

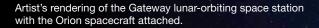




I am pleased to present this Semiannual Report summarizing the NASA Office of Inspector General's (OIG) activities and accomplishments between April 1 and September 30, 2024. Our office provides independent, objective, and comprehensive oversight of NASA programs, projects, and personnel while supporting the Agency's mission and improving its outcomes. The oversight and insights offered by OIG staff are both impactful and particularly relevant as NASA faces a constrained budget environment and makes difficult trade-offs regarding mission priorities. In addition to the OIG staff, I would like to recognize and thank Kimberly F. Benoit, our former Assistant Inspector General for Audits, for her leadership and spirit of innovation that she brought to our office over the past 5 years.

Our audit work focuses primarily on the top management challenges that we identified NASA is facing. These include improving the management of major programs and projects, partnering with commercial industry, and enabling mission critical capabilities and support services. During this reporting period, our Office of Audits issued 15 reports and identified more than \$2.9 million in questioned costs. We also found the following:

- Despite Agency attempts to improve the project, the Mobile Launcher 2 contract, originally awarded for \$383 million, is now estimated to cost \$1.8 billion with delivery of the launcher to NASA by September 2027. We project costs could be even higher due in part to the significant amount of construction work that remains.
- Costs for the Space Launch System Block 1B—NASA's more powerful heavy-lift rocket—will reach approximately \$5.7 billion before the system is scheduled to launch in 2028. This is \$700 million more than the nearly \$5 billion cost and schedule baseline NASA established in 2023.
- Much of NASA's rocket propulsion test (RPT) infrastructure is aging and costly to maintain. Also, the landscape for RPT is changing and increased commercialization in the space industry has lessened demand for NASA's large-scale RPT facilities.
- Under the Commercial Lunar Payload Services (CLPS) initiative, NASA deviated from its original, hands-off strategy and its plan for incremental progress toward larger missions. Rather, the Agency's aggressive lander development schedules led to increasingly risk-averse practices and policies, higher costs, and delayed delivery schedules.
- NASA's science, technology, engineering, and mathematics (STEM) engagement efforts could better target the Agency's mission critical technical occupations to help build the pipeline for NASA's future workforce.



Over the next year, we will be issuing audit reports on topics such as NASA's management of the Human Landing System contracts, the status of the Commercial Crew Program, management of the Dragonfly mission, NASA's vulnerabilities to the impacts of climate change, awards to small disadvantaged businesses, and progress in implementing NASA's information technology (IT) zero trust architecture.

Our Office of Investigations continues to identify and investigate fraud, waste, abuse, misconduct, and mismanagement involving NASA personnel and contractors, resulting in over \$10 million in recoveries during this reporting period. Examples of our investigative results include the following:

- A large government contractor agreed to a civil settlement of \$377 million to resolve allegations that it violated the False Claims Act. NASA OIG examined the settlement and identified a \$1.6 million recovery to NASA.
- A former NASA contractor was sentenced to 21 months of imprisonment and ordered to pay \$689,280 in restitution after pleading guilty to wire fraud for altering testing and conformance documentation for parts and materials intended for use on the Space Launch System.
- As the result of a joint investigation by the Pandemic Response Accountability Committee
  Task Force and the U.S. Secret Service, two West Virginia business owners were indicted
  for obtaining and transferring COVID-19 relief funds to personal bank and cryptocurrency
  accounts. Potential forfeitures of \$6 million and \$5.1 million, respectively, are pending.
- As the result of a joint investigation by NASA OIG and the Federal Bureau of Investigation (FBI), a Russian citizen was indicted for conspiracy to hack and destroy NASA and Ukrainian government computer systems and data.
- A senior NASA employee retired in lieu of administrative action for falsifying their time and attendance records and making false statements to leadership about their work assignments.

We will continue to provide the level of oversight of NASA's Artemis campaign and other Agency programs and projects that we deem appropriate. We appreciate Congress's continued support of our oversight efforts and hope that you find this report informative.

George A. Scott Deputy Inspector General November 6, 2024



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# **Statistical Highlights**

The statistics below highlight the OIG's audits and investigations from April 1 to September 30, 2024, which are discussed further in this report.



#### Office of Audits

**\$3M** 

\$12.6M

QUESTIONED COSTS

FUNDS PUT TO BETTER USE

15

TOTAL NUMBER OF REPORTS ISSUED

40

TOTAL NUMBER OF RECOMMENDATIONS

In addition, 175 recommendations remain unimplemented for a total of \$100,857,602 in potential cost savings.

## Office of Investigations

14

INDICTMENTS AND INFORMATIONS

6

CONVICTIONS AND PLEAS

\$8.2M

JUDICIAL RECOVERIES

ADMINISTRATIVE RECOVERIES

A SpaceX Falcon Heavy rocket carrying NASA's Europa Clipper spacecraft after liftoff from Launch Complex 39A at Kennedy Space Center on October 14, 2024.

The Office of Audits conducts audits and reviews of NASA programs, projects, operations, and contractor activities to identify waste and mismanagement and improve efficiency and effectiveness.



An aurora turns the sky near Malad City, Idaho, red, purple, and green in this 8-second exposure taken on May 11, 2024.



The Artemis II core stage is moved from final assembly at the Michoud Assembly Facility in preparation for delivery to Kennedy Space Center.

Human exploration activities remain among NASA's most highly visible 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, including ambitious goals for the Artemis campaign. Through Artemis, NASA seeks to establish a sustainable lunar presence while preparing the way for crewed missions to Mars. Our oversight of these issues generally involves operations within the Agency's Exploration Systems Development Mission Directorate, Space Operations Mission Directorate, and Space Technology Mission Directorate, as well as select portions of the Science Mission Directorate.

# NASA's Management of Risks to Sustaining ISS Operations through 2030

IG-24-020 | September 26, 2024

For nearly 25 years, astronauts have continuously lived and worked onboard the ISS, the world's preeminent orbiting, microgravity research and development laboratory. However, NASA faces increasing risks to sustaining ISS operations through 2030, Station evacuation options for crew are limited, and ISS transition and deorbit plans remain in development.



Aboard the ISS, NASA astronaut Jeanette Epps replaces and cleans research components inside the Combustion Integrated Rack, which is used for fire safety investigations.

#### **NASA's Rocket Propulsion Test Program**

IG-24-018 | September 24, 2024

NASA uses RPT sites to evaluate how engines and components will react in launch conditions and in space and address any issues before launch. Much of NASA's RPT infrastructure is aging and requires significant funding to maintain, while demand for NASA's large-scale RPT facilities is in decline and funding is insufficient to address major maintenance projects.

# NASA's Management of the Mobile Launcher 2 Project

IG-24-016 | August 27, 2024

NASA is developing a second mobile launcher—the ground structure used to assemble, transport, and launch the Space Launch System rocket and Orion crew capsule—to support larger variants of the rocket beginning with the Artemis IV mission. Mobile Launcher 2's cost and schedule are not sustainable despite NASA's efforts to improve project performance.

## NASA's Management of Space Launch System Block 1B Development

IG-24-015 | August 8, 2024

Artemis IV will be the first flight of NASA's more powerful heavy-lift rocket—the Space Launch System Block 1B. However, Block 1B development efforts have encountered multiple issues including The Boeing Company's ineffective quality management and inexperienced workforce, continued cost increases and schedule delays, and NASA's delayed establishment of a cost and schedule baseline.



Artist's concept of Space Launch System Block 1B.

#### Management Alert: Misuse of Government-Furnished Property at Contractor Facility

ML-24-007 | June 20, 2024

Northrop Grumman Corporation used NASA-provided government-furnished property at its Promontory, Utah, plant for non-NASA purposes. This included the use of specialized storage containers owned by NASA without authorization or payment and an X-ray machine NASA provided for the inspection of solid rocket boosters for services to other commercial customers.

## NASA's Readiness for the Artemis II Crewed Mission to Lunar Orbit

IG-24-011 | May 1, 2024

The Artemis II crewed test flight aims to return humans to lunar orbit for the first time in more than 50 years. While NASA is addressing critical issues revealed during the Artemis I test flight, the Artemis II launch date has been delayed by almost a year due to the significant upgrades, modifications, testing, and integration activities that remain.



U.S. Navy personnel assist NASA astronaut and Artemis II pilot Victor Glover exit a mockup of the Orion spacecraft.

## **Ongoing Audit Work**

NASA's Management of the Human Landing System Contracts

NASA's Management of Government-Furnished Property for the Artemis Campaign

NASA's Management of the Extravehicular Activity Spacesuits

NASA's Management of Its Commercial Crew Program



Part of a payload under the CLPS initiative, engineers prepare three Moon-bound rovers for a test drive.

Science missions like the Mars 2020 Perseverance Rover, Parker Solar Probe, and James Webb Space Telescope further our understanding of the universe. Meanwhile, NASA's Earth-observing missions shed light on climate change, severe weather and other natural hazards, wildfires, and global food production. And, as it has since its earliest days, the Agency continues to conduct research in pursuit of improvements and efficiencies in aviation technology. Our oversight of these areas generally corresponds to efforts undertaken by the Agency's Science Mission Directorate and Aeronautics Research Mission Directorate.

# Audit of the Nancy Grace Roman Space Telescope Project

IG-24-014 | July 31, 2024

Scheduled to launch in 2027, the Nancy Grace Roman Space Telescope is a NASA observatory designed to explore dark energy, exoplanets, and infrared astrophysics. Although the project is on track to meet its cost and schedule commitments despite contractor performance issues, some networks the telescope will rely on for navigation and data downlinking, including NASA's Deep Space Network, are oversubscribed and will be in even greater demand during Roman's mission.

# NASA's Commercial Lunar Payload Services Initiative

IG-24-013 | June 6, 2024

NASA began the CLPS initiative to enable rapid, affordable, and frequent payload deliveries to the Moon by transferring much of the responsibility and risk to CLPS commercial vendors. CLPS is making progress but faces significant challenges, including increased costs and schedule delays.



Each circular section of the Nancy Grace Roman Space Telescope's focal plane mask is designed to block starlight and help reveal hidden planets.

## **Ongoing Audit Work**

NASA's Management of the Dragonfly Mission

NASA's Implementation and Management of Its Planetary Defense Strategy

NASA's Vulnerabilities to Climate Change Impacts

Assessment of NASA's Standing Review Board Practices



Terra, part of NASA's Earth-observing satellite fleet that collects geospatial data, acquired this image of snowfall (in blue) in California's Sierra Nevada mountains.

Institutional services such as human capital management, procurement, infrastructure, and security are organized under NASA's Mission Support Directorate. Our oversight of these functions covers a wide array of topics, including the Agency's workforce management, procurement of goods and services, operations and maintenance of facilities and infrastructure, and physical security. We also monitor and evaluate NASA's management of its IT assets, which is led by the Agency's Chief Information Officer, and we continue to pay close attention to the Agency's efforts to improve its IT cybersecurity practices.

#### Evaluation of NASA's Information Security Program under the Federal Information Security Modernization Act for Fiscal Year 2024

IG-24-019 | September 12, 2024

The Federal Information Security Modernization Act requires the OIG to conduct an annual evaluation of NASA's information security program and practices. For fiscal year 2024, we rated NASA's information security program at a Level 3—meaning policies, procedures, and strategies were consistently implemented, but quantitative and qualitative effectiveness measures were lacking—a rating that falls short to be considered effective.

## NASA's Compliance with the Geospatial Data Act for Fiscal Year 2024

IG-24-017 | September 4, 2024

The Geospatial Data Act seeks to foster efficient, government-wide management of geospatial data—information identifying the geographic location and characteristics of natural or constructed features and boundaries on Earth. While NASA has continued efforts to comply with the Act, progress is still needed to meet key responsibilities.

# Audit of NASA's Science, Technology, Engineering, and Math Engagement

IG-24-010 | April 25, 2024

NASA's success relies substantially on attracting and retaining a skilled and diverse workforce, including those in STEM occupations. NASA's STEM engagement efforts are evolving but require more specific goals and improved oversight of grantees, while the Agency is also missing an opportunity to further develop the future STEM workforce.

## **Ongoing Audit Work**

NASA's Awards to Small Disadvantaged Businesses

Audit of NASA's Mission Support Future Architecture Program

Audit of NASA's Zero Trust Architecture



NASA's SpaceX Crew-9 carrying NASA astronaut Nick Hague and Roscosmos cosmonaut Aleksandr Gorbunov is launched to the ISS on September 28, 2024.

The OIG and its independent external auditor continue to assess NASA's efforts to improve its financial management practices by conducting and overseeing a series of audits—including the annual financial statement audit—to help the Chief Financial Officer and the Agency identify and address weaknesses. We also assess single audits of NASA grantees performed by external independent public accounting firms. The single audits provide NASA and stakeholders with assurance that these award recipients comply with federal reporting directives and assist the Agency in performing pre-award risk assessments and post-award monitoring efforts.

# NASA's Compliance with the Payment Integrity Information Act for Fiscal Year 2023

IG-24-012 | May 29, 2024

The Payment Integrity Information Act was enacted to improve efforts to identify and reduce federal improper payments—payments the federal government should not have made or made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirements. NASA complied with the Act during fiscal year 2023, but the Agency's reported overpayments were inaccurate.

## **Ongoing Audit Work**

Audit of NASA's Fiscal Year 2024 Financial Statements

Fiscal Year 2024 Risk Assessment of NASA's Charge Card Programs

Desk Reviews of Select NASA Grantee Single Audits

## **Statistical Data**

TABLE 1: AUDIT PRODUCTS ISSUED AND NOT DISCLOSED TO THE PUBLIC, CURRENT SEMIANNUAL REPORT

| Report No. and<br>Date Issued | Title  | Objective   |
|-------------------------------|--|---|
| ML-24-008,<br>8/20/2024       | Desk Review of the Association of Universities for<br>Research in Astronomy, Inc.'s Fiscal Year 2023 Single<br>Audit Reporting Package | Determined whether the audit report and supporting workpapers met generally accepted government auditing standards and the Uniform Guidance audit requirements. |
| ML-24-006,<br>6/3/2024        | Desk Review of the Planetary Science Institute's Fiscal<br>Year 2023 Single Audit Reporting Package                                    | Determined whether the audit report and supporting workpapers met generally accepted government auditing standards and the Uniform Guidance audit requirements. |
| ML-24-005,<br>4/3/2024        | Desk Review of the San Jose State University<br>Research Foundation's Fiscal Year 2023 Single Audit<br>Reporting Package               | Determined whether the audit report and supporting workpapers met generally accepted government auditing standards and the Uniform Guidance audit requirements. |

TABLE 2: AUDIT RECOMMENDATIONS YET TO BE IMPLEMENTED, CURRENT SEMIANNUAL REPORT

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | Human Exploration   |                                 |                           |
| IG-24-020,<br>9/26/2024       | NASA's Management of Risks to Sustaining ISS Operations through 2030  |                                 |                           |
|                               | Report on NASA's progress to reexamine available orbital debris tracking tools and offices to ensure all practicable data sources are leveraged to inform ISS operations and ensure crew safety.                    | 9/30/2025                       | \$0                       |
|                               | 2. Document safety contingency plans and vehicle reassignment rules to help ensure the safe return of crew in the event of an emergency—expanding these efforts to include damage to the Crew Dragon and Starliner. | 6/30/2025                       | \$0                       |
|                               | Develop plans that reflect potential cost savings measures and anticipated reductions in operations for ISS decommissioning.  | 5/30/2025                       | \$0                       |
|                               | 4. Update the controlled deorbit plan and ensure the plan includes key commitments, technical, schedule, and cost challenges impacting the 2031 deorbit time frame.   | 9/30/2025                       | \$0                       |
| IG-24-018,<br>9/24/2024       | NASA's Rocket Propulsion Test Program   |                                 |                           |
|                               | Establish a requirement in the RPT Program Plan for recurring right-size studies for the RPT capability portfolio and use the results to reexamine workforce and capability requirements for the future.            | 9/30/2025                       | \$0                       |
|                               | 2. Ensure that cost models deployed at all RPT Centers include full recovery of applicable maintenance costs for the infrastructure and facilities being utilized, similar to that being piloted at Stennis.        | 9/30/2025                       | \$0                       |
|                               | Formally document and establish the FM&M process in the RPT Program Plan or RPTMB Operating Procedures.   | 9/30/2025                       | \$0                       |
|                               | Document the results and planned RPT actions following completion of the Commercial Capability Survey.  | 6/30/2025                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
|                               | 5. Ensure that the appropriate revisions are made to NPR and NPD 8600.1 to clarify the authority structure.  | 3/31/2025                       | \$0                       |
| IG-24-016,<br>8/27/2024       | NASA's Management of the Mobile Launcher 2 Project   |                                 |                           |
|                               | Ensure lessons learned from the ML-2's acquisition, contract, and project management are codified to inform future development efforts.  | 2/29/2028                       | \$2,977,057               |
|                               | 2. Conduct a thorough analysis of the feasibility of utilizing the fixed-price option, and if NASA determines that it will not be exercised, remove the option from the ML-2 contract.           | 2/1/2025                        | \$0                       |
| IG-24-015,<br>8/8/2024        | NASA's Management of Space Launch System Block 1B Development  |                                 |                           |
|                               | Coordinate with Boeing, the SLS Stages prime contractor, to develop a quality management system training program that is compliant with AS9100D and reviewed by the appropriate NASA officials.  | 7/31/2025                       | \$0                       |
|                               | Institute financial penalties for Boeing's noncompliance with quality control standards.   | unresolved <sup>a</sup>         | \$0                       |
|                               | 3. Perform a detailed cost overrun analysis on Boeing's Stages contract for EUS development.   | 12/31/2024                      | \$0                       |
|                               | 4. Coordinate with DCMA to ensure contractual compliance with EVMS clauses.  | 10/31/2024                      | \$0                       |
| ML-24-007,<br>6/20/2024       | Management Alert: Misuse of Government-Furnished Property at Contract  | or Facility                     |                           |
|                               | Coordinate with the Assistant Administrator for Procurement to address the identified instances of NGC's GFP misuse at its Promontory, Utah, facility.   | 8/31/2024                       | \$0                       |
| IG-24-011,<br>5/1/2024        | NASA's Readiness for the Artemis II Crewed Mission to Lunar Orbit  |                                 |                           |
|                               | Ensure the root cause of Orion heat shield char liberation is well understood prior to launch of the Artemis II mission.   | 6/30/2024                       | \$0                       |
|                               | 2. Conduct analysis of Orion separation bolts using updated models that account for char loss, design modifications, and operational changes to Orion prior to launch of the Artemis II mission. | 6/30/2024                       | \$0                       |
|                               | 3. Require EGS conduct additional verification and validation for launch imagery equipment prior to launch attempts should launch conditions change.   | 9/30/2024                       | \$0                       |
|                               | Reexamine procedures to better ensure recovery of Orion jettisoned hardware for the Artemis II mission.  | 5/1/2024                        | \$0                       |
|                               | 5. Develop a corrective action plan to mitigate or prevent the recurrence of uninterpretable Orion telemetry data for the Artemis II mission.  | 5/1/2024                        | \$0                       |
|                               | 6. Establish a course of action and timeline for individual Artemis system design changes before beginning integrated system assembly stacking operations.                                       | 5/1/2024                        | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | Science and Aeronautics   |                                 |                           |
| IG-24-014,<br>7/31/2024       | Audit of the Nancy Grace Roman Space Telescope Project  |                                 |                           |
|                               | Further evaluate space communication and navigation risks, including running and reviewing loading analysis from all four networks.   | 3/31/2025                       | \$0                       |
|                               | Develop a contingency plan for Roman's space communication and navigation services, including an assessment of the DSN's ability to support Roman.  | 3/31/2025                       | \$0                       |
|                               | 3. Assess the potential impacts of the delayed upgrades to the NSN on Roman's scheduled launch timeline.  | 3/31/2025                       | \$0                       |
|                               | 4. Develop procedures that ensure future international agreements for space communication and navigation services include information sharing provisions that allow NASA to conduct proper risk analysis, such as through access to capacity and loading analysis.  | 1/31/2025                       | \$0                       |
| IG-24-013,<br>6/6/2024        | NASA's Commercial Lunar Payload Services Initiative   |                                 |                           |
|                               | Conduct updated market research to assess capability growth across the lunar economy and associated transportation sector since 2017.   | 4/30/2025                       | \$0                       |
|                               | Reassess NASA's role in, and contribution to, the commercial lunar delivery market.   | 5/31/2025                       | \$0                       |
|                               | 3. Finalize a management plan with clear leadership authority and responsibility that would delineate CLPS initiative performance goals and metrics that are measurable and targeted, criteria for augmented insight, a formal lessons-learned process, and any other relevant guidelines for the management plan's implementation. | 3/30/2025                       | \$0                       |
|                               | 4. Prepare and formalize a CLPS Manifest Selection Board charter and processes.   | 1/31/2025                       | \$0                       |
|                               | 5. Strengthen procedures to ensure science payload interfaces and requirements are mature enough to write an RFTP that would minimize future requirement changes.   | 6/30/2025                       | \$0                       |
|                               | 6. Assess technical implications of the first Peregrine lander failure on VIPER mission delivery success and impact to CLPS's overall cost and schedule, as applicable.   | 10/31/2024                      | \$0                       |
|                               | Mission Support and Information Technology  |                                 |                           |
| IG-24-017,<br>9/4/2024        | NASA's Compliance with the Geospatial Data Act for Fiscal Year 2024   |                                 |                           |
|                               | 1. Formalize the designation of a SAOGI in NASA policy to institutionalize the role.  | 10/31/2024                      | \$0                       |
| IG-24-010,<br>4/25/2024       | Audit of NASA's Science, Technology, Engineering, and Math Engagement   |                                 |                           |
|                               | Reevaluate the OSTEM performance goals to ensure they are distinct and well correlated with outcomes.   | 3/31/2026                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
|                               | Develop a procedure to ensure OSTEM tracks and reports funding for all Agency STEM engagement activities.  | 12/31/2024                      | \$0                       |
|                               | 4. Develop a standardized grant process that ensures mandatory performance reporting and that expiration dates are tracked and monitored to meet requirements and develop practices to ensure grant recipients are reporting subrecipient awards over \$30,000 as required.                  | 9/30/2024                       | \$0                       |
|                               | 5. Reevaluate jurisdictions eligible for EPSCoR funds to ensure effective and equitable distribution of Agency funds.  | 11/30/2024                      | \$12,613,442              |
|                               | 6. Require all NASA organizations capture STEM engagement activities in STEM Gateway.  | 12/31/2024                      | \$0                       |
|                               | 7. Require OCHCO, Mission Directorates, and Centers collaborate to identify and incorporate critical Agency workforce needs when developing future STEM engagement activities and develop a plan that increases the number of STEM engagement activities aimed at skilled trade occupations. | 12/31/2024                      | \$0                       |

<sup>&</sup>lt;sup>a</sup> There is no estimated completion date, and the OIG and NASA are working on corrective actions to address the recommendation.

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

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | Human Exploration   |                                 |                           |
| IG-24-003,<br>10/19/2023      | NASA's Management of the Artemis Supply Chain   |                                 |                           |
|                               | Complete the Supply Chain Visibility Data Requirement Description effort to gain supplier data from contractors.  | 2/29/2024                       | \$0                       |
|                               | 5. Ensure data is regularly entered into a supplier database (e.g., Insight Central) to track supplier data and ongoing challenges.   | 9/30/2024                       | \$0                       |
|                               | 6. Incorporate a representative from the Logistics Management Division into each Artemis-related program and project at appropriate milestones, including at the onset of a contract and each life-cycle milestone. | 8/31/2024                       | \$0                       |
|                               | 7. Ensure an Artemis-specific study of the Agency's industrial base and supply chain is completed on a recurring basis.   | 9/30/2023                       | \$0                       |
| IG-24-001,<br>10/12/2023      | NASA's Transition of the Space Launch System to a Commercial Services (   | Contract                        |                           |
|                               | Establish achievable cost saving metrics beginning with Artemis IV SLS elements and production contracts.   | 12/31/2027                      | \$0                       |
|                               | Transition the core stage and Exploration Upper Stage contracts to fixed-price contracts with a per mission price to codify the actual costs.   | 12/31/2027                      | \$0                       |
|                               | 3. If keeping contracts as cost-plus-award-fee, increase the percentage of cost as a factor when conducting contractor evaluations for award fee purposes.  | 12/31/2027                      | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | Conduct a detailed review of all contractor-submitted documents to ensure the government's rights to data and processes are not unnecessarily transferred to the contractor.  | 12/31/2027                      | \$0                       |
|                               | 5. Include contract flexibility on future SLS acquisitions that will allow NASA to pivot to other commercial alternatives.  | 12/31/2027                      | \$0                       |
|                               | 6. For each Artemis SLS rocket under EPOC, add compensation to the DST contract such as incentive fees for when the contractor achieves specific cost saving goals.   | 12/31/2027                      | \$0                       |
|                               | 7. Ensure Government Mandatory Inspection Points and government oversight teams remain throughout the EPOC transition period.   | 6/28/2024                       | \$0                       |
| IG-23-015,<br>5/25/2023       | NASA's Management of the Space Launch System Booster and Engine Co  | ntracts                         |                           |
|                               | 3. Ensure Marshall procurement, legal, project planning and control, and SLS and booster program officials comply with best practices for establishing and maintaining internal controls, specifically on the appropriate process and procedures on REAs, fiscal law, and appropriate internal and external engagement. | 9/30/2023                       | \$24,500,000              |
|                               | Update RS-25 production per engine cost estimate to include investment costs in restart facilities, equipment, new production overhead costs, and government-funded property.   | 11/30/2024                      | \$0                       |
|                               | 6. Conduct a thorough review of BPOC's scope of work and technical requirements needed to complete the respective periods of performance and update the contract as appropriate.  | 11/30/2023                      | \$0                       |
|                               | 8. Develop a separate non-fee bearing contract line item for completion of the 11 unfinished heritage RS-25 adaptation engines.   | 6/30/2023                       | \$19,767,103              |
| IG-23-004,<br>1/17/2023       | NASA's Partnerships with International Space Agencies for the Artemis Car   | mpaign                          |                           |
|                               | Establish a coordination strategy with NASA's international partners that includes recurring forums specifically for Artemis Accords signatories that are (or are interested in) participating in the Artemis campaign.   | 8/31/2023                       | \$0                       |
|                               | Establish NASA-led Artemis campaign boards and working groups for partners with agreed-upon commitments with NASA and provide opportunities for liaison representation from international partner agencies.   | 3/31/2024                       | \$0                       |
|                               | 4. Perform a detailed gap analysis and cost estimate for Artemis missions beyond Artemis IV that will help inform a cost-sharing strategy with international partners.  | 12/31/2024                      | \$0                       |
|                               | Establish a full-time export control team dedicated to the various     Artemis programs in support of space flight developments.  | 12/31/2024                      | \$0                       |
|                               | 6. Review export control requirements and consider additional roles for partner astronauts to increase their utilization in NASA space flight operations, to include amending existing agreements if necessary.   | 6/30/2024                       | \$0                       |
|                               | 7. Establish a full-time export control team dedicated to the Artemis programs in support of space flight operations.   | 12/31/2023                      | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | Coordinate with other federal agencies to gain a unique EAR classification for the Gateway as appropriate.  | 3/31/2023                       | \$0                       |
|                               | 9. In conjunction with NASA's Mission Directorates and the State Department, execute appropriate Artemis agreements with key international space agency partners to ensure partner roles and responsibilities are clearly understood and allow for efficient and timely partnerships in support of Artemis.   | 3/31/2024                       | \$0                       |
|                               | 10. Develop an automated routing method for the processing of international agreements within NASA.   | 1/31/2025                       | \$0                       |
| IG-23-005,<br>12/19/2022      | Review of NASA's Space Technology Mission Directorate Portfolio   |                                 |                           |
|                               | 3. Complete efforts to develop additional outcome-based performance measures based on the transition, advancement, and infusion of technologies.  | 12/30/2024                      | \$0                       |
| IG-22-012,<br>6/9/2022        | NASA's Management of the Mobile Launcher 2 Contract   |                                 |                           |
|                               | Evaluate Bechtel's support for the updated estimate of cost and schedule at project completion and finalize negotiations for Bechtel's currently proposed cost increases and NASA's government-driven changes.  | 7/31/2023                       | \$0                       |
|                               | 3a. To the extent that some or all of the Bechtel contract is converted to a fixed-price contract, ensure that the Critical Design Review has been completed in accordance with NASA's life-cycle policies prior to conversion.   | 9/30/2023                       | \$0                       |
|                               | 3b. To the extent that some or all of the Bechtel contract is converted to a fixed-price contract, ensure that an IGCE is established before entering into any new contractual agreements.  | 9/30/2023                       | \$0                       |
| IG-22-007,<br>1/11/2022       | NASA's Management of Its Astronaut Corps  |                                 |                           |
|                               | 3. At least 18 months prior to the planned Artemis II launch, coordinate with Artemis program offices to complete the development and chartering of the framework of Artemis boards and panels to ensure alignment with future mission training needs for new vehicles and missions, including Orion, next-generation spacesuits, HLS, and Gateway. | 8/21/2023                       | \$0                       |
| IG-22-005,<br>11/30/2021      | NASA's Management of the International Space Station and Efforts to Con   | nmercialize Low Ear             | th Orbit                  |
|                               | Ensure the risks associated with cracks and leaks in the Service Module Transfer Tunnel are identified and mitigated prior to agreeing to an ISS life extension.  | 1/31/2025                       | \$0                       |
| IG-22-003,<br>11/15/2021      | NASA's Management of the Artemis Missions   |                                 |                           |
|                               | Develop a realistic, risk-informed schedule that includes sufficient margin to better align Agency expectations with the development schedule.  | 9/30/2023                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | 3. Develop an Artemis-wide cost estimate, in accordance with best practices, that is updated on an annual basis.  | 12/31/2024                      | \$0                       |
|                               | 4. Maintain an accounting of per-mission costs to increase transparency and establish a benchmark against which NASA can assess the outcome of initiatives to increase the affordability of ESD systems.  | 12/31/2024                      | \$0                       |
| IG-21-004,<br>11/10/2020      | NASA's Management of the Gateway Program for Artemis Missions   |                                 |                           |
|                               | Develop a HEOMD policy that establishes a reasonable amount of recommended schedule margin by phase of the program or project.  | 9/30/2024                       | \$0                       |
| IG-21-002,<br>10/27/2020      | NASA's Management of Its Acquisition Workforce  |                                 |                           |
|                               | Finalize and fully implement the Performance Metrics Dashboard to measure acquisition performance.  | 10/1/2024                       | \$0                       |
|                               | Document contract assignments to COs, CORs, and program/project managers in a centralized system for inclusion in the Performance Metrics Dashboard.  | 10/1/2024                       | \$0                       |
| IG-20-018,<br>7/16/2020       | NASA's Management of the Orion Multi-Purpose Crew Vehicle Program   |                                 |                           |
|                               | 2. To the extent practicable, adjust the production schedules for Artemis 4 and 5 to better align with the successful demonstration of Artemis 2 to reduce schedule delays associated with potential rework.  | 12/31/2023                      | \$0                       |
| IG-20-012,<br>3/10/2020       | NASA's Management of Space Launch System Program Costs and Contra   | octs                            |                           |
|                               | 2. Review HEOMD and NASA program management policies, procedures, and ABC reporting processes to provide greater visibility into current, future, and overall cost and schedule estimates for the SLS Program and other human space flight programs.                                  | 12/31/2024                      | \$0                       |
|                               | 2b. Establish methodologies and processes to track and set cost commitments for Artemis II.   | 4/29/2022                       | \$0                       |
|                               | 2c. Determine reporting and tracking procedures for setting cost and schedule commitments, and monitor progress throughout the entire life cycle of the SLS Program (through at least 2030).  | 12/31/2023                      | \$0                       |
| IG-20-011,<br>3/3/2020        | NASA's Management of Distributed Active Archive Centers   |                                 |                           |
|                               | In conjunction with ESDIS, once SWOT and NISAR are operational and providing sufficient data, complete an independent analysis to determine the long-term financial sustainability of supporting the cloud migration and operation while also maintaining the current DAAC footprint. | 3/31/2025                       | \$0                       |
| IG-20-005,<br>11/14/2019      | NASA's Management of Crew Transportation to the International Space Sta   | ation                           |                           |
|                               | Correct identified safety-critical technical issues before the crewed test flights, including parachute and propulsion systems testing, to ensure sufficient safety margins exist.  | 3/31/2025                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
|                               | Science and Aeronautics  |                                 |                           |
| IG-24-008,<br>2/28/2024       | Audit of the Mars Sample Return Program  |                                 |                           |
|                               | Ensure the MSR Program establishes a stable CCRS design prior to establishing the life-cycle cost and schedule estimate at KDP-C, incorporating recommendations from the 2023 IRB as appropriate.  | 4/30/2025                       | \$0                       |
|                               | 2. Ensure the life-cycle cost and schedule estimates properly incorporate MSR Program complexity and performance as factors and do not only focus on external cost growth impacts and ongoing design issues.                                   | 4/30/2025                       | \$0                       |
|                               | 3. Ensure the Agency Program Management Council is provided with a set of potential launch scenarios by KDP-C, including life-cycle cost and schedule estimates and an associated Joint Cost and Schedule Confidence Level for each.           | 4/30/2025                       | \$0                       |
| IG-24-002,<br>10/4/2023       | NASA's Efforts to Demonstrate Robotic Servicing of On-Orbit Satellites   |                                 |                           |
|                               | Recoup the costs of the labor and services (supplemental work) provided by NASA to Maxar to complete the work on the spacecraft bus contract.  | 12/30/2024                      | \$2,000,000               |
|                               | 3. Issue guidance that contracting officials, as part of acquisition strategy planning, consider incorporating award or incentive fees into future fixed-price development contracts.  | 9/30/2024                       | \$0                       |
| IG-23-018,<br>9/5/2023        | NASA's Earth System Science Pathfinder Program   |                                 |                           |
|                               | Reexamine its selection process to ensure PIs or their teams have sufficient experience, including project management, and the ability to dedicate necessary resources to effectively manage ESSP projects.                                    | 9/30/2024                       | \$0                       |
|                               | 5. Conduct a lessons learned review of the GeoCarb mission to identify what NASA, PI, and contractor practices and activities should be revised and applied to the management of future Earth Venture Class projects.                          | 9/30/2024                       | \$0                       |
|                               | 6. Develop a plan to provide PIs and their teams with contract and project management training post-selection approval to better equip them to manage subcontractors.  | 9/30/2024                       | \$0                       |
|                               | 7. Develop a formal and clear guidance on the roles, responsibilities, and expectations for the inclusion of applications within Earth Venture Class projects.   | 9/30/2024                       | \$0                       |
|                               | 8. Develop a methodology for funding applications in Earth Venture Class projects.   | 9/30/2024                       | \$0                       |
| IG-23-010,<br>3/20/2023       | NASA's Management of Its Radioisotope Power Systems Program  |                                 |                           |
|                               | Create an RPS resource allocation and technology development strategic plan that includes an evaluation and mitigation of risks for each project through its completion and provide a communication plan to stakeholders and mission managers. | 12/1/2024                       | \$0                       |
|                               | 2. Conduct high-quality, frequent, and routine self-assessment TRAs by project management beginning after the initial implementation of a technology development project as a basis for TRL assessment and risk management discussions.        | 12/31/2024                      | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | 3. Per Title 51 and NPR 7120.5F, recalculate the life-cycle costs for Next-Gen RTG and DRPS projects to include funding NASA provides to DOE.   | 3/31/2026                       | \$0                       |
|                               | 4. Institute an EVM process for Next-Gen RTG and DRPS projects that conforms with NASA policy, FAR requirements, and industry best practices.   | 3/31/2026                       | \$0                       |
|                               | 5. For Next-Gen RTG and DRPS development efforts that transition to a space flight project, execute a JCL analysis at the proper phases in accordance with NPR 7120.5F.   | 3/31/2026                       | \$0                       |
|                               | 6. In coordination with DOE, develop a means for the RPS Program to obtain high-fidelity Pu-238 and fueled clad current and future inventory information.   | 1/1/2025                        | \$0                       |
|                               | 7. Develop a means to quantify risk of future Pu-238 and fueled clad availability that can be communicated to NASA mission managers and incorporated into mission development proposals and plans.  | 12/30/2024                      | \$0                       |
|                               | 8. Leverage the RPS Program's existing business processes with its element structure to monitor fission technology development for SMD feasibility and educate stakeholders on the possibilities and differences.   | 9/30/2024                       | \$0                       |
|                               | 9. Reevaluate the need and if appropriate reauthorize the organizational position of the Nuclear Power and Propulsion System Capability Leadership Team through the appropriate Mission Directorate and provide the Team responsibility for monitoring and advocating strategic nuclear power coordination across NASA.   | 12/31/2024                      | \$0                       |
| IG-22-011,<br>4/7/2022        | NASA's Cost Estimating and Reporting Practices for Multi-Mission Program  | ns                              |                           |
|                               | 4. Develop a formal process by which a risk-based probabilistic analysis is conducted to cover the global and interdependency risks of major programs and projects when those individual projects are required for the successful implementation of a mission, regardless of how those programs/projects are categorized (i.e., tightly coupled, single-project program, etc.). | 6/30/2023                       | \$0                       |
|                               | 7. Establish procedural requirements for a risk posture analysis to ensure that major programs supporting multiple missions identify and estimate the cost and schedule impact of global and major interdependency risk.  | 12/31/2023                      | \$0                       |
| IG-22-010,<br>4/6/2022        | NASA's Volatiles Investigating Polar Exploration Rover (VIPER) Mission  |                                 |                           |
|                               | Coordinate with the Chief Knowledge Officer to submit and at appropriate intervals document and publish lessons learned associated with using a CLPS provider, particularly on major acquisitions.  | 10/31/2024                      | \$0                       |
| IG-21-011,<br>1/27/2021       | NASA's Efforts to Mitigate the Risks Posed by Orbital Debris  |                                 |                           |
|                               | Lead national and international collaborative efforts to mitigate orbital debris including activities to encourage active debris removal and the timely end-of-mission disposal of spacecraft.  | 6/30/2022                       | \$0                       |
|                               | 2. Collaborate with Congress, other federal agencies, and partners from the private and public sectors to adopt national and international guidelines on active debris removal and strategies for increasing global compliance rates for timely removal of spacecraft at the end of a mission.  | 6/30/2022                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations  | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|---|---------------------------------|---------------------------|
|                               | 3. Invest in methods and technologies for removing defunct spacecraft. As part of this effort, conduct a study evaluating the technical merit and cost to investing in active debris removal systems and technologies.                                | 12/31/2025                      | \$0                       |
| IG-20-023,<br>9/16/2020       | NASA's Planetary Science Portfolio  |                                 |                           |
|                               | 2. In coordination with the Office of Chief Financial Officer, engage relevant Centers and technical capability leaders to implement budgetary and accounting system options to support critical discipline capabilities.                             | 1/31/2025                       | \$0                       |
| IG-19-019,<br>5/29/2019       | Management of NASA's Europa Mission   |                                 |                           |
|                               | 9. Reassess the process of isolating key project personnel from instrument selection to balance their additional insight in integration and cost estimation while maintaining fairness in the announcement.   | 12/20/2024                      | \$0                       |
|                               | Mission Support and Information Technology  |                                 |                           |
| IG-24-009,<br>3/14/2024       | Audit of NASA's High-End Computing Capabilities   |                                 |                           |
|                               | Develop enterprise-wide HEC stakeholder requirements to validate commitment agreements as required in NASA Procedural Requirements 8600.1, NASA Capability Portfolio Management Requirements.   | 12/31/2024                      | \$0                       |
|                               | 3. Identify technology gaps, such as graphics processing unit transition and code modernization, essential for meeting current and future needs and strategic technological and scientific requirements.  | 12/31/2024                      | \$0                       |
|                               | 4. Develop a strategy to improve HEC asset allocations and prioritization for usage, including the appropriate use of on-premises versus cloud resources.   | 12/31/2024                      | \$0                       |
|                               | 5. Evaluate cyber risks associated with HEC assets to determine oversight and monitoring requirements, establish risk appetite, and address control deficiencies. Consider using NASA's Splunk enterprise platform as a shared resource.              | 12/31/2024                      | \$0                       |
|                               | 6. Implement an HEC classification/category designation within Risk Information Security Compliance System for identifying HEC assets.  | 12/31/2024                      | \$0                       |
|                               | 7. Develop an inventory of enterprise-wide HEC assets and formalize procedures for hardware and software life-cycle management.   | 12/31/2024                      | \$0                       |
|                               | 8. Document data risk impact levels, classification, and export control categorization for all HEC jobs.  | 12/31/2024                      | \$0                       |
|                               | Identify and mitigate gaps in the foreign national accreditation access process.  | 12/31/2024                      | \$0                       |
| IG-24-006,<br>12/19/2023      | NASA's Privacy Program  |                                 |                           |
|                               | Document the decision-making process between collection owners and Agency Privacy Managers to include key determinations of instances where privacy impact assessments are not required by law despite indications that one is required within RISCS. | 9/30/2024                       | \$0                       |
|                               | 3. Clearly identify roles and responsibilities for tracking and documenting incident response from detection to final resolution for incidents that involve or potentially involve personally identifiable information.                               | 9/30/2024                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
|                               | 4. Update NASA's breach response plan to clearly identify who is involved during breach responses of varying levels of severity, when a Breach Response Team should be activated, and when an incident should be categorized as a breach.  | 9/30/2024                       | \$0                       |
|                               | 5. Ensure that designated members of a Breach Response Team participate in a tabletop exercise, at least annually.   | 9/20/2025                       | \$0                       |
|                               | 6. Require those with specific security and privacy roles to take privacy role-based training.   | 9/30/2024                       | \$0                       |
| IG-23-017,<br>8/17/2023       | NASA's Federal Information Security Modernization Act of 2014 Evaluation   | Report for Fiscal Ye            | ear 2023                  |
|                               | 8. Revise its policies and procedures to document and implement a lessons learned process based on risk events within the ISCM and Risk Management areas. System security personnel should be instructed to record, analyze, and revise control activities to improve NASA's security posture.             | 2/28/2025                       | \$0                       |
|                               | 11. Continue to implement the necessary entity-wide oversight to improve enforcement mechanisms and controls to ensure all standard baselines and vulnerabilities are monitored and remediated in accordance with Federal and Agency requirements.   | 7/31/2025                       | \$0                       |
|                               | 15. Ensure that the security controls in control families PM, PT, and SR are updated and defined within the Agency's ISCM strategy.  | 2/28/2025                       | \$0                       |
|                               | 16. Document the NMI process in NASA's ISCM Strategy to ensure its hardware inventory monitoring process is accurate, complete, and fully aligns with NASA's other continuous monitoring guidance and integrates processes, associated outputs, and incorporates results to provide situational awareness. | 2/28/2025                       | \$0                       |
|                               | 20. Continue its efforts to prioritize projects that address the complexities required across EL tiers to meet the intermediate (EL2) maturity level in accordance with OMB M-21-31.   | 12/31/2025                      | \$0                       |
|                               | 27. Ensure that each information system owner of external systems has a current ISA that defines how each entity will manage, operate, use, and secure the interconnection.  | 11/15/2024                      | \$0                       |
| IG-23-016,<br>7/12/2023       | Audit of NASA's Deep Space Network   |                                 |                           |
|                               | Explore more efficient options for DSN scheduling, such as maintaining a list of DSN users by priority that is updated in real-time and accessible to all users.   | 9/30/2025                       | \$0                       |
|                               | 2. Ensure completion of the DAEP's remaining antennas and transmitters and finalize requirements for the LEGS project.   | 10/31/2029                      | \$0                       |
|                               | 3. Finalize international agreements, obtain appropriate clearances for installing the remaining 80 kW transmitters, and establish mechanisms to allow for greater oversight of DAEP project sites.  | 10/31/2029                      | \$0                       |
|                               | 4. Explore options for utilizing commercial and international partners networks to offload excess demand from the DSN and to serve as backups in the event of network overages or outages.   | 12/31/2023                      | \$0                       |
| IG-23-012,<br>5/3/2023        | NASA's Management of Its Artificial Intelligence Capabilities  |                                 |                           |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
|                               | 4. Develop a method to track budgets and expenditures for Al use case inventory.   | 12/20/2024                      | \$0                       |
| IG-23-011,<br>4/20/2023       | NASA's Efforts to Increase Diversity in Its Workforce  |                                 |                           |
|                               | Ensure hiring and promotion managers across NASA receive appropriate training to increase DEIA awareness on topics such as implicit bias and inclusive leadership.   | 12/31/2024                      | \$0                       |
|                               | 2. Ensure leadership-related professional development courses and detail assignments are widely available to prepare a more diverse cohort of employees for promotional opportunities.                       | 6/30/2025                       | \$0                       |
|                               | 4. Conduct a barrier analysis to identify obstacles restricting women and minorities from senior management positions and develop a plan to address and eliminate these obstacles.                           | 9/30/2024                       | \$0                       |
|                               | 6. Conduct an analysis of all applicant data (similar to interns), including veterans, to better understand hiring trends and outcomes.  | 12/31/2024                      | \$0                       |
|                               | 7. Designate an official or organization to oversee coordination between the stakeholders (OCIO, ODEO, and OCHCO) to develop a sustainable operation and funding structure for the EDP.                      | 9/30/2024                       | \$0                       |
| IG-23-008,<br>1/12/2023       | NASA's Software Asset Management   |                                 |                           |
|                               | Establish enterprise-wide (institutional and mission) Software Asset Management policy and procedures.   | 9/30/2024                       | \$0                       |
|                               | 2. Implement a single Software Asset Management tool across the Agency.  | 10/1/2027                       | \$39,000,000              |
|                               | 6. Implement a centralized repository for NASA's internally developed software applications.   | 10/31/2024                      | \$0                       |
|                               | 7. Develop an Agency-wide process for limiting privileged access to computer resources in accordance with the concept of least privilege.  | 11/15/2024                      | \$0                       |
|                               | Centralize software spending insights to include purchase cards.   | 11/29/2024                      | \$0                       |
| IG-23-001,<br>10/5/2022       | NASA's Compliance with the Geospatial Data Act for Fiscal Year 2022  |                                 |                           |
|                               | The role of the SAOGI is strategically positioned within the Agency to have the responsibility, accountability, and authority needed to meet GDA-assigned agency responsibilities.                           | 1/31/2025                       | \$0                       |
|                               | 2. Roles and responsibilities of the SAOGI and other key stakeholders are defined in both the Geospatial Data Strategy and its implementation plan.  | 7/31/2025                       | \$0                       |
|                               | 3. The implementation plan for the Geospatial Data Strategy contains detailed action items and milestones, including those for developing a complete and accurate inventory of the Agency's geospatial data. | 9/30/2024                       | \$0                       |
|                               | 4. Continued coordination with NARA to establish the appropriate level of scientific data for inclusion in NARA-approved records schedules.  | 6/30/2025                       | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
| IG-22-015,<br>8/4/2022        | Ames Research Center's Lease Management Practices  |                                 |                           |
|                               | Conduct cyclical reviews (no less than once every 5 years) of the Ames lease process to ensure compliance with federal and NASA requirements.  | 10/31/2024                      | \$0                       |
|                               | 2. Update applicable real estate policies and NASA-wide guidance to enhance requirements and procedures to comply with EUL authority and to require maintaining appropriate documentation, documenting decisions, and fostering transparent coordination and communication with internal and external stakeholders in a timely manner. | 10/31/2024                      | \$0                       |
|                               | 3. Update applicable real estate policies and NASA-wide guidance to enhance requirements and standardize applicable financial practices (such as the benefit and cost analysis, life-cycle cost analysis, and audits of tenants' books and records when required) associated with leases.  | 10/31/2024                      | \$0                       |
|                               | 4. Update applicable real estate policies and NASA-wide guidance to incorporate applicable security requirements and agreement clauses in leases.  | 10/31/2024                      | \$0                       |
|                               | 5. Implement written procedures in the lease process to ensure compliance with federal and NASA requirements applicable, but not limited to, timely involvement of the RPAO, competition, life-cycle cost analysis, fair market value assessments, certifications, and termination clauses as appropriate.                             | 9/30/2024                       | \$0                       |
|                               | 9. Within the next 3 years, conduct a Center-wide security vulnerability risk assessment, including the districts outside Ames Campus, to ensure compliance with federal and NASA requirements.  | 6/30/2025                       | \$0                       |
|                               | 10. Identify and implement mitigation strategies and resource requirements to address the security vulnerability assessment risks.   | 6/30/2025                       | \$0                       |
| IG-22-009,<br>3/14/2022       | NASA's Insider Threat Program  |                                 |                           |
|                               | 2. Improve cross-discipline communication by establishing a Working Group that includes OPS, OCIO, Procurement, human resource officials, and any other relevant Agency offices to collaborate on wide-ranging insider threat related issues for both classified and unclassified systems.   | 12/1/2024                       | \$0                       |
| IG-21-027,<br>9/8/2021        | NASA's Construction of Facilities  |                                 |                           |
|                               | 1. Develop and institute an agency-wide process to prioritize and fund institutional and programmatic CoF projects that align with Agency-level missions and goals and require business case analyses to be completed and considered as part of the process prior to the project's approval.   | 12/30/2024                      | \$0                       |
|                               | 3. In coordination with the Mission Directorates, institute a process to ensure facility requirements are identified and funding sources are specified during a program's development and implementation phases.   | 12/31/2024                      | \$0                       |
| IG-21-001,<br>10/2/2020       | Audit of NASA's Compliance with the Geospatial Data Act  |                                 |                           |
|                               | 2. Develop a unified Strategy Implementation Plan or "Roadmap" that defines detailed action items, milestones, and responsibilities for geospatial data management in support of missions across NASA.   | 10/30/2024                      | \$0                       |

| Report No. and<br>Date Issued | Report Title and Recommendations   | Estimated<br>Completion<br>Date | Potential Cost<br>Savings |
|-------------------------------|--|---------------------------------|---------------------------|
| IG-20-001,<br>10/21/2019      | NASA's Security Management Practices   |                                 |                           |
|                               | 5. Coordinate with the Office of General Counsel to standardize the carrying of firearms by NASA civil servants in an Agency-wide policy while also addressing the appropriate situations when NASA contractors may carry their government-issued weapons off NASA property.   | 2/28/2025                       | \$0                       |
| IG-19-002,<br>10/22/2018      | Audit of NASA's Historic Property  |                                 |                           |
|                               | 2. Develop comprehensive procedures for identifying and managing heritage assets, including defining roles and responsibilities for the different NASA entities responsible for evaluating what historic items would most effectively be maintained by the Agency and considered as heritage assets.   | 7/24/2024                       | \$0                       |
|                               | 3. Evaluate and justify the existing list of NASA- and contractor-held heritage assets to determine whether NASA is the most effective owner and what property the Agency will retain because of its historical value.   | 12/1/2024                       | \$0                       |
|                               | 5. Ensure NASA policies and procedures for using the proceeds from facilities leased under NHPA authority appropriately aligns with Agency goals to minimize excess facilities.  | 10/31/2024                      | \$0                       |
| IG-12-017,<br>8/7/2012        | Review of NASA's Computer Security Incident Detection and Handling Capability <sup>a</sup>   |                                 |                           |
|                               | Financial Management   |                                 |                           |
| IG-24-005,<br>12/12/2023      | NASA's Fiscal Year 2023 Financial Statement Audit Management Letter <sup>b</sup>   |                                 |                           |
| IG-22-014,<br>6/28/2022       | NASA's Compliance with the Payment Integrity Information Act for Fiscal Year 2021  |                                 |                           |
|                               | 7. Develop a detailed review process, such as a checklist or job aid, outlining the review procedures performed by the Quality Assurance Division within the reporting process for overpayments from sources other than recapture audits to ensure that the primary reviewer and the supervisory quality control reviewers are performing a thorough review of the aggregated submissions of overpayments. Necessary review steps include ensuring overpayments are not reported twice, capturing issues with overpayments submitted for the incorrect period, and tracking identified and collected portions that occur in different fiscal years for accurate reporting. | 11/29/2024                      | \$0                       |

<sup>&</sup>lt;sup>a</sup> This table omits 2 recommendations from IG-12-017 that NASA determined to be sensitive or classified and therefore unsuitable for release.

b This table omits 11 recommendations from IG-24-005 that NASA determined to be sensitive or classified and therefore unsuitable

#### **TABLE 4: AUDITS WITH QUESTIONED COSTS**

|  | Total Questioned Costs | Total Unsupported Costs |  |
|--|------------------------|-------------------------|--|
| A. Management decisions pending from previous reporting period |                        |                         |  |
| No reports   | \$0                    | \$0                     |  |

for release.

TABLE 4: AUDITS WITH QUESTIONED COSTS (continued)

|   | Total Questioned Costs                  | Total Unsupported Costs |
|---|---|-------------------------|
| B. Issued during period                         |   |                         |
| IG-24-016                                       | \$2,977,057                             | \$0                     |
| Needing management decision during period (A+B) | \$2,977,057                             | \$0                     |
|   | Management Decision Made During Period  |                         |
| Amounts agreed to by management                 |   |                         |
| No reports                                      | \$0                                     | \$0                     |
| Amounts not agreed to by management             |   |                         |
| IG-24-016                                       | \$2,977,057                             | \$0                     |
|   | No Management Decision at End of Period |                         |
| Less than 6 months old                          |   |                         |
| No reports                                      | \$0                                     | \$0                     |
| More than 6 months old                          |   |                         |
| No reports                                      | \$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—an "unsupported cost"; 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 5: AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

|  | Funds to Be Put to Better Use |  |  |
|--|-------------------------------|--|--|
| A. Management decisions pending from previous reporting period |                               |  |  |
| No reports   | \$0                           |  |  |
| B. Issued during period  |                               |  |  |
| IG-24-010  | \$12,613,442                  |  |  |
| Needing management decision during period (A+B)                | \$12,613,442                  |  |  |

TABLE 5: AUDITS WITH RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE (continued)

| Management Decision Made During Period  |              |  |  |
|---|--------------|--|--|
| Amounts agreed to by management         |              |  |  |
| IG-24-010                               | \$12,613,442 |  |  |
| Amounts not agreed to by management     |              |  |  |
| No reports                              | \$0          |  |  |
| No Management Decision at End of Period |              |  |  |
| Less than 6 months old                  |              |  |  |
| No reports                              | \$0          |  |  |
| More than 6 months old                  |              |  |  |
| No reports                              | \$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 6: OTHER MONETARY SAVINGS**

For this reporting period, there were no audits reporting other monetary savings. These would be savings resulting from actions taken by NASA due to conclusions or information disclosed in an OIG audit report that were not identified as questioned costs or funds to be put to better use in Tables 4 and 5, respectively.

TABLE 7: STATUS OF SINGLE AUDIT FINDINGS AND QUESTIONED COSTS RELATED TO NASA AWARDS

| Audits with Findings  |                    | 17               |  |
|---|--------------------|------------------|--|
| Findings and Questioned Costs                               |                    |                  |  |
|   | Number of Findings | Questioned Costs |  |
| Management decisions pending from previous reporting period | 0                  | \$0              |  |
| Findings added during the reporting period                  | 30                 | \$70,547         |  |
| Management decisions made during reporting period           | 21                 | \$0              |  |
| Agreed to by management                                     |                    | \$0              |  |
| Not agreed to by management                                 |                    | \$70,547         |  |
| Management decisions pending, end of reporting period       | 9                  | \$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 for this reporting period on reports involving NASA contract activities.

During this period, DCAA issued 70 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 audit reports issued during this semiannual reporting period and the agreed-upon amounts.

TABLE 8: DCAA AUDIT REPORTS WITH QUESTIONED COSTS AND RECOMMENDATIONS THAT FUNDS BE PUT TO BETTER USE

|                               | Amounts in Issued Reports | Amounts Agreed To |
|-------------------------------|---------------------------|-------------------|
| Questioned costs              | \$19,632,000              | \$15,526,000      |
| 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 the 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.

#### **Audits of NASA Contractors**

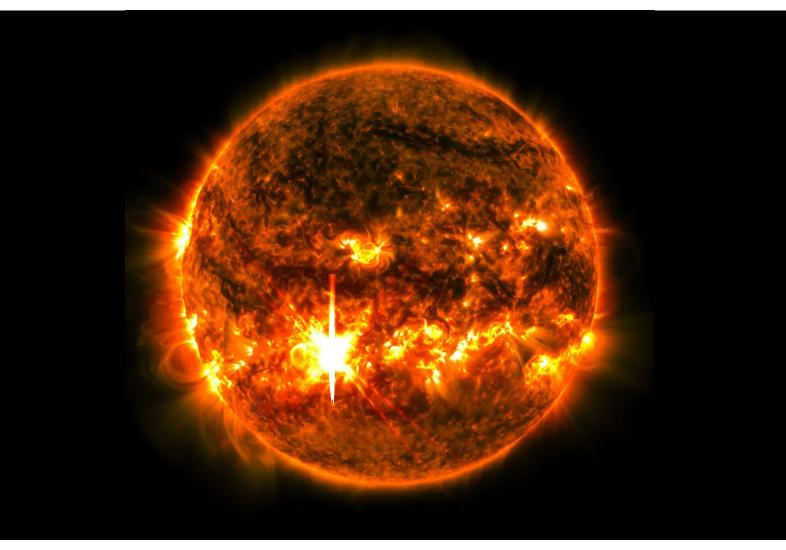
NASA contracts with independent public accounting firms and the U.S. Department of the Interior's Interior Business Center to perform a broad range of contract audits on the companies that conduct business with the Agency. The purpose of the audits is to assist procurement officials with financial information and advice relating to contractual matters and to assess the effectiveness, efficiency, and economy of contractor operations. Contract audits also assist NASA in the negotiation, award, administration, and settlement of contracts. During this semiannual reporting period, independent public accounting firms and the Interior Business Center issued 14 audit reports that involved contractors who do business with NASA. The auditors questioned (\$546,524) in costs. The negative questioned costs resulted from a contractor incorrectly excluding costs in calculation of indirect rates.

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

|                               | Amounts in Issued Reports | Amounts Agreed To |
|-------------------------------|---------------------------|-------------------|
| Questioned costs              | (\$546,524)               | (\$546,524)       |
| Funds to be put to better use | \$0                       | \$0               |

# Office of Investigations

The Office of Investigations investigates fraud, waste, abuse, misconduct, and mismanagement involving NASA personnel and contractors.



NASA's Solar Dynamics Observatory captured this image of a solar flare—seen as the bright flash in the lower left—on October 1, 2024.

### **Procurement and Grant Fraud**

#### **NASA OIG Effort Results in Recovery**

A large government contractor agreed to a civil settlement of \$377 million to resolve allegations that it violated the False Claims Act. NASA OIG examined the settlement and created a model demonstrating the financial impact to the Agency, which ultimately resulted in a \$1.6 million recovery to NASA.

#### Former Research Executive Convicted of Embezzlement

The former executive director of a NASA-funded research institute was sentenced to 56 months of imprisonment (suspended) and 24 months of probation, and ordered to pay \$94,000 in restitution, for embezzlement and misappropriation of public funds. In separate proceedings, the institute was ordered to pay \$1.6 million to successor charitable corporations prior to its dissolution.

#### **Former Contractor Sentenced**

A former NASA contractor was sentenced to 21 months of imprisonment and ordered to pay \$689,280 in restitution after pleading guilty to wire fraud for altering critical testing and conformance documentation for parts and materials intended for use on the Space Launch System.

#### **Contractor Agrees to Civil Settlement**

As the result of a joint investigation by NASA OIG and the Defense Criminal Investigative Service, a NASA contractor agreed to a civil settlement of \$645,000 to resolve claims that it failed to meet subcontract and other key personnel disclosure requirements, as well as claims related to U.S. Department of Defense contracts. The settlement was equally dispersed between NASA and the Defense Department.

#### **University Agrees to Civil Settlement**

A university in New York failed to verify whether a professor receiving NASA funding had any foreign affiliations that would have precluded them from receiving NASA contracts. As a result of the oversight, the university falsely certified to NASA that the professor was eligible for funding and agreed to a civil settlement of \$313,574 of which \$97,318 was awarded to NASA.

#### **Contractors Agree to Civil Settlement**

Two NASA contractors agreed to civil settlements of \$30,000 and \$40,000, respectively, to resolve claims they laid conduit to an incorrect depth at Wallops Flight Facility. The issue has since been resolved at no additional cost to the government.

#### **Owner of Engineering Company Sentenced**

The former head of an engineering company was sentenced to 18 months of probation and ordered to pay a \$9,500 fine after the U.S. Department of Justice Antitrust Division charged them with falsifying documents used in a failed attempt to obtain a security clearance for the purpose of securing a NASA subcontract.

#### **Subcontractor Employee Sentenced**

A NASA subcontractor employee was sentenced to 12 months of probation and 50 hours of community service, and ordered to pay a \$1,000 fine, after the U.S. Department of Justice Antitrust Division charged them with falsifying documents used in a failed attempt to obtain a security clearance for the purpose of securing a NASA subcontract.

# NASA OIG Proactive Investigation Results in Recovery

A Texas company has adjusted its indirect costs to include those paid with Paycheck Protection Program funds, which resulted in a \$12,720 recovery to the Agency. The company's Incurred Cost Submissions are now scheduled to be audited by the NASA Enterprise Pricing Office.

### **Computer Crimes**

#### **Russian Citizen Indicted**

As the result of a joint investigation by NASA OIG and the FBI, a Russian citizen was indicted for conspiracy to hack and destroy NASA and Ukrainian government computer systems and data by conspiring with Russian military intelligence to launch cyberattacks targeting Ukraine and its allies.

#### **Chinese Citizen Indicted**

As the result of a joint investigation by NASA OIG and the FBI, a Chinese citizen was indicted for their role in perpetrating numerous ransomware attacks against healthcare providers. This in turn funded additional intrusions against defense, technology, and government entities worldwide, including NASA. The U.S. Department of Justice then offered a \$10 million reward for information leading to potential prosecution.

#### **Contractor Employee Indicted**

As the result of a joint investigation by NASA OIG and the FBI, a NASA contractor employee was indicted and charged with three counts of engaging in activities related to material containing child pornography.

#### **Contractor Employee Indicted**

As the result of a joint investigation by NASA OIG and the U.S. Department of Homeland Security, a NASA contractor employee was sentenced to 15 years of probation, ordered to pay a \$5,100 special assessment, and required to register as a sex offender for hosting child pornography on their home computer.

#### Individual from Texas Indicted for Theft

As the result of a joint investigation by NASA OIG and the Houston Police Department, an individual from Texas was indicted on one count of aggravated theft and fleeing arrest for the theft of five iPads from Space Exploration Technologies Corporation, which contained data for the ISS. Further investigation led to their indictment on three additional counts of burglary with intent to commit theft. A trial date is pending.

#### Individual from California Sentenced for Impersonating a Federal Agent

As the result of a joint investigation by NASA OIG and the FBI, an individual from California was found guilty of impersonating a federal agent after it was discovered they created false documents in an attempt to obtain sensitive government data. Sentencing is pending.

## **Employee Misconduct**

#### NASA Employee Resigns in Lieu of Termination

Following a joint investigation by NASA OIG and the U.S. Secret Service, a Glenn Research Center civil servant resigned in lieu of removal from federal employment for misusing NASA resources to purchase millions of dollars' worth of gift cards over a 5-year period, which were used to purchase electronic devices for resale.

#### **Senior NASA Employee Retires**

A senior NASA employee retired in lieu of administrative action for falsifying their time and attendance records and making false statements to leadership about their work assignments.

#### **Pandemic Relief Fraud**

## **Business Owners Indicted for Pandemic Relief Fraud**

As the result of a joint investigation by the Pandemic Response Accountability Committee Task Force and the U.S. Secret Service, two West Virginia business owners were indicted for obtaining and transferring COVID-19 relief funds to personal bank and cryptocurrency accounts. Potential forfeitures of \$6 million and \$5.1 million, respectively, are pending.

# NASA Employee Repays Fraudulent Economic Injury Disaster Loan

An Ames Research Center civil servant voluntarily repaid \$24,277 for an Economic Injury Disaster Loan they received under fraudulent circumstances.

#### West Virginia Residents Plead Guilty to Pandemic Relief Fraud

As the result of a joint investigation by the Pandemic Response Accountability Committee Task Force and West Virginia State Police, two West Virginia residents pleaded guilty to fraudulently obtaining a Paycheck Protection Program Ioan of \$20,832, as well as unemployment benefits of \$14,336 and \$8,760, respectively, to include COVID-19 supplementary funds. Sentencing is pending.

#### Former California Institute of Technology Employee Debarred for Pandemic Relief Fraud

A former employee of the Jet Propulsion Laboratory, which is operated by the California Institute of Technology, was debarred for a period of 4 years from receiving federal non-procurement and procurement awards after being found guilty of committing wire fraud to obtain an Economic Injury Disaster Loan.

#### Other Cases

## California Company Ordered to Pay Civil Penalties

A California company was ordered to pay \$4.7 million for making misleading statements about NASA's involvement in the development of its purported fire-retardant material, to include claims that the material was used to protect space shuttles during atmospheric reentry. Of that amount, the company paid \$2.26 million in restitution to 14 victims who based purchases on the company's false claims and \$1.25 million in penalties to the cities of Los Angeles and Santa Barbara.

## Contractor Charged with Possession of a Firearm

A NASA contractor was arrested and charged with possession of a firearm found during a random vehicle inspection at Goddard Space Flight Center. As a result, the contractor was terminated. Sentencing is pending.

# **Investigation Leads to Felony Sexual Abuse Charge**

A joint investigation by NASA OIG and the National Park Service resulted in a felony criminal complaint charging a Florida resident with abusive sexual contact. The incident occurred on Kennedy Space Center property. The United States Attorney's Office for the Middle District of Florida is overseeing the criminal prosecution.

#### **Statistical Data**

#### TABLE 10: OFFICE OF INVESTIGATIONS COMPLAINT INTAKE DISPOSITION

| Source of<br>Complaint | Zero Filesª | Administrative<br>Investigations <sup>b</sup> | Management<br>Referrals° | Preliminary<br>Investigations <sup>d</sup> | Total |
|------------------------|-------------|---|--------------------------|--|-------|
| Hotline                | 8           | 11  | 1                        | 14   | 34    |
| All others             | 19          | 16  | 2                        | 54   | 91    |
| Total                  | 27          | 27  | 3                        | 68   | 125   |

<sup>&</sup>lt;sup>a</sup> 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.

#### TABLE 11: FULL INVESTIGATIONS OPENED THIS REPORTING PERIOD

| Full Criminal/Civil Investigations <sup>a</sup> | 23 |
|---|----|
|---|----|

<sup>&</sup>lt;sup>a</sup> 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 | 94 |
|--|----|
|--|----|

**Note:** The 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         | 63  |  |
|------------------------------------|-----|--|
| Full Criminal/Civil Investigations | 137 |  |
| Administrative Investigations      | 100 |  |
| Total                              | 300 |  |

<sup>&</sup>lt;sup>b</sup> Administrative investigations include non-criminal matters initiated by the Office of Investigations as well as hotline complaints referred to the Office of Audits.

<sup>&</sup>lt;sup>e</sup> Management referrals are those complaints referred to NASA management for which a response is requested.

<sup>&</sup>lt;sup>d</sup> Preliminary investigations are those complaints where additional information must be obtained prior to initiating a full criminal or civil investigation.

#### Office of Investigations

#### **TABLE 14: QUI TAM INVESTIGATIONS**

| Qui Tam Matters Opened This Reporting Period       | 4  |
|--|----|
| Qui Tam Matters Pending at End of Reporting Period | 12 |

Note: The 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 <sup>a</sup>                   | 26 |
|---|----|
| Individuals Referred to the U.S. Department of Justice <sup>b</sup> | 25 |
| Individuals Referred to State and Local Authorities <sup>b</sup>    | 1  |
| Indictments/Informations <sup>c</sup>                               | 14 |
| Convictions/Plea Bargains   | 6  |
| Sentencing/Pretrial Diversions                                      | 5  |
| Civil Settlements/Judgments   | 6  |

<sup>&</sup>lt;sup>a</sup> This includes all referrals of individuals and entities to judicial authorities.

#### **TABLE 16: ADMINISTRATIVE ACTIONS**

| Referrals  |    |  |  |
|--|----|--|--|
| Referrals to NASA Management for Review and Response | 8  |  |  |
| Referrals to NASA Management – Information Only      | 6  |  |  |
| Referrals to the Office of Audits                    | -  |  |  |
| Referrals to Security or Other Agencies              | 4  |  |  |
| Total  | 18 |  |  |

<sup>&</sup>lt;sup>b</sup> The number of individuals referred to federal, state, and local authorities are a subset of the total cases referred for prosecution.

<sup>°</sup> This includes indictments/informations on current and prior referrals.

#### Office of Investigations

TABLE 16: ADMINISTRATIVE ACTIONS (continued)

| Recommendations to NASA Management                    |    |  |  |
|---|----|--|--|
| Recommendations for Disciplinary Action               |    |  |  |
| Involving a NASA Employee                             | 4  |  |  |
| Involving a Contractor Employee                       | 1  |  |  |
| Involving a Contractor Firm                           | 3  |  |  |
| Other   | -  |  |  |
| Recommendations on Program Improvements               |    |  |  |
| Matters of Procedure                                  | 9  |  |  |
| Total   | 17 |  |  |
| Administrative/Disciplinary Actions Taken             |    |  |  |
| Against a NASA Employee                               | 7  |  |  |
| Against a Contractor Employee                         | 2  |  |  |
| Against a Contractor Firm                             | 5  |  |  |
| Other   | 3  |  |  |
| Procedural Change Implemented                         | 7  |  |  |
| Total   | 24 |  |  |
| Suspensions or Debarments from Government Contracting |    |  |  |
| Involving an Individual                               | 1  |  |  |
| Involving a Contractor Firm                           | -  |  |  |
| Total   | 1  |  |  |

#### **TABLE 17: INVESTIGATIVE RECEIVABLES AND RECOVERIES**

| Judicial                    | \$8,194,452  |  |
|-----------------------------|--------------|--|
| Administrative <sup>a</sup> | \$1,808,427  |  |
| Total <sup>b</sup>          | \$10,002,879 |  |
| Total NASA                  | \$2,986,987  |  |

#### **TABLE 18: WHISTLEBLOWER INVESTIGATIONS**

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

#### TABLE 19: SENIOR GOVERNMENT EMPLOYEE INVESTIGATIONS REFERRED FOR PROSECUTION

| Case Number | Allegation  | Referral Date | Disposition |
|-------------|-------------|---------------|-------------|
| 20-0180-O   | Grant Fraud | 4/23/2024     | Declined    |

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

| Case Number | Allegation   | Closure Date | Disposition   |
|-------------|--|--------------|---|
| 23-0178-0   | Covid Relief Fraud                                 | 7/11/2024    | Unsubstantiated   |
| 24-0012-MR  | Payroll—Telework Locality Pay                      | 4/19/2024    | Unsubstantiated   |
| 24-0061-P   | Employee Misconduct                                | 5/15/2024    | Letter of reprimand, training, and reassignment             |
| 24-0133-P   | Potential Computer Security<br>Violations          | 8/28/2024    | Security Clearance revoked and reassigned to a new position |
| 24-0145-Z   | Conflict of Interest—<br>Employment Considerations | 4/16/2024    | Management handled advisement procedures correctly          |

<sup>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.</sup> 

# Office of Data Analytics

The Office of Data Analytics provides the OIG analysis and research methodology services, data products, and automation tools to gain efficiencies and data-driven operations.



An aurora and atmospheric glow crown Earth's horizon in this photograph taken from the ISS as it orbited 266 miles above a cloudy Indian Ocean southwest of Australia.

# **OIG Data Analytics, Products, and Tools**

- Provided data analytics, sampling, or survey support for 15 audits, including NASA's readiness for the Artemis II crewed mission, the CLPS initiative, NASA's STEM engagement, and awards to small disadvantaged businesses.
- Created three internal dashboards: (1) audit operations including an open recommendations report, (2) tool for investigators to research entities (e.g., person, company, address) across five data sources, and (3) NASA OIG workforce overview. Maintained nine additional dashboards.
- Created an automated process to extract, modify, and store data from the U.S. Department of the Treasury's USASpending.gov, as well as NASA information systems on IT procurement and grants. Also maintained 13 automated data processes. Automated data was used to deliver 121 entity search results.

# **Promotion of Data-Driven Operations**

- Delivered eight hands-on workshops and interactive sessions to NASA OIG as part of the Data Champion Series to improve data literacy and technical skills.
- Led NASA OIG Federal Employee Viewpoint Survey committee to improve the organizational climate and performance of the OIG.
- Presented NASA OIG efforts on cost and schedule analytic capabilities at NASA's Cost and Schedule Symposium.
- Presented information on data visualizations to the Council of the Inspectors General on Integrity and Efficiency (CIGIE) Data Analytics Working Group. Additionally, co-led two Data Analytics Working Group subgroups:

   (1) CIGIE Procurement Collusion Analytics, which collaborates on the use of analytics to combat anti-trust crimes and how to approach anti-trust issues, and (2) CIGIE Business Intelligence and Visualization, which shares data visualization and analytics software best practices.

# Office of Legal Counsel

The Office of Legal Counsel provides legal advice to OIG managers, auditors, and investigators, and serves as both counsel in administrative litigation and the coordinator for whistleblower protection.



This image from NASA's James Webb Space Telescope's Near-Infrared Camera of star-forming region NGC 604 shows how stellar winds from bright, hot young stars carve out cavities in surrounding gas and dust.

# **Ethics and Training**

- At the Western Field Investigations Office off-site meeting, Western Regional Counsel presented annual ethics training, Hatch Act training, and an introduction to the Federal Acquisition Regulation.
- At the Artemis Oversight Center of Excellence meeting, Central Regional Counsel collaborated with Office of Audits and Office of Investigations personnel to identify potential whistleblower claims for auditors when they are performing audit work.
- At the OIG managers' meeting, OIG Counsel and the OIG Human Resources Division presented information on performance management, including presentations on discipline, performance improvement, and adverse actions associated with misconduct and performance deficiencies. Counsel also showcased other services offered to OIG managers and supervisors.

#### **Whistleblower Protection**

Central Regional Counsel presented an intensive Whistleblower 101 training for new investigative agents. The Western Regional Counsel then modeled this introduction to whistleblower retaliation cases for investigative agents in their region.

# **Regulatory Review**

During this reporting period, the legal office managed the processing of over 160 intra- and inter-agency requests for review of proposed regulations. Following triage of these requests, 28 regulations were substantively reviewed. This is a list of the more significant reviews:

- NASA Interim Directive 8900, Policy for the Handling of Active Astronaut Mortality Related to Human Spaceflight
- NASA Interim Directive 9050.2C, Managing Information Technology
- NASA Policy Directive 1030.1, Gifts or Decorations from Foreign Governments and Gifts to Foreign Individuals
- NASA Policy Directive 1400.1, Documentation and Promulgation of Internal NASA Requirements
- NASA Policy Directive 1450.12E, Interactions with the Executive, Legislative, and Judicial Branches of the U.S. Government

- NASA Policy Directive 9910.1B, Government Accountability Office/NASA Office of Inspector General Audit Liaison, Resolution, and Follow-Up Program
- NASA Procedural Requirements 1400.1, NASA Directives Procedural Requirements
- NASA Procedural Requirements 2810.2A, Possession and Use of NASA Information and Information Systems Outside of the United States
- NASA Procedural Requirements 8705.6F, Safety and Mission Assurance (SMA) Audits, Reviews, and Assessments

#### **TABLE 21: LEGAL ACTIVITIES AND REVIEWS**

| Freedom of Information Act Matters | 34 |
|------------------------------------|----|
| Appeals                            | 0  |
| Inspector General Subpoenas Issued | 30 |
| Regulations Reviewed               | 28 |



# **Appendixes**

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# Appendix A. Inspector General Act Reporting Requirements

| Inspector General<br>Act Citation | Requirement Definition  | Cross Reference<br>Page Numbers |
|-----------------------------------|---|---------------------------------|
| Section 404(a)(2)                 | Review of legislation and regulations   | 40                              |
| Section 405(b)(1)                 | Description of significant problems, abuses, and deficiencies relating to the administration of programs and operations of the establishment and associated reports and recommendations for corrective action made by NASA OIG  | 7-25                            |
| Section 405(b)(2)                 | Identification of each recommendation made before the reporting period for which corrective action has not been completed, including the potential cost savings associated with the recommendation  | 15-25                           |
| Section 405(b)(3)                 | Summary of significant investigations closed during the reporting period  | 30-32                           |
| Section 405(b)(4)                 | Identification of the total number of convictions during the reporting period resulting from investigations   | 34                              |
| Sections 405(b)(5)                | Information regarding each audit, inspection, or evaluation report issued during the reporting period, including a listing of each audit, inspection, or evaluation, and if applicable, the total dollar value of questioned costs (including a separate category for the dollar value of unsupported costs) and the dollar value of recommendations that funds be put to better use, including whether a management decision had been made by the end of the reporting period  | 12-15, 25-27                    |
| Section 405(b)(6)                 | Information on management decisions made during the reporting period with respect to any audit, inspection, or evaluation issued in a previous reporting period   | 25-27                           |
| Section 405(b)(7)                 | Information described under section 804(b) of the Federal Financial Management Improvement Act of 1996  | -                               |
| Section 405(b)(8)                 | Peer review conducted by another OIG  | 45                              |
| Section 405(b)(9)                 | Outstanding recommendations from peer reviews of NASA OIG   | -                               |
| Section 405(b)(10)                | List of any peer reviews conducted by the Inspector General of another OIG during the reporting period, including a list of any outstanding recommendations made from any previous peer review (including any peer review conducted before the reporting period) that remain outstanding or have not been fully implemented   | 45                              |
| Section 405(b)(11)                | Statistical tables showing the total number of investigative reports issued during the reporting period, the total number of persons referred to the Department of Justice for criminal prosecution during the reporting period, the total number of persons referred to state and local prosecuting authorities for criminal prosecution during the reporting period, and the total number of indictments and criminal informations during the reporting period that resulted from any prior referral to prosecuting authorities | 34                              |
| Section 405(b)(12)                | Description of the metrics used for developing the data for the statistical tables  | 33-36                           |

# Appendix A. Inspector General Act Reporting Requirements (continued)

| Inspector General Act Citation          | Requirement Definition   | Cross Reference<br>Page Numbers |
|---|--|---------------------------------|
| Section 405(b)(13)(A)<br>and (B)(i)(ii) | Summary of investigations involving senior government employees                  | 36                              |
| Section 405(b)(14)                      | Summary of whistleblower investigations  | 36                              |
| Section 405(b)(15)(A)<br>and (B)        | Agency attempts to interfere with OIG independence                               | -                               |
| Section 405(b)(16)(A)                   | Closed inspections, evaluations, and audits not disclosed to the public          | 12                              |
| Section 405(b)(16)(B)                   | Closed investigations of senior government employees not disclosed to the public | 36                              |

# **Appendix B.** Awards

CIGIE recognizes the outstanding accomplishments of OIGs across the federal government. The following NASA OIG teams and individuals were honored this year.

#### **Audit Award for Excellence**

Members of the Office of Audits received an Award for Excellence in recognition of exceptional achievement and outstanding teamwork in identifying significant obstacles, including rising costs and technological challenges, NASA must address for the Mars Sample Return mission to be successful.

#### **Barry R. Snyder Joint Award**

Members of the Office of Audits received the Barry R. Snyder Joint Award in recognition of exceptional achievement and outstanding teamwork in the redesign and facilitation of the revised CIGIE Training Institute's Introductory Auditor course. A team of auditors from 14 different OIGs volunteered to support the redesign effort and serve as adjunct instructors.

#### **Special Act Award for Excellence**

A member of the Office of Investigations received a Special Act Award for Excellence in recognition of outstanding achievement for identifying and recovering approximately \$3 million for NASA from a government-wide False Claims Act settlement.

# **Appendix C.** 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

The NASA OIG Office of Audits performed an external peer review of the Federal Housing Finance Agency OIG for the 3-year period ending March 31, 2022, and issued our report on September 21, 2022. We also performed an external peer review of the Board of Governors of the Federal Reserve System and Consumer Financial Protection Bureau OIG for the 3-year period ending March 31, 2023, and issued that report on September 18, 2023. The U.S. Department of the Interior OIG completed a peer review of the NASA OIG Office of Audits in September 2024. NASA OIG received a peer review rating of "pass," and we are currently addressing the recommendations included in the Letter of Comment.

#### Office of Investigations

In January 2023, the U.S. Department of Transportation OIG completed its review of the NASA OIG Office of Investigations and found the office to be compliant with all relevant guidelines. There are no unaddressed recommendations outstanding from this review. In October 2023, we completed an external peer review of the U.S. Department of Education OIG Office of Investigations.

# Appendix D. Acronyms

CIGIE Council of the Inspectors General on Integrity and Efficiency

**CLPS** Commercial Lunar Payload Services

**DCAA** Defense Contract Audit Agency

**FBI** Federal Bureau of Investigation

ISS International Space Station

IT information technology

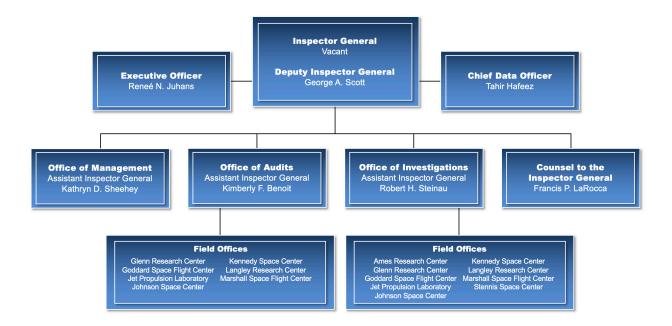
Office of Inspector General

**RPT** rocket propulsion test

**STEM** science, technology, engineering, and mathematics

# Appendix E. Office of Inspector General Organizational Structure

The OIG is funded under a continuing resolution at the fiscal year 2024 level of \$47.6 million. Currently, this budget supports the work of 177 employees in their audit, investigative, and administrative activities. Below is NASA OIG's organizational structure and leadership for the current semiannual reporting period.



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 the 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 independent public accounting firms in conducting NASA's annual financial statement audits.

**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 U.S. 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.

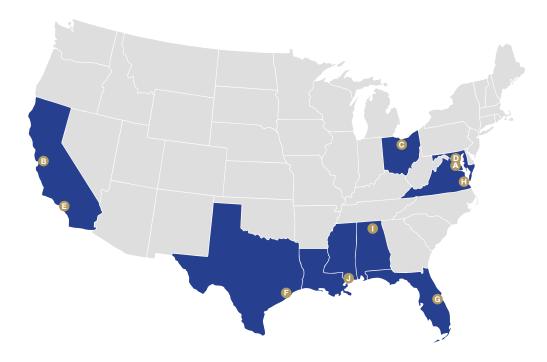
THE OFFICE OF DATA ANALYTICS provides analytic consultation and data services and develops data products to support audits, investigations, and management and planning functions. Composed of statisticians, data scientists, and data engineers, the office also develops a secure data analytic infrastructure that automates processes; secures data in cloud and on-premises environments; and rapidly disseminates critical information to decision-makers to detect and deter fraud, waste, and abuse.

THE OFFICE OF LEGAL 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 U.S. 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 MANAGEMENT** provides financial, procurement, human resources, administrative, and IT services and support to OIG staff.

# Appendix F. Map of Office of Inspector General Field Offices

The map below shows headquarters and field office locations for the OIG's Offices of Audits and Investigations.



#### NASA OIG HEADQUARTERS 300 E Street SW, Suite 8U71 Washington, DC 20546-0001

Tel: 202-358-1220

#### **3** AMES RESEARCH CENTER

NASA Office of Inspector General Ames Research Center Mail Stop 11, Building N207 Moffett Field, CA 94035-1000 Tel: 650-604-3682 (Investigations)

#### **GUENN 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: 216-433-5414 (Investigations)

#### **D** 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 or 609-656-2545

#### 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: 818-354-3451

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: 562-951-5485

NASA Office of Inspector General Office of Investigations 6430 South Fiddlers Green Circle, Suite 350 Greenwood Village, CO 80111 Tel: 303-689-7042

#### JOHNSON SPACE CENTER

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

> Office of Audits Mail Stop W-JS Building 1, Room 161 Tel: 281-483-9572

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

#### **(G)** KENNEDY SPACE CENTER

NASA Office of Inspector General Mail Stop W/KSC-OIG Post Office Box 21066 Kennedy Space Center, FL 32815 Tel: 321-867-3153 (Audits) Tel: 321-867-4093 (Investigations)

#### LANGLEY RESEARCH CENTER

NASA Office of Inspector General Langley Research Center 9 East Durand Street Mail Stop 375 Hampton, VA 23681 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: 256-544-0501 (Audits) Tel: 256-544-9188 (Investigations)

#### **1** 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 Super Blue Sturgeon Moon seen from Nokesville, Virginia, on August 19, 2024. (Image credit: Ray Tolomeo)



# SEMIANNUAL REPORT

To report fraud, waste, abuse, or mismanagement, contact the NASA OIG Hotline at 800-424-9183 or 800-535-8134 (TDD) or visit https://oig.nasa.gov/hotline.html. You can also write to NASA Inspector General, P.O. Box 23089, L'Enfant Plaza Station, Washington, DC 20026. The identity of each writer and caller can be kept confidential, upon request, to the extent permitted by law.