NASA OFFICE OF Inspector General

SEMIANNUAL REPORT

April 1, 2011–September 30, 2011

FROM THE INSPECTOR GENERAL

With the safe return of Atlantis in July 2011, NASA ended more than 30 years of flights to low Earth orbit on the Space Shuttle Orbiters. Several months earlier, the NASA Administrator had announced the locations where the three retired Orbiters and the full-scale test vehicle would be permanently displayed. The Administrator's announcement, while greeted with excitement at the chosen locations, was not well received by some members of Congress who represent geographic regions that did not receive an Orbiter. In light of concerns that NASA failed to follow the law and instead allowed politics to dictate the result, the Office of Inspector General (OIG) examined the Agency's process for selecting the Orbiters' display locations. A summary of our findings in this matter begins on page 3 of this report.

This type of review – part audit, part investigation – draws upon the multi-disciplinary skills of the OIG workforce and is an example of the independence and objectivity we bring to all of our oversight work. Other examples of work we completed during this period include audits of NASA's challenges in acquiring commercial crew transportation services, its management of the $2.5 billion Mars Science Laboratory Project, and maintenance of its aging real property holdings. In addition, our Office of Investigations completed a wide variety of criminal and administrative cases involving fraud, theft, counterfeit parts, ethics violations, and computer intrusions that affected NASA operations.

Near the end of this reporting period NASA announced the framework for its much-anticipated Space Launch System (SLS) that is intended to take NASA astronauts to an asteroid, the Moon, or Mars during the next decade. Previously, NASA had announced that the Orion capsule – now known as the multi-purpose crew vehicle (MPCV) – would serve as the primary crew vehicle for future missions beyond low Earth orbit. In the months ahead, the OIG will continue to provide the Agency, Congress, and the public with aggressive oversight of these and other important NASA missions.

This Semiannual Report summarizes the OIG's accomplishments from April 1 to September 30, 2011. We hope that you find it informative.

Paul K. Martin
Inspector General
October 31, 2011

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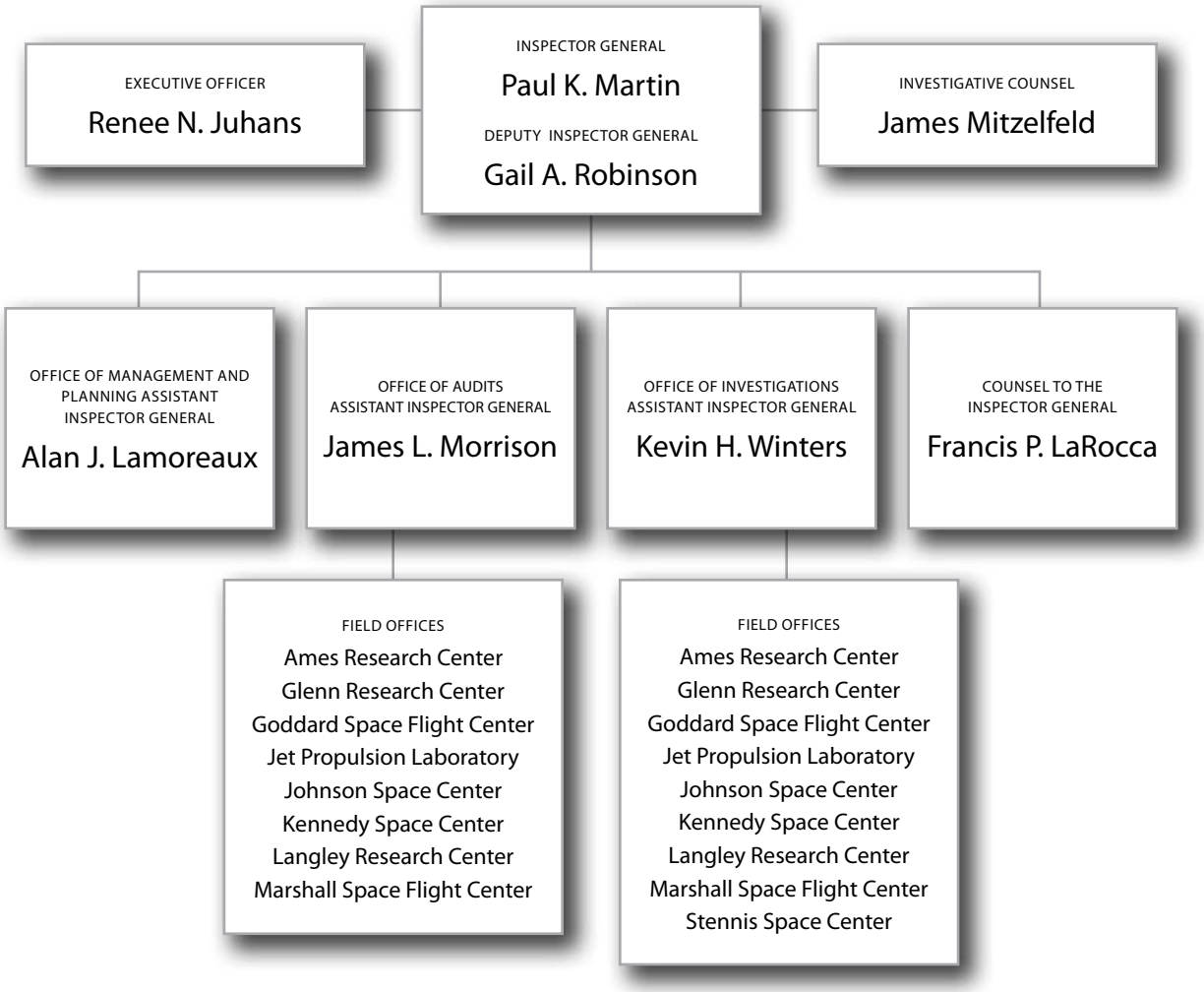
ORGANIZATION



The NASA Office of Inspector General (OIG) conducts audits, reviews, and investigations of NASA programs and operations to prevent and detect fraud, waste, abuse, and mismanagement and to assist NASA management in promoting economy, efficiency, and effectiveness. The OIG's budget of $36.3 million supports the work of 209 employees in their audit, investigative, and administrative activities.

The Inspector General (IG) provides policy direction and leadership for the NASA OIG and serves as an independent voice to the Administrator and Congress by identifying opportunities and promoting solutions for improving the Agency's performance. The Deputy Inspector General provides supervision to the Assistant Inspectors General and Counsel to the Inspector General in the development and implementation of the OIG's diverse audit, investigative, legal, and support operations. The Executive Officer serves as the OIG liaison to Congress and other Government entities, conducts OIG outreach both within and outside of NASA, and manages special projects. The Investigative Counsel serves as a senior advisor for OIG investigative activities and conducts special reviews of NASA programs and personnel.

The Office of Management and Planning (OMP) provides financial, procurement, human resources, administrative, and information technology (IT) support to OIG staff.

The Office of Audits (OA) conducts independent and objective audits and reviews of NASA programs, projects, operations, and contractor activities. In addition, OA oversees the work of the independent public accounting firm under contract by the OIG to conduct the annual audit of NASA's financial statements.

The Office of Investigations (OI) investigates allegations of cybercrime, fraud, waste, abuse, and misconduct that may affect NASA programs, projects, operations, and resources. OI refers its findings either to the Department of Justice (DOJ) for criminal prosecution and civil litigation or to NASA management for administrative action. Through its investigations, OI develops recommendations for NASA management to reduce NASA's vulnerability to criminal activity.

The Office of Counsel to the Inspector General provides legal advice and assistance to OIG managers, auditors, and investigators. The Office serves as OIG counsel in administrative litigation and assists the DOJ when the OIG participates as part of the prosecution team or when the OIG is a witness or defendant.

SPECIAL REVIEW

Space Shuttle Orbiter Disposition

NASA's Space Shuttle era, which began with the maiden voyage of Columbia in 1981, ended after 135 missions when Atlantis landed at Kennedy Space Center on July 21, 2011. With the conclusion of the Space Shuttle Program came the need to decide where the three retired Orbiters, as well as Enterprise, a full-scale test vehicle, should be permanently displayed. On the 30th anniversary of the first Space Shuttle flight, NASA Administrator Charles F. Bolden, Jr., announced that the Space Shuttle Orbiters Discovery, Atlantis, and Endeavour would be placed, respectively, at the Smithsonian Institution's National Air and Space Museum, Steven F. Udvar-Hazy Center near Washington, D.C. (the Smithsonian); the Kennedy Space Center Visitor Complex in central Florida (Kennedy Visitor Complex); and the California Science Center in Los Angeles, California (Science Center). In addition, he announced that New York City's Intrepid Sea, Air, and Space Museum (Intrepid) would receive Enterprise, which is currently on display at the Smithsonian. According to Bolden, he chose these locations to "provide the greatest number of people with the best opportunity to share in the history and accomplishments of NASA's remarkable Space Shuttle Program."

Final Space Shuttle Launch (STS-135), July 8, 2011

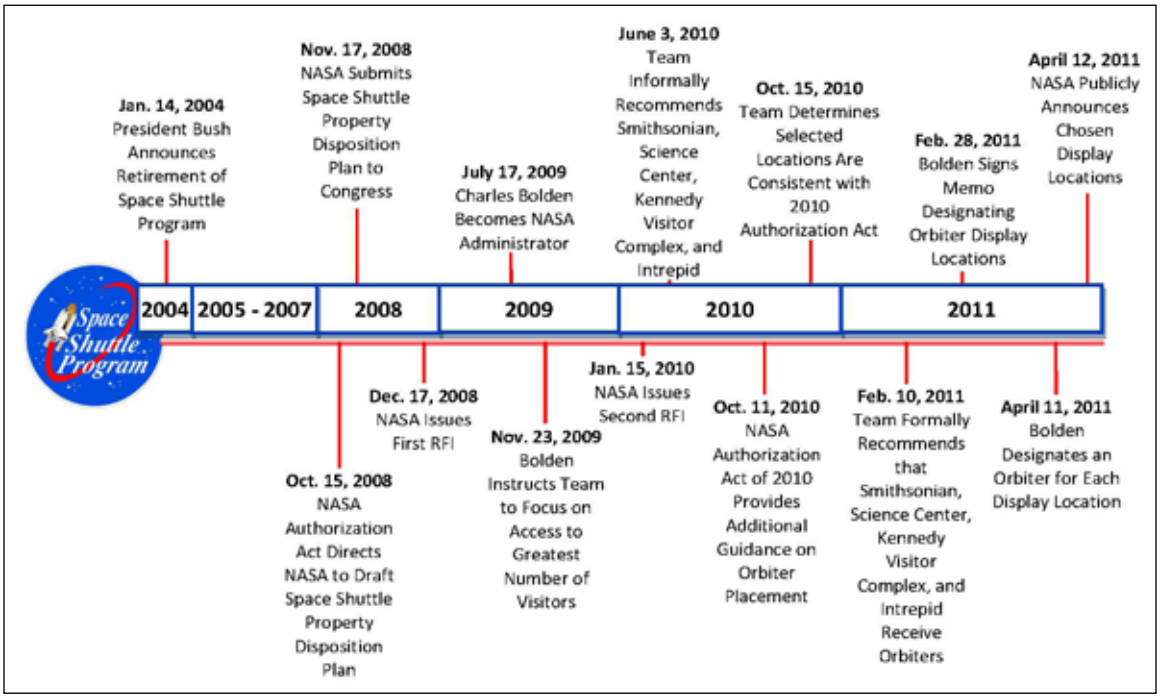
Source: NASA/Bill Ingalls

The Administrator's announcement, while greeted with excitement at the chosen locations, was not well received by some members of Congress who represent geographic regions that will not receive an Orbiter. Some members raised concerns that in making its selections NASA failed to follow the law and instead allowed politics to dictate the result. In light of the public interest in this matter, the Office of Inspector General examined NASA's process for selecting the Orbiters' new homes.

Our review concluded that NASA's decisions regarding Orbiter placement were the result of an Agency-created process that emphasized, above all other considerations, locating the Orbiters in places where the most people would have the opportunity to view them. The Agency was not required to and did not consider a location's ties to the Space Shuttle Program but, as directed by the 2010 NASA Authorization Act, considered whether the chosen locations had a connection

to NASA's human spaceflight program. The Agency's decision to place primary weight on three criteria – the applicants' attendance figures, regional population, and access to international visitors – was determinative in deciding which locations received Orbiters.

Timeline of Significant Events in Orbiter Placement Process



We found no evidence that the Team's recommendation or the Administrator's decision was tainted by political influence or any other improper consideration. While the Administrator was subject to a great deal of pressure from members of Congress and other interested parties, we found that this pressure had no influence on his decision about where to place the Orbiters. In addition, we found no attempt by White House officials to direct or influence Bolden's decision making. We also found that NASA's process was consistent with applicable Federal law, including the rules regarding disposal of excess Government property.

However, the OIG found that the team of NASA employees who evaluated the applicants made several errors during its evaluation process, including one not corrected before Bolden's announcement that would have resulted in a numerical "tie" among three facilities. Bolden said that even if he had been aware of this tie he would have made the same decision regarding Orbiter placement because the third museum was unable to commit to raising the necessary funds and because he believes the chosen locations will best serve NASA's goal to spur interest in science, technology, and space exploration.

Finally, although not the primary focus of our review, we found that the selected locations appear to be on track to raise the necessary funds, prepare facilities to house and display the Orbiters, and take delivery of the vehicles in accordance with NASA's schedule. That said, we also found that NASA will need to deftly manage a series of challenges as it works with these institutions to complete the process of readying and transporting the Orbiters to their new homes.

Enterprise on Display at the National Air and Space Museum's Steven F. Udvar-Hazy Center

Source: "Space Shuttle Program Transition and Retirement Personal Property Disposition Plan," November 2008

While we did not make specific recommendations for corrective action in the report, we believe that NASA should:

- expeditiously review recipients' financial, logistical, and curatorial display plans to ensure they are feasible and consistent with the Agency's educational goals and processing and delivery schedules;

- ensure that recipient payments are closely coordinated with processing schedules, do not impede NASA's ability to efficiently prepare the Orbiters for museum display, and provide sufficient funds in advance of the work to be performed; and

- work closely with the recipient organizations to minimize the possibility of delays in the delivery schedule that could increase the Agency's costs or impact other NASA missions and priorities.

Review of NASA's Selection of Display Locations for the Space Shuttle Orbiters (Special Report, August 25, 2011)
http://oig.nasa.gov/audits/reports/FY11/Review_NASAs_Selection_Display_Locations.pdf

AUDITS AND INVESTIGATIONS

Space Operations and Exploration

Space operations and exploration is one of NASA's most highly visible missions. Since NASA's establishment over 50 years ago, human space flight has continued to evolve from the Apollo to the Space Shuttle era and beyond. With the recent retirement of the Space Shuttle, the emergence of commercial companies seeking to provide access to the International Space Station (ISS) and low Earth orbit, and development of new technologies for future long-term exploration, NASA's challenges have become increasingly complex. During this reporting period, the OIG focused its oversight resources on key issues in this area.

NASA's Challenges in Acquiring Commercial Crew Transportation Services

NASA's retirement of the Space Shuttle fleet in 2011 left the United States dependent on the Russian Soyuz vehicle for crew transportation to and from the ISS. To develop the next generation of spaceflight vehicles, NASA is simultaneously embarking on two paths: (1) developing a Government-owned multi-purpose crew vehicle and Space Launch System for human exploration beyond low Earth orbit and (2) stimulating the development of a commercial space industry capable of providing NASA with safe, reliable, and cost-effective access to the ISS and low Earth orbit. While NASA has over 50 years of experience with contractor-built, Government-owned space vehicles, the Agency has never purchased transportation for its astronauts aboard a commercially developed vehicle.

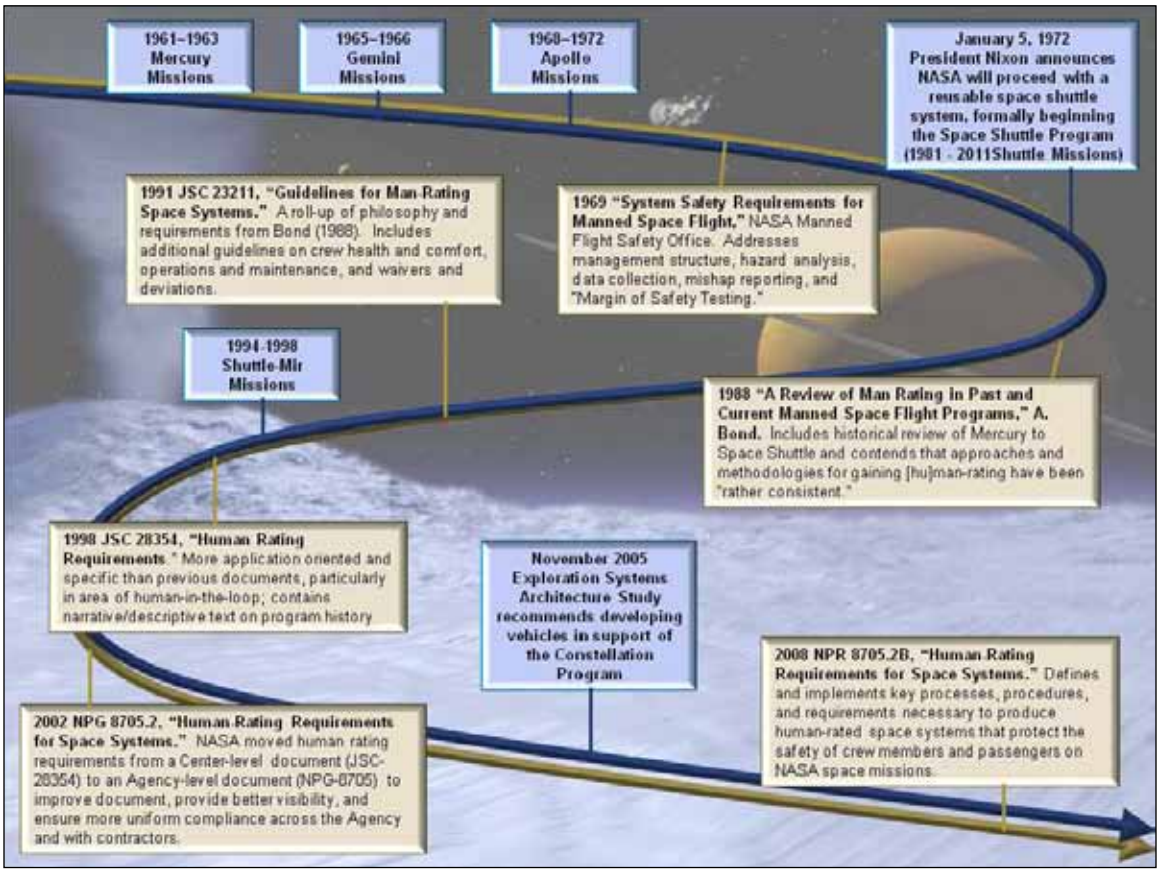
Given the importance of the shift in NASA's approach to acquiring human access to space, we examined the Agency's efforts to modify its existing safety and human-rating requirements to make them applicable to commercially developed vehicles and evaluated the overarching challenges associated with possible approaches NASA may use to certify and acquire commercial crew transportation services.

We found that NASA is making sustained progress toward acquiring commercial crew transportation services. For example, in 2009 the Agency initiated the Commercial Crew Development effort to focus on developing systems and concepts that will help establish an industry capable of transporting astronauts to low Earth orbit and the Space Station. Subsequently, in 2010 and 2011 NASA awarded a total of $319.3 million in funded Space Act Agreements to encourage the development of system concepts and capabilities that could enable commercial crew transportation services and accelerate the availability of U.S. commercial crew transportation capabilities. We also identified a series of challenges NASA will face as it moves forward to acquire commercial crew transportation services:

- modifying existing safety and human-rating requirements for commercially developed systems;

- selecting an acquisition strategy;
- establishing the appropriation insight/oversight model;
- relying on an emerging industry and uncertain market conditions; and
- ensuring coordination with the Federal Aviation Administration (FAA).

Selected Chronology of NASA's Human Spaceflight Programs and Human-Rating Requirements



While we did not make specific recommendations for corrective action, we noted that NASA should:

- clearly articulate to its commercial partners as soon as possible all requirements for commercially developed systems and the processes NASA will use for certifying such systems;

- maintain robust communication with the emerging commercial spaceflight industry to ensure that Agency contracting mechanisms include the appropriate balance between insight and oversight that will provide NASA with sufficient information to assess and certify commercial partners' systems while providing companies the flexibility to innovate;

- clearly articulate how NASA will mitigate potential conflicts of interest that may arise that could provide an unfair competitive advantage to a NASA partner; and

- expand coordination with the FAA to avoid the potentially serious business impacts that would result if commercial companies were required to operate in an environment that included inconsistent standards for NASA certification and FAA licensing of the same vehicle.

The Associate Administrator for the Exploration Systems Mission Directorate agreed that NASA should pay particular attention to the challenges highlighted in the report and stated that the Agency will be making progress in each of the areas as the Commercial Crew Program matures.

NASA's Challenges Certifying and Acquiring Commercial Crew Transportation Services (IG-11-022, June 30, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-022.pdf

Improvements Needed in NASA's Advanced Radiation Instrumentation Project

Space radiation poses a danger to NASA's astronauts, increasing their risk of cataracts, cancer, damage to the central nervous system, and cardiovascular fatality.[1] Consequently, protecting astronauts from overexposure to space radiation has been a fundamental requirement since space travel began.

To monitor astronauts' exposure to radiation while aboard the ISS, NASA installed a suite of instruments on the ISS between October 2000 and April 2002. However, these instruments have exceeded their design life; experienced varying degrees of failure, including in one case complete failure; and do not meet all ISS medical operations and radiation monitoring requirements. Consequently, NASA created the Advanced Radiation Instrumentation (ARI) Project in 2008 to develop a new suite of instruments and ensure that NASA has the real-time information needed to protect astronaut crews.

We found that NASA has poorly managed the development of replacement radiation monitoring instruments. As a result, total estimated ARI Project costs increased approximately 62 percent, from $16 million to $26 million; the Project has been de-scoped and will not include all planned elements; and delivery of the new instruments has been delayed by almost 3 years. In addition, until April 2010 NASA was developing an instrument that did not meet stated radiation monitoring requirements. Specifically, the ISS Medical Operations Requirements Document specifies the monitoring and measuring requirements of charged particles outside the ISS, but NASA was developing an instrument that only would have measured radiation dosage.

[1] Space radiation consists primarily of ionizing radiation in the form of high-energy, charged particles that can cause acute and long-term damage to living cells depending on the dose received.

We also found that the ISS Program has never monitored astronaut exposure to neutrons in accordance with Program requirements and had not adequately analyzed, planned, tracked, or controlled the resulting risk. Because the ISS Program took immediate corrective action when we raised this issue during our audit fieldwork, we did not make any recommendations regarding this issue in our audit report.

To address our other findings, we recommended that the ISS Program Manager ensure that all future ISS-related projects follow the tenets of NASA's project management policy and not move to implementation until managers demonstrate the projects are properly anchored by firm requirements, realistic cost and schedule estimates, sufficient funding, and successful completion of a Preliminary Design Review.

We also recommended that the Director of Space Life Sciences for Johnson Space Center determine whether the current ISS medical operations requirement for external radiation monitoring is appropriate and formally initiate steps to update the medical operations requirement as needed.

Although NASA agreed with our recommendations and proposed corrective actions that we considered responsive to those recommendations, the Agency insisted that the Project had not been poorly managed. However, we believe our findings demonstrate that the Project was poorly managed and do not understand NASA's rationale for insisting otherwise.

A Review of NASA's Replacement of Radiation Monitoring Equipment on the International Space Station (IG-11-027, September 29, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-027.pdf

Historic Items Recovered

An OIG investigation resulted in recovery of the employee badges of NASA astronauts Virgil I. (Gus) Grissom, Edward H. White, and Roger B. Chaffee. On January 27, 1967, the astronauts perished in a fire inside of the command module of an Apollo spacecraft during a preflight test. Our investigation determined that a former Kennedy Space Center Deputy Chief of Security concealed his possession of the badges for 44 years and was attempting to auction them for monetary gain. An auction house valued the set of badges at $20,000 to $30,000.

Apollo Astronaut Sued by Department of Justice

The Department of Justice, on behalf of NASA, filed a civil suit against Apollo astronaut Edgar Mitchell for the return of a data acquisition camera that Mitchell made available for sale at a New York City auction house. The camera, which Mitchell retained after his Apollo 14 mission to the Moon, is valued between $60,000 and $80,000. The camera was withdrawn from auction after OIG agents and counsel for Johnson Space Center contacted the auction house.

Investigators Recover RL-10 Rocket Engine

In July 2011, the NASA OIG recovered a Pratt & Whitney RL-10 rocket engine valued at approximately $200,000 that had been advertised for sale on an Internet auction site. The owner advised investigators that he purchased the engine from an individual who had received it from an unknown NASA employee. The 1960s-era RL-10 was the United States' first rocket engine fueled by liquid hydrogen. The RL-10 is subject to the International Traffic in Arms Regulations (ITAR) and, accordingly, may not be sold or released to the public.

Texas Businessman Charged with Fraud Involving Space Vehicle Parts

In July 2011, a League City, Texas, business owner was indicted for fraud involving space vehicle parts and making false statements. The indictment alleges that the business owner falsely certificated that eight parts supplied by the company for use on the International Space Station were up to standard when in fact the parts – bidirectional tower latch ratchets – did not meet tolerance limits or conform to specification.

Former United Space Alliance Employee Enters Pretrial Diversion

In April 2011, a former NASA contractor employee entered into a pretrial diversion program with the State of Florida after being charged with theft and trafficking in stolen property. The indictment resulted from a NASA OIG investigation that traced a Space Shuttle tile, which had been sold on eBay, to the former contractor employee. The OIG determined that the contractor employee had sold 12 stolen Shuttle tiles on eBay for prices ranging from $41 to $912. The former contractor employee was sentenced to 12 months of probation and ordered to pay $5,353 in restitution and $742 in fines and fees, as well as perform 50 hours of community service.

Ongoing Audit Work

Controls over Loans of Astromaterials

NASA's astromaterials samples, including lunar material returned from the Apollo missions, meteorites recovered from the Antarctic, and cosmic dust particles collected from the stratosphere, are a unique and limited national resource requiring careful allocation, coordination, and management control to ensure they are available for study by future generations. In accordance with the National Aeronautics and Space Act of 1958, which directs NASA to disseminate the results of its scientific activities widely, NASA makes a portion of these astromaterials available through loans for scientific study, public outreach, and educational activities. Our review will evaluate NASA's controls over the loans of these astromaterials samples.

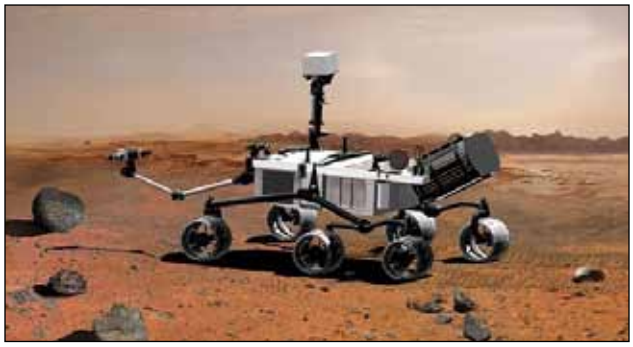
Acquisition and Project Management

Effective contract and project management is critical to NASA's ability to achieve its overall mission but has presented long-standing challenges for the Agency. The OIG has continued to focus resources in this area to help ensure that NASA engages in sound acquisition management practices that provide the Agency and the taxpayer with the best value. In addition, OIG investigators continue to examine allegations of fraud and other misconduct related to NASA contracts.

Management of the Mars Science Laboratory Project

This audit examined the significant technical, schedule, and fiscal challenges facing NASA as it prepares for the launch of the $2.5 billion Mars Science Laboratory (MSL) in late 2011. Designed to investigate whether Mars has, or ever had, an environment capable of supporting life, the MSL is the most technologically challenging rover ever designed. Contributing to the complexity of the mission are the Project's innovative entry, descent, and landing system, including a sky crane touchdown system that will lower the rover known as Curiosity on a tether to the Martian surface; the size and mass of the rover (four times as heavy as the previous Martian rovers Spirit and Opportunity); the number and interdependence of its 10 science instruments; and a new type of power generating system.

Artist's Concept of Curiosity on the Surface of Mars



Source: http://marsprogram.jpl.nasa.gov/msl/images/PIA09201-br2.jpg (accessed September 30, 2011)

In February 2009, NASA delayed the MSL's launch by 2 years because of the late delivery of several critical components and instruments. This delay and the additional resources required to resolve the underlying technical issues increased the Project's development costs by 86 percent, from $969 million to $1.8 billion, and its life-cycle costs by 56 percent, from $1.6 billion to $2.5 billion. In addition, due to planetary alignment, the optimal launch window for a mission to Mars occurs every 26 months. If the MSL is delayed again, the Project would require significant redesign at a cost of at least $570 million.

Our audit found that the MSL Project has overcome the key technical issues that were the primary causes of the launch delay in 2009. Additionally, as of March 2011, all critical components and instruments had been installed and final preparation for shipment to Kennedy Space Center for launch aboard an Atlas V launch vehicle was proceeding. However, of the 10 issues Project managers identified as contributing to the 2009 launch delay, three remained unresolved as of March 2011. Moreover, the OIG

found the Project faced nearly three times the number of critical tasks as originally planned to be completed in the months remaining until launch. Therefore, the resolution of these issues and others that may arise during final integration are likely to strain the already limited margin that managers built into the Project's schedule to allow for unanticipated delays.

We also found that approximately 1,200 reports of problems and failures observed by Project personnel remained open as of February 2011. If these reports are not resolved prior to launch, there is a possibility that an unknown risk could materialize and negatively affect mission success. Furthermore, although the Project has received three budget increases since the 2009 decision to delay launch – most recently an infusion of $71 million in December 2010 – the Project may require additional funds to meet the scheduled launch date because, in our judgment, Project managers did not adequately consider historical cost trends when estimating the amount required to complete development.

To minimize the risk of missing the launch window and incurring the resultant costs, we recommended that NASA reassess the sufficiency of the Project's funding and allocate additional resources to expeditiously close all outstanding reports of problems or failures that could impact mission success. The Associate Administrator for the Science Mission Directorate agreed with our findings, concurred with our recommendations, and described a series of corrective actions. The recommendations are resolved and pending closure.

NASA's Management of the Mars Science Laboratory Project (IG-11-019, June 8, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-019.pdf

Delays by Partner Agencies Increased NASA's Costs for Meteorological Satellite

Artist's Illustration of Satellite

Source: NASA Release 08-98, "Mission Operations Readiness Review for NPOESS Preparatory Project Completed," December 16, 2008

The National Polar-orbiting Operational Environmental Satellite System (NPOESS), a planned series of meteorological satellites, is considered a national priority essential to meeting civilian and military weather forecasting, storm tracking, and climate monitoring requirements. The NPOESS Preparatory Project (NPP) initially was conceived as a risk reduction mission for NPOESS, providing an opportunity to demonstrate and validate new instruments; processing algorithms; and command, control, communications, and ground processing capabilities prior to launching the first of six planned NPOESS satellites. To manage the NPP and the larger NPOESS Program, NASA was part of a tri-agency Integrated Program Office that included the Department of Defense and the Department of Commerce's National Oceanic and Atmospheric Administration (NOAA).

The OIG examined NASA's management of the NPP and found that NASA has incurred approximately $304 million in additional costs for this important meteorological satellite due to failures by NOAA and the Air Force to deliver instruments and other critical components to NASA in a timely manner. As a result, the Project has experienced a 5-year launch delay and cost increases of 54 percent.

Our audit found that although NASA met its schedule and technical requirements for producing the NPP spacecraft and the scientific instruments for which it was responsible, NOAA and the Air Force were unable to deliver their scientific instruments and critical components to NASA in a timely manner. Because the agreement between NASA and its partner agencies stipulated that the funding, management, and development of each agency's instruments would be on a "no exchange of funds basis," each partner was responsible for all costs related to its mission segments. Consequently, NASA – as NPP system integrator – incurred the additional $304 million in costs associated with the 5-year launch delay.

We recommended that when assessing future collaborative efforts with external partners NASA carefully consider the technical capabilities of partner agencies and the risks associated with agreements executed on a no exchange of funds basis. We also recommended that if NASA enters into such agreements in the future, it ensure that its budget includes reserve levels commensurate with the associated risk.

The Associate Administrator for the Science Mission Directorate concurred with our recommendations and stated that the Directorate will seek to structure future partnerships to align responsibilities with technical expertise and acquisition capability while exploring reimbursable funding arrangements or a means to secure timely delivery of critical project components. In addition, the Associate Administrator stated that in partnerships executed on a no exchange of funds basis, NASA will track the programmatic risks and adjust reserves accordingly. We considered the Associate Administrator's comments to be responsive to our recommendations.

NASA's Management of the NPOESS Preparatory Project (IG-11-018, June 2, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-018.pdf

Titanium Suppliers Sentenced

In May 2011, two U.S. suppliers of titanium – Western Titanium, Inc., and its subsidiary, Mach 2 Metals, Inc. – were sentenced in U.S. District Court for the Southern District of California to 5 years' probation, fined a total of $90,000, and ordered to pay a combined restitution of $51,350 after pleading guilty to mail fraud and falsely certifying that titanium they sold to U.S. Government contractors complied with military specifications. As part of the plea agreement, four management officials for the companies entered into deferred prosecution agreements.

Small Business Owner Convicted

In August 2011, a small business owner who had obtained Small Business Innovative Research (SBIR) contracts from NASA pleaded guilty to one count of wire fraud in the Southern District of Mississippi. The business owner was indicted in June 2011 for making false statements and submitting false claims to NASA and other agencies in connection with the SBIR contracts. The five-count indictment was the result of a joint investigation by the NASA OIG and the National Science Foundation (NSF) OIG. The investigation determined that the owner's SBIR proposal contained false statements about the principal investigator's primary employment and about whether the research had been previously submitted for Federal funding. The owner, who was also the principal investigator, was employed full time by a university, had submitted the same or very similar research proposals multiple times to various Federal agencies, and received over $373,000 in multiple SBIR contract awards for the same or similar work. Sentencing is scheduled for November 2011.

Small Business Contractor Enters Civil Settlement

On August 8, 2011, Integran Technologies USA agreed to pay a civil penalty of $42,781 for violating NASA requirements in order to obtain SBIR contracts from the Agency. Our investigation revealed that the contractor had falsely claimed that it would perform all research under the SBIR contracts in the United States when, in fact, a majority of the research was performed in Canada by the contractor's parent company.

Contractor Agrees to Civil Settlement

On April 20, 2011, Sunpower, Inc., agreed to pay $451,830 to settle allegations that it improperly billed NASA Glenn Research Center for development of an instrument designed to develop a highly efficient, low mass, reliable power converter for future radioisotope power systems. Sunpower allegedly charged to NASA unallowable organizational costs associated with a related company. The settlement was in addition to costs that the company previously reimbursed to NASA through contractual credits.

College Pays Civil Settlement

Morehouse College agreed to pay $1.2 million to the U.S. Government in a civil settlement as the result of a joint investigation by the NASA OIG and the NSF OIG. The investigation found that grant funds were used for personal travel expenses and for equipment and services unrelated to the grants.

NASA Contractor Enters Civil Settlement

Deerpath Corporation, a Michigan-based firm, agreed to pay $800,000 to resolve allegations that the company knowingly caused false claims to be submitted in connection with a contract to refurbish equipment at NASA's Plum Brook Station in Ohio. It was specifically alleged that the company fraudulently obtained the contract by misrepresenting its eligibility for a Service-Disabled Veteran-Owned Small Business set-aside contract. In addition, the company allegedly fraudulently obtained manufacturing industry certified stamps used to symbolize engineering and inspection certifications required by the contract.

Ongoing Audit Work

NASA's Project Management Practices

NASA continues to have difficulty meeting cost, schedule, and performance objectives for many of its projects. The necessity to effectively manage its wide-ranging portfolio will only increase in importance as NASA operates in an increasingly constrained fiscal environment. The objective of this audit is to identify and correct management practices and challenges that result in cost overruns, schedule delays, and performance shortfalls in NASA projects.

NASA's Implementation of Lessons Learned

Lessons learned are brief summaries of failures or successes that may help other NASA projects avoid mistakes or replicate positive achievements. A 2001 Government Accountability Office (GAO) survey of all NASA program and project managers revealed fundamental weaknesses in the collection and sharing of lessons learned Agency-wide. Our audit will review the Agency's Lessons Learned Information System and examine whether and how management uses the System throughout the life cycle of programs and projects.

NASA's Technology Transfer Program

Federal law requires that NASA and other Federal agencies make every effort to ensure the commercialization of federally owned or originated technology. This audit will assess the adequacy of NASA's planning for and execution of technology transfers to state and local governments and the commercial sector.

Use of NASA Research Announcements within the Aeronautics Research Mission Directorate

To help meet its research goals, the Aeronautics Research Mission Directorate (ARMD) supplements research performed by civil service personnel with research performed by outside individuals. To award such research, NASA issues NASA Research Announcements (NRAs). Between 2007 and 2010, ARMD issued NRA awards valued at $382 million. Our audit will examine the effectiveness of aviation research funded by NRAs as well as NASA's use of Recovery Act funds for this research.

Recovery Act-Funded Contracts under NASA's Small Business Innovation Research Program and Small Business Technology Transfer Program

As of September 2011, NASA had funded more than $24 million of SBIR and Small Business Technology Transfer (STTR) contracts with Recovery Act funds. This audit will assess the effectiveness of NASA's internal controls for these contracts and determine whether cost, schedule, and performance milestones were met.

NASA's Improper Payment Identification and Reporting

The Federal Government annually wastes billions of taxpayer dollars on improper payments due to payments in the wrong amount, made to the wrong entity, or made for the wrong reason. This audit will examine whether NASA is identifying, reporting on, and reducing improper payments in accordance with Federal law.

Infrastructure and Facilities Management

Infrastructure and facilities management is a long-standing concern likely to remain a top Agency challenge for the foreseeable future. The NASA Authorization Act of 2010 directs the Administrator to undertake a comprehensive study examining NASA's institutional assets, paying particular attention to identifying and removing unneeded or duplicative infrastructure. In light of the enormity of this challenge, the OIG is focusing significant resources on this topic.

NASA's Management of Its Real Property

NASA's real property holdings include approximately 5,400 buildings and other structures such as wind tunnels, laboratories, launch pads, and test stands. In total, the assets represent more than $26.4 billion in current replacement value. However, 80 percent of NASA's facilities are 40 or more years old and many are in degraded condition. To manage this property, NASA considers several key data elements when determining whether to maintain, repair, consolidate, lease, sell, or demolish existing assets, including (1) utilization rate, (2) mission dependency status, and (3) physical condition. These key elements, all of which are recorded in NASA's Real Property Management System (RPMS), provide NASA managers with information on how often facilities are used, their importance in terms of supporting NASA's mission, and their physical condition.

Our review found that RPMS data relating to utilization, mission dependency, and condition were unreliable for evaluating NASA's real property assets, largely because NASA Centers used inadequate processes to gather and update the information. Specifically, we found that the Centers did not accurately record utilization data in the RPMS because they did not have processes in place to calculate annual usage rates or inspections to ensure data accuracy. As a result, the utilization data in the RPMS did not reflect actual conditions for 15 of the 34 facilities we inspected.

In addition, we found that a lack of guidance and the use of a ratings scale that fails to make meaningful distinctions between facilities limited the usefulness of the data intended to track the mission dependency of NASA facilities. Consequently, we found differences between the ratings applied to similar assets across Centers. Moreover, 85 percent of the Center facilities we visited were rated as "Mission Dependent" or "Mission Critical." Given that even facilities with relatively low ratings were considered "Mission Dependent," we question that characterization.

Finally, in tracking the physical condition of its facilities, NASA relies on cursory visual inspections performed by small teams of contractors under tight deadlines. Given the nature of the inspections, we question the accuracy of the information in the RPMS regarding the physical condition of NASA facilities. For example, we found that the condition data recorded in the RPMS for some of the facilities at Glenn's Plum Brook Station failed to reflect their true conditions (as illustrated by the following photographs).

Igloos at Plum Brook Station Rated in "Good" Condition

Source: Glenn photographs (July 2010)

Warehouse at Plum Brook Station Rated in "Fair" Condition

Source: NASA OIG photograph (March 2011)

Given the extent and age of NASA's facilities, it is imperative that NASA has reliable data with which to manage its real property assets as well as to maintain accountable and transparent Agency operations. For these reasons, we recommended that NASA establish processes that accurately capture the utilization rates of facilities, revise existing procedures to include guidance for conducting mission dependency reviews, and reassess its contracts for condition assessments to provide contractors sufficient time and direction to ensure that the Agency receives comprehensive assessments of the physical condition of its facilities.

NASA concurred with our recommendation to develop guidance for conducting mission dependency reviews and partially concurred with our recommendations to establish and refine processes for capturing utilization rates and conducting condition assessments, citing a lack of resources. However, we believe the costs of improving the data will ultimately provide NASA value in allowing Agency managers to more effectively manage NASA's real property holdings.

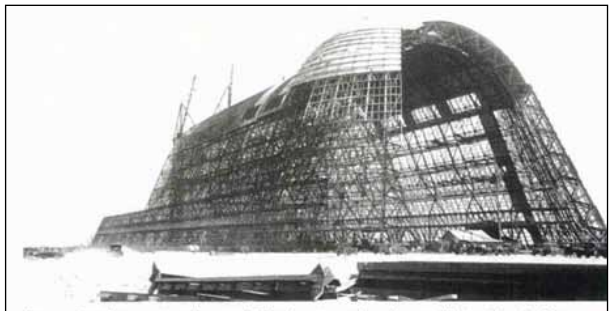
NASA Infrastructure and Facilities: Assessment of Data Used to Manage Real Property Assets (IG-11-024, August 4, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-024.pdf

NASA's Hangar One Re-Siding Project

Hangar One, built in the 1930s to house the naval airship USS Macon, is one of the world's largest freestanding structures, covering approximately 8 acres. The hangar, part of NASA's Ames Research Center, is listed on the National Register of Historic Places. NASA acquired the hangar in 1994 as a result of the base realignment and closure process that involved Moffett Field, a Navy base adjoining Ames.

This photograph of Hangar One, taken in 1992, shows the doors opening. The cars and airplanes provide a perspective of the hangar's size.

During fiscal year (FY) 2003, NASA discovered that polychlorinated biphenyls (PCBs) were leaking from the siding of Hangar One. After significant discussions, the Office of Management and Budget (OMB) determined that the Navy would pay for the environmental cleanup of the building but NASA would be responsible for the cost of re-siding the hangar and any additional upgrades necessary to prepare it for reuse. In April 2011, the Navy began removing Hangar One's siding.



Hangar 1 under construction, ca. 1933; view toward southwest. Photo taken by Herman E. Finell. Source: Moffett Field Historical Society

This photograph shows the steel frame structure of Hangar One, which is essentially what will remain when the Navy's contractor completes removal of the siding.

At OMB's direction, NASA included the re-siding project in the President's FY 2012 budget request at an estimated cost of $32.8 million. With these funds, NASA proposes to make the structure watertight by installing new exterior siding, roofing, and windows.

In this review, we examined whether the $32.8 million requested will cover the full costs of the Hangar One Project, whether NASA has identified a NASA-related use or private tenants for the hangar, and the effect dedicating funds to Hangar One restoration may have on other NASA construction or renovation projects.

We found that even after the re-siding project is completed, additional funding will be required – potentially tens of millions of dollars – for upgrades and repairs to make the hangar fit for use. Moreover, although funds to re-side the hangar have been requested and estimates for additional work are being developed, NASA has identified neither an Agency-related use for Hangar One nor private entities willing to commit to leasing the property. At the same time, other mission critical projects were removed from NASA's FY 2012 budget request in order to include the Hangar One Project. Finally, while Hangar One is protected by the Preservation Act, NASA does not have to re-side the hangar to comply with the Act. In light of our findings and NASA's overall challenges related to maintaining its aging facilities, we questioned whether preservation of Hangar One is the best use of limited NASA funds.

We recommended that the Associate Administrator for Mission Support consider the following alternatives for Hangar One: (1) re-side the hangar as described in the budget request and identify the annual maintenance cost assuming no use; (2) re-side the hangar and complete the upgrades and repairs necessary to allow for use as aircraft storage; (3) re-side the hangar and complete the upgrades and repairs necessary to allow for use as exhibition space or for other public assemblies; (4) demolish the hangar and carry out mitigation actions in accordance with the Preservation Act; and (5) transfer the hangar to another Government entity.

The Associate Administrator concurred with our recommendation and stated that NASA will evaluate these alternatives by November 30, 2011. We consider the Associate Administrator's comments and proposed actions to be responsive to our recommendation.

NASA's Hangar One Re-Siding Project (IG-11-020, June 22, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-020.pdf

Ongoing Audit Work

NASA's Efforts to Reduce Unneeded and Duplicative Infrastructure

NASA's costs to maintain its infrastructure – more than 5,400 buildings and other structures totaling more than 44 million square feet – are significant and continue to rise: operations and maintenance costs have increased 44 percent (by $173 million) since 2005. Numerous reports and studies have noted the need for NASA to reduce its infrastructure, from GAO testimony in the 1990s that noted major duplication of capabilities to our report released during this semiannual reporting period assessing the quality of the data used to manage the Agency's real property assets.[2] This audit will evaluate NASA's efforts to identify and reduce its unneeded and duplicative test stands and wind tunnels.

NASA's Real Property Master Planning

NASA is developing its first integrated Agency-wide real property master plan. NASA intends to use the plan to better coordinate facilities resources across the Agency and to help NASA gain efficiencies by eliminating facilities that no longer benefit the Agency. A key part of the master planning process is the annual prioritization process used to budget for construction projects that make up the plans. Between 2006 and 2010, NASA spent approximately $1.9 billion on these types of projects. This audit will examine whether NASA has an effective overall Agency-wide master planning process and whether NASA has an effective approach for prioritizing funding for construction projects.

Audit of Leased Space at NASA Centers

One approach to help NASA reduce its $2.6 billion in annual deferred maintenance costs is to consider leasing its underused facilities. However, NASA may not be effectively identifying facilities available to lease, which prevents the Agency from reducing its maintenance liability to the extent possible. Our audit will evaluate NASA's use and management of lease agreements across NASA Centers.

[2] "NASA Infrastructure and Facilities: Assessment of Data Used to Manage Real Property Assets" (IG-11-024, August 4, 2011).

Information Technology

During this semiannual reporting period, we continued to work with NASA to improve IT security and management controls on its critical IT systems.

Texas Man Sentenced for Hacking

In June 2011, a Texas man was sentenced in the U.S. District Court of Minnesota to 2 years in prison and ordered to pay $66,400 in restitution after pleading guilty to one count of wire fraud for hacking a local company's computer network. As part of his plea, he also admitted hacking two NASA computer servers at Goddard Space Flight Center.

NASA Contractor Employee Indicted for Child Pornography

In July 2011, a NASA contractor employee from Marshall Space Flight Center was indicted on two counts of receiving and possessing child pornography. The employee allegedly used his NASA-issued computer to access and upload sexually explicit images of children to an account on a social media website.

Contractor Reimburses NASA for Software Licensing Irregularities

An investigation into allegations of contract irregularities relating to software licensing resulted in an administrative recovery of $382,471 from IBM in the form of a contract credit to NASA as well as a cost avoidance of $361,262 in reduced rates on future licensing of the software. The software at issue, Maximo, was used by many NASA contractors. IBM was issuing software licenses to the contractors rather than to NASA even though NASA was paying for the licenses. This arrangement allowed the contractors to retain the licenses after completion of their contracts. As a result, NASA was forced to re-purchase duplicative licenses and could not benefit from quantity discounts it would have otherwise realized. The recovery and cost avoidance were in lieu of judicial action in the matter.

Ongoing Audit Work

NASA's Agency-Wide Computer Incident Detection and Response Capability

In FYs 2009 and 2010, NASA reported 5,621 cybersecurity incidents that included the installation of malicious software on its systems and unauthorized access to sensitive information. To address these incidents, NASA established a Security Operations Center (SOC) in November 2008. This audit will examine whether the SOC is effectively providing incident detection, response, and reporting on cyber attacks against NASA networks and computer systems.

Configuration Management and Continuous Monitoring Practices

A common threat to NASA's IT systems and data occurs when vulnerabilities exist or are introduced to system components and NASA's monitoring and mitigation techniques do not identify and address them in a timely fashion. Strong IT security practices for configuration management and continuous monitoring can minimize the number and severity of vulnerabilities on NASA's systems. This audit will evaluate the effectiveness of controls used to identify high-impact vulnerabilities and ensure components are configured properly on critical NASA IT systems.

NASA's Compliance with FISMA Requirements for FY 2011

NASA IT systems contain sensitive information which, if improperly released or stolen, could result in significant financial loss or adversely affect national security. This audit will assess NASA's compliance with Federal Information Security Management Act (FISMA) requirements for FY 2011. FISMA requires the OIG to conduct annual evaluations of NASA's information security program and report the results to OMB.

Audit of NASA's Information Technology Security Assessment and Monitoring Tools

NASA has 570 information systems with more than 120,000 devices that connect to NASA's networks. To reduce the risk of unauthorized access, these devices must be regularly monitored and assessed. Because NASA's management of IT security is decentralized, IT security tools are not standard across the Agency and NASA may be missing opportunities to improve efficiency through consolidation of purchases and the identification of redundant investments. This audit will examine whether NASA could improve its IT security processes by standardizing the use of IT security tools across the Centers and Mission Directorates.

Financial Management

The OIG continues to work with NASA and the independent external auditor to improve NASA's financial management system and controls.

Ongoing Audit Work

Audit of NASA's FY 2011 Financial Statements

The OIG is overseeing NASA's FY 2011 consolidated financial statement audit, which is being performed by the independent public accounting firm PricewaterhouseCoopers.

Audit of NASA's Purchase and Travel Card Programs

Effective purchase and travel card programs depend on properly training users to manage card use and agency-specific internal controls to protect against misuse. This audit will examine whether the NASA purchase and travel card programs are operating efficiently and whether NASA is compliant with Federal and Agency requirements.

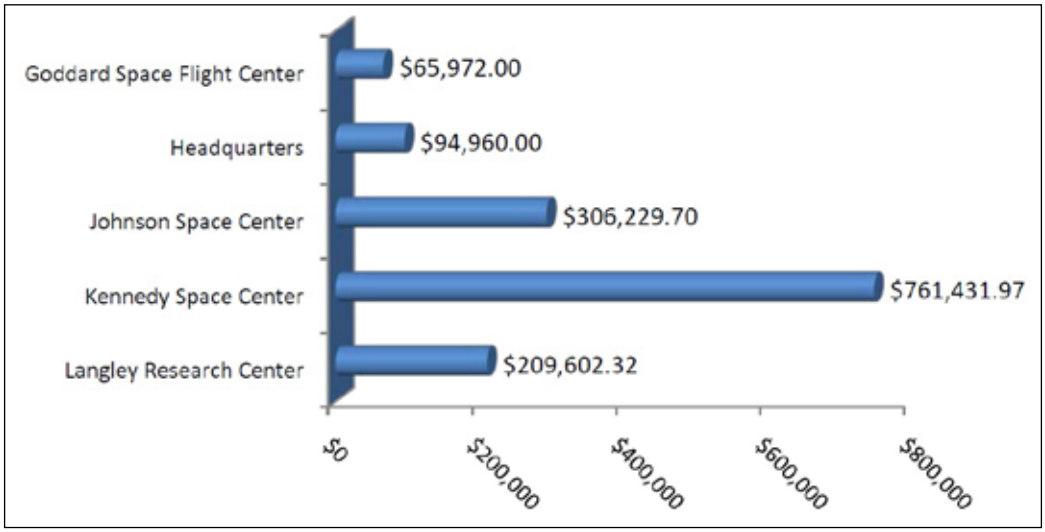
NASA's Payments for Academic Training and Degrees

NASA offers its more than 18,500 civil service employees training and educational opportunities to complement work experience and achieve better organizational and individual performance. Given the size of NASA's workforce, training poses a significant cost – approximately $250 million between FYs 2006 and 2010. A subset of this expenditure was for academic training at colleges and universities. Between July 2006 and September 2010, NASA spent approximately $17 million for more than 2,460 NASA employees to attend 10,120 academic courses.

Federal law prohibits NASA from funding employees' academic degrees except through planned, systemic, and coordinated development programs that meet specific requirements. In other words, NASA cannot spend taxpayer funds to send employees to college solely to make them better educated or to enable them to qualify for a better paying position within NASA. In accordance with these laws, NASA has established academic degree programs under which qualified employees can pursue undergraduate or graduate degrees.

We found that some NASA employees are circumventing the Agency's established procedures and obtaining degrees funded by NASA outside of formal degree programs. The Agency's decentralized management structure, coupled with a lack of strong internal controls over NASA's payment for employees' academic training, has increased the potential for misuse and abuse, and NASA has not established adequate internal controls to compensate for these challenges. As a result, from July 2006 through September 2010, NASA paid $1.44 million for 57 employees to pursue degrees outside of NASA's established degree programs.

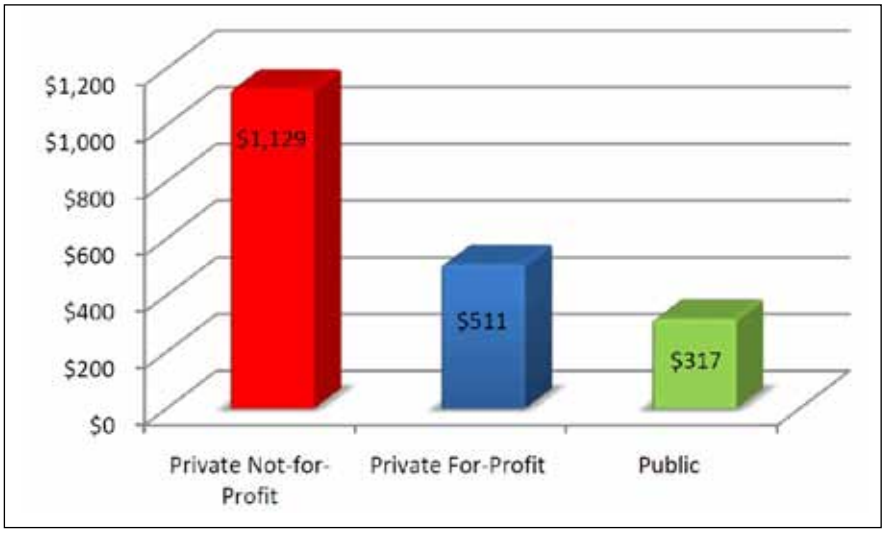
Expenditures for the 57 NASA Employees Pursuing Degrees Outside of Established Programs at Headquarters and the Four Centers Reviewed



Moreover, these employees did not enter into continuing service commitments with the Agency for the degree pursued and therefore could leave NASA without any repayment or service obligations.

In addition, we found that because NASA does not limit tuition rates or annual spending per employee, employees have no incentive to seek training from less expensive public institutions as opposed to more expensive private or for-profit schools. In fact, 11 of the top 20 universities attended by NASA civil service employees were private or for-profit institutions that were 3.6 times and 1.6 times more expensive, respectively, than public universities.

Average Tuition Rate, per Credit, at the Top 20 Institutions Attended by NASA Civil Service Personnel



We also found that NASA policy does not address the issue of payment for college credits awarded based on employees' life experience; the Agency could not always provide evidence of course completion, and the documentation provided was not consistently reliable; and NASA cannot quantify the total amount it spends on academic training for its civil service employees.

Finally, NASA pays for academic training for contractor employees, as negotiated in a company's contract, but the use of these funds is handled internally and governed by company policy. Accordingly, NASA has little oversight of these funds.

We made six recommendations to NASA to strengthen the policies, procedures, and internal controls for the Agency's academic training program. Specifically, we recommended that NASA require Center Training Offices to assess the appropriateness of all academic training requests to ensure payment is made only for academic degrees pursued within the Agency's established degree programs; establish a centralized mechanism for tracking the Agency's academic training expenditures; limit payments per credit hour, cap the amount an employee can be reimbursed in any given year, and

establish a formal approval process for consideration of exceptions; develop a mechanism to leverage the size of NASA's civil service and contractor workforce to negotiate discounted tuition rates; establish the Agency's position on the payment of college credits for life or work experience and the criteria for such payment; and require employees to submit official transcripts to document successful course completion.

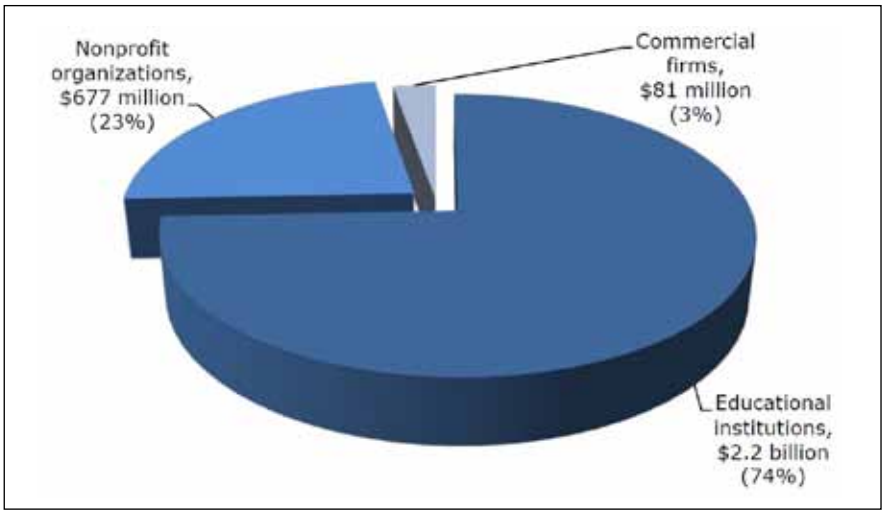
NASA concurred with four of our recommendations and partially concurred with our recommendation to require employees to submit official transcripts as proof of course completion. We found NASA's proposed actions to these recommendations to be responsive and consider these recommendations resolved. NASA did not concur with our recommendation to limit payments per credit hour and institute caps on reimbursement amounts, stating that "the overriding factor in selecting academic institutions should be relevant technical excellence, not cost per credit hour." We considered NASA's proposed actions to this recommendation to be unresponsive and the recommendation remains unresolved. While we acknowledge that technical excellence should be a factor in selecting a college or university, we do not accept that technical excellence is only attainable at the highest cost. Moreover, financial caps on employee tuition reimbursement are commonplace in the Government and private industry, including among NASA contractors who also employ workforces with a high level of technical expertise.

NASA's Payments for Academic Training and Degrees (IG-11-023, August 10, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-023.pdf

Administration and Management of NASA's Grant Program

Over the past 5 years, NASA has awarded approximately $3 billion in grants to fund scientific research, scholarships, fellowships, and educational activities in support of its mission.

NASA Grants Awarded between 2006 and 2010



To examine NASA's management of its grant operation, the OIG reviewed a sample of $17.3 million in NASA grant awards and found that the Agency has not established adequate policy or internal controls to effectively administer the grant award process, review grant expenditures, or assess grantee performance. As a result, some grant funds are not being used for their intended purposes.

The OIG audit identified weaknesses in the announcement, administration, and oversight of NASA grants. Specifically, we found that NASA:

- awarded grants in lieu of contracts, contrary to Federal and NASA regulations and requirements;
- awarded grants and grant supplements contrary to NASA requirements governing unsolicited proposals;
- did not provide adequate oversight of grantee performance and expenditures; and
- awarded unauthorized and unallowable grant supplements contrary to Federal and NASA regulations.

The nature of the control weaknesses we identified in our sample led us to believe our findings reflect systemic deficiencies in the administration and management of NASA's grant program.

During the audit, we identified three grant supplements totaling $410,191 for which a contract would have been the more appropriate procurement instrument because the grantee performed services for the direct benefit of NASA that otherwise would have been performed by NASA employees or contractors. Procurement contracts are subject to statutory and regulatory requirements that generally do not apply to grants. Accordingly, use of an incorrect procurement instrument could bypass competition and other legal requirements. In addition, we found that grant officers at two Centers inappropriately awarded $7.3 million in grants and grant supplements without soliciting public proposals for the work.

We also identified internal control weaknesses in NASA's monitoring of grantee performance. Agency Procurement officials have issued minimal requirements to ensure that, once grant funds are awarded, grant officers, technical officers, and finance officials perform adequate oversight of the grantee's financial and programmatic performance. For example, the Agency does not require grant officials to perform such common grant monitoring actions as desk reviews or site visits. Further, we found that the NASA Grant and Cooperative Agreement Handbook issued by the Office of Procurement allows grantees to deviate from their proposed budgets without approval from NASA except when the change involves property, construction, or subcontract-related costs. In our view, this broad discretion to deviate from proposed budgets increases the risk that grantees will incur unauthorized or unallowable costs or expenditures unrelated to the purpose of the grant. During our

audit, we found that one grantee paid employee tuition costs totaling $7,388 even though these costs were not included in the budget approved by NASA.

NASA's limited efforts to monitor its grant awards differ markedly from those of other Federal grant-making agencies. For example, the Department of Justice's Office of Justice Programs, which in FY 2010 awarded $3 billion in grants, requires annual grantee desk reviews and recommends that such reviews be conducted semiannually. In our view, conducting periodic, comprehensive reviews of information reported by grantees using desk reviews or site visits could reduce the level of noncompliance with grant requirements, thereby reducing the risk of fraud, waste, or abuse in NASA's grant program.

We made nine recommendations to address the issues identified and to reclaim related questioned costs. Specifically, NASA needs to strengthen its policies, procedures, and internal controls to ensure that proper award instruments are used consistently; grants are solicited and awarded in an open and transparent fashion; supplements are not used when new grants should be awarded; and grantees do not incur unauthorized and unallowable costs. Following our standard procedures, we provided a draft of this report to NASA management for review and comment. However, while we received and incorporated staff technical comments as appropriate, the Agency did not provide an official response to our recommendations by the time we issued the report; therefore, the report does not contain a management response.

NASA's Grant Administration and Management (IG-11-026, September 12, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-026.pdf

NASA's Use of Recovery Act Funds to Repair Hurricane Damage at Johnson Space Center

In 2009, NASA allocated $50 million in Recovery Act funds to Johnson Space Center (JSC) to pay for the repair of buildings and facilities damaged in September 2008 by Hurricane Ike. The objective of our audit was to assess cost, schedule, and performance of the JSC repair contracts, as well as JSC's compliance with applicable OMB and NASA guidance regarding use of Recovery Act funds. We reviewed the performance of nine of the largest contractors hired: one quality assurance contractor; seven construction contractors that performed repair work directly; and JSC's existing facilities support services contractor, Computer Sciences Corporation Applied Technology Division (CSC), which performed construction oversight. In total, we reviewed $41 million of the $50 million in Recovery Act contract actions awarded by JSC.

Damage to JSC Building Caused by Hurricane Ike

Source: Johnson Space Center

In general, we found that the work performed by the nine contractors met cost, schedule, and performance milestones and that JSC's use of Recovery Act funds for these contracts complied with OMB and NASA guidance. However, we identified a number of issues pertaining to the construction-related delivery orders JSC awarded to CSC. Specifically, JSC's award of three delivery orders resulted in payment of up to $1.8 million in excessive and questionable costs; JSC did not negotiate project oversight costs; JSC paid $348,534 for questionable risk-related costs; and unauthorized persons recommended payment of CSC invoices.

CSC is NASA's fourteenth largest contractor with over $253 million in contract actions in FY 2009. Through a series of delivery orders, JSC awarded approximately $12.5 million in Recovery Act funds to CSC for construction-related hurricane repair work. CSC in turn hired subcontractors to perform the work and charged JSC a project oversight fee of nearly $2 million, or 33 percent of the subcontractors' costs. We concluded that had JSC awarded the work covered by the CSC delivery orders directly to qualified construction companies, as it did for other Recovery Act-funded hurricane repair work, it could have saved up to $1.8 million in project oversight costs.

In addition, JSC did not negotiate CSC's cost proposals for three delivery orders to ensure NASA was receiving the best value (see the following table). Two of the cost proposals exceeded the independent Government estimate, and the third contained project oversight costs totaling nearly 40 percent of total subcontractor costs. Best practices in the construction industry indicate that costs not directly related to the construction project itself, such as project oversight, overhead, and administrative labor, should equal approximately 15 percent of direct construction costs.

Subcontractor Cost and CSC Project Oversight Amounts for Delivery Orders 1011, 1168, and 1201*

Delivery Order	Subcontract Base Dollar Amount	CSC Project Oversight Amount	CSC Project Oversight (Percent)	Description
1011	$2,117,170	$550,464	26.00	Replace roof on cafeteria building
1168	$1,714,278	$599,997	35.00	Repair, caulk, and waterproof panels on 13 JSC buildings
1201	$2,083,181	$827,335	39.72	Repair, caulk, and waterproof panels on 17 JSC buildings
Total	**$5,914,629**	**$1,977,796**	**33.44**	

* The CSC Recovery Act awards included 19 delivery orders for facility repairs totaling $12.5 million. We selected three of these delivery orders for review, totaling approximately $8.2 million or 65 percent of the total Recovery Act award.

Source: CSC's delivery order proposals

Moreover, two CSC delivery orders for Recovery Act-funded hurricane repair work included $348,534 in questionable charges for risks such as subcontractor default, property damage, grounds cleanup, and hurricane mobilization. In several instances, CSC used different probabilities to account for the same risk. For example, for the risk of "Property Damage," CSC indicated a 50 percent probability of occurrence under one delivery order and a 60 percent probability under another.

Finally, the contracting officer's technical representative (COTR) delegation letter for CSC's contract allows only the COTR to recommend the payment of contractor invoices; however, JSC project and program managers who were not delegated this responsibility recommended payment of seven invoices totaling over $9 million. Allowing unauthorized individuals to make payment recommendations increases the risk that improper payments will occur.

We recommended that the Recovery Act Implementation Executive work with NASA's Assistant Administrator for Procurement to provide updated guidance or training to address the proper selection of contract vehicle and procedures to ensure that contracting officers verify contractor-proposed charges, evaluate rates proposed by the contractor, and document this determination in the contract files. We also recommended that the Assistant Administrator remind contracting officers that for contracts where a COTR has been appointed, only the COTR is authorized to recommend invoices for payment.

NASA concurred with our recommendations and proposed corrective actions we consider responsive to our recommendations.

NASA's Use of Recovery Act Funds to Repair Hurricane Damage at Johnson Space Center (IG-11-025, September 1, 2011)
http://oig.nasa.gov/audits/reports/FY11/IG-11-025.pdf

Telephone Cramming at NASA

In response to a request from the Senate Committee on Science, Commerce, and Transportation, the NASA OIG conducted a preliminary review to determine whether telephone cramming is occurring at NASA. Cramming is an unauthorized, misleading, or deceptive charge appearing on a wired or cellular telephone bill.

We reviewed billing for wired long-distance, wired local, and cellular telephone services at Kennedy Space Center and Wallops Flight Facility. Although we found a few instances of telephone cramming on a wired, local telephone service bill at Wallops, we generally found that NASA is examining its telephone bills closely and is on the lookout for such activity. Nevertheless, we suggested that NASA request that all vendors providing telecommunications services to the Agency block third-party billing to minimize the possibility of cramming charges being added to NASA's telephone bills. In addition, we recommended that NASA disseminate information on telephone cramming to the

appropriate employees at each NASA Center to ensure that Agency personnel are aware of this unscrupulous practice and that NASA does not pay for these improper charges. In response to the letter to Congress in which we summarized the results of our preliminary review, the NASA Administrator stated that the Agency would take steps to address the issues we identified.

Telephone Cramming (letter to Congress, July 11, 2011)
http://oig.nasa.gov/readingRoom/PhoneCramming.pdf

Thefts of Valuable Metals from NASA Centers

Over the past year the OIG has investigated and referred for criminal prosecution several individuals for stealing valuable metals from NASA storage areas and worksites. These losses have been significant – more than 5 tons of copper and other metals with an estimated value of $120,000 have been stolen from Goddard Space Flight Center, Johnson Space Center, and Marshall Space Flight Center. Based on information we learned during the course of these investigations, we drafted a memorandum to NASA managers describing Agency practices that appear to have facilitated these losses and recommending that NASA take corrective action. Among the issues we highlighted were insufficient security and inventory practices. We also found that NASA contract administrators were not complying with procedures that require NASA to recoup the value of scrap metal from its contractors. Specifically, we found that NASA was allowing contractors to retain rather than return scrap metal to the Agency. We recommended that NASA take steps to enhance its security and inventory controls over copper and other valuable metals and ensure that personnel are aware of and adhere to proper disposal procedures.

Former NASA Contractor Sentenced for Copper Theft

A former contractor employee at Goddard Space Flight Center pleaded guilty and was sentenced to 1 year of supervised probation, 75 hours of community service, and ordered to pay restitution of $1,315 for stealing copper tubing from a mechanical equipment room in the basement of a building at Goddard. OIG investigators recovered the copper and returned it to NASA for use in ongoing construction projects.

Former NASA Contractor Charged with Copper Theft

In August 2011, a former NASA contractor employee was charged in Federal court with stealing copper from Johnson Space Center. The investigation, conducted by the NASA OIG in cooperation with NASA security, led to admissions by the employee that he stole copper from JSC and sold it at scrap yards in the area. In April 2011, the same contractor employee received deferred adjudication of misdemeanor theft charges for stealing tools from JSC. Under the agreement, the charges will be dismissed if the employee pays a $500 fine and successfully completes 2 years of probation and 60 hours of community service.

Former Human Resources Specialist Debarred for Ethics Violation

A former NASA human resources specialist and cooperative education program coordinator has been debarred from doing business with the Federal Government for 18 months as a result of her conviction on Federal conflict of interest charges. The former employee pleaded guilty to using her official position to advance her husband's employment at Langley Research Center.

Former NASA Contractor Employee Charged with Theft

In September 2011, a former NASA contractor employee was charged with felony theft for timecard and travel voucher fraud. The OIG investigation revealed that the employee falsified his timecard and created and submitted to the Agency fraudulent travel receipts resulting in total losses to NASA of $7,833. The contractor that employed this individual has reimbursed NASA for the fraudulent claims.

United Space Alliance Contractor Employee Sentenced for Theft

In July 2011, a United Space Alliance (USA) employee pleaded guilty in the U.S. District Court for the Middle District of Florida to one count of theft of Government property. The employee used USA's procurement system to purchase air conditioning parts and equipment for his private business. In September, the contractor employee was sentenced to 12 months' probation, fined $5,000, and ordered to pay restitution of $7,500.

Marshall Space Flight Center Employee Sentenced

In May 2011, a NASA Marshall Space Flight Center employee entered a guilty plea before a U.S. Magistrate Judge in the Northern District of Alabama to two counts of possessing firearms and dangerous weapons and one count of violating NASA regulations. The employee was sentenced to serve 12 months' probation and fined $2,000. The employee carried a loaded handgun on the Center and had a second handgun and a knife in his motor vehicle, which was parked in the Center's parking lot.

Former NASA Contractor Employee Indicted

A former NASA contractor employee was indicted in April 2011 for felony theft of services by a grand jury in Harris County, Texas. The employee used a Johnson Space Center telephone to make personal long-distance calls. Toll charges for the calls exceeded $9,000.

LEGAL ISSUES

Cloud Computing and Inspectors General

NASA OIG legal staff participated in an inter-agency working group that is considering issues related to ensuring OIG access to agency information and evidence that is stored outside the agencies in a cloud-computing environment. Access to cloud-based information is governed by contracts between the agencies and the providers, and the OIG community is working to ensure that OIGs maintain access to this information.

New Media

OIG legal staff contributed to various new media projects both internally and externally during the reporting period. Staff supported the OIG's ongoing Facebook and Twitter activities, which are part of a continuing effort to make products available in a timely manner to a wider range of audiences. In addition, the legal staff participated with other OIG attorneys in a Government-wide working group that developed an information-sharing database, hosted on an OMB website, for OIG attorneys throughout the Government.

Training to Clients

During this reporting period, OIG legal staff briefed OIG managers on legal issues in employment law. In addition, the lawyers made presentations on legal privileges and provided other relevant legal updates.

REGULATORY REVIEW

During this reporting period, the OIG reviewed and commented on 17 NASA directives and regulations addressing issues ranging from counterintelligence and counterterrorism to human-rating requirements for space systems and financial management requirements.

OUTREACH ACTIVITIES

During this reporting period, the OIG engaged in a number of outreach activities that involved coordination with the Agency, other OIGs, and other Federal agencies.

- OI's Computer Crimes Division (CCD) participated in the annual Defcon Computer Security Conference in Las Vegas, Nevada. Defcon is attended by top researchers and members of industry to discuss cybersecurity-related topics. A "Meet the Fed 2.0" panel discussed topics such as the challenges of catching criminals in cyberspace, what types of skills are needed to become a computer crimes investigator, and the scope and focus of CCD's mission. In addition to a representative from CCD, the panel included special agents from the Air Force Office of Special Investigations, the Naval Criminal Investigative Service, and the Army Criminal Investigation Command. CCD also participated in a new event – "Defcon for Kids" – where children ages 7–16 were invited to learn about computer-related topics.

- OA's Financial Management Directorate participated in monthly meetings of the Financial Statement Audit Network. Representatives from the Federal Accounting Standards Advisory Board, GAO, OMB, and other Federal OIGs met to discuss current issues in financial management, including impacts of accounting and auditing standards, as well as reporting requirements affecting Federal agency and Government-wide financial statements.

- The Inspector General, Assistant Inspector General for Investigations, and OA's Director of the Science and Aeronautics Research Directorate participated in a conference on fraud in Federal Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) Programs titled "Combating SBIR/STTR Fraud – Congress, Agencies, and IGs Working Together." The conference was jointly hosted by the NASA and National Science Foundation OIGs.

- OI and OIG legal representatives continued participating in a Government-wide Counterfeit Parts Working Group that is developing a strategy for reducing vulnerability to counterfeit parts entering Federal Government supply channels. The Working Group's activities are being conducted in collaboration with a Federal Government-wide joint strategic plan on intellectual property enforcement.

- OI also continued participating in meetings at the National Intellectual Property Rights Coordination Center, Arlington, Virginia, to further coordination in the areas of counterfeit parts detection, prevention, and Agency-wide enforcement of addressing fraudulent space products.

- The Deputy Assistant Inspector General for Audits and OA's Mission Support Director participated in the Federal Recovery Accountability and Transparency Board Working Group meeting, during which agency representatives discussed Board activities including the deployment of a suspension and debarment survey, IG published works, and recipient data quality issues. The NASA OIG is hosting the quarterly meetings during 2011.

AWARDS

Presentation to Assistant U.S. Attorney and Legal Assistant

On August 8, 2011, NASA OIG Special Agent Phil Mazzella (far left) and Resident Agent in Charge Patty Searle (far right) from Kennedy Space Center recognized Assistant U.S. Attorney Greg McMahon and Legal Assistant Danielle Durst for their assistance in a case that resulted in the convictions of former University of Florida professor Samim Anghaie and his wife for SBIR fraud.

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Appendix A. Inspector General Act Reporting Requirements

INSPECTOR GENERAL ACT CITATION	REQUIREMENT DEFINITION	CROSS-REFERENCE PAGE NUMBER(S)
Section 4(a)(2)	Review of Legislation and Regulations	35
Section 5(a)(1)	Significant Problems, Abuses, and Deficiencies	6–34
Section 5(a)(2)	Recommendations for Corrective Actions	6–34
Section 5(a)(3)	Prior Significant Audit Recommendations Yet to Be Implemented	44–46
Section 5(a)(4)	Matters Referred to Prosecutive Authorities	49
Sections 5(a)(5) and 6(b)(2)	Summary of Refusals to Provide Information	None
Section 5(a)(6)	OIG Audit Products Issued – Includes Total Dollar Values of Questioned Costs, Unsupported Costs, and Recommendations that Funds Be Put to Better Use	42–43
Section 5(a)(7)	Summary of Significant Audits and Investigations	3–34
Section 5(a)(8)	Total Number of Reports and Total Dollar Value for Audits with Questioned Costs	47
Section 5(a)(9)	Total Number of Reports and Total Dollar Value for Audits with Recommendations that Funds Be Put to Better Use	47
Section 5(a)(10)	Summary of Prior Audit Products for which No Management Decision Has Been Made	47
Section 5(a)(11)	Description and Explanation of Significant Revised Management Decisions	None
Section 5(a)(12)	Significant Management Decisions with which the Inspector General Disagreed	None
Section 5(a)(13)	Reporting in Accordance with Section 5(b) of the Federal Financial Management Improvement Act of 1996 Remediation Plan	None
Section 5(a)(14)	Peer Review Conducted by Another OIG (Last peer review of NASA OIG was June 2010)	None
Section 5(a)(15)	Outstanding Recommendations from Peer Reviews of the NASA OIG	None
Section 5(a)(16)	Outstanding Recommendations from Peer Reviews Conducted by the NASA OIG (see below)	None

Peer Review Recommendations Closed

On October 12, 2010, the NASA OIG issued a report on its peer review of the Department of State and Broadcasting Board of Governors Office of Inspector General that contained seven recommendations. As of September 30, 2011, those recommendations had all been resolved and closed.

Appendix B. Statistical Information

Table 1: Audit Products and Impact

During the period April 1 through September 30, 2011, the Office of Audits issued 12 products.

REPORT NO./ DATE ISSUED	TITLE	IMPACT
Audit Area: Space Operations and Exploration		
IG-11-022 6/30/11	NASA's Challenges Certifying and Acquiring Commercial Crew Transportation Services	Identified issues and challenges that NASA must address to successfully transition to acquiring commercial crew transportation services to low Earth orbit.
IG-11-027 9/29/11	A Review of NASA's Replacement of Radiation Monitoring Equipment on the International Space Station	Improved management of the Project that is working to meet the Agency's radiation monitoring needs aboard the ISS.
Audit Area: Acquisition and Project Management		
IG-11-018 6/2/11	NASA's Management of the NPOESS Preparatory Project	Increased consideration of the financial and schedule risks NASA may incur from partnership agreements.
IG-11-009 6/8/11	NASA's Management of the Mars Science Laboratory Project	Improved awareness of factors impacting mission success and readiness for launch of the MSL, thereby increasing the probability of success and minimizing the risk of incurring additional costs.
Audit Area: Infrastructure and Facilities Management		
IG-11-020 6/22/11	NASA's Hangar One Re-Siding Project	NASA could potentially save $32.8 million if Hangar One at Moffett Field is not re-sided.
IG-11-024 8/4/11	NASA Infrastructure and Facilities: Assessment of Data Used to Manage Real Property Assets	Identified issues that NASA must address to effectively manage its real property assets.
Audit Area: Other		
IG-11-023 8/10/11	NASA's Payments for Academic Training and Degrees	Strengthened policies, procedures, and internal controls for the Agency's academic training program and identified $2.3 million in questionable academic training payments.
N/A 7/11/11	Telephone Cramming (letter to Congress)	Improved awareness of and NASA's efforts to block unscrupulous phone cramming.
IG-11-025 9/1/11	NASA's Use of Recovery Act Funds to Repair Hurricane Damage at Johnson Space Center	Identified contracting practices that may have resulted in the Agency unnecessarily spending up to $1.8 million in Recovery Act funds.

Table 1: Audit Products and Impact (continued)

REPORT NO./ DATE ISSUED	TITLE	IMPACT
Audit Area: Other (continued)		
IG-11-026 9/12/11	NASA's Grant Administration and Management	Strengthened policies, procedures, and internal controls related to the award and management of grant funds and identified $299,599 in questioned costs related to unauthorized and unallowable expenditures.
Audit Area: Quality Control Review		
IG-11-021 7/5/11	Final Memorandum on the Quality Control Review of the KPMG LLP and the Defense Contract Audit Agency Office of Management and Budget Circular A-133 Audit of the Smithsonian Institution for the Fiscal Year Ended September 30, 2009	Ensured compliance with generally accepted government auditing standards and OMB Circular A-133 requirements.
Audit Area: Initial Review		
ML-11-001 5/31/11	Final Memorandum on the Initial Review of the Brooks & Associates Audit Report of the Goddard Employee Welfare Association Financial Statements for the Fiscal Year Ended September 30, 2009	Ensured compliance with generally accepted government auditing standards.

Table 2: Prior Audit Recommendations Yet to Be Implemented

As shown in Table 2, 90 of 133 recommendations, from 25 audit reports, remain open. Of these open recommendations, 57 are from 10 reports issued during the last semiannual reporting period. The oldest open recommendation, related to IT security, is from FY 2005.

REPORT NO./ DATE ISSUED	TITLE	DATE RESOLVED	NUMBER OF RECOMMENDATIONS		LATEST TARGET CLOSURE DATE
			OPEN	CLOSED	
NEW SINCE LAST REPORTING PERIOD					
Audit Area: Space Operations and Exploration					
IG-11-016 3/15/11	Preparing for the Space Shuttle Program's Retirement: Review of NASA's Controls over Public Sales of Space Shuttle Property	4/5/2011	7	0	11/1/2011
IG-11-003 11/10/10	Final Memorandum Assessing Launch Services Program's Interim Response Team Training Requirements	11/10/2010	3	0	12/30/2011
Audit Area: Acquisition and Project Management					
IG-11-012 2/17/11	Review of NASA's Acquisition of Commercial Launch Services	2/17/2011	1	0	9/29/2011[1]
IG-11-010-R 1/12/11	Review of NASA's Management of Its Small Business Innovation Research Program (Redacted)	1/12/2011	7	3	9/30/2011[2]
Audit Area: Information Technology					
IG-11-017 3/28/11	Inadequate Security Practices Expose Key NASA Network to Cyber Attack	3/28/2011	3	0	11/30/2012
IG-11-009 12/7/10	Preparing for the Space Shuttle Program's Retirement: A Review of NASA's Disposition of Information Technology Equipment	1/18/2011	2	2	1/31/2012
Audit Area: Financial Management					
IG-11-007-R 11/16/10	Final Report, "Information Technology Management Letter Comments," Prepared by Ernst & Young LLP in Connection with the Audit of NASA's Fiscal Year 2010 Financial Statements (Redacted)	12/14/2010	4	0	11/30/2011
IG-11-006 11/15/10	Audit of the National Aeronautics and Space Administration's Fiscal Year 2010 Financial Statements	11/15/2010	10	0	11/30/2011
IG-11-001 10/12/10	Final Report, "Internet and Intranet Security Assessments," Prepared by Ernst & Young LLP in Connection with the Audit of NASA's Fiscal Year 2010 Financial Statements	10/12/2010	7	0	11/30/2011

[1] The OIG is reviewing a request for an extension from management.
[2] The OIG is working with management to determine a revised target closure date.

Table 2: Prior Audit Recommendations Yet to Be Implemented (continued)

REPORT NO./ DATE ISSUED	TITLE	DATE RESOLVED	NUMBER OF RECOMMENDATIONS		LATEST TARGET CLOSURE DATE
			OPEN	CLOSED	
Audit Area: Other					
IG-11-004 12/13/10	Review of the Jet Propulsion Laboratory's Occupational Safety Program	1/18/2011	13	2	3/31/2012
REPORTED IN PREVIOUS SEMIANNUAL REPORTS					
Audit Area: Safety (Managing Risk)					
IG-08-025 9/19/08	[A NASA] Center's Security Program Needed Improvement	9/19/2008	4	4	9/30/2012
Audit Area: Space Operations and Exploration					
IG-10-023 9/21/10	Review of NASA's Tracking and Data Relay Satellite System	9/21/2010	1	3	12/16/2011
IG-10-016 7/6/10	NASA's Astronaut Corps: Status of Corrective Actions Related to Health Care Activities	7/6/2010	1	1	12/31/2012
IG-10-011 3/29/10	Review of the Constellation Program's Request to Discontinue Using the Metric System of Measurement	5/3/2010	2	1	6/30/2012
IG-10-011-a 5/3/10	Addendum				
Audit Area: Acquisition and Project Management					
IG-10-015 6/18/10	Review of NASA's Microgravity Flight Services	6/18/2010	1	2	12/31/2012
IG-09-017 7/27/09	Opportunities to Improve the Management of the Space Flight Awareness Honoree Launch Conference Event	7/27/2009	1	0	7/29/2011[2]
Audit Area: Information Technology					
IG-10-024 9/16/10	Review of NASA's Management and Oversight of Its Information Technology Security Program	9/16/2010	3	0	4/30/2012
IG-10-019 9/14/10	Audit of NASA's Efforts to Continuously Monitor Critical Information Technology Security Controls	9/14/2010	2	0	2/28/2012
IG-10-018-R 8/5/10	Audit of Cybersecurity Oversight of [a NASA] System (Redacted)	8/5/2010	10	5	12/30/2011

[2] The OIG is working with management to determine a revised target closure date.

Table 2: Prior Audit Recommendations Yet to Be Implemented (continued)

REPORT NO./ DATE ISSUED	TITLE	DATE RESOLVED	NUMBER OF RECOMMENDATIONS		LATEST TARGET CLOSURE DATE
			OPEN	CLOSED	
Audit Area: Information Technology (continued)					
IG-10-013 5/13/10	Review of the Information Technology Security of [a NASA Computer Network]	7/1/2010	2	0	9/30/2011[1]
IG-10-013-a 7/1/10	Addendum				
IG-09-015 4/27/09	NASA's Processes for Providing Personal Identity Verification (PIV) Cards Were Not Completely Effective in Meeting Federal Requirements	4/27/2009	2	4	12/31/2011
IG-09-015-a 6/4/09	Addendum				
IG-07-014 6/19/07	Controls over the Detection, Response, and Reporting of Network Security Incidents Needed Improvement at Four NASA Centers Reviewed	6/19/2007	1	7	9/30/2011[2]
IG-05-016 5/12/05	NASA's Information Technology Vulnerability Assessment Program	5/12/2005	1	3	2/29/2012
Audit Area: Other					
IG-10-021 8/23/10	Final Memorandum on the Office of Inspector General's Review of the Fleet Management Program at the Jet Propulsion Laboratory	8/23/2010	1	2	3/30/2012
IG-09-003 11/13/08	Final Memorandum on the Review of NASA Stolen Property at Goddard Space Flight Center and Marshall Space Flight Center	11/13/2008	1	4	9/30/2012

[1] The OIG is reviewing a request for an extension from management.
[2] The OIG is working with management to determine a revised target closure date.

Table 3: Audits with Questioned Costs

	NUMBER OF AUDIT REPORTS	TOTAL QUESTIONED COSTS
No management decision made by beginning of period	1	$2,700,000
Issued during period	3	$4,816,615
Needing management decision during period	4	$7,516,615
Management decision made during period	1	$2,700,000
Amounts agreed to by management		371,612
Amounts not agreed to by management		2,328,388
No management decision at end of period		
Less than 6 months old	3	$4,816,615
More than 6 months old	0	0

Table 4: Audits with Recommendations that Funds Be Put to Better Use

	NUMBER OF AUDIT REPORTS	TOTAL FUNDS TO BE PUT TO BETTER USE
No management decision made by beginning of period	2	$74,300,000
Issued during period	1	$32,800,000
Needing management decision during period	3	$107,100,000
Management decision made during period	1	$13,300,000
Amounts agreed to by management		1,858,059
Amounts not agreed to by management		11,441,941
No management decision at end of period		
Less than 6 months old	1	$32,800,000
More than 6 months old	1	$61,000,000

Table 5: Status of A-133* Findings and Questioned Costs Related to NASA Awards

Total audits reviewed		36
Audits with findings		28
Findings and Questioned Costs		
	NUMBER OF FINDINGS	QUESTIONED COSTS
Management decisions pending, beginning of reporting period	187	$39,978,397
Findings added during the reporting period	87	$ 2,010,889
Management decision made during reporting period		
Agreed to by management	(10)	n/a
Not agreed to by management	(7)	($21,455,053)
Management decisions pending, end of reporting period	257	$20,534,233

* OMB Circular A-133, "Audits of States, Local Governments, and Non-Profit Organizations," requires Federal award recipients to obtain audits of their Federal awards.

Table 6: Legal Activities and Reviews

FOIA matters	21
Appeals	2
Inspector General subpoenas issued	69
Regulations reviewed	17

Table 7: Office of Investigations Activities

a. Complaint Intake Disposition

SOURCE OF COMPLAINT	ZERO FILES[1]	ADMINISTRATIVE INVESTIGATIONS[2]	MANAGEMENT REFERRALS[3]	PRELIMINARY INVESTIGATIONS[4]	TOTAL
Hotline	29	6	27	12	74
All others	55	13	19	72	159
Total	**84**	**19**	**46**	**84**	**233**

[1] Zero files are complaints for which no action is required or that are referred to NASA management for information only or to another agency.
[2] Administrative investigations include non-criminal matters initiated by OI as well as hotline complaints referred to OA.
[3] Management referrals are complaints referred to NASA management for which a response is requested.
[4] Preliminary investigations are complaints where additional information must be obtained prior to initiating a full criminal or civil investigation.

b. Full Investigations Opened this Reporting Period

Full criminal/civil investigations*	7

* Full investigations evolve from preliminary investigations that result in a reasonable belief that a violation of law has taken place.

c. Cases Pending at End of Reporting Period

Preliminary investigations	104
Full criminal/civil investigations	95
Administrative investigations	42
Total	**241**

d. Qui Tam[1] Investigations[2]

Opened this reporting period	3
Pending at end of reporting period	11

[1] A qui tam is a civil complaint filed by an individual on behalf of the U.S. Government under the civil False Claims Act.
[2] The number of qui tam investigations is a subset of the total number of investigations opened and pending.

Table 7: Office of Investigations Activities (continued)

e. Judicial Actions

Cases referred	38
Indictments/criminal informations	16
Convictions/plea bargains	13
Sentencing/pretrial diversions	13
Civil settlements/judgments	6

f. Administrative Actions

Recommendations to NASA management for disciplinary action		**16**
Involving a NASA employee	9	
Involving a contractor firm	1	
Involving a contractor employee	6	
Administrative/disciplinary actions taken		**21**
Against a NASA employee	12	
Against a contractor employee	9	
Recommendations to NASA management on program improvements		**7**
Matters of procedure	7	
Safety issues or concerns	–	
Program improvement actions taken		**3**
Matters of procedure	3	
Referrals to NASA management for review and response		**17**
Referrals to NASA management – information only		**13**
Referrals to the Office of Audits		**6**
Referrals to Security or other agencies		**8**
Suspensions or debarments from Government contracting		**3**
Involving an individual	2	
Involving a contractor firm	1	

g. Investigative Receivables and Recoveries

Judicial	$2,974,208	
Administrative*	$1,703,436	
Total	**$4,677,644**	
Total to NASA		**$1,825,994**

* Includes amounts for cost savings to NASA as a result of investigations.

Defense Contract Audit Agency Audits of NASA Contractors

The Defense Contract Audit Agency (DCAA) provides audit services to NASA on a reimbursable basis. DCAA provided the following information during this period on reports involving NASA contract activities.

DCAA Audit Reports Issued

During this period, DCAA issued 103 audit reports on contractors who do business with NASA. Corrective actions taken in response to DCAA audit report recommendations usually result from negotiations between the contractors doing business with NASA and the Government contracting officer with cognizant responsibility (e.g., the Defense Contract Management Agency and NASA). The cognizant agency responsible for administering the contract negotiates recoveries with the contractor after deciding whether to accept or reject the questioned costs and recommendations for funds to be put to better use. The following table shows the amounts of questioned costs and funds to be put to better use included in DCAA reports issued during this semiannual reporting period and the amounts that were agreed to during the reporting period.

Table 8: DCAA Audit Reports with Questioned Costs and Recommendations that Funds Be Put to Better Use; Amounts Agreed To[1, 2]

	AMOUNTS IN ISSUED REPORTS	AMOUNTS AGREED TO[3]
Questioned costs	$117,953,000	$1,293,000
Funds to be put to better use	$68,713,000	$26,981,000

[1] This data is provided to the NASA OIG by DCAA and may include forward pricing proposals, operations, incurred costs, cost accounting standards, and defective pricing audits. Because of limited time between availability of management information system data and legislative reporting requirements, there is minimal opportunity for DCAA to verify the accuracy of reported data. Accordingly, submitted data is subject to change based on subsequent DCAA authentication.

[2] The data presented does not include statistics on audits that resulted in contracts not awarded or in which the contractor was not successful.

[3] Amounts agreed to include amounts from reports issued in previous semiannual reporting periods.

Appendix C. Glossary and Acronyms

Glossary

Administrative Investigation. An administrative investigation is an inquiry into allegations of misconduct, wrongdoing, or administrative matters, the results of which could lead to disciplinary action.

Disallowed Cost (the IG Act of 1978 definition). A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the Government.

Investigative Recoveries. Investigative recoveries are the total dollar value of (1) recoveries during the course of an investigation (before any criminal or civil prosecution); (2) court (criminal or civil) ordered fines, penalties, and restitutions; and (3) out-of-court settlements, including administrative actions resulting in noncourt settlements.

Investigative Referrals. Investigative referrals are cases that require additional investigative work, civil or criminal prosecution, or disciplinary action. Those 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 to one or more of these categories.

Judicial Actions. Investigative cases referred for prosecution that are no longer under the jurisdiction of the OIG, except for cases on which further administrative investigation may be necessary. This category comprises 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. Indictments and convictions represent the number of individuals or organizations indicted or convicted (including pleas and civil judgments).

Latest Target Closure Date. Management's current estimate of the date it will complete the agreed-upon corrective action(s) necessary to close the audit recommendation(s).

Management Decision (the IG Act of 1978 definition). 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 that management concludes are necessary.

Questioned Cost (the IG Act of 1978 definition). 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.

Recommendation Resolved. A recommendation is considered resolved when (1) management agrees to take the recommended corrective action, (2) the corrective action to be taken is resolved through agreement between management and the OIG, or (3) the Audit Followup Official determines whether the recommended corrective action should be taken.

Recommendation that Funds Be Put to Better Use (the IG Act of 1978 definition). A recommendation by the 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 pre-award reviews of contract or grant agreements; or (6) any other savings that are specifically identified. (Note: Dollar amounts identified in this category may not always allow for direct budgetary actions but generally allow the Agency to use the amounts more effectively in the accomplishment of program objectives.)

Qui Tam. Latin for "who as well." A lawsuit brought by a whistleblower on behalf of the Government under the civil False Claims Act, where a share of recoveries can be awarded to the whistleblower.

Unsupported Cost (the IG Act of 1978 definition). An unsupported cost is a cost that is questioned by the OIG because the OIG found that, at the time of the audit, the cost was not supported by adequate documentation.

Acronyms

ARI	Advanced Radiation Instrumentation
ARMD	Aeronautics Research Mission Directorate
CCD	Computer Crimes Division
COTR	Contracting Officer's Technical Representative
CSC	Computer Sciences Corporation Applied Technology Division
DCAA	Defense Contract Audit Agency
DOJ	Department of Justice
FAA	Federal Aviation Administration
FISMA	Federal Information Security Management Act
FOIA	Freedom of Information Act
FY	Fiscal Year
GAO	Government Accountability Office
IG	Inspector General
ISS	International Space Station
IT	Information Technology
ITAR	International Traffic in Arms Regulations
JSC	Johnson Space Center
MPCV	Multi-Purpose Crew Vehicle
MSL	Mars Science Laboratory
NASA	National Aeronautics and Space Administration
NOAA	National Oceanic and Atmospheric Administration
NPOESS	National Polar-orbiting Operational Environmental Satellite System
NPP	NPOESS Preparatory Project
NRA	NASA Research Announcement

NSF	National Science Foundation
OA	Office of Audits
OI	Office of Investigations
OIG	Office of Inspector General
OMB	Office of Management and Budget
OMP	Office of Management and Planning
OPS	Office of Protective Services
PCBs	Polychlorinated Biphenyls
PIV	Personal Identity Verification
RFI	Request for Information
RPMS	Real Property Management System
SBIR	Small Business Innovation Research
SLS	Space Launch System
SOC	Security Operations Center
STTR	Small Business Technology Transfer
USA	United Space Alliance

Appendix D. NASA OIG Offices of Audits and Investigations

NASA OIG Headquarters
300 E Street SW, Suite 8V39
Washington, DC 20546-0001
Tel: 202-358-1220

Ames Research Center
NASA Office of Inspector General
Ames Research Center
Moffett Field, CA 94035-1000
Tel: 650-604-2679 Audits
Tel: 650-604-3682 Investigations

Glenn Research Center
NASA Office of Inspector General
Mail Stop 14-9
Glenn Research Center
at Lewis Field
Cleveland, OH 44135-3191
Tel: 216-433-9714 Audits
Tel: 216-433-2364 Investigations

Goddard Space Flight Center
NASA Office of Inspector General
Code 190
Goddard Space Flight Center
Greenbelt, MD 20771-0001
Tel: 301-286-6443 Audits
Tel: 301-286-9316 Investigations

NASA Office of Inspector General
Office of Investigations
402 East State Street
Room 3036
Trenton, NJ 08608
Tel: 609-656-2543

Jet Propulsion Laboratory
NASA Office of Inspector General
Jet Propulsion Laboratory
4800 Oak Grove Drive
Pasadena, CA 91109-8099

Office of Audits
Mail Stop 180-202
Tel: 818-354-3360

Office of Investigations
Mail Stop 180-203
Tel: 818-354-6630

NASA Office of Inspector General
Office of Investigations
Glenn Anderson Federal Building
501 West Ocean Boulevard
Suite 5120
Long Beach, CA 90802-4222
Tel: 562-951-5480

Johnson Space Center
NASA Office of Inspector General
Lyndon B. Johnson Space Center
2101 NASA Parkway
Houston, TX 77058-3696

Office of Audits
Mail Stop W-JS
Building 1, Room 161
Tel: 281-483-0483

Office of Investigations
Mail Stop W-JS2
Building 45, Room 514
Tel: 281-483-8427

Kennedy Space Center
NASA Office of Inspector General
Mail Stop KSC/OIG
Post Office Box 21066
Kennedy Space Center, FL
32815-0066
Tel: 321-867-3153 Audits
Tel: 321-867-4714 Investigations

Langley Research Center
NASA Office of Inspector General
Langley Research Center
9 East Durand Street
Mail Stop 375
Hampton, VA 23681-2111
Tel: 757-864-8562 Audits
Tel: 757-864-3263 Investigations

Marshall Space Flight Center
NASA Office of Inspector General
Mail Stop M-DI
Marshall Space Flight Center, AL
35812-0001
Tel: 256-544-1149 Audits
Tel: 256-544-9188 Investigations

Stennis Space Center
NASA Office of Inspector General
Office of Investigations
Building 3101, Room 119
Stennis Space Center, MS
39529-6000
Tel: 228-688-1493

Website Address:
http://oig.nasa.gov

Cyberhotline:
http://oig.nasa.gov/hotline.html

Toll-Free Hotline:
1-800-424-9183 or
TDD: 1-800-535-8134

NASA OFFICE OF Inspector General

HOTLINE:

1-800-424-9183 / TDD: 1-800-535-8134

GO TO: *http://oig.nasa.gov/hotline.html*

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P.O. BOX 23089, L'Enfant Plaza Station
Washington, DC 20026