from NTTC that supports classification of the $19,500 in salary costs as allowable severance pay. Although management's response to the audit report stated that a contract would be used to acquire future services from NTTC, management recently stated that they plan to continue to use a cooperative agreement. Two recommendations remain open. We will continue to monitor management's actions during the next reporting period.

REVIEW OF THE AERONAUTICS AND ASTRONAUTICS COORDINATING BOARD IMPLEMENTATION RESULTS
Report No. P&A-98-003

The Aeronautics and Astronautics Coordinating Board (AACB) is a joint DoD and NASA senior management review and advisory body that was chartered to help ensure the effective use of U.S. scientific and engineering resources, avoid unnecessary duplication of efforts, facilities and

equipment, and reduce costs. An AACB initiative developed 34 recommendations having the potential to effect savings and increase efficiency and effectiveness. Our review concluded that although the AACB Cooperation Initiative has been a successful partnership, the implementation of approximately half of the recommendations remains incomplete. The remaining open recommendations offer potential opportunities to improve operations and reduce costs.

NASA's AACB Executive Secretary plans to discuss how to proceed with resolving the open recommendations with the newly appointed DoD AACB Executive Secretary.

POOR BILLING PRACTICE ON X-33 PROGRAM
Report No. IG-99-001

An audit of the X-33 program disclosed a practice whereby Lockheed-Martin, who was awarded the cooperative agreement for the project, delayed billing for completed and government-accepted milestones until the following fiscal year. The practice resulted in NASA having unrecorded year-end obligations, costs, and liabilities totaling $22 million in FY 1996 and $34 million in FY 1997. Management agreed to perform a study of the appropriateness of those practices and to take corrective actions deemed appropriate by the study.

As of September 30, 1999, NASA had not released the study. Therefore, all recommendations remain open.

USE OF COOPERATIVE AGREEMENT ON X-33 PROGRAM HAS LIMITED SUCCESS
Report No. IG-99-019

The OIG conducted an audit to determine whether NASA's use of a cooperative agreement for performance of the X-33 technology demonstration program was appropriate and whether the agreement effectively defines roles, responsibilities, and rights of the Government and industry partners. The audit found that although use of a cooperative agreement has provided certain benefits, it has also contributed to program management problems. We made nine recommendations to improve X-33 program management and to ensure effective program management practices are followed on future Agency cooperative agreements.

Management initiated corrective actions on all but two of the recommendations. Management's planned actions were not responsive to two recommendations concerning (1) the need for an Agency-unique risk assessment plan, and (2) the need for periodic Estimate at Completion Analyses. We reaffirmed our position on each recommendation and requested additional comments in the final report.

EARTH SCIENCE

COMMERCIAL SECTOR NOT EFFICIENTLY UTILIZED TO OBTAIN REMOTE SENSING DATA
Report No. IG-99-023

An OIG audit showed that although the Commercial Remote Sensing Program Office (CRSPO) located at the John C. Stennis Space Center has been successful at developing the commercial remote sensing industry, the program office has not leveraged this industry to provide products that meet baseline scientific requirements. This resulted in the CRSPO being unable to fulfill its goal to reduce NASA's costs of remote sensing science and technology programs through competition within the commercial remote sensing industry. We made recommendations to

(1) publish a baseline of scientific requirements to foster competition within the commercial remote sensing industry, and (2) use this baseline in initiatives to fulfill NASA's Earth Science objectives at the lowest cost. Management concurred with the recommendations and is currently developing the baseline.

SPACE SCIENCE

SOFTWARE PROBLEMS CAUSE LAUNCH DELAY OF CHANDRA X-RAY OBSERVATORY REPORT NO. IG-99-016

Our audit the Chandra X-ray Observatory showed that launch delay was caused by problems in software development and inadequate time scheduled for integration and test activities for the observatory's flight and ground software. Although software development was identified as a high risk, the observatory's Risk Management Plan was not updated and NASA had not assigned personnel with software expertise at the contractor's production plant. We recommended that management revise the new NASA policy to require program managers to update Risk Management Plans as high-risk issues arise. In addition, NASA should assign personnel with necessary expertise to be on-site at contractor's locations when a particular area becomes a significant management risk. Management concurred with the recommendations and discussed them at the April 1999 meeting of the Program/Project Management Working Group. Management is now awaiting recommended action from the Program and Project Management Steering Committee.

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

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

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

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

PROCUREMENT

Contractor Reimburses Over $30.8 Million

As the result of an ongoing OIG investigation, with the assistance of DCAA, a NASA contractor reimbursed the Agency $30,832,378. The OIG investigation revealed that the contractor had improperly double billed NASA for contract award fees and contract incurred costs for the years 1997 and 1998. The investigation is continuing.

PRODUCT SUBSTITUTION

International Space Station Subcontractor To Pay Restitution of $1.2 Million

As the result of a joint investigation conducted by the OIG and Defense Criminal Investigative Service (DCIS) a company president plead guilty on behalf of the corporation to three counts of filing false statements (18 U.S.C. 1001). The company, a major subcontractor on the ISS, conducts reliability testing of electronic components used by NASA, DoD, and their contractors. The company was ordered to pay $1.2 million in restitution, pay a $500,000 criminal fine, pay a $300 special assessment fee, and was placed on 5-years probation.

COMPUTER INTRUSIONS/CRIMES

Two Charged for Computer Hacking

As the result of an investigation two Swedish hackers were charged with hacking into the computer systems of NASA and the U.S. military. The hackers allegedly attempted to infect the systems with a computer virus. Damages to NASA are estimated to be $159,100. The trial, which will take place in Sweden, is pending.

Former NASA Contractor Employee Indicted for Illegal Intrusion of NASA Computer

An OIG investigation, with the assistance of the NASA Johnson Space Center, IT Security Office, resulted in the indictment of a former NASA contractor employee. The employee was indicted by the Grand Jury of Harris County Texas on one Texas State Felony Count of Breach of Computer Security. The indictment alleged that the employee accessed a NASA computer network without authorization and downloaded a password file. The employee further cracked the password file providing him full access to the network where he collected 133 additional user passwords. Damages to the Government were assessed at $19,387.

Network Intruder Arrested

A joint investigation conducted by the OIG and DCIS with assistance from the Federal Bureau of Investigation (FBI), the Immigration and Naturalization Service (INS), and the Department of the Interior OIG resulted in the arrest of an individual for unauthorized access to government and other computers. OIG agents performed an on-site analysis of electronic evidence obtained with a federal search warrant. The analysis disclosed that the "hacker" possessed data records containing personal information for a significant number of individuals. Prosecutive activity in this case is pending.

EMPLOYEE MISCONDUCT

Former NASA Employee Pleads Guilty

An OIG investigation resulted in a former NASA employee entering a guilty plea to one count of embezzlement of government funds. The employee had been charged in a criminal information with embezzling approximately $17,700 for the Employee Morale Association. Sentencing is pending.

OTHER

Fraudulent Moon Rock Scheme Results in Indictment and Arrest

An OIG investigation, with the assistance of the FBI, resulted in a 24-count indictment against a disbarred attorney who was attempting to sell bogus moon rocks. The fake moon rocks were offered for thousands of dollars to numerous victims throughout the United States. The rocks were seized and brought to the Johnson Space Center, Houston, Texas, Lunar Curator for examination. The Curator found that the rocks were not of lunar origin.

COMPUTER INTRUSIONS/CRIMES

Canadian Hacker Arrested

Previously Reported (September 1998): A joint investigation by agents from the OIG, the FBI, and the Royal Canadian Mounted Police resulted in the apprehension of a Canadian hacker. The hacker's illegal intrusion altered the network server that allows public access to the NASA World Wide Web homepage causing a denial of service. Estimated costs of the repairs to NASA are approximately $70,000. Other victims included the National Oceanographic and Atmospheric Administration, Hughes, STX (a NASA contractor), as well as several universities and private Web sites in Canada.

UPDATE: The perpetrator has been held over for trial on 47 counts of illegal intrusions and hacking.

BRIBERY/KICKBACKS

Contractor Official Pays More Than $32,000 in Kickbacks

Previously Reported (September 1998): A joint OIG, DCIS, and Air Force Office of Special Investigations investigation resulted in a subcontractor official being sentenced to a 1-year probation and ordered to pay $32,212 in restitution to NASA. Acting on behalf of her company, the official had paid more than $32,000 in kickbacks to a prime contractor's procurement manager.

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

UPDATE: Two other companies, a company president, and a company owner have since pled guilty to violations in this matter. A company and its president each pled guilty to a one count information for submitting a false and fraudulent claim to NASA. With the help of the procurement manager, the company president submitted a false claim inflated by $16,000, which was subsequently paid to the procurement manager. Another company and its owner each have pled guilty to one count of paying kickbacks in excess of $7,900 to the procurement manager.

PRODUCT SUBSTITUTION

Contractor and Two Officials Charged With Product Substitution

Previously Reported (March 1999): Following a joint investigation by the OIG, NCIS, and Customs, a company and two of its officials were indicted by a Grand Jury and pled guilty in U.S. District Court to a conspiracy charge for misrepresenting the origin of strainers imported into the United States. The corporation's former president and its general manager each pled guilty in U.S. District Court to one count of charges relating to the removal of country-of-origin markings from the high-pressure valve strainers supplied to NASA and the U.S. Navy. The former corporation president agreed in a separate settlement agreement presented before the U.S. Court of International Trade, to pay the Government $350,000.

UPDATE: During this period, the general manager and the president of the company were each ordered to pay a $2,500 fine.

ENVIRONMENTAL VIOLATIONS

Company Fined $6.5 Million for Improper Handling of Hazardous Waste

Previously Reported (September 1996): Following a joint investigation by the OIG and numerous other federal, state, and local agencies, a company pled guilty to a criminal information charging the company with three counts of violating the Resource Conservation and Recovery Act. The charges stemmed from a complaint that an explosion at the contractor's facility resulted from the improper disposal of hazardous waste by burning. Two contractor employees were killed in the explosion.

UPDATE: Three company officials were indicted for violating federal environmental laws. They were charged with storing and disposing hazardous waste without the permit required by the Resource Conservation and Recovery Act.

Special Thanks

The Inspector General cites for special recognition the close collaboration between the Department of Justice (DoJ) and the NASA OIG as an example of excellence in government for the benefit of the public. The dramatic rise in and tenor of cyber space crimes continues a trend to eclipse the volume of other crimes over time.

Over the past several years, the DoJ Computer Crimes and Intellectual Property Section (CCIPS) of the Criminal Division and the OIG CCD have collaborated on training initiatives involving U.S. federal prosecutors and investigators at NASA facilities. These initiatives combined the legal expertise of the DoJ CCIPS staff with the technical and law enforcement investigative expertise of OIG CCD staff to provide matchless training programs. The OIG CCD also collaborates with CCIPS on a variety of other Attorney General-led working groups.

We wish to extend our gratitude to Mr. Scott Charney, Chief, and CCIPS. Mr. Charney's personal leadership and contributions provide a model of excellence in government. Mr. Charney will be leaving CCIPS for the private sector. Mr. Charney embodies the best in government: hard working, personal integrity, and excellence in his professional dealings. We will miss him.

(Janet Reno presents Scott Charney with a plaque recognizing his service to the Federal Government)

Special Thanks

We appreciate the excellent efforts put forth by Assistant U.S. Attorney (AUSA) Michael Schultz of the U.S. Attorney's Office Southern District of Texas, Houston, Texas, in support of the OIG and the U.S. Space Program.

During this period AUSA Schultz successfully prosecuted an individual who impersonated a NASA Astronaut. The impersonator gained illegal access to NASA's Payload Operations Control Center during a Space Shuttle flight. The impersonator was charged and convicted for false impersonation of a NASA Astronaut.

(AUSA Michael Schultz, SA Joseph Gutheinz and SAC Lance Carrington)

Chapter 3
Inspections, Administrative Investigations, and Assessments

The Office of Inspections, Administrative Investigations, and Assessments staff provides timely and constructive evaluations of Agency programs, projects, and organizations. The IAIA staff conducts assessments of policy, processes, structures, and operations to determine whether resources are effectively managed and applied toward accomplishing NASA's missions. IAIA projects also include focused reviews of specific management issues or plans. Typically, IAIA actions are "rapid responses," usually completed within 180 days. During the reporting period, IAIA successfully introduced its *Quick Pitch* approach to both inspections and administrative investigations. The approach provides a rapid briefing of key NASA managers of issues surfaced during an IAIA activity, and then a streamlined follow-up process to assure necessary corrective actions.

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

ADMINISTRATIVE INVESTIGATIONS

The IAIA staff also conducts administrative investigations (inquiries involving non-criminal allegations or administrative wrongdoing). Investigations in this category include misuse of government equipment and other resources, employee violations of the Standards of Conduct, and other forms of misconduct. We investigated 87 new reports of suspected or alleged misconduct during this period. In addition, 127 administrative investigations were carried over from the previous reporting period. Of these 214 cases, we closed 62. During the reporting period, the staff also greatly expanded its support of the Office of Criminal Investigations. IAIA staff worked on several criminal investigations, providing technical insights and advice (including procurement and engineering issues) to and partnering with special agents conducting criminal cases.

INSPECTIONS AND ASSESSMENTS

Significant inspection and assessment activities during this reporting period include:

ASSESSMENT OF FLIGHT TERMINATION SYSTEMS (SECURITY CLASSIFIED—CONFIDENTIAL)
Report No. G-98-011

An IAIA team completed an assessment of NASA's use of FTS. In addition to other potential improvements, we found the Agency should use appropriate risk-based assessments to reach decisions on whether to use secure FTS. We made recommendations to enhance program security and address the Agency's core value—safety. NASA management concurred with two report recommendations and recently agreed to reconsider concurrence with the remaining four recommendations.

Chapter 3

ASSESSMENT OF THE TRIANA MISSION
Report No. G-99-013

We reviewed the Triana mission, a project to build, launch, and operate a spacecraft that will take pictures of the sunlit side of the Earth and transmit them to the Internet 24 hours a day. We found that the focus of the mission changed from primarily inspiration and education to primarily science. The added scientific capabilities will increase the amount of data gathered by the mission, but in so doing, also increase the mission's total cost. Due to the mission's circumscribed peer review process, we are concerned that the added science may not represent the best expenditure of NASA's limited science funding.

We are also concerned that the Triana spacecraft, originally conceived as a cooperative effort between university students, industry, and government, is essentially being built, launched, and operated by NASA. We believe that NASA's major role in developing and launching the spacecraft does not further the goals of the National Space Policy of 1996 and the Commercial Space Act of 1998, which direct NASA to acquire spacecraft and launch vehicles from the private sector whenever possible.

We recommended that NASA management reassess and modify, as needed, its current approach to the Triana mission. NASA management did not concur with our recommendation.

CONTRACTOR USE OF GENERAL SERVICES ADMINISTRATION VEHICLES AT THE GOLDSTONE DEEP SPACE COMMUNICATIONS COMPLEX
Report No. G-98-013

Based on alleged misuse of government vehicles at the facility, an IAIA team performed an inspection of contractor use of GSA vehicles at the Goldstone Complex. Along with compliance with contract provisions and federal regulations, we focused on the practice of contractor employees using GSA vehicles for home-to-work commuting purposes. We found this practice to be contrary to NASA policy and federal regulations, but in accordance with collective bargaining agreements. We recommended the contractors we reviewed discontinue current practices until they submitted the appropriate justifications to obtain required authorizations from the Administrator. We also recommended that management review similar practices of other contractors to ensure the appropriate use of GSA vehicles. NASA management concurred with both recommendations. As discussed with management, the IAIA staff will conduct a follow-up review of implementation of planned corrective actions.

ASSESSMENT OF THE NATIONAL AERONAUTICS AND SPACE ADMINISTRATION'S AUTOMATED SYSTEMS INCIDENT RESPONSE CAPABILITY
(SENSITIVE—LIMITED DISTRIBUTION)
Report No. G-99-007

We conducted an assessment of NASA's Automated Systems Incident Response Capability (NASIRC). The objective of the 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. NASA management concurred with our 11 recommendations.

ONGOING ACTIVITIES

Other IAIA activities during the report period included:

- **HARD DRIVE 99 - CLEARING CONTROLLED INFORMATION FROM EXCESSED MICROCOMPUTERS (G-99-003)**

  Based on our the findings of the spot checks of excessed microcomputers we began in 1997, NASA management instituted new policies and procedures to emphasize compliance with existing guidelines and has developed new rules on the clearance of data from hard drives on excessed microcomputers.

  Our current inspection found numerous problems with the manner computer hard drives were being cleared of electronic information at a NASA installation. We will issue a report early in FY 2000, but management has already begun corrective actions.

- **JOHNSON SPACE CENTER EXCHANGE COMMERCIAL RELATIONSHIPS INSPECTION (G-99-008)**

  This activity responds to a December 12, 1998, letter from Congressman Rohrabacher to the Inspector General. Congressman Rohrabacher requested a NASA OIG inspection of relationships between certain Center and Exchange and commercial entities.

- **FOLLOW-UP ASSESSMENT ON 1997 INSPECTION OF THE NASA AEROSPACE SAFETY ADVISORY PANEL (G-99-020)**

  The OIG issued an inspection report during 1997 on the NASA Aerospace Safety Advisory Panel (ASAP). This follow-up assessment addresses the status of corrective actions planned by NASA management in response to our prior ASAP report recommendations.

- **NASA BADGING PROGRAM AND PHYSICAL ACCESS CONTROLS MARSHALL SPACE FLIGHT FACILITY (G-99-001)**

  We completed fieldwork on our first inspections of badging and physical access controls at Marshall Space Flight Center and the Wallops Flight Facility. We assessed compliance with applicable controls and evaluated processes controlling access to sensitive facilities and/or controlled information and materials. We also identified and shared lessons learned and best practices during our work. We will provide management a draft report for comment for each of these inspections early in FY 2000.

- **NASA HEADQUARTERS COMPUTER SUPPORT INSPECTION (G-99-009)**

  This inspection will evaluate the Headquarters installation support contract, including contract and subcontract administration, customer services, hardware and software, acquisitions and support, and systems security.

- **INTERNATIONAL SPACE STATION PROGRAM IMPLEMENTATION OF COMMUNICATIONS SECURITY AND AUTOMATED INFORMATION SECURITY MEASURES (G-99-010)**

  We recently announced this inspection to evaluate whether NASA management has accurately identified communications security (COMSEC) and AIS requirements necessary for mission assurance and safe ISS operation and whether appropriate processes and safeguards are being effectively implemented.

- **CONSOLIDATED SPACE OPERATIONS CONTRACT SECURITY (G-99-012)**

  We are assessing the security management portion of the consolidated space operations contract (CSOC) to evaluate whether it deals effectively with potential threats and risks and whether CSOC security management effectively uses NASA IT Security (ITS) and COMSEC program capabilities.

- **NASA BADGING PROGRAM AND PHYSICAL ACCESS CONTROLS WALLOPS FLIGHT FACILITY (G-99-014)**

  We completed fieldwork on our first inspections of badging and physical access controls at Marshall Space Flight Center and the Wallops Flight Facility. We assessed compliance with applicable controls and evaluated processes controlling access to sensitive facilities and/or controlled information and materials. We also identified and shared lessons learned and best practices during our work. We will provide management a draft report for comment for each of these inspections early in FY 2000.

- **COMPUTER BANNER INSPECTION (G-99-015)**

  This inspection is evaluating whether NASA computer banner policies and procedures are adequate to deter the improper use of government computer systems and to provide sufficient evidence for pursuit of potential criminal actions when a system intrusion occurs. We are also reviewing the effectiveness of routine scanning procedures and status reporting on NASA-owned or funded IT systems.

- **INSPECTION OF NASA EXCHANGE OPERATIONS GLENN RESEARCH FACILITY (G-99-016)**

  This is the first in a series of inspections of NASA exchanges. The overall objective of this inspection is to evaluate whether the Glenn Exchange is meeting employee needs and conducting operations in a manner consistent with NPD 9050.6E and other statutory or regulatory controls. In addition, we are also reviewing Glenn Exchange activities to assure that operations and activities are managed effectively and in accordance with applicable policies, regulations, and statutes.

- **USE OF SUPPORT SERVICE CONTRACTORS AT THE GLENN RESEARCH FACILITY (G-99-017)**

  We initiated an inspection of contractor performance of support service activities. We are evaluating whether contractors are performing within the scope of their contracts and NASA contract administrators and technical monitors provide adequate surveillance of support service contractors to ensure contractor personnel do not perform personal services or inherently governmental services. We are also reviewing whether sufficient delineation exists between functions performed by contractor and civil servant personnel.

- **ASSESSMENT OF NASA INTERAGENCY PERSONNEL AGREEMENTS POLICIES AND PRACTICES (G-99-019)**

  We are assessing the various factors of the NASA Interagency Personnel Agreements (IPA) Program. The scope of our initial review includes IPA assignments to NASA and excludes NASA employees on IPA assignments to other organizations, focusing on senior level positions (i.e., GS-15, Senior Executive Service, and equivalent positions).

Chapter 4
Legislation, Regulations, and Legal Matters

The OIG legal staff provides advice and assistance on a variety of legal issues and matters relating to the OIG's reviews of Agency programs and operations. The OIG Attorney-Advisor acts as the central official for the review and coordination of all legislation, regulations, Freedom of Information Act (FOIA) requests, Congressional 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.

LEGISLATION

Proposed Provision to NASA FY 2001 Authorization

As a result of the decision in *NASA v. Federal Labor Relations Authority* [FLRA] *(infra,* page 49*)*, we have proposed that the NASA OIG be expressly defined as *not* a representative of the agency for the purposes of labor/management relations.

H.R. 1827, Government Waste Corrections Act of 1999

This office has reviewed the revised H.R. 1827, Government Waste Corrections Act of 1999. This legislation provides for so-called "recovery audits," which will allow for retention by third parties of a percentage of funds which would have eventually been collected by the Government in the ordinary course of business. We do not agree that the legislation is needed or will be beneficial. Emphasis can be placed on improving the controls in the payment process without establishing statutory requirements for a burdensome oversight process in the form of recovery audits. We were particularly concerned with the proposed 31 USC 3562(c) that requires that each recovery audit of a payment activity shall cover all payments made by the paying activity in a fiscal year. No consideration appears to be given to the probability that the value of these audits, while questionable from the start would diminish over time if overpayments were detected and the related controls strengthened to avoid a recurrence of the deficiency. Also, this language appeared to limit the use of a risk based approach to these audits. Audit attention would be most cost effective if provided on a periodic, rather than a continuing, basis. Therefore, we recommended that legislation include provisions that limit recovery audits to situations where these audits are cost effective. Our recommendations were recently adopted in revisions to the bill.

Proposed Commercial Space Act Amendment

We provided comment to a draft proposal that would permit the Administrator to set fees for U.S. commercial use of the accommodations, resources, transportation services and related infrastructure of the ISS. We recommended that these fees be based on full cost generally, and that revenues in excess of costs be returned to the U.S. Treasury. We also recommended an annual report on the fees collected, and controls be put into place to prevent favoritism

REGULATIONS

During this reporting period, the OIG reviewed 20 Agency regulations.

NPG 1000.2, NASA Strategic Management Handbook

We recommended that NASA link its revised Strategic Management Handbook to the GAO and Inspector General designated top ten management concerns associated with statutes such as GPRA. We recommended that references to the process for addressing the Agency's response to the top ten challenges be included in the strategic management handbook. We also provided a list of technical suggestions to improve the document.

Inspector General Access Clause

We have submitted a proposal to the General Counsel and the Associate Administrator for Procurement to include a standard Inspector General access clause in government contracts. The clause would reduce the need to commence enforcement actions for Inspector General access to contractor data in the courts. The General Counsel is working with us in submitting the proposal in a format required by the FAR Council to establish a FAR case. In the interim NASA is considering our proposal for inclusion of a similar clause in the NASA FAR Supplement (NFS) for NASA contracts.

NASA OIG Hotline Poster Clause

We have proposed a clause for NASA contracts that would require that NASA Hotline posters be displayed at NASA aerospace contractor facilities. The posters would be provided at OIG expense. The Office of General Counsel has raised an issue concerning consistency with a similar Defense Department initiative, as well as Regulatory Flexibility Act and commercial item issues. We anticipate resolving these issues.

Proposed Meritorious Claims Regulation

We provided comment to NASA concerning third party meritorious claims against the United States. A “meritorious claim” is a claim for which NASA is not legally liable, but decides to pay as a matter of equity or fairness. We urged that the Agency reduce these claims for any contributory or comparative negligence of the third party claimant.

NASA OIG NONCONCURRENCES

NPD 1400.1F, the NASA Directives System

NASA issued this directive on July 19, 1999. The directive changed the role of the OIG in reviewing proposed directives internally. Prior to the directive, the OIG was a “review and concurring” office, which meant that NASA offices had to seek the concurrence of the OIG before submitting a proposed regulation to the Administrator. Now NASA has changed our role to one of “review and comment,” in which our concurrence is no longer necessary for a proposed regulation to be submitted to the Administrator. In order that the OIG's comments receive adequate consideration by the Agency, the OIG will track the disposition of its comments. NASA OIG will report to the Administrator, the Associate Deputy Administrator and to Congress (e.g., via the semiannual report and otherwise) those proposals where we have significant, unresolved disagreements with Agency management. We anticipate these instances will be the exception since the Agency is generally committed to resolving differences in a collegial manner.

NPG 2810.1, Security of Information Technology

After a long and difficult negotiation, we were able to resolve our differences with Agency management over the express role of the NASA OIG in IT security. This document reiterates our role in investigating computer intrusions for possible criminal prosecution. We agree to promptly notify management of incidents that may pose a threat to human safety or critical missions. We will coordinate, to the extent practicable, when use of Center or network data is needed to support an OIG investigation. NASA management will assist the OIG in investigating, monitoring, and gathering evidence to identify and prosecute individuals committing computer crimes against NASA. NASA agrees that whenever possible, it will coordinate with the OIG for an orderly control or termination of a hostile intrusion or other incident. This NPG reflects a compromise aimed at preserving evidence of computer crimes, while at the same time protecting NASA assets from unacceptable risks.

NPG 8715, NASA Occupational Safety and Health Programs

We did not concur in the issuance of this NPG. We requested that the directive include a provision that employees report hazardous or unsafe or unhealthy conditions to the Inspector General as well as to the occupational safety and heath channels. The Agency is concerned that additional reporting requirements will deter employees from reporting violations. The point is valid. However, there are other alternatives. For example, supervisors could report potentially serious dangers to the health and personal safety of individuals. This information would permit the OIG to determine whether there are issues of crime (e.g., unlawful product substitutions, or environmental hazards) or serious systemic safety issues. We are on the standard distribution list for mishaps. Given the OIG role in safety investigations,[1] the Agency missed an opportunity to enhance the Administrator's oft-stated priority of “safety first.”

LITIGATION

NASA v. FLRA, No. 98—369

On June 17, 1999, the U.S. Supreme Court issued its decision in the case of *NASA and NASA OIG v. Federal Labor Relations Authority*. In a 5-4 decision, the court affirmed the ruling of the Eleventh Circuit Court of Appeals that OIG investigators are “representatives of the agency” under 5 U.S.C. Sec. 7114(a)(2)(b) when conducting an examination of a bargaining unit employee that could result in administrative discipline. It is unclear whether the Supreme Court's holding extends also to interviews conducted as part of a criminal investigation. On the same day it issued the NASA decision, the Supreme Court remanded a companion case to the Second Circuit Court of Appeals. This case may provide more explicit guidance on the issue of whether the ruling in NASA applies in criminal as well as administrative investigations. In the interim, we have issued guidelines to our investigators and inspectors for conducting *Weingarten* interviews. We have also requested that the labor relations statute be amended to exempt OIG interviews from the *Weingarten* rule.

[1] Section 7(a) of the IG Act of 1978, as amended, expressly states: " The Inspector General may receive and investigate complaints or information from an employee of the establishment concerning the possible existence of an activity constituting a violation of law, rules, or regulations, or mismanagement, gross waste of funds, abuse of authority or a **substantial and specific danger to the public health and safety**, " 5 USC Appendix III, Sec. 7(a) (emphasis added).

Chapter 4

OTHER

Freedom of Information Act Matters

During this reporting period, the OIG processed 17 FOIA requests. We processed two appeals of an initial determination during this timeframe.

Subpoenas

During the reporting period, the Inspector General issued 33 subpoenas. No enforcement actions were filed.

OIG Legal Newsletter and Web Site

During this reporting period we published two legal newsletters for the benefit of OIG staff. We published articles on the allowability of environmental costs, the prohibition on the use of appropriated funds for gifts, and frequently asked questions on the use of frequent flyer awards gained as a result of government travel. These articles are available on the Internet at http://www.hq.nasa.gov/office/oig/hq/legalitems.html.

Cooperative, Outreach, and Other Activities

COOPERATIVE ACTIVITIES

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

AUDITS

OIG Continues Support Of GSA In Property Surveys at the Santa Susana Field Laboratory

The GSA conducts periodic surveys of the NASA-owned property at Santa Susana in California to determine whether the property is available for excessing by the Government. Based on the experience we gained during previous audits of Santa Susana ("Cost Sharing for SSFL Cleanup Activities and Commercial Use of the SSFL"), the OIG is working with GSA to identify options for NASA concerning future use of Santa Susana facilities. Included in those options is the possibility of transferring ownership and responsibility for environmental clean up of the Santa Susana to the contractor. We will continue to work closely with all concerned parties until GSA issues it final report.

NASA and Department of Commerce OIG's Jointly Review Polar-Orbiting Satellite System (Previously Reported Under Report No. P&A-98-008)

The National Polar-Orbiting Environmental Satellite System (NPOESS) will combine the Department of Commerce (Commerce) Polar-Orbiting Environmental Satellite (POES) program with the DoD, Defense Meteorological Satellite Program. NASA manages the design, development and launch of the POES spacecraft for Commerce. Under NPOESS, NASA will be responsible for technology transfer, as well as research and development support for several NPOESS instruments. We teamed with Commerce OIG in conducting a joint review to assess the level of sensor technology being transferred from NASA and other sources to NPOESS to minimize risk and cost. The review found that preliminary planning assumptions for the proposed NPOESS Preparatory Project do not include evaluating the feasibility of demonstrating the Ozone Mapper Profiler Suite (OMPS). The OMPS will provide Commerce and NASA with critical ozone data needed to meet public safety and international agreement responsibilities and comply with law. Specifically, NASA will use OMPS data in its Earth Observing System, global change science research. The risk of a disruption in ozone data will significantly increase without an OMPS flight demonstration. We recommended that the NPOESS Integrated Program Office: (1) request NASA to include OMPS as a payload alternative in its NPP feasibility study, (2) defer the decision to include or exclude the OMPS for flight demonstration until mission costs are fully analyzed and a cost sharing arrangement is negotiated, and (3) assess the operational risk of not demonstrating the OMPS. The Integrated Program Office Director agreed with the recommendations and has taken action to include OMPS in the study and defer its' decision until negotiations. A preliminary evaluation of operational risks has been conducted, but a more complete assessment will be made after source selection of the OMPS development contractor.

NASA and Department of Transportation OIG's Jointly Review Aviation Safety Issues (Previously Reported Under Report No. P&A-98-005)

The Airline Deregulation Act of 1978 has resulted in a significant growth in air travel, placing heavy demands on the National Airspace System. Insufficient capacity, limited access, and operating restrictions are cited as contributors to excessive operating cost and decreased efficiency for National Airspace System users. Together, the FAA and NASA use their technical expertise to develop advanced air traffic decision support tools, improve training efficiency and enhance safety through human factors research, and develop and test advanced communications, navigation, and surveillance systems. NASA and the FAA have a long history of working together on air traffic management systems and aviation safety research to enhance the capacity, efficiency, and safety of the NAS. We teamed with Department of Transportation OIG to conduct a joint review of aviation safety and air traffic management research. Although the review concluded that joint FAA and NASA research has produced very valuable aviation technology, the team identified five areas where the FAA and NASA can take action to further enhance the effectiveness of their coordination efforts and help ensure government resources are used in the most cost-effective manner. We recommended that NASA, in cooperation with FAA: (1) re-evaluate the advisory committee structure; (2) increase the number of common members participating on NASA and FAA advisory committees; (3) adopt a joint implementation plan and a formal agreement for aviation safety research that includes a requirement for an integrated plan; (4) ensure adequate cross representation of expertise at each agency; and (5) update the coordinating committee agreement to require regular meetings to resolve issues regarding joint research efforts. Management generally concurred with the recommendations. Of the report's five recommendations, we consider one to be closed. Management has implemented the recommendation to update the coordinating committee agreement and require the committee to meet regularly.

COMPUTER CRIMES DIVISION

In our continued effort to assist NASA in protecting it's critical network infrastructure we met with senior management to propose low cost and no cost solutions to network security. Through the efforts and experience of the CCD, solutions were provided that were immediately available at low or no cost to the Agency. These solutions would reduce intrusion activity immediately upon implementation. This type of solution would have a resounding effect on the NASA network security posture, reducing the overwhelming activity targeting NASA and allowing the limited IT resources to better respond to the more serious hostile network threat activity.

CCD offered to provide technical assistance with personnel to help guide the NASA IT security solution implementation thereby minimizing impact to operational components.

INSPECTIONS, ADMINISTRATIVE INVESTIGATIONS, AND ASSESSMENTS

Based on an allegation received by the OIG, IAIA staff worked with local financial management staff and conducted a survey of time and attendance submissions at a NASA installation. As a result, management accepted several recommendations we made to improve compliance with established NASA regulations and improve internal controls.

Cooperative, Outreach, and Other Activities

The AIGIAIA continued to represent the NASA OIG on NASA's Critical Infrastructure Protection Team (CIPT). NASA created the CIPT to develop the Agency's Critical Infrastructure Protection Plan (CIPP) as required by Presidential Decision Directive 63 (PDD-63). In addition, IAIA staff members are assisting audit staff in a review of NASA's CIPP.

A team of analysts from IAIA briefed the Aerospace Safety Advisory Panel on information security related activities of the NASA OIG, focusing on flight termination, command and control, and automated information security concerns.

Continuing efforts to partner with Agency management and staff, IAIA analysts began working with a NASA software engineer and a network specialist involving our information security reviews of the ISS and the CSOC. The technical capabilities and experiences of both NASA professionals are significantly contributing to both activities.

Inspections staff, in cooperation with OIG audit and investigative staff, and NASA budget and accounting personnel, initiated a review of NASA funding transfers to the Russian Government. Our team also coordinated its efforts with the FBI.

Based on several allegations of improper conduct and information from subsequent IAIA inquiries, the Inspector General issued a memorandum, *Undue or Improper Influence on the Selection of Contractor Personnel.* The memorandum cautioned NASA officials to remain at arm's length from contractor hiring processes and to refrain from actions that may create the appearance of improperly influencing contractor-hiring decisions.

OUTREACH

AUDITS

OIG Assumes a Leadership Role In the Federal Audit Community

The Federal Audit Executive Council (FAEC) was chartered to discuss and coordinate issues relating to audit policy and operations affecting the federal audit community. FAEC members include the AIGA's from federal agencies, as well as, the Director, DCAA, and the Auditors General of the military services. The FAEC has sponsored training and forums to disseminate information on new requirements and standards for federal financial statement preparation and audit, computer security controls, auditing nonfinancial information, risks inherent to electronic commerce, and critical infrastructure assurance. In addition, the FAEC has developed a report on "Auditing Information System Security."

The AIGA from NASA OIG serves as both chairman of the FAEC and as a representative of the FAEC to the PCIE Audit Committee. This committee focuses on improving audit quality, coordinating interagency audits and other projects, and enhancing the audit profession within PCIE member organizations. The committee commented on proposed legislation potentially affecting the Inspectors General, analyzed PCIE and GAO financial audit guidance, developed two Single Audit review guides, and is currently reviewing the Federal Government's non-tax delinquent debt.

OIG Proactively Works to Ensure Security and Internal Controls Are Successfully Implemented through IFMP

The Security and Internal Controls Working Group (SICWG) was formed through a memorandum of understanding between the OIG and NASA's CIO to address security and internal control issues that arise regarding the development and implementation of NASA's planned integrated financial management system. The group provides a forum to resolve these issues. PricewaterhouseCoopers, an Independent Verification and Validation agent, supports the group. The SICWG is working with PricewaterhouseCoopers on strategies to evaluate internal controls associated with an implemented system.

OIG Proposes PCIE Initiative on Presidential Decision Directive 63

A representative from the NASA OIG briefed members of the FAEC regarding a proposed "model role" for the Inspector General community in PDD-63 (Protection of the Nation's Critical Infrastructure). He also presented "general audit guidance" that the federal audit community can use when performing PDD-63-related audits. The NASA OIG later submitted a proposal to the President's Council on Integrity and Efficiency (PCIE) Audit Committee (Committee) that would establish a PCIE initiative on critical infrastructure assurance. The proposal received unanimous support from the Committee and will be presented for approval to the full PCIE early in FY 2000. More than 20 agencies are expected to participate in the initiative.

OIG Participates on PCIE Audit Standards Committee Task Force

The OIG participated on a task force PCIE Audit Standards Committee to revise the PCIE audit report and working paper review guides to reflect the Single Audit Act Amendments of 1996 and the revised OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*. The task force issued its final report and working paper review guides in August 1999.

OIG Participates on PCIE Audit Committee Activities

The OIG is participating in the PCIE Audit Committee activity, Single Audit Monitoring, to revise the *Federal Cognizant Agency Audit Organization Guidelines* (Orange Book). The activity will revise the Orange Book to address the changes in the Single Audit Act Amendments of 1996 and create uniformity among federal audit organizations in discharging responsibilities associated with cognizant and oversight agency assignments. The OIG will also participate in a curriculum assessment for the Inspector General Audit Training Institute and identify a training program to ensure consistent implementation of these responsibilities.

COMPUTER CRIMES DIVISION

During the period, the CCD worked with several federal law enforcement and intelligence agencies on organized network infrastructure crimes. The CCD published multiple Network Attack Alerts describing unique attack methodologies and signatures to the NASA IT security community and to other law enforcement communities. CCD and its law enforcement partners at the National infrastructure Protection Center provide a unique insight into hostile trends in the virtual environment of the Internet.

Cooperative, Outreach, and Other Activities

OFFICE OF CRIMINAL INVESTIGATIONS

OIG Participates in Inspector General Criminal Investigator Curriculum Assessment Conference

A representative from the NASA OIG participated in the PCIE conference to review the current and proposed Criminal Investigator Training Program at the Federal Law Enforcement Training Center, Brunswick, GA. The PCIE and Executive Council on Integrity and Efficiency (ECIE) have endorsed the merger of the Inspector General Criminal Investigator Academy and the Treasury Inspector General for Tax Administration Training Academy. The new combined Academy will be tasked to develop a large number of courses to enhance the skills of the entire Inspector General investigative community. The conference reviewed existing courses, set priorities for basic and advanced courses, and developed course curriculums.

OIG Works With DOJ on Health Care Fraud Initiatives

A recent study by GAO identified health care fraud as a lucrative area of financial fraud—an estimated $100 billion dollars annually in costs to the Government. The Attorney General has designated health care fraud a top priority for DOJ prosecutions and has dedicated staff to the prosecution of criminal and civil health care fraud.

Because of the high cost of health care benefits paid by NASA contractors, the presence of contractor operated health care clinics on NASA Centers, and fraud schemes that affect the Federal Employees Health Benefit plans, OCI has sought to work with local DoJ health care fraud task forces. We are also participating on the national level with DoJ National Health Care Fraud task force, which meets quarterly in Washington, DC. We are participating in local health care fraud training programs.

INSPECTIONS, ADMINISTRATIVE INVESTIGATIONS, AND ASSESSMENTS

During this period, an IAIA team developed the *NASA OIG Review (Review)* to highlight and summarize key OIG reports and activities. The *Review* is distributed internally to NASA management and key external organizations such as the Office of Management, General Accounting Office, and congressional staffs, and is also published on the OIG Web page. The first issue of the *Review* was distributed in May 1999.

The Inspections group serves as the principal OIG liaison to the NASA security community, and focuses on security and related safety issues. To keep NASA management apprised, the Inspections staff:

- Continued its practice of updating the security and OIG liaison communities on relevant OIG activities with periodic electronic mail updates.
- Developed and issued our first update to computer crime professionals in the NASA OIG on relevant inspection, audit, and policy review activities.
- Issued a management alert on an unsafe vehicle at a NASA Center.
- Conducted special *Quick Pitch* presentations for Headquarters information technology, logistics, and procurement staffs on problems related to civil servants and contractors not properly clearing electronic information from hard drives.
- Issued an early warning to NASA management concerning security of hazardous materials.

- Began monitoring the Agency's performance in posting electronic warning banners for its computer systems and issued our first advisory to a Center information security contact based on our monitoring activities.

The IAIA staff developed information security materials for presentation at the PCIE Conference in April 1999. Hosted by the NASA Inspector General at NASA's Goddard Space Flight Center, the conference focused on information security. The NASA OIG presentation, *Information Technology Outsourcing - Oversight, Security & Access*, highlighted concerns about oversight, control, access and security of IT in an era of increased outsourcing to contractors.

OTHER ACTIVITIES

AUDITS

OIG Oversight of Audit Services

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

- **Financial Statement Audits**
  The CFO Act of 1990 requires NASA's financial statements to be audited according to generally accepted government auditing standards. The Act also requires reports on NASA's system of internal controls and compliance with laws and regulations. The OIG contracted with Arthur Andersen LLP, an independent public accounting firm to conduct the audit of NASA's FY 1999 financial statements 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.

- **Educational and Non-Profit Organizations Audits**
  Quality Control Reviews The OIG performed quality control reviews of the working papers that support the OMB Circular A-133 audits of University Space Research Associates (IG-99-029 - FY 1998), Ohio Aerospace Institute (IG-99-033 -FY 1998), The Woods Hole Research Center, Inc. (IG-99-039 - FY 1998), and The Institute for Global Environmental Strategies, Inc. (IG-99-050 – FY's 1997 and 1998). The OIG and the DoD OIG performed joint quality control reviews of the California Institute of Technology and the JPL single audit working papers (JPL Report: IG-99-045 – FY's 1997 and 1998).

  Referrals The OIG referred two Certified Public Accountant (CPA) firms and a partner in one of the firms to the Massachusetts State Board of Public Accountancy and the American Institute of CPA's. The actions of the audit firms and the partner meet the PCIE's definition of a referable action under PCIE Position Statement 4, "IG [Inspector General] Quality Control Referral Procedures."

- **Nonappropriated Fund Activities Audits**
  NASA policy requires annual audits of the financial statements of exchanges operated by NASA Headquarters and field Centers. The OIG established a quality control program to ensure the audits comply with applicable standards. We plan to review the exchange audits on a three-year cycle. This program includes (1) desk reviews of audit reports and supporting documentation, (2) periodic quality control reviews of auditor working papers and exchange books and records, and (3) monitoring corrective actions taken in response to selected recommendations resulting from the audits. In FY 1999, we conducted quality control reviews at two centers – Johnson Space Center and Stennis Space Center. In future years we

will coordinate the exchange quality control reviews with the exchange inspections conducted by staff of the Assistant Inspector General for Inspections, Administrative Investigations, and Assessments.

Implementation of Audit Working Paper Software

Implementation of the TeamMate Audit Management Software, an electronic audit working paper software package, continues at all OIG locations. We have modified our audit policy manual to cover use of the software and are developing a best practices guide for the audit staff. We are also upgrading to the latest version of the software, TeamMate 2000. The workpaper templates incorporated into the TeamMate software has helped assure that all auditors comply with government auditing standards, as well as NASA OIG audit policies. In addition, the automated workpapers have facilitated workpaper review by supervisors and the sharing of audit programs and workpapers among auditors who are working the same project from different locations.

LEGAL

Working Group on Unlawful Use of the Internet

The NASA OIG is assisting the Working Group on the Unlawful Use of the Internet, which was established pursuant to Executive Order 13133, dated August 3, 1999. We have provided input to the Working Group on Internet and computer crime issues of interest to the Inspector General community.

U.S. Department of Justice Task Force on Council of Europe

The NASA OIG has provided representation to this DoJ group, which is interested in promoting codes and procedures to assist in enforcing cyber crime laws against those who commit crimes through the Internet across international borders.

NASA Internal Policy on Counter-intelligence

We provided comment and did not concur in a proposed NASA internal policy on counter-intelligence. The policy needs to reflect our role as the focal point for Agency criminal investigative and coordinating responsibility for criminal violations. Also, the OIG needs to be informed where there may be criminal law enforcement aspects to any alleged sabotage or espionage issues that arise within the Agency's programs.

Training

During this semiannual period, we provided legal training to the OIG staff on *Weingarten* rights and on emerging issues as a result of the *McDade* amendment, 28 USC 530B. We also provided legal training to our law enforcement personnel on the Attorney General's guidelines on the use of deadly force and guidance on the proper handling of non-public law enforcement and other sensitive information.

Chapter 5

MULTI-PROGRAM ACTIVITY

Training

In September 1999, OCI and IAIA participated in a training conference in Williamsburg, Virginia. Guest speakers and NASA OIG employees presented a variety of subjects designed to improve the effectiveness of the NASA OIG in the conduct of all investigations. IAIA covered procedures designed to streamline and improve IAIA report writing, file maintenance and report referencing processes, and new procedures to assure that IAIA staff members effectively follow up on the implementation of management corrective actions. IAIA staff also presented training sessions on handling classified material and current NASA acquisition issues.

RECOGNITION OF ACHIEVEMENT

At the Annual PCIE/ECIE award program in September 1999, several members of the OIG were recognized for their efforts during this period. An Award for Excellence was presented to NASA OIG personnel for their role in furthering a computer intrusion training initiative jointly with the Postal Service OIG. Our staff members were also recognized with an Award for Excellence for their achievement in evaluating and improving information security within NASA. Our participation on various task forces was honored with an Award for Excellence for our work related to A-133 audits and investigations impacting government weapon and space hardware programs.

Appendixes

Appendix I

Statistical Highlights

AUDIT ACTIVITIES	
OIG Reports Issued	36

AUDIT IMPACT	
Recommended Better Use of Funds	$43.9 million
Questioned Costs	$ 9.2 million
TOTAL Audit Dollar Impact	$53.1 million

OMB Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, requires federal agencies to conduct audits of non-federal entities expending federal awards. The following table summarizes the results of A-133 audit reports for organizations under the cognizance/oversight of NASA for the financial reporting period ending June 30, 1998.

STATUS OF OMB CIRCULAR A-133 FINDINGS AND QUESTIONED COSTS RELATED TO NASA AWARDS[1]	
Total Audits Reviewed	15
Audit Findings	0
Audits Resolved Within 6 Months	11
Audits Unresolved Over 6 Months Old	0

INVESTIGATIONS ACTIVITIES	
Cases Opened	104
Cases Closed	74
Cases Pending	312
Hotline Complaints Received	36
Referred to Audits or Investigations	8
Referred to Inspections	12
Referred to NASA Management	1
Referred to Other Agencies	1

[1] Data prepared by NASA Office of Procurement.

Appendix I

INVESTIGATIONS IMPACT[2]	
Indictments/Informations	22
Convictions/Pleas Bargains/Pretrial Diversions	15
Cases Referred for Prosecution	23
Cases Declined	6
Cases Referred to NASA Management for Action	9
Cases Referred to Other Agencies for Action	8
Suspensions/Debarments	
Individuals	4
Firms	7
Administrative Actions	
NASA Employees	2
Contractor Employees	9
Recoveries[3]	$33,891,167
TOTAL Investigations Dollar Impact	$33,891,167

ADMINISTRATIVE INVESTIGATIONS ACTIVITIES	
Cases Opened	87
Cases Closed	62
Cases Pending	152
Referred to Management	14
Closed	9
Pending	5
Referred to Investigations	2

INSPECTIONS/ASSESSMENTS ACTIVITIES	
Activities Opened	11
Activities Closed	5
Activities Pending	14
Management Referral Letters/Alerts	1

[2] Includes results from joint investigations.
[3] No amount reportable for Funds Put to Better Use.

Audit Reports Issued by the OIG

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

For this period, a total of 36 reports identified $9.2 million in questioned costs, and $43.9 million in recommendations that funds be put to better use.

AUDIT REPORTS ISSUED BY NASA OIG

Report	Report Title & Monetary Amount
IG-99-021	Obligations and Adjustments – Recording Obligations and Adjustments
IG-99-025	Exemptions for Fiscal Year 2000 Testing, Johnson Space Center
IG-99-026	Implementation of NASA's Integrated Financial Management Project
IG-99-027	Department of Health and Human Services Billings for Audit Services
IG-99-028	Management of NASA-Held Equipment
IG-99-029	Quality Control Review of Ernst &Young LLP Audit of Universities Space Research Association for Fiscal Year Ended June 30, 1998
IG-99-030	Advanced Air Transportation Technologies Project
IG-99-031	NASA's Non-Tax Delinquent Debt
IG-99-032	Ames Research Center's NAS Facilities Disaster Recovery Plan
IG-99-033	Quality Control Review of Ernst &Young LLP Audit of Ohio Aerospace Institute for Fiscal Year Ended June 30, 1998
IG-99-034	NASA's Year 2000 Program – Renovation and Validation Phases
IG-99-035	Year 2000 Date Conversion Assessment Phase
IG-99-036	X-38/Crew Return Vehicle Operational Testing
IG-99-037	Earned Value Management at NASA – ECS Performance Measurement Baseline
IG-99-038	Performance Evaluation Plan for the Earth Observing System Data and Information System Core System Contract

(Continued)

AUDIT REPORTS ISSUED BY NASA OIG (continuation)

Report	Report Title & Monetary Amount
IG-99-039	Quality Control Review Thomas Havey LLP Audit of the Woods Hole Research Center, Inc., for Fiscal Year Ended June 30, 1998
IG-99-040	Selected Internal Controls Related to Financial Statement Audits
IG-99-041	Quality Control Review of Sheryl C. Staley, P.C., Audit of National Aeronautics and Space Administration Johnson Space Center Exchange Financial Statements for Fiscal Year Ended September 30, 1998
IG-99-042	Allied-Signal Subcontract Management
IG-99-043	Disaster Recovery Planning at Marshall Space Flight Center's Automated Data Processing Consolidation Center
IG-99-044	Year 2000 Program – Implementation Phase
IG-99-045	Quality Control Review of Pricewaterhouse Coopers LLP and Defense Contract Audit Agency Audit of the Jet Propulsion Laboratory at the California Institute of Technology for the Fiscal Year Ended September 21, 1997
IG-99-046	Costs Incurred for a Barbecue Sponsored by The Boeing Company
IG-99-047	Safety Considerations at Goddard Space Flight Center
IG-99-048	Year 2000 Program Oversight of NASA Grants and Cooperative Agreements
IG-99-049	Fire Sprinklers at the Mission Control Center
IG-99-050	Quality Control Review of Sheridan & Company Audit of the Institute for Global Environmental Strategies, Inc., for Fiscal Years Ended June 30, 1997, and June 30, 1998
IG-99-051	Environmental Aspects of the External Tank Contract NAS8-36200
IG-99-052	X-33 Cost Estimating Processes
IG-99-053	Contractor Leased Facilities at Marshall Space Flight Center (*$9,217,000)
IG-99-054	JPL Management of Subcontractor Technical Performance

(Continued)

Audit Reports Issued by the OIG

AUDIT REPORTS ISSUED BY NASA OIG (Continuation)

Report	Report Title & Monetary Amount
IG-99-055	NASA Implementation of the Government Performance and Results Act
IG-99-056	NASA Noncompetitive Procurements
IG-99-057	A-76 Study of NASA-3 Aircraft (**$43,900,000)
IG-99-058	Earned Value Management at NASA
IG-99-059	Matching Disbursements to Obligations

DCAA Audits of NASA Contractors

The DCAA provides various audit services to NASA on a reimbursable basis. The audits performed include: proposal evaluations that are used to negotiate a contract price; incurred cost reviews 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.

A. AUDIT REPORTS ISSUED

During the period, DCAA issued 989 audit reports (excluding pre-award contractor proposal evaluations) on contractors who do business with NASA. The types of audits performed and the results of these audits are shown in DCAA-provided figures shown here. (Dollar figures are in thousands)

DCAA also issued 135 reports on audits of NASA contractor proposals totaling $879 million, which identified cost exceptions totaling about $17.4 million. These figures include proposals from several contractors bidding on the same contract; therefore, the total amount of exceptions is larger than the amount of potential savings to NASA.

TYPES OF DCAA AUDITS CONDUCTED ON NASA CONTRACTORS

Type of Audit	Number of Audit Reports	Total Costs Questioned	Total Costs Avoided	Total
Incurred Costs	800	$52,123	$7,552	$59,675
Defective Pricing	17	$ 648	$ 0	$ 648
Cost Accounting Standards	169	$ 2,327	$ 0	$ 2,327
Other Direct Effort	3	$ 0	$ 0	$ 0
Totals	989	$55,098	$7,552	$62,650

DCAA Audits of NASA Contractors

B. Significant Contract Audits

INCURRED COST/ $11.1 MILLION
DCAA ASSIGNMENT NOS.: 1201-95N10250112 & 1201-96N10250126

An audit of a contractor's multi-years incurred cost submission resulted in $11.1 million in savings to the Government. Claimed amounts related to effort provided to NASA, Marshall Space Flight Center, for building and maintaining the Center's communications systems and related support services under two contracts. The majority of the savings relate to direct material and equipment costs, associated with the fixed-price portion of the contracts, and non-contract costs improperly claimed on the cost-plus portions of the contracts. The audit also disclosed overstated direct labor costs, unreasonable personal business leave costs, and general and administrative (G&A) expenses in excess of the contracts ceilings. The auditor was involved in extensive fact finding and negotiations. All of the questioned costs were sustained.

FORWARD PRICING PROPOSAL/$559,000
DCAA CASE NO.: 1201-98L21000073

An audit of a $36.4 million cost-plus-incentive-fee proposal resulted in $559,000 in savings for NASA. The engineering change order proposal was for effort provided to the Johnson Space Center relating to the transfer of the payload software integration and verification tasks. The audit questioned costs of $2.3 million. Questioned costs resulted primarily from the auditor's use of more current quotes, decrement factors based on purchase cost history, and lower more current forecasted overhead rates.

FORWARD PRICING/ $1.18 MILLION
DCAA ASSIGNMENT NO.: 3121-95C21000052

An audit of a $7.75 million firm-fixed-price proposal resulted in savings of $1.18 million for NASA. The proposal was for a 5-year period for the operations and maintenance of the administrative telephone system at the Kennedy Space Center. The auditor questioned a total of $1.43 million in costs including direct labor costs that were not required, duplicated fringe benefits costs, and indirect costs applicable to the questioned direct costs. NASA negotiated a reduction of $1.73 million of which $1.18 million was the result of DCAA questioned costs.

FORWARD PRICING/$70,000
DCAA ASSIGNMENT NO.: 3231-96S21000005

The audit and subsequent negotiation of a cost-plus-award-fee change order proposal resulted in a reduction of costs of $1.9 million from the proposed cost of $9.9 million to the negotiated amount of $8 million. The auditor questioned approximately $1 million due to overstated material estimates and the differences between proposed and audit adjusted indirect rates. The auditor's detailed analysis of proposed material costs resulted in questioned cost of $740,000 due to overstated escalation factors and the application of audit computed material decrement factors to proposed subcontract costs. During negotiations, the contractor provided the results of updated vendor settlements, which confirmed and, in some cases, actually exceeded the amount questioned in the audit, which reduced the fee to NASA by $70,000.

DCAA Audits of NASA Contractors

INCURRED COST/$1.1 MILLION
DCAA ASSIGNMENT NO.: 4231-96P10150002

An audit of a contractor's multi year incurred cost submission resulted in $2.4 million in savings to the Government, of which, $1.1 million was saved on NASA contracts. Major audit exceptions included (1) duplicated incentive compensation amounts; (2) costs allocable to other division locations; (3) indirect marketing and consulting costs allocable only to a commercial cost center; (4) unsupported and overstated transfers of direct labor on fixed-price contracts to indirect overhead accounts; (5) FAR Part 31 unallowable patent costs, cafeteria losses, and stock bonuses; and (6) facility improvements that should have been capitalized and depreciated over future periods. The auditors worked closely with the contracting officer and the contractor to resolve outstanding issues. The contractor ultimately agreed to most issues, and the Government sustained over 80 percent of the audit exceptions.

FORWARD PRICING/ $1.3 MILLION
DCAA ASSIGNMENT NO.: 4701-95A10501003

An operations audit recommended that a contractor vacate one of its off site buildings and relocate the employees into the unused capacity on the main campus. In response to findings in the audit report and in coordination with the NASA Contracting Officer, the contractor placed one of the off campus buildings on the real estate market. The building was sold and the employees were relocated to the main campus as recommended. This resulted in cost avoidance of $1.8 million to the Government. NASA's portion of the cost avoidance was $1.3 million.

FORWARD PRICING/$35,000
DCAA ASSIGNMENT NO.: 6311-97P21000035

The audit of a $6.4 million cost-plus-fee price subcontract proposal resulted in $547,000 of costs questioned sustained during negotiations. The subcontract provides consolidated network and mission operations support (CNMOS) services at the NASA Wallops Island facility. The cost questioned consisted primarily of direct labor cost due to the difference between the subcontractor's proposed productive yield of 2,008 hours and the auditor's recommended yield of 1,800 hours. The contractor included vacation and sick leave hours in the total available hours (2,088) to arrive at their productive yield, which the audit considered inappropriate. Costs of overhead and G&A expenses applicable to the direct labor cost questioned were also questioned. The NASA negotiator sustained all of the costs questioned, which reduced the fee to NASA by $35,000.

FORWARD PRICING/$134,000
DCAA ASSIGNMENT NO.: 6141-97M21000005

The audit of a $502 million cost-plus-award-fee proposal for consolidated CNMOS services resulted in $1.9 million of costs questioned sustained during negotiations. The audit found contractor mathematical errors in determining the proposed direct labor costs and unnecessary proposed travel and subsistence. The contractor agreed to the labor, travel and subsistence issues raised by the audit, which reduced the fee to NASA by $134,000.

DCAA Audits of NASA Contractors

C. NASA ACTIONS

Corrective actions taken on DCAA audit report recommendations usually result from negotiations between the contractor and the government contracting officer. The following tables show the number of DCAA audit reports and amounts of questioned costs and funds put to better use for the period April 1, 1999, through September 30, 1999. During this period, NASA management resolved 281 reports with $61.9 million of questioned costs, and 74 reports with $42.9 million of funds put to better use. NASA management sustained 59 percent of DCAA's questioned costs and 54 percent of the funds put to better use. (Dollar figures are in thousands.)

DCAA AUDITS WITH QUESTIONED COSTS[1]

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made by beginning of period	561	$190,695
Issued during period	182	$ 66,651
Needing management decision during period	743	$257,346
Management decision made during period:	281	$ 61,924
Amounts agreed to by management		$ 33,392
Amounts not agreed to by management		$ 28,532
No management decision was made by end of period:	462	$195,422
No management decision prior to period and still unresolved at end of period	360	$133,743
Reports issued during reporting period and unresolved at end of period	102	$ 61,679

[1] Represents Fiscal Year 1999 year-end amounts.

DCAA Audits of NASA Contractors

DCAA AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE[2]

Category	Number of Audit Reports	Total Questioned Costs
No management decision was made at beginning of period	151	$433,831
Issued during period	79	$ 60,824
Needing management decision during period	230	$494,655
Management decision made during period:	74	$ 42,866
Amounts agreed to by management		$ 25,079
Amounts not agreed to by management		$ 17,787
No management decision was made by end of period:	156	$451,789
No management decision prior to period and still unresolved at end of period	79	$392,253
Reports issued during reporting period and unresolved at end of period	77	$ 59,536

[2] Represents Fiscal Year 1999 year-end amounts.

Top Ten Management Challenges

SAFETY AND MISSION ASSURANCE

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

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

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

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

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

Based on tests in which some of NASA's mission-critical systems were successfully penetrated, the GAO recommended that NASA implement an effective Agencywide security program to include improvements in five categories. Those categories include: assessing risks and evaluating needs, implementing policies and controls, monitoring compliance with policy and effectiveness

of controls, providing computer security training, and coordinating responses to security incidents.

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

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

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

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

PROCUREMENT

Procurement continues to be a significant support process for all of NASA's enterprises and its overall mission. NASA's procurement obligations accounted for over 87 percent of the Agency's total obligations in FY 1998, just as they have for the last 5 years. NASA procures over $12.5 billion in goods and services annually. In January 1999, the GAO identified NASA contract management as a major management challenge and program risk. The GAO stated, in part, that NASA lacks adequate systems and processes to oversee procurement activities and to produce accurate and reliable management information in a timely manner. NASA's procurement workload, combined with the significant reductions in procurement personnel, continues to challenge the remaining staff's ability to adequately administer contracts and implement new procurement initiatives.

As NASA places more reliance on contractors to administer programs, we continue to find problems in a variety of areas, such as leasing, noncompetitive procurements, subcontract management, and use of contractors for on-site support. NASA also faces risks as the Agency moves toward the greater use of electronic commerce. During FY 1998, NASA made over 113,600 purchases, totaling $66 million, with credit cards. In addition, NASA faces many challenges as it outsources various functions, particularly IT functions. While strategic processes and core oversight activities must remain in-house, other functions can be outsourced. Activities that may be outsourced include expert IT advice, specific applications, education, maintenance,

aspects of software/physical security, and disaster recovery. Advantages of outsourcing include potentially lower costs and faster access to new technology. Outsourcing brings with it considerable risks unless the Agency carefully provides for establishing internal controls.

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

INTERNATIONAL SPACE STATION

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

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

Our recent report on *Space Station Contingency Planning for International Partners* disclosed that the plan did not contain cost and schedule impacts and did not clearly identify mitigation measures and primary consequences of the contingencies. Further, the Program Office did not have a process that ensured the contingency plan was kept current, did not include some actions being taken to prevent further Russian delays, and did not address the Y2K date conversion problem. Until the Program contingency plan is complete, NASA cannot fully reduce ISS risks.

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

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

INFORMATION TECHNOLOGY

Last year we recommended that NASA report the IT area as a material weakness. We continue to believe that IT should be reported as a material weakness due to concerns with security, outsourcing, and the Y2K date conversion.

Top Ten Management Challenges

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

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

The number and severity of IT incidents has increased dramatically. While NASA has taken many positive steps to enhance computer security and its response to IT attacks, the Agency needs to take additional actions to fully address increasing threats, including delineation of NASIRC roles and responsibilities. As noted in our concern for safety and mission assurance, many of NASA's launch vehicles that require an FTS utilize a non-secure system. The non-secure FTS does not provide adequate safeguards to prevent unauthorized command and inadvertent activation, and does not comply with national policy.

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

Year 2000 Date Conversion: The OMB and GAO have identified the importance of and risks associated with the Y2K problem, both in terms of complexity and time constraints. Congress requires OMB to report to them on a quarterly basis the status of Y2K efforts for government systems. The OMB monitors the progress of work at federal agencies through stringent quarterly reporting requirements. NASA reported to OMB that as of August 15, 1999, virtually all mission-critical systems and most non-mission critical systems have been addressed.

NASA guidelines for renovation and validation are generally consistent with GAO guidance for addressing Y2K date conversion problems. However, NASA's efforts to prepare contingency plans for continuing Agency operations in the event critical systems fail due to Y2K problems need to be improved. Also, the Agency's Y2K program oversight of its grants and cooperative agreements, specifically the requirement for major recipients to report on whether their computer systems are Y2K compliant and NASA's establishing timeframes for reporting problems need improvement. As a result, NASA could receive research data that is adversely affected by Y2K problems.

Top Ten Management Challenges

FISCAL MANAGEMENT

NASA is experiencing difficulty in implementing the IFMP, which may now be delayed until the year 2001. The IFMP is a NASA-wide, fully integrated, transaction-driven financial management system intended to provide full-cost accounting and other budget information. The delay in implementing the new system will result in continued reliance on outdated systems that do not efficiently and effectively provide the financial and management information that the Agency needs. Also, NASA will not be able to effectively implement full cost management as planned, and will instead incur substantial costs to maintain legacy systems that the new system would replace.

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

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

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

PROGRAM AND PROJECT MANAGEMENT

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

Since NASA has an increased reliance on contractor support in monitoring contracts, we believe NPG 7120.5A should be revised to emphasize contractor performance monitoring and technology

transfer and include specific requirements related to technical monitoring, communications, and contractor performance. Based on our FY 1998 review of new technology reporting, NPG 7120.5A should be revised to incorporate the requirements and responsibilities of program and project managers regarding new technology reporting.

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

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

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

LAUNCH VEHICLES

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

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

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

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

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

RESEARCH AND TECHNOLOGY DEMONSTRATION/APPLICATION

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

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

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

INTERNATIONAL AGREEMENTS

Since its inception, NASA has entered into approximately 3,500 international agreements. These agreements span every NASA Enterprise and involve numerous programs and projects with the most notable being the ISS Program. NASA's international agreements also often provide for

foreign nationals and representatives to have access to NASA facilities and information. NASA's Office of External Relations is responsible for determining the appropriateness and level of access. Inherent in a decision to grant foreign personnel access is the risk of sabotage or disclosure of information of military or economic importance.

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

NASA NPG 1371.2, *Procedures and Guidelines for Processing Requests for Access to NASA by Foreign Nationals or Representatives* provides standard procedures for timely and accurate processing of various types of foreign visits and other access requests. While helping NASA fulfill its responsibilities for facilitating visits that support U.S. national and international program interests, it also provides guidance in screening visit requests to determine whether they conform with Agency and national policies. However, NASA personnel designated as sponsors of foreign national visitors should ensure that all applicable procedures are followed, especially those procedures related to access approval and to escorts and badging.

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

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

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

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

ENVIRONMENTAL MANAGEMENT

NASA management has been slow in negotiating cost sharing and cost recovery agreements for the JPL and Santa Susana Field. In reports issued in FY's 1997 and 1998, we recommended that NASA pursue these negotiations. While negotiations have begun for JPL, they have progressed slowly. Negotiations have not begun for the Santa Susana. According to management, NASA has only limited legal grounds to require other government agencies to negotiate cost sharing agreements for Resource Conservation and Recovery Act (RCRA) sites. Management also stated that a recent DCAA finding would allow the contractors to charge the environmental cleanup costs through their G&A expense to NASA. We disagree with management's assessment.

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

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

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

Directives Reviewed by the OIG

HQPG 1590.1A	HQ Operations Services Guide
NHB 1101.3	Ames Organizational Change
NHB 1101.3	Code M Organizational Chart Change
NHB 1101.3	GSFC Organizational Chart Change
NHB 1101.3	Code M Roles and Mission Statement and Organizational Chart
NPD 1200.1A	Management Assessment and Audit Process
NPD 1210	Acceptance and Use of Gifts and Donations by NASA
NPD 1400.1F*	NASA Directives Systems
NPD 3713.2G	Federal Equal Opportunity Programs of NASA
NPD 3713.2G	Delegation of Authority - To Act in Matters Pertaining to Discrimination Complaints Processing Under 29 CFR Part 1614
NPD 7120.4B	Program/Project Management
NPD 8870	NASA Policy for Disposition for the Flight and Disposal in Space of Human or Animal Remains
NPD 8900	Astronaut Medical and Dental Observation Study and Care Program
NPD 9501.3	Earned Value Management
NPG 1000.2	Earned Value Management
NPG 1400.1	NASA Directives Systems Procedures and Guidelines
NPG 1620	Security Procedures and Guidelines
NPG 1620	Security of Information Technology
NPG 8715.1*	NASA Safety & Health Handbook (Occupational Safety & Health Programs)
Proposed 14 CFR Part 1267	Meritorious Claims

*Indicates those regulations with which the Inspector General has significant, unresolved disagreement with Agency management.

Appendix VI
Government Performance and Results Act Review Plan

I. Introduction

The GPRA, 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.[1] GPRA 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 GPRA and, therefore, has requested federal agency Inspectors General to develop and implement, in consultation with appropriate congressional committees and their agency heads, a GPRA review plan.[2]

The NASA OIG is committed to assisting Agency management in promoting the economy, efficiency, and effectiveness of its programs and operations. In keeping with our commitment, this GPRA review plan establishes the strategies and methods the OIG will use to review the Agency's implementation of the GPRA.

II. GPRA REVIEW PLAN REQUIREMENTS

The OIG GPRA 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 GPRA.[3]

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

[1] NASA initiated key Agencywide initiatives and a Presidential Decision Directive that will foster efficient and effective operations. They are detailed in Appendix 1 of this plan.
[2] Congressional request made by the Honorable Richard Armey, Daniel Burton, Stephen Horn, and Peter Sessions.
[3] NASA's processes to assess program performance are listed in Appendix 2 of this plan.

Appendix VI
Government Performance and Results Act Review Plan

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

1. Are at high risk of waste, fraud, or mismanagement.

2. As determined by the Inspector General, require a review to assess the adequacy of Agency controls for ensuring that the underlying performance data are accurate and reliable.

We submitted our GPRA Review Plan in the semiannual report for the period ending March 31, 1999. We will update the plan and report accomplishments annually as of March 31. In this semiannual report, we are reporting our interim accomplishments as of September 30, 1999, and will report interim accomplishments annually, thereafter.

III. GPRA REVIEW PLAN STRATEGY, GOALS, METHODOLOGY, AND INTERIM 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 Interim Accomplishments

The following table details the activities, methodology, and interim accomplishments in conducting our GPRA Review.

ACTIVITIES, METHODOLOGY, AND INTERIM ACCOMPLISHMENTS

ACTIVITY	METHODOLOGY	INTERIM ACCOMPLISHMENTS
Include NASA's GPRA requirements in the OIG's annual work planning process	Assure that the OIG annual planning process is linked to the Agency's strategic plan and current annual performance plan giving emphasis to the ten most serious Agency management challenges identified annually by the OIG.	The OIG considers the Agency's strategic plan and annual performance plan in planning new assignments and in setting objectives for each review. For FY 2000, the OIG has organized the annual plan by the Agency's top 10 management challenges, which will ensure coverage of each area.
Incorporate the review of the Agency's performance measures into work assignments	NASA's performance measures will be evaluated internally by management and externally by organizations such as the NASA Advisory Council and the National Academy of Sciences. Where appropriate, the OIG will include in the scope of work for audits and reviews requirements to assess those performance measures and goals relating to the particular Agency program, project, or crosscutting process emphasizing those performance measures associated with activities identified as high risk, (e.g., safety, technology development, and security).	We consider the need for coverage of performance measures in each audit and have reviewed performance measures in selected assignments. For example, we reviewed performance measures for CRSPO. We reported that the Program Office had not formalized its project-level performance measures for each commercial initiative. Also, in an on-going assignment we are reviewing the strategic plans and metrics for the X-34 Program. We will issue a report on both on this assignment in FY 2000. We will continue to evaluate performance measures in other assignments.
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.	We reviewed NASA's verification and validation of selected data sources, information collection and accounting systems that support the Agency's strategic and performance plans and performance reports. We recommended that the NASA verify and validate data and supporting information before they are used by Agency managers to assess progress and before the data are included in the annual Performance Report. Management concurred and has initiated corrective actions. We also conducted an evaluation of the NASIRC and made 11 recommendations to improve the Agency's response capability. NASA management concurred with the recommendations.

(Continued)

ACTIVITIES, METHODOLOGY, AND INTERIM ACCOMPLISHMENTS (continuation)

ACTIVITY	METHODOLOGY	INTERIM ACCOMPLISHMENTS
Use the OIG Issue Area Coordination Process to coordinate OIG research on Agency management priorities and develop and prioritize OIG work coverage applicable to specific work areas	OIG Issue Area Coordinators will review the Agency's planning and performance measures within their assigned areas, which include procurement, financial management, program/project management, safety, security programs, information technology, infrastructure, science and engineering, and international and interagency agreements.	We conducted special outreach initiatives with NASA management in the areas of security, procurement, and information technology. In the financial management area, we jointly worked with NASA management on the SICWG to ensure that proper controls will be established in the Agency's Integrated Financial Management Information System.
Coordinate OIG review of performance measures with independent public accountant 's review of performance measures associated with the Agency financial statement audit	We will cover selected performance measures not reviewed by the independent public accountant in its financial statement audit of the Agency. The scope of work for the Agency's financial statement audit includes the independent public accountant's verification and validation of performance measures included in the NASA Accountability Report. We will coordinate our review with the independent public accountant to avoid duplication of effort.	We reviewed NASA's efforts to develop and use performance measures for determining progress toward achieving the performance goals and program outcomes in the Agency's performance plans and reports. We recommended that NASA perform interim progress tracking and take corrective action in areas not achieving satisfactory progress. Management concurred with the recommendations.
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 GPRA is being applied effectively at program levels.	OIG Aerospace Technologists assisted in the development of the OIG's Technology Oversight Project, examined the Triana mission's science efforts, and provided technical insight and advice to auditors, inspectors, and criminal investigators. We also reviewed NASA's control of Export-Controlled Technologies and made recommendations for improving the identification, classification, and cataloging of these technologies. Management concurred with our recommendation. In addition, we have an on-going review of Contractor Control of Sensitive Technologies.

(Continued)

ACTIVITIES, METHODOLOGY, AND INTERIM ACCOMPLISHMENTS (continuation)

ACTIVITY	METHODOLOGY	INTERIM ACCOMPLISHMENTS
Monitor the IFMP and Full Cost Accounting	We will continue our coverage of these processes through various reviews and through participating with Agency management in the process-related working groups.	Our report on Full-Cost Implementation recommended that NASA develop and use a methodology for distributing the costs of the Space Shuttle Program, as well as service-oriented programs, to programs that benefit from the services. Management disagreed with the recommendations, and we are pursing resolution. We also reported on NASA's implementation of the IFMP. We recommended that NASA take steps to protect its interest and receive adequate consideration due to the contractor's nonperformance. Management agreed and has initiated corrective actions.
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.	During FY 2000, the OIG will have an observer on the NASA Headquarters Quality Council, which monitors implementation of ISO 9001. As appropriate, we will include an evaluation of ISO 9001 in specific assignments.
Monitor activities related to PDD-63, which mandates the strengthening of the nation's defenses against emerging, unconventional threats to the United States	The OIG will participate as an active member of the CIPT to help the Agency to develop an effective CIPP. We will also conduct subsequent reviews to determine whether NASA has implemented the critical steps it identifies as key to protecting its infrastructure.	The OIG provided a representative to the NASA's CIPT and participated in the development of the Agency's plan. The OIG reviewed and comments on the Plan and related Agency policies and guidelines. In addition, the NASA OIG briefed members of the FAEC on a proposed "model role" for the IG community. We also submitted a proposal to the PCIE that would establish an initiative on critical infrastructure assurance. The proposal was well supported.

Appendix VI
Government Performance and Results Act Review Plan

APPENDIX 1
AGENCYWIDE INITIATIVES AND PRESIDENTAL DECISION DIRECTIVE 63

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

1. ***Integrated Financial Management Project.*** The Agency initiated IFMP with an objective to implement common Agencywide solutions for many business and administrative processes. The IFMP initiative is designed to eliminate non-integrated systems and Center-unique procedures.

2. ***Full Cost Accounting.*** The Agency implemented the full cost initiative in response to the CFO Act of 1990, the National Performance Review, GPRA, and the Federal Financial Management Improvement Act. Full Cost Accounting ties all Agency costs to major activities and budgets by managing all activities from a full cost perspective.

3. ***ISO 9001 Certification.*** The NASA Administrator requested that all Agency installations obtain ISO 9001 certification by September 1999. ISO 9000 is a series of standards and guidelines that define minimum requirements for a quality system to be accepted internationally. ISO 9001 comprises the most detailed certification and contains the most comprehensive set of standard requirements for quality programs established under ISO guidelines.

4. ***Presidential Decision Directive on Critical Infrastructure Protection.*** To ensure mission success, NASA must safeguard its ability to perform in an increasingly hostile electronic environment. The Agency has a continuing dialogue with the OIG for assuring the security of its proprietary information contained in its electronic and computer-based systems. On May 22, 1998, the President issued PDD-63, which mandated the strengthening of the nation's defenses against emerging, unconventional threats to the United States. As a result of PDD-63, the Agency established the CIPT. The OIG participates on the CIPT.

APPENDIX 2
AGENCY PERFORMANCE ASSESSMENT PROCESS

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

The following documents assess Agency performance at all levels.

1. ***NASA Strategic Plan.*** The Strategic Plan articulates the Agency's vision, mission, goals and objectives, as well as Agencywide strategies for achieving them.

2. ***Enterprise Strategic Plan.*** The Enterprise Strategic Plans are an extension of the Agency's Strategic Plan and provide a more detailed description of each Enterprise's goals, objectives, and implementing strategies.

3. ***NASA Performance Plan.*** The Performance Plan outlines selected measurements to evaluate progress the Agency intends to make toward the achievement of its strategic goals.

4. ***Functional Performance Plan.*** The Functional Performance Plans contain the performance goals and measures for Agency functional offices.

5. ***Center Director's Performance Plan.*** The Center Director's Performance Plan contains performance goals and measures for each NASA Center.

6. ***NASA Accountability Report.*** The NASA Accountability Report summarizes the Agency's program accomplishments and stewardship over budget and financial resources. This report includes assessments of performance measures and the Agency's financial statements.

[1] 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.

Glossary and Acronyms

Glossary

DISALLOWED COST	A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the Government.
EXCEPTIONS SUSTAINED	(DCAA Definition) Costs 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. 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 RECOVERIES	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.

Appendix VII

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.

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

Glossary and Acronyms

Acronyms

AACB	Aeronautics and Astronautics Coordinating Board
AIGA	Assistant Inspector General for Auditing
AIGI	Assistant Inspector General for Investigations
AIGIAIA	Assistant Inspector General for Inspections, Administrative Investigations, and Assessments
ASAP	Aerospace Safety Advisory Panel
ASI	Agency Safety Initiative ASI
AUSA	Assistant United States Attorney
BCCP	Business Continuity and Contingency Plan
CCD	Computer Crimes Division
CFO	Chief Financial Officer
CIO	Chief Information Officer
CIPP	Critical Infrastructure Protection Plan
CIPPS	Computer Crimes and Intellectual Property Section
CIPT	Critical Infrastructure Protection Team
CNMOS	Consolidated Network and Mission Operations Support
COMSEC	Communications Security
COTS	Commercial-off-the-Shelf
CPA	Certified Public Accountant
CRSPO	Commercial Remote Sensing Program Office
CRV	Crew Return Vehicle
CSLA	Commercial Space Launch Act
DCAA	Defense Contract Audit Agency
DCIS	Defense Criminal Investigative Service
DCMC	Defense Contract Management Command
DoD	Department of Defense
DoJ	Department of Justice
ECIE	Executive Council on Integrity and Efficiency
ECS	Earth Observing System Data and Information System Core System
ELV	Expendable Launch Vehicle
EVM	Earned Value Management
EVMS	Earned Value Management System
FAA	Federal Aviation Administration
FAEC	Federal Audit Executive Council
FAR	Federal Acquisition Regulation
FBI	Federal Bureau of Investigation
FEID	Flight Equipment Interface Devices
FLRA	Federal Labor Relations Authority
FOIA	Freedom of Information Act
FTS	Flight Termination Systems
FY	Fiscal Year
GAO	Government Accounting Office
G&A	General and Administrative
GPRA	Government Performance and Results Act

Acronyms

GSA	General Services Administration
IFMP	Integrated Financial Management Project
IPA	Interagency Personnel Agreements
ISS	International Space Station
IT	Information Technology
ITS	IT Security
JPL	Jet Propulsion Laboratory
KPMG	KPMG Peat Marwick
NACC	NASA Automated Data Processing Consolidation Center
NAS	Numerical Aerospace Simulation
NASIRC	NASA's Automated Systems Incident Response Capability
NEPA	National Environmental Policy Act
NFS	NASA Federal Acquisition Regulation Supplement
NMI	NASA Management Instruction
NPD	NASA Policy Directive
NPG	NASA Procedures and Guidelines
NPOESS	National Polar-Orbiting Environmental Satellite System
NTTC	National Technology Transfer Center
OIG	Office of Inspector General
OMB	Office of Management and Budget
OMPS	Ozone Mapper Profiler Suite
PCIE	President's Council on Integrity and Efficiency
PDD	Presidential Decision Directive
P.L.	Public Law
POES	Polar-Orbiting Environmental Satellite
RCRA	Resource Conservation and Recovery Act
RLV	Reusable Launch Vehicle
RMD	Resources Management Division
SICWG	Security and Internal Controls Working Group
SPF	Software Production Facility
SPI	Single Process Initiative
U.S.	United States
U.S.C.	United States Code
Y2K	Year 2000

INSPECTOR GENERAL ACT CITATION	REQUIREMENT	PAGE(S)
Section 4(a)(2)	Review of Legislation and Regulations	47-50 and Appendix V
Section 5(a)(1)	Significant Problems, Abuses, and Deficiencies	9-16 35-36
Section 5(a)(2)	Recommendations for Corrective Actions	9-16 35-36
Section 5(a)(3)	Prior Recommendations Not Yet Implemented	23-33
Section 5(a)(4)	Matters Referred to Prosecutive Authorities	Appendix I
Section 5(a)(5) and Section 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	9-16
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Section 5(a)(9)	Table—Funds to be Put to Better Use	18
Section 5(a)(10)	Summary of Prior, Unresolved Audit Reports	19-21
Section 5(a)(11)	Significant Revised Management Decisions	17
Section 5(a)(12)	Significant Management Decisions with Which the Inspector General Disagreed	48-49

DEBT COLLECTION

The Senate Report accompanying the supplemental Appropriations and Rescissions Act of 1980 (P.L. 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, 1998, the receivables due from the public totaled $5,577,000, of which $2,134,000 is delinquent. The amount written off as uncollectible for the period October 1, 1997, through September 30, 1998, was $41,000.