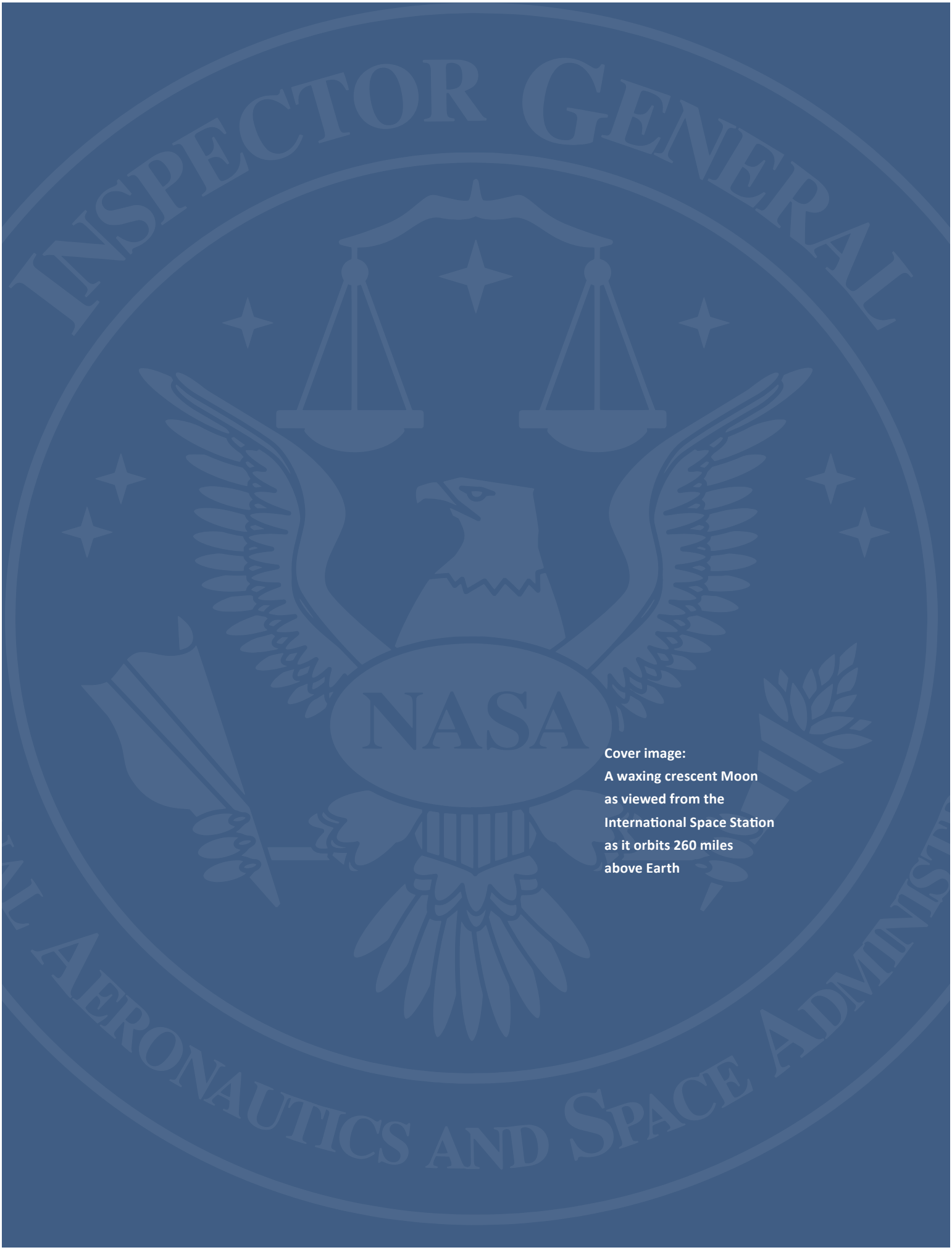
NASA OFFICE OF INSPECTOR GENERAL

SEMIANNUAL REPORT

OCTOBER 1, 2019–MARCH 31, 2020



Cover image:
A waxing crescent Moon as viewed from the International Space Station as it orbits 260 miles above Earth

FROM THE INSPECTOR GENERAL

In May 2019, NASA announced the Artemis program, setting the ambitious goal of returning American astronauts to the Moon by 2024. Over the past decade, the Office of Inspector General (OIG) has conducted extensive oversight work in each of the programs that will play a critical role in making this goal a reality. For example, during the current reporting period, the OIG issued three audits examining issues central to a successful human return to the Moon's surface:

- ***NASA's Management of Space Launch System Program Costs and Contracts (IG-20-012).*** Key to the Artemis program is the Space Launch System (SLS), a two-stage, heavy-lift rocket that will launch the Orion Multi-Purpose Crew Vehicle (Orion) into space. NASA contracted with The Boeing Company (Boeing) to provide the launch system's Core Stage and Upper Stage; Aerojet-Rocketdyne (Aerojet), the vehicle's RS-25 Engines; and Northrop Grumman, the Solid Rocket Boosters. This audit found that NASA continues to struggle with managing SLS Program costs and schedules as the launch date for the first integrated SLS/Orion mission slips further. Specifically, each of the major element contracts for building the SLS for the first Artemis has experienced technical challenges, performance issues, and requirement changes that collectively have resulted in $2 billion of cost overruns and increases, with another $1.4 billion in cost overruns expected before the first launch.

- ***Audit of NASA's Development of Its Mobile Launchers (IG-20-013).*** Critical to NASA's efforts to return American astronauts to the Moon is the development of two mobile launchers that will serve as the ground structure to assemble, process, transport, and launch the integrated SLS/Orion system. The first mobile launcher (ML-1)—originally constructed in 2010 for the since-canceled Constellation Program at a cost of $234 million—required large-scale modifications to support the SLS and is nearing completion. NASA is also developing a second mobile launcher (ML-2) for future, larger variants of the SLS at a cost of $486 million. In this audit, we found that NASA has greatly exceeded its cost and schedule targets in developing ML-1: as of January 2020, the ML-1 modification project has cost $693 million—$308 million more than the Agency's March 2014 budget estimate—and is running more than 3 years behind schedule. NASA has taken positive steps to address lessons learned in developing ML-2 but is missing opportunities to improve project management and oversight.

- ***NASA's Development of Ground and Flight Application Software for the Artemis Program (IG-20-014).*** NASA is involved in multiple software development projects needed to safely launch and track the integrated SLS/Orion system: (1) the Spaceport Command and Control System, which will operate ground equipment, such as pumps, motors, and valves, and monitor Orion and SLS during launch preparations, and (2) the Ground and Flight Application Software (GFAS), which will interface with flight systems and ground crews. In this audit, we evaluated NASA's development of GFAS and found Agency managers have taken appropriate steps to manage the project by

implementing a flexible software development process and exercising appropriate oversight and risk management. However, we found that challenges from simultaneous hardware and software development efforts resulted in increased development costs.

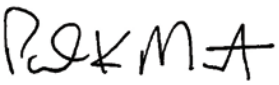
At the same time, our Office of Investigations continues to pursue allegations involving misuse of NASA funds; misconduct by NASA employees, contractors, and grant recipients; and cyberattacks on Agency systems.

Finally, during this reporting period, we issued our annual report identifying what we consider to be the top management and performance challenges facing NASA in 2020:

- Landing Humans on the Moon by 2024
- Improving Management of Major Projects
- Attracting and Retaining a Highly Skilled Workforce
- Sustaining a Human Presence in Low Earth Orbit
- Improving Oversight of Contracts, Grants, and Cooperative Agreements
- Addressing Long-standing Information Technology Governance and Security Concerns
- Sustaining Infrastructure and Facilities

Moving forward, the OIG plans to continue conducting audits and investigations that focus on NASA's efforts to meet these and other significant Agency challenges.

This Semiannual Report summarizes the OIG's activities and accomplishments between October 1, 2019, and March 31, 2020. We hope you find it informative.



Paul K. Martin
Inspector General
April 30, 2020

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AERONAUTICS AND SPACE ADMINISTRATION

NASA'S TOP MANAGEMENT AND PERFORMANCE CHALLENGES

A United Launch Alliance Atlas V rocket with Boeing's CST-100 Starliner spacecraft onboard is seen on the launch pad at Space Launch Complex 41 ahead of the Orbital Flight Test mission at Cape Canaveral Air Force Station in Florida

As required by the Reports Consolidation Act of 2000, the annual report summarized below provided the OIG's independent assessment of the top management and performance challenges facing NASA.

In our November 2019 report, we discussed the top management and performance challenges facing NASA under the following topics:

- Landing Humans on the Moon by 2024
- Improving Management of Major Projects
- Attracting and Retaining a Highly Skilled Workforce
- Sustaining a Human Presence in Low Earth Orbit
- Improving Oversight of Contracts, Grants, and Cooperative Agreements
- Addressing Long-standing Information Technology Governance and Security Concerns
- Sustaining Infrastructure and Facilities

In deciding whether to identify an issue as a "top challenge," we considered its significance in relation to NASA's mission; whether its underlying causes are systemic in nature; and its susceptibility to fraud, waste, and abuse. Identification of an issue as a top challenge does not necessarily denote significant deficiencies or lack of attention on NASA's part. Rather, these issues are long-standing and inherently difficult challenges central to the Agency's mission and, as such, will likely remain challenges for many years. Consequently, these issues require consistent, focused attention from NASA management and ongoing engagement on the part of Congress, the public, and other stakeholders. For our part, the OIG plans to continue conducting audits and investigations that focus on NASA's efforts to meet these and other challenges.

2019 Report on NASA's Top Management and Performance Challenges (November 13, 2019)

(Report)

(Video)

"Black Marble" image of Earth at night showing the night lights of the Americas

OFFICE OF AUDITS

The SLS's Core Stage is moved into the Vehicle Assembly Building at Kennedy Space Center

SPACE OPERATIONS AND HUMAN EXPLORATION

Space operations and human exploration are among NASA's highest-visibility missions, with the Agency currently operating the International Space Station (ISS or Station), managing the commercial crew and cargo programs that support the Station, and planning for future exploration beyond low Earth orbit with the SLS and Orion Multi-Purpose Crew Vehicle (Orion).

NASA'S MANAGEMENT OF SPACE LAUNCH SYSTEM PROGRAM COSTS AND CONTRACTS

In May 2019, NASA announced the Artemis program, setting the ambitious goal of returning American astronauts to the Moon by 2024. Key to achieving this mission is the SLS—a two-stage, heavy-lift rocket that will launch the Orion crew vehicle into space. In 2011 and 2012, NASA contracted with three commercial companies—Boeing, Aerojet, and Northrop Grumman—to develop the five major elements of the SLS for the first two Artemis missions, currently anticipated to launch no earlier than spring 2021 and October 2022, respectively. Specifically, Boeing would provide the launch system's Core Stage and Upper Stage; Aerojet, the RS-25 Engines; and Northrop Grumman, the Solid Rocket Boosters. This audit updates our October 2018 audit on the Boeing Core Stages contract and examines the remaining major SLS element contracts. We found that NASA continues to struggle with managing SLS Program costs and schedules as the launch date for the first integrated SLS/Orion mission slips further. Specifically, each of the major element contracts for building the SLS for Artemis I has experienced technical challenges, performance issues, and requirement changes that collectively have resulted in $2 billion of cost overruns and increases, with another $1.4 billion in cost overruns before the first launch. Additionally, based on our review of SLS Program cost reporting, we found that the Program exceeded its Agency Baseline Commitment—that is, the cost and schedule baselines committed to Congress against which a program is measured—by at least 33 percent at the end of fiscal year (FY) 2019, a figure that could reach 43 percent or higher given that the launch date for Artemis I is slipping to 2021. If a program exceeds its Agency Baseline Commitment by more than 30 percent, NASA is required to notify Congress, rebaseline program costs and schedule commitments, and stop funding program activities within 18 months unless Congress provides its approval and additional appropriations. The Agency concurred with all five of our recommendations.

NASA's Management of Space Launch System Program Costs and Contracts (IG-20-012, March 10, 2020)

(Report)

(Video)

AUDIT OF NASA'S DEVELOPMENT OF ITS MOBILE LAUNCHERS

Critical to NASA's efforts to return American astronauts to the Moon is the development of two mobile launchers that will serve as the ground structure to assemble, process, transport, and launch the integrated SLS/Orion system. The first mobile launcher (ML-1)—originally constructed in 2010 for the since-canceled

ML-1 rolls back to the Vehicle Assembly Building after integration testing at Launch Pad 39B

Constellation Program at a cost of $234 million—required large-scale modifications to support the SLS and is nearing completion. NASA is also developing a second mobile launcher (ML-2) for future, larger variants of the SLS at a cost of $486 million. In this audit we assessed the Agency's development of its mobile launchers. We found that NASA has greatly exceeded its cost and schedule targets in developing ML-1, a system that the Agency currently plans to use for only three or four missions. As of January 2020, the ML-1 modification project has cost $693 million—$308 million more than the Agency's March 2014 budget estimate—and is running more than 3 years behind schedule. The Agency's acquisition approach for ML-1, which lacked coordination and competition with design contractors, coupled with immature SLS requirements, resulted in design errors and integration challenges that drove the project's cost increases and schedule delays. Looking to ML-2, NASA has taken positive steps to address ML-1 lessons learned, including utilizing a single contract to both design and build ML-2; however, NASA is missing other opportunities to improve project management and oversight of ML-2. The Agency concurred with all four of our recommendations.

Audit of NASA's Development of Its Mobile Launchers (IG-20-013, March 17, 2020)

(Report)

(Video)

NASA'S MANAGEMENT OF CREW TRANSPORTATION TO THE INTERNATIONAL SPACE STATION

Since the Space Shuttle Program ended in 2011, the United States has lacked a domestic capability to transport crew to the ISS, instead relying on the Russian Soyuz spacecraft to ferry astronauts. In 2010, NASA initiated agreements with U.S. aerospace companies to develop commercial crew transportation capabilities. As of August 2019, the Commercial Crew Program had obligated approximately $5.5 billion out of $8.5 billion awarded for this effort. However, after 5 years in the current phase of development, the Commercial Crew Program is several years behind its planned operational date. Given the expense and importance of NASA's commercial crew transportation program, our audit examined NASA's plans and progress for transporting astronauts to the ISS. We found that Boeing and the Space Exploration Technologies Corporation (SpaceX)—the two contractors hired by NASA to develop commercial crew capabilities—each face significant safety and technical challenges with parachutes, propulsion, and launch abort systems that need to be resolved prior to receiving NASA authorization to transport crew to the ISS. Moreover, given the number, magnitude, and unknown nature of the technical challenges remaining with each contractor's certification activities, the Commercial Crew Program will continue to be challenged to establish realistic launch dates. In addition, while awaiting the start of these commercial crew flights, NASA will likely experience a reduction in the number of crew

Exterior view of the ISS taken during a session of extravehicular activity

aboard the Station from three to one beginning in spring 2020, given schedule delays in the development of Boeing and SpaceX space flight systems coupled with a reduction in the frequency of Soyuz flights. Finally, in examining Boeing's commercial crew contracts, we found that NASA had agreed to pay an additional $287.2 million above Boeing's fixed prices to mitigate a perceived 18-month gap in ISS flights anticipated in 2019 and to ensure the company continued as a second commercial crew provider. We questioned $187 million of these price increases as unnecessary costs. The Agency concurred with our five recommendations.

NASA's Management of Crew Transportation to the International Space Station (IG-20-005, November 14, 2019)

(Report)

(Video)

NASA'S DEVELOPMENT OF GROUND AND FLIGHT APPLICATION SOFTWARE FOR THE ARTEMIS PROGRAM

In support of the Artemis program, the Exploration Ground Systems (EGS) Program manages two major software development projects: (1) the Spaceport Command and Control System, which will operate ground equipment, such as pumps, motors, and valves, and monitor SLS and Orion during launch preparations, and (2) the Ground and Flight Application Software (GFAS), which will interface with flight systems and ground crews. In this audit, we evaluated NASA's management of GFAS development; specifically, whether NASA has taken appropriate steps in developing the software and whether the Agency appropriately managed the risks given the complexities of parallel hardware and software development. We found the EGS Program has taken appropriate steps to manage GFAS by implementing a flexible software development process and exercising appropriate oversight and risk management. However, we also found that challenges from simultaneous hardware and software development efforts resulted in revisions to GFAS and contributed to increased development costs. In addition, NASA and the Lockheed Martin Corporation took 2 years to resolve information technology security issues that delayed the GFAS team from obtaining remote access to critical test equipment at the contractor's laboratory. As of October 2019, GFAS development had cost $51 million, about $14 million more than originally planned. Although EGS managers expect GFAS to be ready in time to launch Artemis I, it is essential that the Agency incorporate lessons learned from cross-program development, integration, and testing challenges to minimize risks to future software development. NASA concurred with our two recommendations.

NASA's Development of Ground and Flight Application Software for the Artemis Program (IG-20-014, March 19, 2020)

(Report)

ONGOING AUDIT WORK

NASA's Efforts to Mitigate the Risks Posed by Orbital Debris

Millions of pieces of orbital debris—man-made objects in space that no longer serve a useful purpose—currently circle the Earth. Ranging in size from small flecks of paint or metal to decommissioned satellites, some of this "space junk" is large enough to potentially cause catastrophic collisions with spacecraft and astronauts. NASA's Orbital Debris Program Office has taken the international lead in conducting measurements of the orbital environment and in developing the technical consensus for adopting mitigation measures. In this audit, we are evaluating NASA's efforts to mitigate, address, and decrease the risks posed by orbital debris, as well as the Agency's coordination and communication efforts with international and commercial organizations to address the orbital debris challenge.

Audit of the Orion Multi-Purpose Crew Vehicle Program

Orion is the crew capsule that will carry up to four astronauts to destinations beyond low Earth orbit on the SLS. Since FY 2012, NASA has spent $1.2 billion annually, or about 7 percent of its overall budget, on the Orion Program. Overall, the Agency has spent almost $10 billion on the Program with a cost baseline of $11.3 billion. Orion faces a series of technical challenges leading up to the capsule's first crewed flight, as well as

A static hot-fire test of the Orion spacecraft's Launch Abort System Attitude Control Motor

funding issues, with NASA expecting the Program to exceed its cost baseline in FY 2021. This audit will examine the Agency's management of the Orion Program.

NASA's Acquisition Strategy for the Artemis Missions

In March 2019, the Vice President directed NASA to execute a plan to land astronauts on the Moon's South Pole by 2024. In order to meet this ambitious schedule, NASA is making modifications to routine procurement and program management practices to reduce costs and accelerate the schedule. NASA has already begun acquiring the technologies and space flight hardware needed to support the Artemis missions using a variety of acquisition methods. The overall objective of this audit is to examine NASA's acquisition strategy for the Artemis missions to include landing astronauts on the Moon by 2024.

The Stratospheric Observatory for Infrared Astronomy sits on the tarmac during nighttime telescope operations

ACQUISITION AND PROJECT MANAGEMENT

Effective contract, grant, and project management remain top challenges for NASA. Through its audits, the OIG helps ensure NASA engages in sound procurement and acquisition practices that provide the Agency and taxpayer with the best possible value.

AUDIT OF SPACE SCIENCE INSTITUTE

NASA missions use the vantage point of space to achieve a better scientific understanding of Earth, other planets and solar system bodies, the interplanetary environment, the Sun and its effects on the solar system, and the universe beyond. NASA engages scientists and researchers to explore these issues and funds research largely through grants and cooperative agreements. Among the recipients of this funding is the Space Science Institute (SSI or Institute), a nonprofit, public-benefit research and education corporation established in 1992. In this spin-off review to our 2016 audit that examined 60 NASA-funded institutes, we assessed the extent to which SSI supports NASA's science goals; whether the Institute used NASA funds for their intended purpose; and whether costs paid under the agreements were in accordance with applicable laws, regulations, and guidelines. We found that SSI met reporting requirements, and the Institute's awards supported NASA science missions and goals, produced programs and models, and provided data to the Agency and scientific community. Further, the Agency sufficiently supported its award selection to SSI, whose funds and costs, in turn, were accounted for effectively, were handled appropriately, and complied with federal and NASA regulations and guidance.

Audit of the Space Science Institute (IG-20-007, December 12, 2019)

(Report)

ONGOING AUDIT WORK

Management of the Stratospheric Observatory for Infrared Astronomy Airborne Observatory

In February 2014, NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA) reached full operational capability after a problematic 23-year development history, a cost of $1.1 billion—more than 300 percent over original estimates—and yearly operational costs of $75 million to $85 million. In a July 2014 report, we recommended that NASA establish a timeline to evaluate SOFIA within a Senior Review, or similar process, during its primary operational phase because its planned initial phase is inordinately long in comparison to most science missions—20 years compared to 5 years. However, soon after NASA proposed a timeline for such a review, Congress directed NASA not to include SOFIA in the 2016 Astrophysics Senior Review and has included this restriction with each subsequent SOFIA appropriation. Given the high costs and extraordinary efforts expended to develop SOFIA, maximizing its scientific research capabilities and output remains an important responsibility for the Program. Accordingly, we are assessing the Agency's management of SOFIA during its ongoing prime operations phase relative to cost, technical performance, and scientific achievements.

Artist's rendering of a water vapor plume spewing from Jupiter's icy moon Europa

Management of NASA's Planetary Science Portfolio

NASA's Planetary Science Division manages several high-profile programs such as Lunar Discovery and Exploration, Mars Exploration, Outer Planets and Ocean Worlds, and Planetary Defense. The Division's budget for the next 5 years is forecast to average more than $2.5 billion a year, which is almost double its budget from 10 years ago. Against this backdrop, the Division is challenged to manage its portfolio under competing mandates from the President and Congress while meeting stakeholder needs and science community priorities. The overall objective of this audit is to assess NASA's management of its planetary science portfolio and examine whether it is achieving established goals and priorities set by the President, Congress, and science community stakeholders.

Management of the Low-Boom Flight Demonstrator Project

According to the International Air Transport Association and others, worldwide annual commercial passenger trips are projected to increase from 3.3 billion in 2014 to 11 billion by 2050. To address the anticipated challenges associated with meeting this increase in demand, in April 2016, NASA announced the New Aviation Horizon Initiative with the intent to build five X-planes over the next 10 years. These experimental aircraft will investigate technologies for reducing fuel use, carbon dioxide emissions, and noise pollution, as well as overcoming the hurdles to efficient, low-noise supersonic flight. The first X-plane NASA is building is the Low-Boom Flight Demonstrator—a $583 million project estimated to be completed in October 2023. The first new X-plane development in decades, the goal of the Low-Boom Flight Demonstrator Project is to perform supersonic operations with a reduction in sonic-boom noise emissions and provide data to the Federal Aviation Administration that could lead to changing regulations to allow supersonic flight overland. Our audit is assessing whether NASA is effectively managing the Low-Boom Flight Demonstrator Project to accomplish its technical objectives while meeting established milestones and controlling costs.

Artist's rendering of NASA's Quiet Supersonic Technology Low-Boom Flight Demonstrator in flight

NASA's Management of Its Partnership with the Universities Space Research Association

The Universities Space Research Association (USRA) is one of NASA's largest research partners, accounting for $162 million in expenditures in 2018. USRA is an independent, nonprofit research corporation chartered in 1969 by the National Academy of Sciences to enable universities to collaborate with NASA to perform space research and technology development. In this audit, we are evaluating the NASA/USRA partnership relative to meeting Agency requirements and expectations.

NASA's Management of Its Acquisition Workforce

NASA utilizes contracts to fund research and development and purchase services, supplies, and equipment to support every facet of its operations. In FY 2018, the Agency spent approximately $19 billion, or 82 percent of its available resources, on procurement. Given the enormity of funding NASA devotes to procuring goods and services through contracts and the recent decision to accelerate NASA's plans for a lunar landing, it is essential that the Agency maintain a highly skilled acquisition workforce capable of efficiently and effectively utilizing taxpayer funds and responsive and agile enough to achieve NASA's ambitious portfolio of missions. Our audit is examining the readiness of NASA's acquisition workforce to respond to the Agency's evolving contracting needs.

The Northrop Grumman Antares rocket, with Cygnus resupply spacecraft on board, launches from Wallops Flight Facility in November 2019

INFORMATION TECHNOLOGY SECURITY AND GOVERNANCE

Information technology (IT) plays an integral role in NASA's space, science, and aeronautics operations. In FY 2019, the Agency has spent more than $2.1 billion on a portfolio of IT assets that included hundreds of information systems used to control spacecraft, collect and process scientific data, provide security for its IT infrastructure, and enable NASA personnel to collaborate with colleagues around the world. Through audits and investigations, the OIG has identified systemic and recurring weaknesses in NASA's IT security program that adversely affect the Agency's ability to protect the information and information systems vital to its mission. Achieving the Agency's IT security goals will require sustained improvements in NASA's overarching IT governance and management practices.

NASA'S MANAGEMENT OF DISTRIBUTED ACTIVE ARCHIVE DATA CENTERS

For more than 50 years, NASA has launched satellites and other scientific instruments into space to observe the Earth and collect data on climate, weather, and natural phenomena such as earthquakes, droughts, floods, and wildfires. The data generated by the Agency's Earth science missions is stored at 12 Distributed Active Archive Centers (DAAC), which are responsible for processing, archiving, and distributing data. In 2014, the Earth Science Data and Information System (ESDIS) project sponsored an independent review to study potential efficiencies and enhanced capabilities, including cloud computing, open-source software, and tool/service interoperability, across the DAACs. As a result of this review, ESDIS is proceeding with the Earthdata Cloud storage initiative, which will enable end users to work across multiple large data sets managed by different DAACs without the need to transmit data, thereby streamlining data distribution. In this audit, we assessed NASA's management of DAACs and ESDIS's data management and cloud transition efforts. We found that Earth science data stored on the cloud is expected to exponentially increase as several high-data-volume missions come online, leading to increased costs and several management challenges. In addition, we found that ESDIS and the Office of the Chief Information Officer are not consistently involved early in decision making that impacts management of mission data and that system security plans need improvement to help ensure the integrity of Earth science data. Finally, we noted that the Evolution, Enhancement, and Efficiency panel selected to perform an independent review of the DAACs failed to identify potential costs savings—savings that may have helped offset the increase in cloud storage costs. The Agency concurred with our three recommendations.

NASA's Management of Distributed Active Archive Data Centers (IG-20-011, March 3, 2020)

(Report)

Jupiter's swirling clouds are captured in this image from the Juno spacecraft

ONGOING AUDIT WORK

Evaluation of NASA's Information Security Program under the Federal Information Security Modernization Act for Fiscal Year 2019

In this required annual review, we will evaluate NASA's IT security program against the 2019 Federal Information Security Modernization Act (FISMA) metrics. Specifically, we will review a sample of NASA- and contractor-owned information systems to assess the effectiveness of information security policies, procedures, standards, and guidelines. Additionally, we will evaluate whether NASA has addressed the deficiencies identified in our prior FISMA reviews.

NASA's Policies and Practices Regarding the Use of Non-Agency IT Devices

In an April 2018 memorandum, the NASA Chief Information Officer clarified existing policy to no longer allow IT devices—such as smartphones, tablets, and laptop computers—to connect to NASA networks or systems unless they have been preapproved for Agency business or receive a waiver. Further, the policy clarification stated that all IT devices must have an approved authorization to operate from a NASA authorizing official prior to accessing, storing, processing, or transmitting NASA data. Additionally, Agency requirements mandate that all IT devices—regardless of their ownership—used to access NASA networks and systems undergo sanitation and data disposition that includes a factory reset upon change in their usage. However, because smartphones and other IT devices are integral to NASA employees' and contractors' work, it is unclear how the Agency intends to enforce these requirements. This audit is evaluating NASA's policies and practices regarding the use of non-Agency IT devices for Agency business, assessing Center-level impacts from the changes in policies and practices, and identifying any risks and challenges that may be associated with implementing these policies and practices.

NASA's Cybersecurity Readiness

NASA's high-profile and advanced technology makes the Agency's computer systems and networks an attractive target for cyber intruders. In this audit, we are assessing whether NASA is adequately prepared to identify and respond to cyberattacks and has the IT infrastructure in place to deal with new and emerging threats while maintaining cyber resiliency in light of the evolving threat landscape.

The Unitary Plan Wind Tunnels at Ames Research Center

INFRASTRUCTURE

NASA's real property includes more than 5,000 buildings and other structures—such as wind tunnels, laboratories, launch pads, and test stands—that occupy 44 million square feet and are valued at more than $37 billion. However, over 70 percent of NASA's facilities are more than 50 years old and reaching the end of their design life spans. Managing its expansive portfolio is an ongoing challenge for the Agency and one we continue to monitor.

NASA'S SECURITY MANAGEMENT PRACTICES

NASA is home to numerous irreplaceable assets that support space flight, aeronautics missions, and planetary research. These assets, coupled with NASA's high-profile mission and extensive physical footprint, make its facilities an attractive target for those who wish to do harm to the Agency. The NASA Office of Protective Services (OPS) and Center Protective Services Offices are responsible for securing NASA employees, contractors, and guests along with Agency assets under a decentralized, Center-based model. In this audit, we assessed the effectiveness of NASA's management of its security operations—specifically, physical security, law enforcement, and fire services operations—across the Agency. We found that while overall security policy and oversight priorities are set at the Agency level, protective services operations are implemented and funded by Center Directors, who have used their resources for Center-based priorities. Moreover, although NASA's plan to move physical security to an enterprise level was revised in August 2019, OPS was not well positioned to manage such a change. In addition, leadership at the Centers we visited made security staffing and infrastructure protection decisions based primarily on funding instead of threat or risk assessments, and OPS could only recommend that Center Directors perform corrective actions

Crews at Stennis Space Center lift and install the first Core Stage of the SLS into the B-2 Test Stand

to mitigate deficiencies. Finally, the current decentralized, Center-focused operational structure for OPS resulted in the inconsistent application of federal arrest authority, legislative jurisdiction, firearms policy, and non-NASA

tenant decisions across the Centers. To effectively implement enterprise-level security programs across the Agency, NASA needs to address the disparate implementation of OPS policies and procedures at the Centers, whether it moves the management of physical security to an enterprise-level approach or retains its current Center-based system. The Agency concurred with our eight recommendations.

NASA's Security Management Practices (IG-20-001, October 21, 2019)

(Report)

NASA's Super Guppy aircraft sits on the tarmac of Redstone Arsenal airfield prior to liftoff with the Orion stage adapter

ONGOING AUDIT WORK

NASA's Management of Hazardous Materials

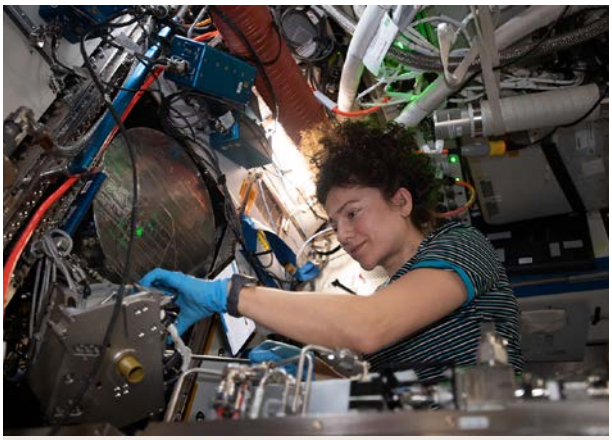
NASA's space flight and aeronautics programs require scientists and engineers to utilize hazardous materials. A hazardous material is any item or agent (biological, chemical, radiological, or physical) that has the potential to cause harm to humans, animals, or the environment. Consequently, the management, storage, and disposal of hazardous materials are heavily regulated. Typically, a material is classified as hazardous when it exhibits at least one of four characteristics—ignitibility, corrosivity, reactivity, or toxicity—or because it has been listed by the U.S. Environmental Protection Agency as hazardous. Given the potential damage, health hazard, and long-term, costly clean-up efforts that often result from poor management of these substances, we are examining the Agency's management of hazardous materials.

FINANCIAL MANAGEMENT

The OIG continues to assess NASA's efforts to improve its financial management practices by conducting and overseeing a series of audits to assist the Agency in addressing weaknesses.

AUDIT OF NASA'S FISCAL YEAR 2019 FINANCIAL STATEMENTS

The OIG contracted with the independent public accounting firm CliftonLarsonAllen LLP (CLA) to audit NASA's FY 2019 financial statements. CLA performed the audit in accordance with the Government Accountability Office's *Government Auditing Standards* and the Office of Management and Budget's Bulletin No. 19-03, *Audit Requirements for Federal Financial Statements*. The audit resulted in an unmodified opinion on NASA's FY 2019 financial statements. An unmodified opinion means the financial statements present fairly, in all material respects, the financial position and results of NASA's operations in conformity with U.S. generally accepted accounting principles. CLA also reported on NASA's internal control and compliance with laws and regulations. For FY 2019, CLA identified one significant deficiency related to IT management and did not report any instances of noncompliance this year.



Expedition 62 flight engineer and NASA astronaut Jessica Meir works on orbital plumbing tasks on board the ISS

Audit of NASA's Fiscal Year 2019 Financial Statements (IG-20-006, November 15, 2019)
(Report)

REVIEW OF NASA'S FISCAL YEAR 2019 DIGITAL ACCOUNTABILITY AND TRANSPARENCY ACT SUBMISSION

The Digital Accountability and Transparency Act of 2014 (DATA Act) expands and improves oversight of federal spending, which in FY 2018 totaled more than $4 trillion. To increase transparency, federal agencies are responsible for submitting complete and accurate financial and award data to USAspending.gov, a public website that tracks federal spending. To increase accountability, the DATA Act also requires that Inspectors General issue three separate reports (one every 2 years) on the completeness, accuracy, timeliness, and quality of agency data, and on each agency's implementation and use of the government-wide data standards. We issued our first report in November 2017. In this second audit, we assessed (1) the completeness, accuracy, timeliness, and overall quality of NASA's

FY 2019, first quarter financial and award data, and (2) NASA's implementation and use of the data standards. We found that NASA's DATA Act submission was complete and timely, that the Agency implemented and properly used the government-wide financial data standards, and that NASA's data met the Council of the Inspectors General on Integrity and Efficiency standard of "higher quality." Despite the positive rating, we identified errors that affected the timeliness, accuracy, and completeness of NASA's financial and award data. The Agency concurred with our five recommendations.

Review of NASA's Fiscal Year 2019 Digital Accountability and Transparency Act Submission (IG-20-004, November 7, 2019)

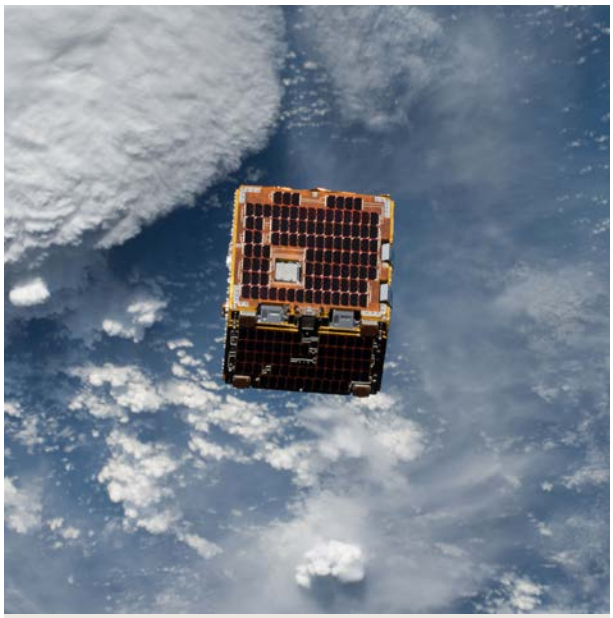
(Report)

RISK ASSESSMENT OF NASA'S GRANT CLOSEOUT PROCESS

On January 28, 2016, the President signed into law the Grants Oversight and New Efficiency Act of 2016, initiating the Administration's efforts to close expired grants. In accordance with the Act, agency heads are required to submit to Congress a report listing each open federal grant award for which the period of performance had expired by more than 2 years as of the end of FY 2017. Additionally, the Inspector General of any agency with more than $500 million in annual grant funding is required to conduct a risk assessment to determine if an audit or review of the agency's grant closeout process is necessary. We reviewed NASA's submissions for FYs 2017 and 2018, reviewed current closeout procedures, and analyzed data within the Agency's financial systems. Based on our analysis, we found minimal occurrence of expired grants and cooperative agreements remaining open more than 2 years beyond the end of their period of performance and therefore concluded that an audit of NASA's grant closeout process is not necessary at this time.

Risk Assessment of NASA's Grant Closeout Process (ML-20-003, February 5, 2020)

(Report)



Deployed from the ISS, the NanoRacks-Remove Debris satellite, a technology demonstration CubeSat, will map the location and speed of "space junk"

FISCAL YEAR 2019 REPORT ON STATUS OF CHARGE CARD AUDIT RECOMMENDATIONS

The Government Charge Card Abuse Prevention Act of 2012, as implemented by Office of Management and Budget (OMB) Memorandum M-13-21, requires Inspectors General to report to OMB within 120 days of the end of each fiscal year on their agency's progress in implementing charge card-related audit recommendations. In February 2018, we examined whether key internal controls in NASA's charge card programs detect and prevent potentially illegal, improper, or erroneous

transactions and made five recommendations to the Agency. This review assessed the status of the recommendations made in our 2018 report. As of the end of FY 2019, one recommendation from the 2018 report remained open and unimplemented.

Fiscal Year 2019 Report on Status of Charge Card Audit Recommendations (ML-20-002, January 27, 2020)

(Report)

FISCAL YEAR 2019 RISK ASSESSMENT OF NASA'S CHARGE CARD PROGRAMS

The Government Charge Card Abuse Prevention Act of 2012 requires Inspectors General to conduct periodic assessments of agency purchase (including convenience checks) and travel card programs to analyze the risk of illegal, improper, or erroneous transactions. We conducted our risk assessment based on FY 2018 purchase and travel card data and information. Overall, we concluded that the risks of illegal, improper, or erroneous purchases and payments through NASA's purchase and travel card programs were moderate and low, respectively.

Fiscal Year 2019 Risk Assessment of NASA's Charge Card Programs (ML-20-001, October 30, 2019)

(Report)

ONGOING AUDIT WORK

Audit of NASA's Fiscal Year 2020 Financial Statements

The Chief Financial Officers Act of 1990, as amended by the Government Management Reform Act of 1994, requires an annual audit of NASA's consolidated financial statements. We are overseeing the FY 2020 audit conducted by the independent public accounting firm CLA.

NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2019

The Improper Payments Information Act of 2002, as amended by the Improper Payments Elimination and Recovery Act of 2010, seeks to enhance the accuracy and integrity of federal payments. As mandated, the OIG is assessing NASA's compliance with the Act's requirements.

NASA'S COMPLIANCE WITH FEDERAL EXPORT CONTROL LAWS

In a February 2020 letter to Congress, we summarized our work relating to NASA's compliance with federal export control laws. During the past year, we completed three audits examining NASA's controls over sensitive information, IT assets, and IT security systems, many of which contain data subject to export control laws, and initiated three audits related to IT security. In addition, our Office of Investigations closed five investigations related to the misuse of and unauthorized access to export-controlled information. The OIG also continues as an active member of the U.S. Department of Homeland Security's Export Enforcement Coordination Center, which coordinates export enforcement efforts and intelligence activities among federal agencies to resolve conflicts involving violations of U.S. export control laws.

NASA's Compliance with Federal Export Control Laws (IG-20-010, February 20, 2020)

(Report)

The joint European Space Agency–NASA Solar Orbiter mission launches from Cape Canaveral Air Force Station in Florida

European Space Agency astronaut Luca Parmitano is pictured tethered to the ISS while finalizing thermal repairs on the Alpha Magnetic Spectrometer

STATISTICAL DATA

TABLE 1: AUDIT PRODUCTS AND IMPACTS

Report No. and Date Issued	Report Title	Impact
Space Operations and Human Exploration		
IG-20-014, 3/19/2020	NASA's Development of Ground and Flight Application Software for the Artemis Program	Provided recommendations to improve the effectiveness and efficiency of software development, particularly when in parallel with associated hardware development efforts
IG-20-013, 3/17/2020	Audit of NASA's Development of Its Mobile Launchers	Provided recommendations to improve potential outcomes of ML-2 development
IG-20-012, 3/10/2020	NASA's Management of Space Launch System Program Costs and Contracts	Provided recommendations to increase the sustainability, accountability, and transparency of NASA's efforts to manage the five major SLS contracts
IG-20-005, 11/14/2019	NASA's Management of Crew Transportation to the International Space Station	Provided recommendations to improve the Commercial Crew Program and ensure that future payments to contractors are appropriate and necessary
Acquisition and Project Management		
IG-20-007, 12/12/2019	Audit of Space Science Institute	Determined that SSI is meeting performance and financial requirements while helping support NASA science goals
Information Technology Security and Governance		
IG-20-011, 3/3/2020	NASA's Management of Distributed Active Archive Centers	Provided recommendations to mitigate the risks associated with the migration to the cloud, improve data management planning, and enhance system security categorizations
Infrastructure		
IG-20-001, 10/21/2019	NASA's Security Management Practices	Provided recommendations to improve the effectiveness of NASA's management of its security operations—specifically, physical security, law enforcement, and fire services operations—particularly from an enterprise-level perspective
Financial Management		
ML-20-003, 2/5/2020	Risk Assessment of NASA's Grant Closeout Process	Assessed the risk that procedures are not in place to ensure timely grant closeout
ML-20-002, 1/27/2020	Fiscal Year 2019 Report on Status of Charge Card Audit Recommendations	Notified OMB of NASA's open charge card-related audit recommendations
IG-20-006, 11/15/2019	Audit of NASA's Fiscal Year 2019 Financial Statements	Identified improvements in NASA's ability to provide auditable financial statements and sufficient evidence to support the financial statements throughout the fiscal year and at year end
IG-20-004, 11/7/2019	Review of NASA's Fiscal Year 2019 Digital Accountability and Transparency Act Submission	Provided recommendations to improve the accuracy and quality of NASA's DATA Act submissions
ML-20-001, 10/30/2019	Fiscal Year 2019 Risk Assessment of NASA's Charge Card Programs	Assessed the risk of illegal, improper, or erroneous transactions
Other Audit Matters		
IG-20-010, 2/20/2020	NASA's Compliance with Federal Export Control Laws	Provided assurance to Congress that NASA is abiding by applicable laws and regulations regarding its interaction with Chinese entities

TABLE 2: AUDIT PRODUCTS ISSUED AND NOT DISCLOSED TO THE PUBLIC, CURRENT SEMIANNUAL REPORT

Report No. and Date Issued	Report Title	Impact
IG-20-009, 12/17/2019	Fiscal Year 2019 Financial Accounting Management Letter	Identified improvements in the effectiveness of the controls over financial reporting
IG-20-008, 12/13/2019	Fiscal Year 2019 Financial Statement Audit Information Technology Management Letter	Identified improvements in the effectiveness of the controls over the IT control environment
IG-20-003, 11/5/2019	Vulnerability Assessment and Penetration Testing of NASA's Financial Network	Identified improvements in the security of the Agency's financial systems

TABLE 3: AUDIT RECOMMENDATIONS YET TO BE IMPLEMENTED, CURRENT SEMIANNUAL REPORT

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Space Operations and Human Exploration						
IG-20-014, 3/19/2020	NASA's Development of Ground and Flight Application Software for the Artemis Program	3/19/2020	2	0	9/30/2020	$0
IG-20-013, 3/17/2020	Audit of NASA's Development of Its Mobile Launchers	3/17/2020	4	0	5/31/2021	$0
IG-20-012, 3/10/2020	NASA's Management of Space Launch System Program Costs and Contracts	–	5	0	9/30/2020	$0
IG-20-005, 11/14/2019	NASA's Management of Crew Transportation to the International Space Station	11/14/2019	3	2	6/30/2020	$186,680,000
Information Technology Security and Governance						
IG-20-011, 3/3/2020	NASA's Management of Distributed Active Archive Centers	3/3/2020	3	0	3/31/2024	$0
Infrastructure						
IG-20-001, 10/21/2019	NASA's Security Management Practices	10/21/2019	8	0	6/30/2021	$0
Financial Management						
IG-20-009, 12/17/2019	Fiscal Year 2017 Financial Accounting Management Letter	12/17/2019	32	0	12/31/2020	$0
IG-20-008, 12/13/2019	Fiscal Year 2019 Financial Statement Audit Information Technology Management Letter	12/13/2019	16	0	12/31/2020	$0
IG-20-006, 11/15/2019	Audit of NASA's Fiscal Year 2019 Financial Statements	11/15/2019	7	0	11/30/2020	$0
IG-20-004, 11/7/2019	Review of NASA's Fiscal Year 2019 Digital Accountability and Transparency Act Submission	11/7/2019	4	1	11/30/2020	$0
IG-20-003, 11/5/2019	Vulnerability Assessment and Penetration Testing of NASA's Financial Network	11/5/2019	9	0	11/30/2020	$0

TABLE 4: AUDIT RECOMMENDATIONS YET TO BE IMPLEMENTED, PREVIOUS SEMIANNUAL REPORT

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Space Operations and Human Exploration						
IG-19-001, 10/10/2018	NASA's Management of the Space Launch System Stages Contract	4/28/2019	1	6	1/31/2020	$0
IG-18-021, 7/30/2018	NASA's Management and Utilization of the International Space Station	7/30/2018	3	2	12/31/2020	$0
IG-18-016, 4/26/2018	Audit of Commercial Resupply Services to the International Space Station	8/9/2018	1	4	10/30/2020	$0
IG-17-017, 4/13/2017	NASA's Plans for Human Exploration Beyond Low Earth Orbit	8/10/2017	1	5	4/30/2020	$0
IG-17-012, 3/9/2017	NASA's Management of Electromagnetic Spectrum	3/9/2017	1	1	7/31/2020	$0
IG-16-025, 6/28/2016	NASA's Response to SpaceX's June 2015 Launch Failure: Impacts on Commercial Resupply of the International Space Station	10/17/2016	1	5	8/31/2020	$0
IG-16-015, 3/28/2016	Audit of the Spaceport Command and Control System	3/28/2016	1	0	2/14/2021	$0
IG-15-023, 9/17/2015	NASA's Response to Orbital's October 2014 Launch Failure: Impacts on Commercial Resupply of the International Space Station	12/2/2015	1	6	12/31/2020	$0
IG-14-026, 7/22/2014	Audit of the Space Network's Physical and Information Technology Security Risks	7/22/2014	1	3	10/30/2020	$0
Acquisition and Project Management						
IG-19-019, 5/29/2019	Management of NASA's Europa Mission	8/8/2019	9	1	7/30/2020	$0
IG-19-018, 5/7/2019	NASA's Heliophysics Portfolio	5/7/2019	3	1	5/31/2021	$0
IG-19-014, 3/26/2019	NASA's Engineering and Technical Services Contracts	3/26/2019	3	0	9/15/2021	$0
IG-18-015, 4/5/2018	NASA's Management of GISS: The Goddard Institute for Space Studies	4/5/2018	2	6	6/30/2020	$0
IG-18-001, 10/5/2017	NASA's Management of Spare Parts for Its Flight Projects	10/5/2017	2	5	12/31/2021	$0
IG-17-003, 11/2/2016	NASA's Earth Science Mission Portfolio	11/2/2016	1	1	11/30/2021	$0
IG-16-013, 2/18/2016	Audit of NASA Space Grant Awarded to the University of Texas at Austin	2/18/2016	1	3	5/31/2020	$322,500

Report No. and Date Issued	Report Title	Date Resolved	Number of Recommendations		Latest Target Completion Date	Potential Cost Savings
			Open	Closed		
Information Technology Security and Governance						
IG-19-022, 6/18/2019	Cybersecurity Management and Oversight at the Jet Propulsion Laboratory	12/4/2019	8	2	9/30/2021	$0
IG-18-020, 5/23/2018	Audit of NASA's Security Operations Center	6/5/2018	3	3	7/31/2020	$0
IG-18-019, 5/24/2018	Audit of NASA's Information Technology Supply Chain Risk Management Efforts	5/24/2018	2	5	9/17/2020	$0
IG-17-011, 2/8/2017	Industrial Control System Security within NASA's Critical and Supporting Infrastructure	2/8/2017	3	3	9/30/2020	$0
IG-17-010, 2/7/2017	Security of NASA's Cloud Computing Services	6/9/2017	2	4	7/31/2020	$0
IG-12-017, 8/7/2012	Review of NASA's Computer Security Incident Detection and Handling Capability	8/7/2012	2	1	12/15/2020	$0
Infrastructure						
IG-19-013, 3/19/2019	NASA's Progress with Environmental Remediation Activities at the Santa Susana Field Laboratory	3/19/2019	2	0	6/30/2020	$211,742,117
IG-19-002, 10/22/2018	Audit of NASA's Historic Property	2/5/2019	4	1	10/30/2020	$0
IG-17-021, 5/17/2017	Construction of Test Stands 4693 and 4697 at Marshall Space Flight Center	10/5/2017	3	0	7/31/2020	$17,115,009
Financial Management						
IG-19-020, 6/3/2019	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2018	6/3/2019	3	0	5/31/2020	$0
IG-19-007, 11/28/2018	NASA's Management of Extended Temporary Duty Travel	11/28/2018	3	0	12/31/2020	$108,304
IG-18-017, 5/14/2018	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2017	5/14/2018	3	0	5/31/2020	$0
IG-18-014, 2/28/2018	Review of NASA's Purchase and Travel Card Programs	2/28/2018	1	4	3/30/2020	$0
IG-17-020, 5/15/2017	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2016	11/7/2017	1	8	5/31/2020	$0
IG-16-021, 5/12/2016	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2015	10/28/2016	1	4	5/31/2020	$0
IG-15-015, 5/15/2015	NASA's Compliance with the Improper Payments Information Act for Fiscal Year 2014	5/15/2015	1	9	5/31/2020	$0

TABLE 5: AUDITS WITH QUESTIONED COSTS

	Number of Audit Reports	Total Questioned Costs	Total Unsupported Costs
Management decisions pending, beginning of reporting period	0	$0	$0
Issued during period	1	$186,680,000	$0
Needing management decision during period	1	$186,680,000	$0
Management Decision Made During Period			
Amounts agreed to by management	0	$0	$0
Amounts not agreed to by management	1	$186,680,000	$0
No Management Decision at End of Period			
Less than 6 months old	0	$0	$0
More than 6 months old	0	$0	$0

Notes: Questioned costs (the Inspector General Act of 1978, as amended) are costs 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.

Management decision (the Inspector General Act of 1978, as amended) is 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.

TABLE 6: AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

	Number of Audit Reports	Funds to Be Put to Better Use
Management decisions pending, beginning of reporting period	0	$0
Issued during period	0	$0
Needing management decision during period	0	$0
Management Decision Made During Period		
Amounts agreed to by management	0	$0
Amounts not agreed to by management	0	$0
No Management Decision at End of Period		
Less than 6 months old	0	$0
More than 6 months old	0	$0

Note: Recommendation that Funds Be Put to Better Use (the Inspector General Act of 1978 definition) is 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. (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.)

TABLE 7: OTHER MONETARY SAVINGS

Report No. and Date Issued	Title	Description	Amount
IG-19-001, 10/10/2018	NASA's Management of the Space Launch System Stages Contract	In October 2018, the NASA OIG recommended the Associate Administrator for Human Exploration and Operations Mission Directorate and the Deputy Associate Administrator for Exploration Systems Development, in conjunction with the Marshall Center Director, Marshall Office of Procurement, and SLS Program, renegotiate the Boeing Stages contract based on both Boeing and federal government cost estimates to determine the amount of cost overruns to date and ensure no future fees are paid on this amount. Through contract modification 286, as of January 24, 2020, NASA renegotiated the contract and identified $1.8 billion of added contract value as cost overruns not subject to the 12.5 percent fee. Based on an average award fee earned of 84 percent, this results in savings of $189 million.	$189,000,000
IG-19-001, 10/10/2018	NASA's Management of the Space Launch System Stages Contract	In October 2018, the NASA OIG recommended the Associate Administrator for Human Exploration and Operations Mission Directorate and the Deputy Associate Administrator for Exploration Systems Development, in conjunction with the Marshall Center Director, Marshall Office of Procurement, and SLS Program, renegotiate the Boeing Stages contract based on both Boeing and federal government cost estimates to remove the system integration award fee structure and cap potential award fees at 12.5 percent of estimated costs. Through contract modification 286, as of January 24, 2020, NASA reduced the fee rate for new work to the appropriate 12.5 percent level, resulting in a total reduction in the available award fee pool of approximately $8 million.	$7,994,651

TABLE 8: STATUS OF SINGLE AUDIT FINDINGS AND QUESTIONED COSTS RELATED TO NASA AWARDS

Audits with Findings	7	
Findings and Questioned Costs		
	Number of Findings	**Questioned Costs**
Management decisions pending, beginning of reporting period	8	$0
Findings added during reporting period	13	$0
Management decisions made during reporting period	(11)	
Agreed to by management		$0
Not agreed to by management		$0
Management decisions pending, end of reporting period	10	$0

Note: The Single Audit Act, as amended, requires federal award recipients to obtain audits of their federal awards. The data in this table is provided by NASA.

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.

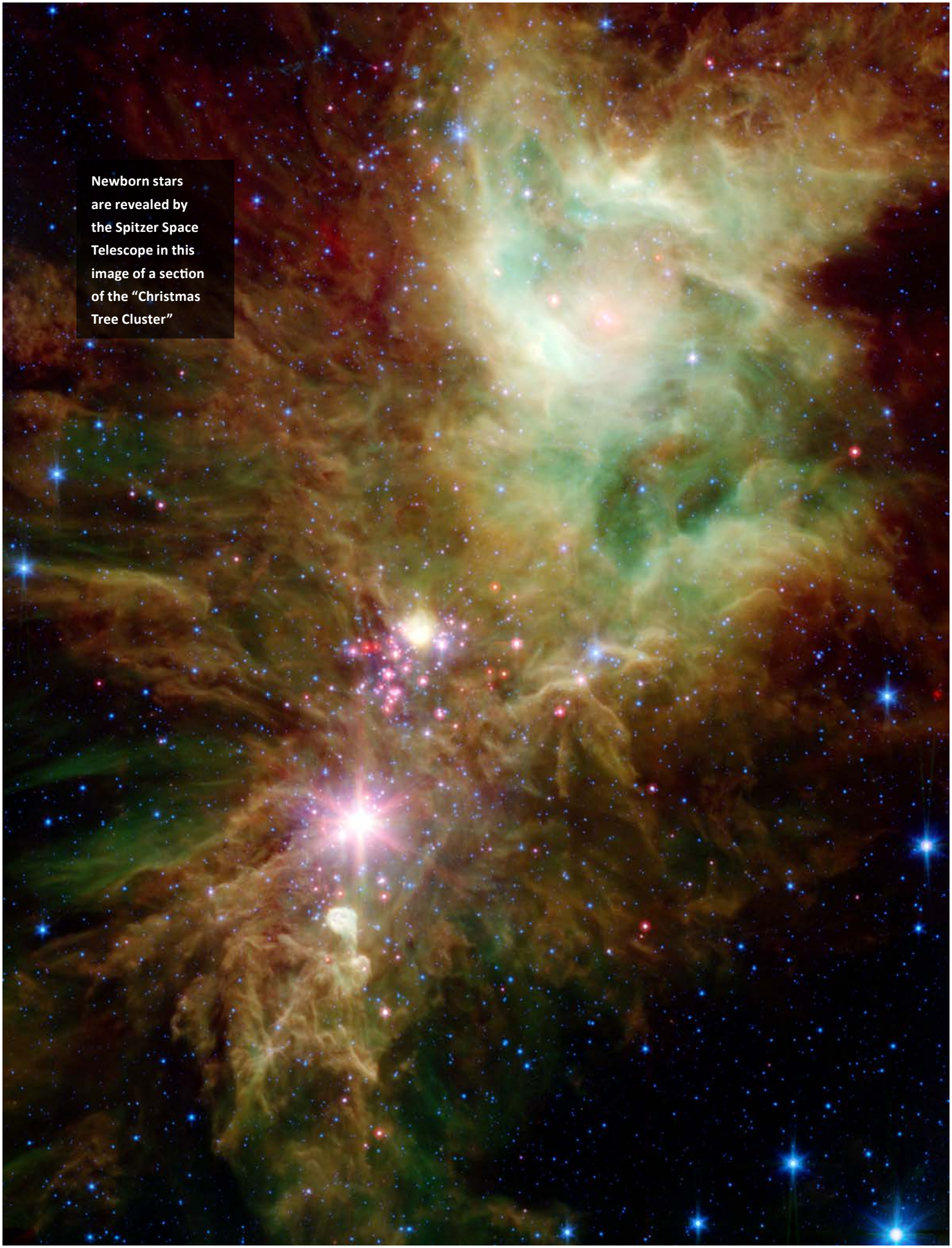
DCAA AUDIT REPORTS ISSUED

During this period, DCAA issued six audit reports involving contractors who do business with NASA. Corrective actions taken in response to DCAA audit report recommendations usually result from negotiations between the contractors and the government contracting officer with cognizant responsibility (e.g., the Defense Contract Management Agency and NASA). The agency responsible for administering the contract negotiates recoveries with the contractor after deciding whether to accept or reject the questioned costs and recommendations that funds 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 agreed-upon amounts.

TABLE 9: DCAA AUDIT REPORTS WITH QUESTIONED COSTS AND RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

	Amounts in Issued Reports	Amounts Agreed To
Questioned costs	$4,777,000	$1,009,000
Funds to be put to better use	$0	$0

Note: This data is provided to 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 the 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. The data presented does not include statistics on audits that resulted in contracts not awarded or in which the contractor was not successful.



Newborn stars are revealed by the Spitzer Space Telescope in this image of a section of the "Christmas Tree Cluster"

OFFICE OF INVESTIGATIONS

A fully functional Launch Abort System with a test version of Orion attached launches from Cape Canaveral Air Force Station in Florida

As the law enforcement arm of NASA OIG, the Office of Investigations is responsible for investigating fraud, waste, abuse, mismanagement, and misconduct involving NASA programs, personnel, and resources. Typically, the Office refers its findings to the U.S. Department of Justice for prosecution or to NASA management for corrective action.

PROCUREMENT, ACQUISITION, AND GRANT FRAUD

Former President and Former Executive Director of Contractor Plead Guilty and Sentenced

As the result of a NASA OIG investigation, the former President and the former Executive Director of a Palmdale, California, research institute both pled guilty to charges relating to fraudulent use of NASA funds. The former President was sentenced to 3 years of supervised release and fined $2,070. The former Executive Director was sentenced to 2 years of supervised release and ordered to pay restitution of $341,266 to NASA.

Parts Supplier Agrees to Civil Settlement

Based on the results of a Qui Tam lawsuit filed with the Department of Justice and an investigation by NASA OIG, a parts supplier agreed to pay $375,000 to resolve claims it falsely certified that it cleaned and purged critical ground support equipment used to access Orion.

Small Business Agrees to Civil Settlement

As the result of a proactive investigation by NASA OIG, a Louisville, Kentucky, small business agreed to pay damages of $83,334 in a civil settlement to resolve allegations that it accepted Small Business Innovation Research funding from NASA for which it provided no work product.

Former Center for the Advancement of Science in Space Official Pleads Guilty to Filing False Tax Return

As a result of a joint investigation by NASA and the Internal Revenue Service, a former Center for the Advancement of Science in Space senior official pled guilty to filing a false tax return after he allegedly used government funds to pay for escorts and other unallowable expenses while on official company business. The official understated his total income by approximately $209,916 and failed to report approximately $158,000 in gross receipts earned from clients for whom he was a consultant. In addition, he improperly deducted business expenses of approximately $51,500, despite being reimbursed for the expenses, some of which were unnecessary. Sentencing is scheduled for later this year.

Contractor Agrees to Reimbursement

A major space contractor agreed to reimburse NASA and the U.S. Department of Defense $355,464 after one of its former employees admitted to mischarging time against multiple government contracts. Of the total amount, NASA was reimbursed $70,245.

Former NASA Contractor Employee Sentenced

Following an investigation by NASA OIG, a former flight operations contractor employee at Ellington Field, Texas, was sentenced to 2 years

of imprisonment and ordered to pay $15,000 in restitution for selling NASA flight jackets and other stolen NASA property on eBay.

Former Space Launch System Subcontractor Employee Sentenced

Following a 2-day jury trial in Orlando, Florida, a former Kennedy Space Center subcontractor employee was sentenced to 12 months of supervised release for knowingly supplying inferior products to the SLS Program and concealing their country of manufacture.

Business Owner Found Guilty of Defrauding Federal Agencies; Four Others Reach Plea Agreements

NASA OIG investigated a conspiracy involving several individuals defrauding the government to obtain more than $15 million in set-aside contracts under the Service Disabled Veteran-Owned and 8(a) programs. One of the set-aside contracts was for the construction of a $5.5 million security building at the main entrance to NASA's Plum Brook Station in Sandusky, Ohio. At a November 2019 trial, a Florida business owner was found guilty of one count of conspiracy to commit wire fraud, five counts of wire fraud, one count of conspiracy to submit false claims, three counts of false claims, and three counts of major fraud against the United States related to the Plum Brook construction contract and U.S. Department of Veterans Affairs and Department of Defense contracts. Prior to the trial, four other individuals pled guilty to multiple fraud charges. The U.S. Department of the Navy also suspended 7 individuals and 14 firms from federal government contracting relating to these charges.

Former Subcontractor Employee Pleads Guilty to Fraud

A former subcontractor quality assurance engineer pled guilty to falsifying inspection reports and nondestructive test certifications for flight-critical components to be used on SpaceX rocket missions for NASA, the U.S. Air Force, and the National Oceanic and Atmospheric Administration. The charge carries a maximum penalty of 15 years of imprisonment and a $500,000 fine. Sentencing is expected in May 2020.

University Researcher Charged

A researcher at the University of Tennessee was indicted on three counts of wire fraud and three counts of false statements for concealing his affiliation with the Beijing University of Technology in an attempt to defraud NASA. Federal law prohibits the use of appropriated funds on collaborative projects with China or its universities. As a result of the researcher's actions, the University of Tennessee unknowingly falsely certified its compliance with federal law.

Former General Manager Indicted

The former general manager of a Titusville, Florida, engineering and construction firm was indicted for conspiracy and wire fraud for misrepresenting his company as a woman-owned small business in order to gain an unfair competitive advantage for a subcontract at Kennedy Space Center.

COMPUTER CRIMES

Guilty Plea in Internet Scam Investigation

An individual who victimized a now-deceased Marshall Space Flight Center employee was sentenced to 3 years of incarceration to be served consecutively with other non-OIG case sentencings. In addition to supporting the conviction of the subject, the NASA OIG investigative effort resulted in the subject being ordered to pay $170,000 in restitution to the victim's family.

Former Contractor Employee Sentenced

In November 2019, a former contract emergency medical technician was sentenced to 3 years of supervised release and ordered to pay $4,900 in restitution for gaining unauthorized access to multiple NASA employees' private electronic medical records.

EMPLOYEE MISCONDUCT

Former NASA Employee Agrees to Civil Settlement

A former Glenn Research Center employee agreed to pay $76,638 to resolve allegations that she falsified her time and attendance reports over an extended period.

Retired Glenn Employee Charged with False Statements

In November 2019, a federal grand jury in Cleveland, Ohio, indicted a recently retired Glenn Research Center employee for making false statements. Specifically, the counts charged the retiree with making materially false, fictitious, and fraudulent statements related to his contact with foreign nationals, his foreign financial interests, and his financial support of foreign nationals while undergoing a background investigation for a NASA security clearance.

STATISTICAL DATA

TABLE 10: OFFICE OF INVESTIGATIONS COMPLAINT INTAKE DISPOSITION

Source of Complaint	Zero Files[a]	Administrative Investigations[b]	Management Referrals[c]	Preliminary Investigations[d]	Total
Hotline	19	11	5	15	50
All others	31	26	3	65	125
Total	**50**	**37**	**8**	**80**	**175**

[a] Zero files are those complaints for which no action is required or that are referred to NASA management for information only or to another agency.

[b] Administrative investigations include non-criminal matters initiated by the Office of Investigations as well as hotline complaints referred to the Office of Audits.

[c] Management referrals are those complaints referred to NASA management for which a response is requested.

[d] Preliminary investigations are those complaints where additional information must be obtained prior to initiating a full criminal or civil investigation.

TABLE 11: FULL INVESTIGATIONS OPENED THIS REPORTING PERIOD

Full Criminal/Civil Investigations[a]	24

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

TABLE 12: INVESTIGATIONS CLOSED THIS REPORTING PERIOD

Full, Preliminary, and Administrative Investigations	104

Note: NASA OIG uses closing memorandums to close investigations. Investigative reports are used for presentation to judicial authorities, when requested.

TABLE 13: CASES PENDING AT END OF REPORTING PERIOD

Preliminary Investigations	71
Full Criminal/Civil Investigations	121
Administrative Investigations	81
Total	**273**

TABLE 14: QUI TAM INVESTIGATIONS

Qui Tam Matters Opened This Reporting Period	3
Qui Tam Matters Pending at End of Reporting Period	7

Note: Number of Qui Tam investigations is a subset of the total number of investigations opened and pending.

TABLE 15: JUDICIAL ACTIONS

Total Cases Referred for Prosecution[a]	29
Individuals Referred to the Department of Justice[b]	24
Individuals Referred to State and Local Authorities[b]	4
Individuals Referred to International Courts	1
Indictments/Informations[c]	10
Convictions/Plea Bargains	13
Sentencing/Pretrial Diversions	8
Civil Settlements/Judgments	3

[a] This includes all referrals of individuals and entities to judicial authorities.

[b] Number of individuals referred to federal, state, and local authorities are a subset of the total cases referred for prosecution.

[c] This includes indictments/informations on current and prior referrals.

TABLE 16: ADMINISTRATIVE ACTIONS

Referrals	
Referrals to NASA Management for Review and Response	12
Referrals to NASA Management—Information Only	16
Referrals to the Office of Audits	3
Referrals to Security or Other Agencies	6
Total	**37**
Recommendations to NASA Management	
Recommendations for Disciplinary Action	
Involving a NASA Employee	2
Involving a Contractor Employee	1
Involving a Contractor Firm	–
Other	–
Recommendations on Program Improvements	
Matters of Procedure	3
Total	**6**
Administration/Disciplinary Actions Taken	
Against a NASA Employee	2
Against a Contractor Employee	1
Against a Contractor Firm	1
Procedural Change Implemented	9
Total	**13**
Suspensions or Debarments from Government Contracting	
Involving an Individual	7
Involving a Contractor Firm	14
Total	**21**

TABLE 17: INVESTIGATIVE RECEIVABLES AND RECOVERIES

Judicial	$1,080,152
Administrative[a]	$366,398
Total	**$1,446,550**
Total NASA[b]	**$653,316**

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

[b] Total amount collected may not solely be returned to NASA but may be distributed to other federal agencies.

TABLE 18: WHISTLEBLOWER INVESTIGATIONS

For the reporting period, no officials were found to have engaged in retaliation.

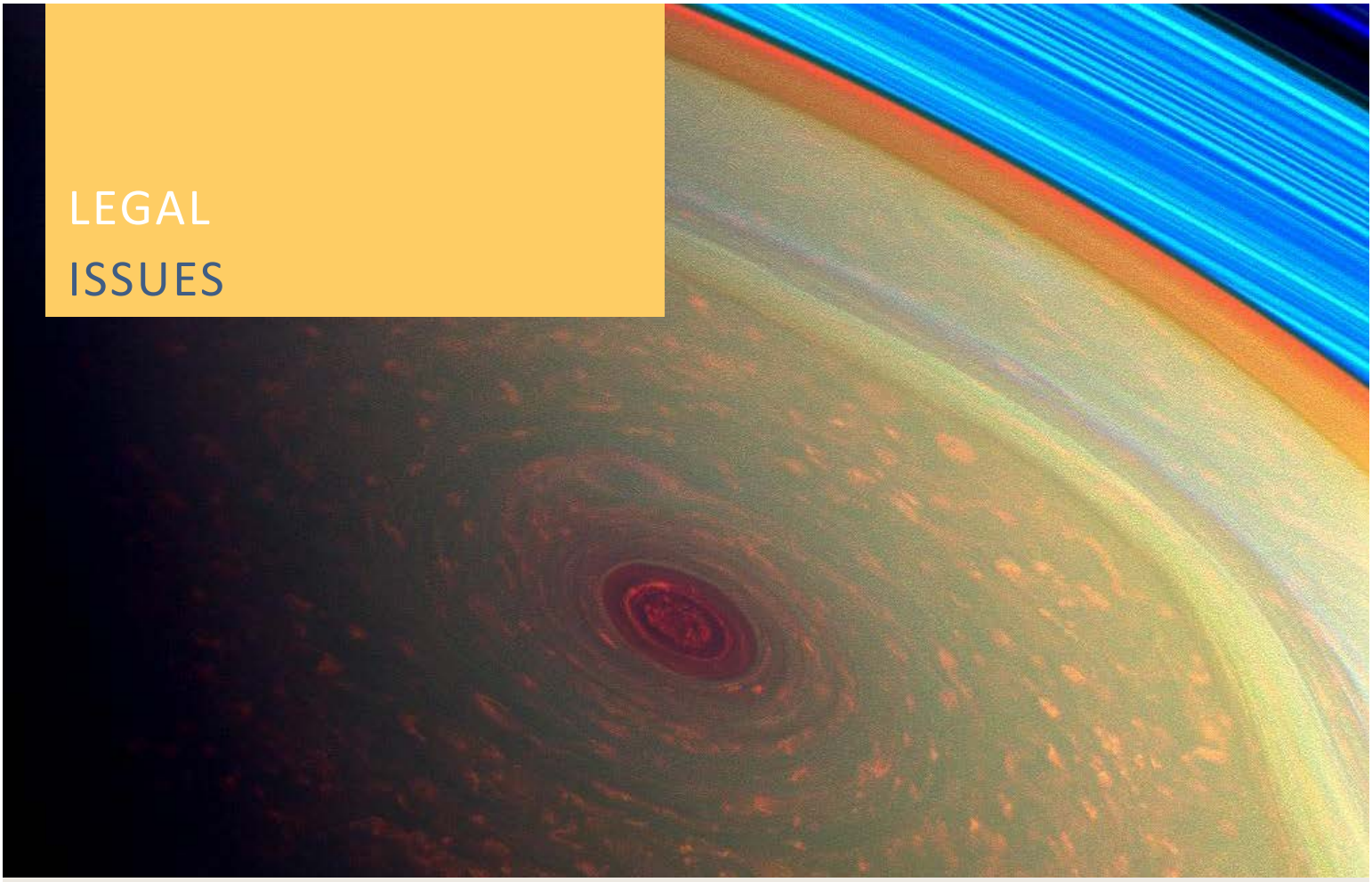
TABLE 19: SENIOR GOVERNMENT EMPLOYEE INVESTIGATIONS REFERRED FOR PROSECUTION

For the reporting period, no closed cases on senior government employees were referred for prosecution.

TABLE 20: SENIOR GOVERNMENT EMPLOYEE CASES NOT DISCLOSED TO THE PUBLIC

Case Number	Allegation	Closure Date	Disposition
19-0051-HL-S	Abuse of position	12/17/2019	Unsubstantiated

LEGAL ISSUES



This false-color image from the Cassini mission highlights the storms at Saturn's north pole

WHISTLEBLOWER MATTERS

NASA's Whistleblower Protection Coordinator received certification in mediation during this 6-month period from Northwestern University.

During the semiannual period, OIG Legal resolved a whistleblower retaliation complaint through alternative dispute resolution. When the parties reached a settlement, the complainant withdrew the reprisal complaint.

REVIEW OF LEGISLATION

H.R. 1709 – SCIENTIFIC INTEGRITY ACT

This bill would require federal agencies to appoint a Scientific Integrity Officer who shall have technical knowledge and expertise in conducting and overseeing scientific research. The Scientific Integrity Officer shall be involved in establishing a system to address disputes and appeals involving an agency's scientific integrity policy. Under the bill, the Scientific Integrity Officer would work closely with the Inspector General, as appropriate.

REGULATORY REVIEW

During this reporting period, we reviewed 18 NASA regulations and policies under consideration by the Agency. The following are the more significant regulations and reviews.

NASA PROCEDURAL REQUIREMENTS (NPR) 8715.7B, PAYLOAD SAFETY PROGRAM

NPR 8715.7B defines the NASA Payload Safety Program, which safeguards people and assets (including flight hardware and facilities) from hazards associated with NASA payloads (including those at facilities not controlled by NASA) during testing, processing, integration to the launch vehicle components, launch (up to payload separation from the launch vehicle), and planned recovery of payload and samples. NASA updated the program to reflect technological advances, process improvements, and lessons learned.

An aerial view of Launch Complex 39B with Exploration Ground Systems' mobile launcher for the Artemis I mission on the pad

The revisions and updates to the NPR were primarily reflected in the Roles/Responsibilities, Payload Safety Process, and Definitions sections of the document. The OIG submitted numerous comments on the revised NPR, intended to more precisely define the types of missions and types of payloads that are covered and to ensure more consistent use of terminology.

NASA POLICY DIRECTIVE (NPD) 4000.19, IDENTIFICATION OF PERSONAL PROPERTY AS HERITAGE ASSETS

NPD 4000.19 applies to property that is no longer needed for its original intended use. Unique personal property, plant, and equipment used to accomplish NASA's various missions can be an important element in the Agency's outreach and education programs, which further NASA's responsibility to provide for the widest practicable and appropriate dissemination of information concerning its activities and the results thereof.

The NPD sets forth NASA's intent to identify personal property unique for its historical or natural significance; cultural, educational, or artistic (e.g., aesthetic) importance; or significant architectural characteristics; as well as to ensure that the property is appropriately protected and preserved. The OIG submitted several comments intended to ensure that definitions and terminology are more consistent within the NPD and across multiple related NASA directives.

NPR 8735.2C, HARDWARE QUALITY ASSURANCE PROGRAM REQUIREMENTS FOR PROGRAMS AND PROJECTS

NPR 8735.2C provides the quality management requirements that ensure consistent implementation of the NASA safety and mission success policy of NPD 8700.1, *NASA Policy for Safety and Mission Success*, and the quality policy of NPD 8730.5, *NASA Quality Assurance Program Policy*. The NPR directs actions taken throughout the project life cycle, including project planning, hardware design, manufacturing process development, supply chain management, technical requirements flow-down, manufacturing, quality assurance and verification, product acceptance or certification, risk management, technical authority oversight, and life-cycle reviews. Among other changes, NASA has revised the NPR to more accurately reflect current Agency practice, and processes related to the delegation of functions to the Defense Contract Management Agency have been updated. The OIG submitted comments suggesting minor process improvements, as well as comments intended to improve the overall clarity and readability of the NPR.

STATISTICAL DATA

TABLE 21: LEGAL ACTIVITIES AND REVIEWS

Freedom of Information Act Matters	32
Appeals	3
Inspector General Subpoenas Issued	55
Regulations Reviewed	18


INSPECTOR GENERAL
NASA
AERONAUTICS AND SPACE ADMINISTRATION

APPENDIXES

Appendixes

The James Webb Space Telescope consists of 18 hexagonal mirror segments that are able to fold to fit inside a rocket

APPENDIX A. INSPECTOR GENERAL ACT REPORTING REQUIREMENTS

Inspector General Act Citation	Requirement Definition	Cross Reference Page Numbers
Section 4(a)(2)	Review of legislation and regulations	41–42
Section 5(a)(1)	Significant problems, abuses, and deficiencies	6–23
Sections 5(a)(5) and 6(b)(2)	Summary of refusals to provide information	—
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	25–30
Section 5(a)(8)	Total number of reports and total dollar value for audits with questioned costs	29
Section 5(a)(9)	Total number of reports and total dollar value for audits with recommendations that funds be put to better use	29
Section 5(a)(10)	Summary of audit, inspection, and evaluation reports issued before this semiannual reporting period	—
Section 5(a)(10)(A)	Summary of prior audit products for which no management decision has been made	—
Section 5(a)(10)(B)	Reports for which no Agency comment was provided within 60 days	—
Section 5(a)(10)(C)	Unimplemented recommendations and associated potential cost savings	27–28
Section 5(a)(11)	Description and explanation of significant revised management decisions	—
Section 5(a)(12)	Significant management decisions with which the Inspector General disagreed	—
Section 5(a)(13)	Reporting in accordance with Section 5(b) of the Federal Financial Management Improvement Act of 1996 Remediation Plan	—
Section 5(a)(14)	Peer review conducted by another OIG	50
Section 5(a)(15)	Outstanding recommendations from peer reviews of NASA OIG	—
Section 5(a)(16)	Outstanding recommendations from peer reviews conducted by NASA OIG	—
Section 5(a)(17)(A)	Summary of investigations	34–36
Section 5(a)(17)(B)(C) and (D)	Matters referred to prosecutive authorities	38
Section 5(a)(18)	Descriptions of table metrics	37–39
Section 5(a)(19)(A) and (B)(i)(ii)	Summary of investigations involving senior government employees	39
Section 5(a)(20)	Summary of whistleblower investigations	39
Section 5(a)(21)(A) and (B)	Agency attempts to interfere with OIG independence	—
Section 5(a)(22)(A)	Closed inspections, evaluations, and audits not disclosed to the public	26
Section 5(a)(22)(B)	Closed investigations of senior government employees not disclosed to the public	39

APPENDIX B. AWARDS

On October 15, 2019, the Council of Inspectors General on Integrity and Efficiency hosted its 22nd Annual Awards ceremony in Washington, D.C., to recognize the outstanding accomplishments of OIGs across the federal government. The following NASA OIG individuals and teams were honored at the ceremony.

BARRY R. SNYDER JOINT AWARD

Mark Jenson from the Office of Audits received an award in recognition of exemplary performance as part of the team that revised the Government Accountability Office/Council of the Inspectors General on Integrity and Efficiency Financial Audit Manual, which is used by the Government Accountability Office, OIGs, and public accounting firms across the government conducting financial statement audits.

AWARD FOR INDIVIDUAL ACCOMPLISHMENT

Ross Weiland from the Office Management and Planning received an award in recognition of exemplary performance at NASA OIG and his collaboration in forming and serving as the first Chairman of the Assistant Inspectors General for Management Committee to help improve the federal Inspector General community.

AUDIT AWARD FOR EXCELLENCE

Members of the Office of Audits received an Award for Excellence in recognition of exceptional achievement and outstanding teamwork for a review of NASA's SLS Stages Contract. The team included Ridge Bowman, Kevin Fagedes, Susan Bachle, Robert Proudfoot, Frank Martin, Mike Beims, Sarah McGrath, and Matt Kelly.

EVALUATIONS AWARD FOR EXCELLENCE

Staff in the Office of Audits received an Award for Excellence in recognition of exceptional achievement reviewing NASA's portfolio of 31 missions focused on studying the Sun and its effects on Earth's climate and electrical systems as well as the solar system. The team included Raymond Tolomeo, Adrian Dupree, Abtin Forghani, Sarah McGrath, and Jobenia Parker.

AWARD FOR EXCELLENCE INVESTIGATION

Staff from our Office of Investigations received an Award for Excellence in recognition of exceptional efforts in combating fraud in the production and certification of critical aerospace components used in the nation's space and missile defense programs. The team included Wade Krieger, Christian Olson, and Joe Fasula.

AWARD FOR EXCELLENCE MULTIPLE DISCIPLINES

Members of the Office of Audits and the OIG's Advanced Data Analytics Program were part of a governmentwide interdisciplinary team that received an Award for Excellence in recognition of exceptional efforts examining high-risk purchase card transactions. The following NASA OIG team members were honored: Shari Bergstein, Norm Conley, Regina Dull, GaNelle Flemons, Mark Jenson, and Bret Skalsky.

APPENDIX C. DEBT COLLECTION

The Senate Report accompanying the supplemental Appropriations and Rescissions Act of 1980 (Pub. L. No. 96-304) requires Inspectors General to report amounts due to the Agency, as well as amounts that are overdue and written off as uncollectible. The NASA Shared Services Center provides this data each November for the previous fiscal year.

For the period ending September 30, 2019, the receivables due from the public totaled $1,547,815, of which $697,030 is delinquent. The amount written off as uncollectible for the period October 1, 2018, through September 30, 2019, was $170,117.

APPENDIX D. PEER REVIEWS

The Dodd-Frank Wall Street Reform and Consumer Protection Act requires the OIG to include in its semiannual reports any peer review results provided or received during the relevant reporting period. Peer reviews are required every 3 years. In compliance with the Act, we provide the following information.

OFFICE OF AUDITS

No external peer reviews were conducted of our Office of Audits during this semiannual period. The date of the last external peer review of NASA OIG was August 13, 2018, and it was conducted by the U.S. Office of Personnel Management OIG. NASA OIG received a peer review rating of "pass," and there are no outstanding recommendations from the review.

During this semiannual reporting period, we performed a peer review examining the system of quality control for the Federal Deposit Insurance Corporation (FDIC) OIG's Office of Program Audits and Evaluations and Office of Information Technology Audits and Cyber in effect for the 12-month period ending March 31, 2019. We assigned a rating of "pass" for the period reviewed. We also communicated additional findings and recommendations that required attention by FDIC OIG managers but were not considered of sufficient significance to affect the opinion expressed in our report. FDIC OIG has informed us that it has implemented or will implement the recommendations we made in our review. We have no outstanding recommendations related to this or past peer reviews that we have conducted.

OFFICE OF INVESTIGATIONS

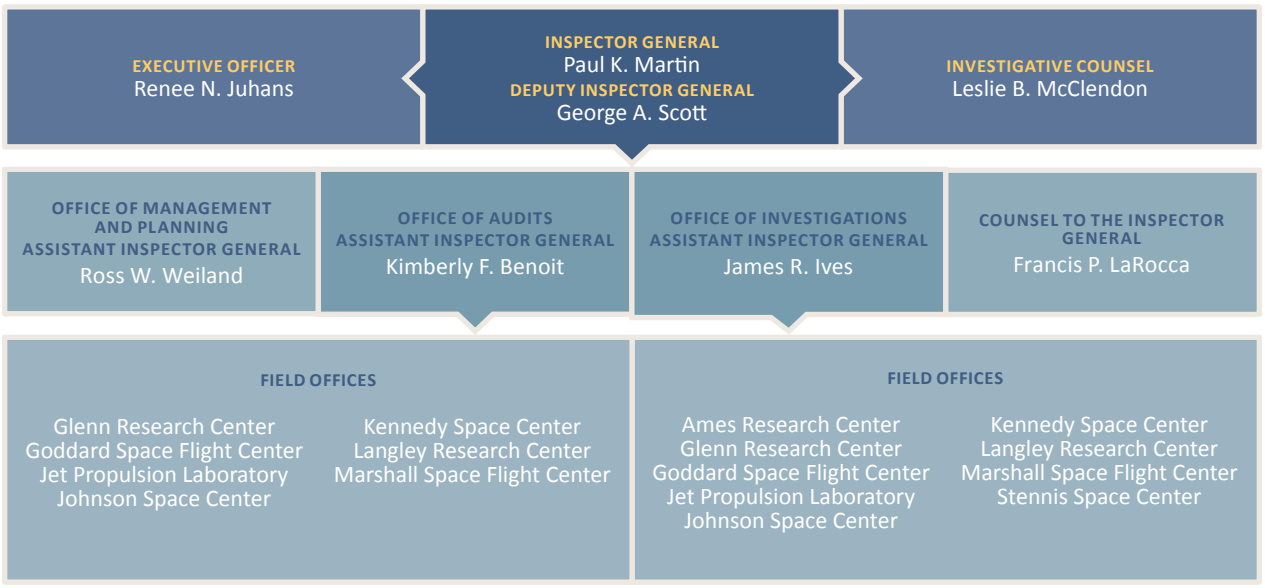
No external peer reviews were performed by the Office of Investigations during this semiannual period. In October 2017, the Office of the Special Inspector General for the Troubled Asset Relief Program reviewed NASA OIG's Office of Investigations and found the office to be compliant with all relevant guidelines. There are no unaddressed recommendations outstanding from this review.

APPENDIX E. ACRONYMS

CLA	CliftonLarsonAllen LLP
DAAC	Distributed Active Archive Center
DATA Act	Digital Accountability and Transparency Act of 2014
DCAA	Defense Contract Audit Agency
EGS	Exploration Ground Systems
ESDIS	Earth Science Data and Information System
FDIC	Federal Deposit Insurance Corporation
FISMA	Federal Information Security Modernization Act of 2014
FY	fiscal year
GFAS	Ground and Flight Application Software
ISS	International Space Station
IT	information technology
ML-1	Mobile Launcher-1
ML-2	Mobile Launcher-2
NPD	NASA Policy Directive
NPR	NASA Procedural Requirements
OIG	Office of Inspector General
OMB	Office of Management and Budget
OPS	Office of Protective Services
SLS	Space Launch System
SSI	Space Science Institute
SOFIA	Stratospheric Observatory for Infrared Astronomy
USRA	Universities Space Research Association

APPENDIX F. OFFICE OF INSPECTOR GENERAL ORGANIZATIONAL CHART

The OIG's FY 2020 budget of $41.7 million supports the work of 184 employees in their audit, investigative, and administrative activities.



THE NASA OFFICE OF INSPECTOR GENERAL 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 INSPECTOR GENERAL provides policy direction and leadership for NASA OIG and serves as an independent voice to the NASA Administrator and Congress by identifying opportunities for improving the Agency's performance. The Deputy Inspector General assists the Inspector General in managing the full range of the OIG's programs and activities and provides supervision to the Assistant Inspectors General, Counsel, and Investigative Counsel 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 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 AUDITS conducts independent and objective audits and reviews of NASA programs, projects, operations, and contractor activities. In addition, the Office oversees the work of an independent public accounting firm in its annual audit of NASA's financial statements.

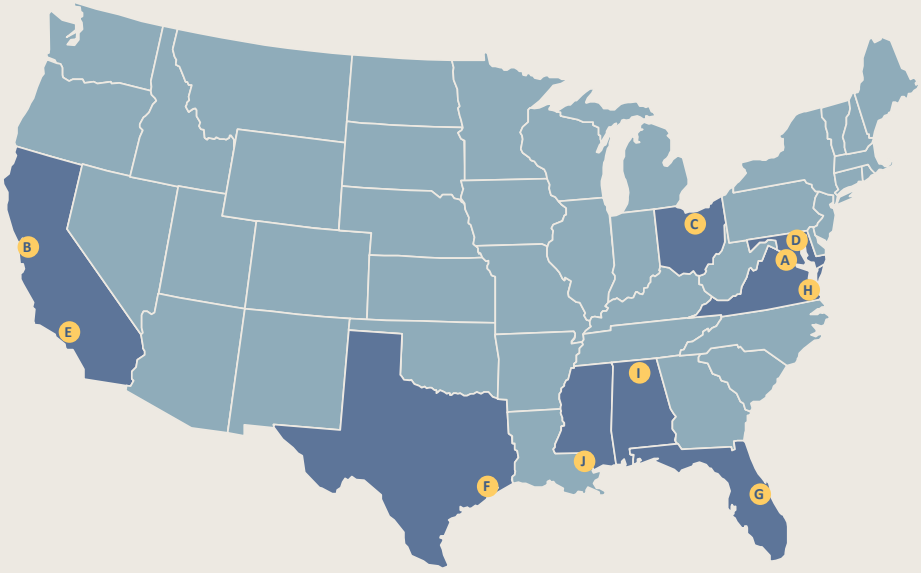
THE OFFICE OF COUNSEL TO THE INSPECTOR GENERAL provides legal advice and assistance to OIG managers, auditors, and investigators. The Office serves as OIG counsel in administrative litigation and assists the Department of Justice when the OIG participates as part of the prosecution team or when the OIG is a witness or defendant in legal proceedings. In addition, the Office is responsible for educating Agency employees about prohibitions on retaliation for protected disclosures and about rights and remedies for protected whistleblower disclosures.

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

THE OFFICE OF MANAGEMENT AND PLANNING provides financial, procurement, human resources, administrative, and IT services and support to OIG staff.

APPENDIX G. MAP OF OIG FIELD OFFICES

NASA OIG OFFICES OF AUDITS AND INVESTIGATIONS



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If you fear reprisal, contact the
OIG Whistleblower Protection Coordinator to learn more about your rights:
https://oig.nasa.gov/whistleblower.html

https://oig.nasa.gov

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