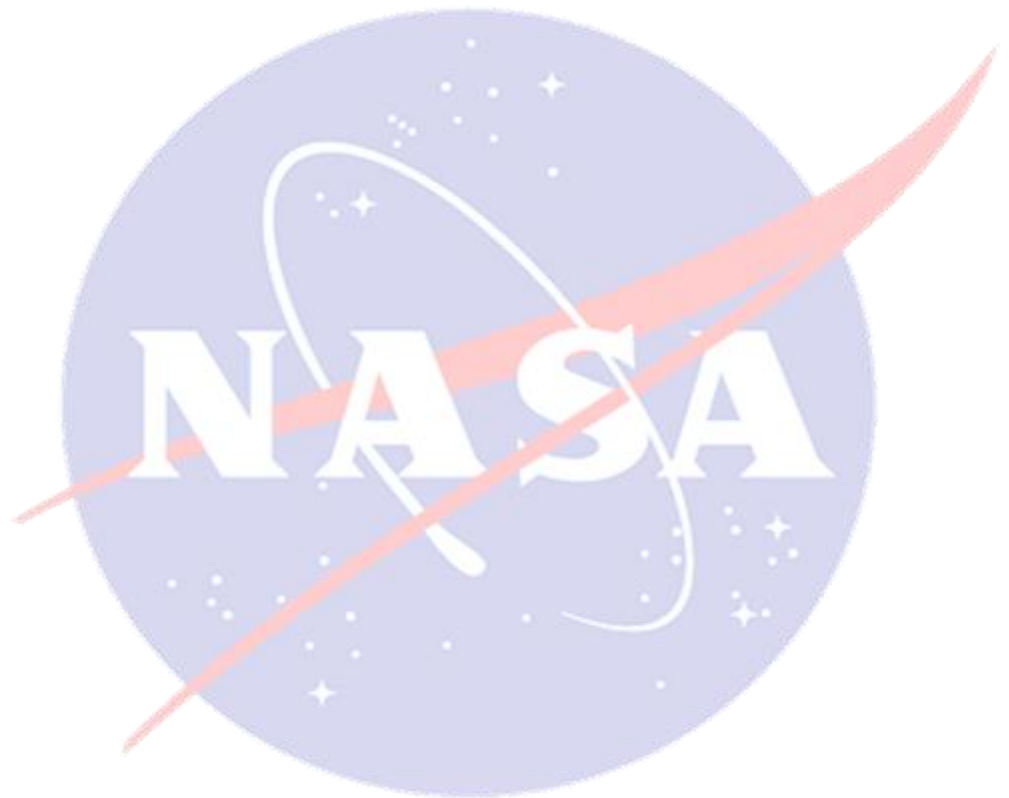




National Aeronautics and Space Administration
OFFICE OF INSPECTOR GENERAL

NASA's Award Closeout Process



OFFICE OF AUDITS

AUDIT REPORT
FEBRUARY 12, 2014

IG-14-014

(A-13-005-00)

Final report released by:

A handwritten signature in black ink, appearing to read 'PKMJA'.

Paul K. Martin
Inspector General

Acronyms

BEI	Brandan Enterprises, Inc.
DCAA	Defense Contract Audit Agency
FAR	Federal Acquisition Regulation
FY	Fiscal Year
GAO	Government Accountability Office
JPL	Jet Propulsion Laboratory
NPR	NASA Procedural Requirements
NSSC	NASA Shared Services Center
OIG	Office of Inspector General

OVERVIEW

NASA'S AWARD CLOSEOUT PROCESS

The Issue

NASA spent approximately 80 percent of its \$17.8 billion fiscal year (FY) 2012 appropriation on contracts to procure goods and services and grants to and cooperative agreements with researchers, universities, and nonprofit entities to fund scientific research, fellowships, and educational activities. Once performance under these varied instruments is complete, NASA must review and complete a series of steps to close the associated files, including ensuring all required documentation is obtained and any unused funds are deobligated.¹ Federal and NASA guidelines provide timeframes in which the closeout process should occur depending on the type of instrument. Meeting these timeframes can help limit NASA's exposure to financial risk by promptly identifying any improper payments the Agency may have made and ensuring that contractors and grantees have satisfied the terms and conditions of the awards. Moreover, timely deobligation of unused funds frees up money for other Agency or Government uses.

The Government Accountability Office, NASA Office of Inspector General, and internal Agency studies have all reported problems associated with timely closure of instruments at NASA and other Federal agencies. As of October 2013, NASA had more than 15,000 award instruments that had expired but were not yet closed. To assist with the closeout process, NASA initially hired a contractor in 2000 and continues to contract out for closeout services.

We performed this audit to determine whether NASA had adequate procedures in place to ensure that instruments are closed timely and in accordance with established requirements and that unused funds are identified and appropriately deobligated. The scope of our audit included all award instruments the Agency closed in FYs 2011 and 2012 and all instruments that had expired but the Agency had not yet closed as of January 3, 2013. To meet our audit objectives, we selected a statistical sample of 416 award instruments. Details of the audit's scope and methodology are in Appendix A.

¹ Deobligation is a process in which NASA removes previously allocated funding to a contract or grant during the closeout process when excess funds remain on the instrument.

Results

Although NASA has slowed the growth of its backlog of award instruments awaiting closeout, the Agency needs to make further improvements to its closeout process. First, we found that NASA's closeout process is not uniform across the Agency. Specifically, Centers vary in the type of instruments they send to the contractor for processing and when they do so. As a result, some Centers are not optimizing the contractor's services, which contributes to the Agency's backlog. Similarly, contract personnel at the Centers use different guidance when closing out award instruments, which impairs their ability to share information and work across the Centers. Second, although we found that NASA generally deobligates unused funds in a timely manner, we nevertheless identified \$2.7 million in our sample of instruments that was not timely deobligated. Based on our statistical projections, we estimate that the Agency has more than 4,000 instruments with \$61 million in funds that were not deobligated in a timely manner, \$44 million of which relates to expired instruments with funds that could be put to better use. Third, we found that the Agency incurred \$6,699 in unnecessary service fees associated with grant accounts that remained open past the period of expiration. Statistically projected, this amounts to an estimate of approximately \$170,000 in unnecessary service fees. Fourth, we found that the Agency closed some award instruments without sufficient evidence that the associated funding had been appropriately spent. Consequently, NASA has increased risk that the costs associated with over \$43 million in awards may not be allowable and reasonable. Finally, we identified best practices that if applied across the Agency could help NASA strengthen its closeout process.

Management Action

In order to improve the award closeout process, we recommended the Assistant Administrator for Procurement (1) standardize the award closeout process across the Centers, (2) engage Center procurement officials to ensure contractor staff use standardized procedures as specified in the contract, (3) implement best practices across the Agency as applicable, and (4) review the backlog of instruments in need of closeout and transfer additional work to the contractor consistent with the recommendations in this report.

In response to our draft report, the Assistant Administrator for Procurement concurred with our findings and recommendations, stating that NASA has identified a Headquarters representative who will work collaboratively with each Center to develop and implement a standardized closeout process that reflects best practices. We consider the proposed actions to be responsive and will close the recommendations upon completion and verification of those actions.

Although the Assistant Administrator concurred with our recommendations, he expressed concerns with our findings that the Agency did not timely deobligate \$2.7 million and that NASA has increased risk that the costs associated with more than \$43 million in awards may not be allowable and reasonable.

With regard to deobligation of the \$2.7 million, the Assistant Administrator asserted that we had not considered the fact that before deobligating excess funds NASA must obtain final invoices from contractors and incurred cost audit reports from the Defense Contract Audit Agency (DCAA). However, we did consider and discuss these issues in this report (see pages 14-15). Moreover, the Federal Acquisition Regulation establishes timeframes by which agencies should obtain documentation required for closeout, and the \$2.7 million we identified was associated with instruments past those timeframes. Indeed, 57 percent of the instruments in our sample were more than a year overdue. In addition, we identified concerns with the diligence of some Agency and contractor personnel in handling the closeout process, including instances in which Agency personnel took no action to seek required documentation from contractors and instances in which files were missing. Finally, we noted that the closeout contractor is better positioned to invest the necessary time and effort to track down documents and reports necessary to complete the closeout process and therefore NASA should make an effort to transfer expired instruments to the closeout contractor in a more timely manner.

The Assistant Administrator also did not agree with our conclusion that the Agency has increased risk that more than \$43 million in awards may not be allowable and reasonable by closing two cost type contracts without evidence of a final audit, pointing to other measures that provide the Agency assurance related to the allowability of a contractor's costs such as the requirement that contractors have adequate accounting systems and use audited indirect rates for billing purposes. In addition, the Assistant Administrator pointed to the diligence of NASA procurement personnel in reviewing contractor reports and invoices throughout performance of the contract and pre-award and yearly incurred cost audits and desk reviews by DCAA.

We agree that all these measures provide some level of assurance regarding allowability and reasonableness of incurred costs. However, we do not believe they are substitutes for the final audit required by the Federal Acquisition Regulation.

The Assistant Administrator also stated that for one of the contracts his office confirmed that yearly-incurred cost audits were conducted and that the Contracting Officer performed a risk assessment prior to closing out the contract. However, we reviewed the contract file and found no evidence of any incurred cost audits performed during the life of the contract. In addition, we followed up with the appropriate procurement personnel and asked whether incurred cost audits had been performed and were available although they were missing from the file. We were told the Contracting Officer had "no recollection of the availability of the incurred costs audits" and that therefore such audits were not considered in making the determination to close the instrument. Moreover, the contracting officer waited 7 years after the period of performance ended to request a final audit from DCAA, at which time DCAA determined it was not cost effective to perform

the audit. Finally, in reaching out to DCAA regarding this contract, procurement personnel informed us that DCAA did not retain records for contracts that old and therefore could not determine whether it had performed any incurred cost audits for this contract. Considering this extensive support gathered during the course of our audit and the lack of evidence provided by the Agency in support of its response, we continue to believe NASA has increased risk that the costs associated with more than \$43 million in awards may not be allowable and reasonable.

Management's full response is reprinted in Appendix D. Technical comments provided by Agency management have been incorporated, as appropriate.

CONTENTS

INTRODUCTION

Background	1
Objectives	6

RESULTS

Additional Improvements Needed in NASA's Award Closeout Process	7
--	---

APPENDIX A

Scope and Methodology	21
Review of Internal Controls	23
Prior Coverage	23

APPENDIX B

Sampling Methodology and Projection of Results	25
--	----

APPENDIX C

Table of Monetary Findings	28
----------------------------	----

APPENDIX D

Management Comments	29
---------------------	----

APPENDIX E

Report Distribution	32
---------------------	----

INTRODUCTION

Background

In fiscal year (FY) 2012, NASA spent approximately 80 percent of its \$17.8 billion budget on contracts to procure goods and services and on grants to and cooperative agreements with researchers, universities, and nonprofit and commercial entities to fund scientific research, fellowships, and educational activities. Once performance under these instruments is complete, NASA must review and complete a series of steps to close the associated files, including ensuring all required documentation is obtained and any unused funds are deobligated.² Federal and NASA guidelines provide timeframes in which this closeout process should occur depending on the type of instrument. Meeting these timeframes can help limit NASA's exposure to financial risk by promptly identifying any improper payments the Agency may have made and ensuring that contractors and grantees have satisfied the terms and conditions of the awards. Moreover, timely deobligation of unused funds frees up money for other Agency or government uses.

Within the past 5 years, NASA has awarded an average of 12,000 instruments per year. As of October 2013, NASA had more than 15,000 expired instruments – instruments for which the period of performance had passed – that had not been closed, including contracts, grants, interagency agreements, purchase orders, task orders, and delivery orders across the Agency.

Untimely Award Closeout is a Government-wide Issue. Timeliness and accuracy in award closeout is an issue across the Federal Government. The Government Accountability Office (GAO), NASA Office of Inspector General (OIG), and internal NASA studies have all reported problems associated with closing out Federal instruments, ranging from poor governance over the closeout process to insufficient resources dedicated to performing closeout actions. For example, GAO found that some agencies lack adequate systems or policies to properly monitor grant closeouts or do not deobligate grant funds in a timely manner.³ In a 2012 report, GAO identified more than \$794 million in Federal funds remaining in expired grant accounts and found that Federal agencies were continuing to pay service fees to the Department of Health and Human

² Deobligation is a process in which NASA removes previously allocated funding to a contract or grant during the closeout process when excess funds remain on the instrument.

³ GAO, "Improving the Timeliness of Grant Closeouts by Federal Agencies and Other Grants Management Challenges" (GAO-12-704T, July 25, 2012).

Services for maintaining payment management system accounts for grants and cooperative agreements that should have been closed. Similarly, in December 2012, GAO released a report noting that military departments have limited data on the extent and nature of their contract closeout backlogs and lack performance metrics to measure their progress in closing out contracts.⁴

In recent work, we identified weaknesses in NASA's grant administration and management, including in the closeout process. In August 2012, we reported that NASA had not timely closed a grant to the HudsonAlpha Institute for Biotechnology or completed several key steps in the closeout process, including deobligating \$17,596 in unspent funds and blocking the grantee's ability to draw down additional funds. Similarly, as part of the audits of NASA's FYs 2011 and 2012 financial statements, independent auditors found that the Agency was not closing out grants within required timeframes and recommended NASA improve its monitoring of the timeliness of the grant closeout process and increase efforts to resolve the backlog of grants awaiting closeout.⁵ Finally, internal Agency reviews conducted between FYs 2008 and 2013 identified issues with NASA Centers not closing out instruments within the required timeframes, specifically noting a lapse between the date of completion of the activity associated with the instrument (e.g., final delivery of goods under a contract) and the date Centers began the closeout process.

NASA's Organizational Structure. NASA consists of a Headquarters Office in Washington, D.C.; nine geographically dispersed Centers; and the Jet Propulsion Laboratory (JPL), a federally funded research and development center operated under contract by the California Institute of Technology. In addition, NASA has a Shared Services Center (NSSC), which is a partnership between the Agency and a contractor to consolidate a variety of support functions, including financial management, human resources, information technology, and procurement. With regard to award closeout, the NSSC administers the Agency's contract for closeout services as well as 99 percent of the Agency's grants and cooperative agreements. The Headquarters Office of Procurement has overall responsibility for establishing procurement policy. In addition, each Center has a procurement office responsible for the day-to-day administration and closeout of award instruments at the Centers.

NASA's Closeout Process. NASA's award closeout process begins once the contractor or grantee has complied with the terms of the award and the period of performance, including any options, has expired. For example, contract "physical completion" occurs when the goods or services procured by the Agency have been fully delivered. While the closeout process varies for different types of instruments, it generally involves review of the instrument file to ensure that all required forms, reports, and financial audits have

⁴ GAO, "DOD Initiative to Address Audit Backlog Shows Promise, but Additional Management Attention Needed to Close Aging Contracts" (GAO-13-131, December 2012).

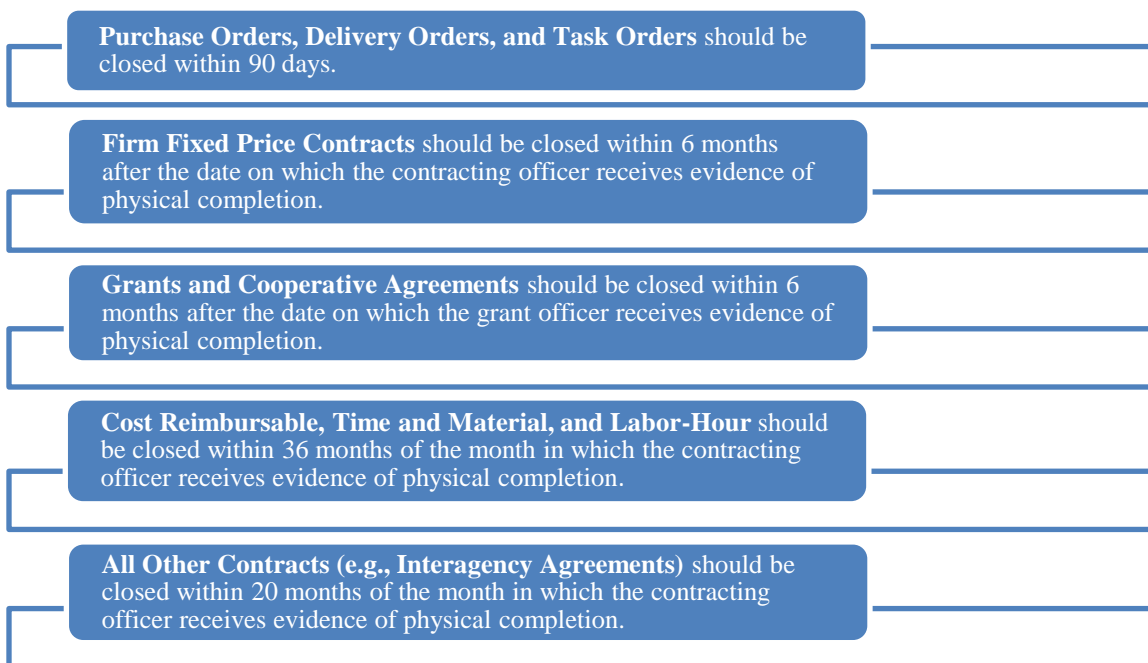
⁵ NASA OIG, "Audit of the National Aeronautics and Space Administration's Fiscal Year 2011 Financial Statements" (IG-12-004, November 15, 2011), and "Audit of the National Aeronautics and Space Administration's Fiscal Year 2012 Financial Statements" (IG-13-003, November 15, 2012).

been completed and verification that all excess funds have been deobligated. The requirements that frame NASA's closeout process are derived from a combination of Federal regulation and Agency policy.⁶ In addition, certain Centers have their own Center-level guidance concerning the closeout process.

An important part of the closeout process is determining whether unspent funds remain on the award that should be deobligated. Depending on the appropriation that funds the award, NASA may use deobligated funds for other Agency purposes or must return them to the Treasury for other Government use.

As shown in Figure 1, Federal requirements and Center guidance have established timeframes for closing out contract and grant files.⁷

Figure 1. Timeframes for Closeout



Source: FAR and NSSC Delivery Guide.

⁶ Federal Acquisition Regulation (FAR) 4.804, NASA Procedural Requirements (NPR) 5800.1 "NASA Grant and Cooperative Agreement Handbook," and NASA FAR Supplement PART 1804.804.

⁷ FAR 4.804-1; NSSC Service Delivery Guide, "Agency-wide Contract Closeout Services" (November 24, 2008). These timeframes do not apply if the contract or grant is in litigation or actions are being taken to terminate the award.

History of Closeout Process at NASA. Approximately 15 years ago, NASA recognized that the award closeout process did not receive the same level of attention across the Agency as the initial award or the day-to-day administration of contracts, grants, and agreements. To address this issue and reduce the backlog of instruments awaiting closure, in 2000, NASA awarded a contract to a private company to assist in performing closeout services. Since February 2013, Brandan Enterprises, Inc. (BEI) has served as NASA's closeout contractor.

Although NASA has slowed the growth of its closeout backlog, NASA procurement officials have continued to identify areas for improvement. Accordingly, for its current closeout contract NASA used a fixed price incentive contract with performance metrics that require BEI to close a specific number of instruments in order to earn the full amount of money available on the contract.⁸ Agency officials hope that incentivizing BEI to close more instruments will help reduce NASA's closeout backlog.

The BEI contract has an 8-month base period with three 1-year options and one 8-month option. If NASA exercises all option periods, the maximum fixed price (excluding incentives) of the contract is \$12.4 million.⁹ As shown in Table 1, the contract sets target ranges for BEI for five types of instruments in the option periods.¹⁰ For example, the range for fixed price contracts is between 650 and 800 instruments. To earn the maximum fixed price amount under the contract, BEI must fall within the range for each category. In addition, BEI may earn an incentive if it exceeds the upper limit in any three categories by 25 percent and meets the target in the remaining two categories (see Table 1). For example, if BEI exceeds the range for categories 1 through 3 by 25 percent, and falls within the range for categories 4 and 5, it would earn the incentive.¹¹ Conversely if BEI is unable to close the minimum number of instruments in any two categories, it is required to pay NASA an amount equal to 15 percent of the fixed price established for each of the categories for which the range was not met.

⁸ NASA established the incentive portion of the contract to increase productivity relative to the number of instruments closed within the contract period of performance.

⁹ As of September 2013, Agency procurement officials said they intended to exercise the first option period under the contract.

¹⁰ Each of the five categories has a set price for both the base and option periods totaling the full fixed price of the contract. However, while metrics were established to incentivize performance during the option periods, no metrics were established for the contract base period. NASA officials told us they did not establish ranges for the base period to give BEI an opportunity to become familiar with Agency operations and procedures before holding the company to a specific metric.

¹¹ The total incentive for option periods 1 through 3 is \$150,000 and for option 4 is \$112,500.

Table 1. BEI Closeout Performance Range Per Option Period

Type of Instrument to Close	Number of Instruments	
	Option Periods 1-3	Option Period 4
Purchase, Delivery, and Task Orders against General Services Administration and NASA Indefinite Delivery Indefinite Quantity Contracts ^a	6,000-7,500	4,500-5,625
Fixed Price Contracts	650-800	487-600
Cost Reimbursement Contracts	150-250	112-187
Interagency Agreements	500-750	375-562
Grants and Cooperative Agreements	3,500-4,500	2,625-3,375

Source: NASA's Contract File for BEI.

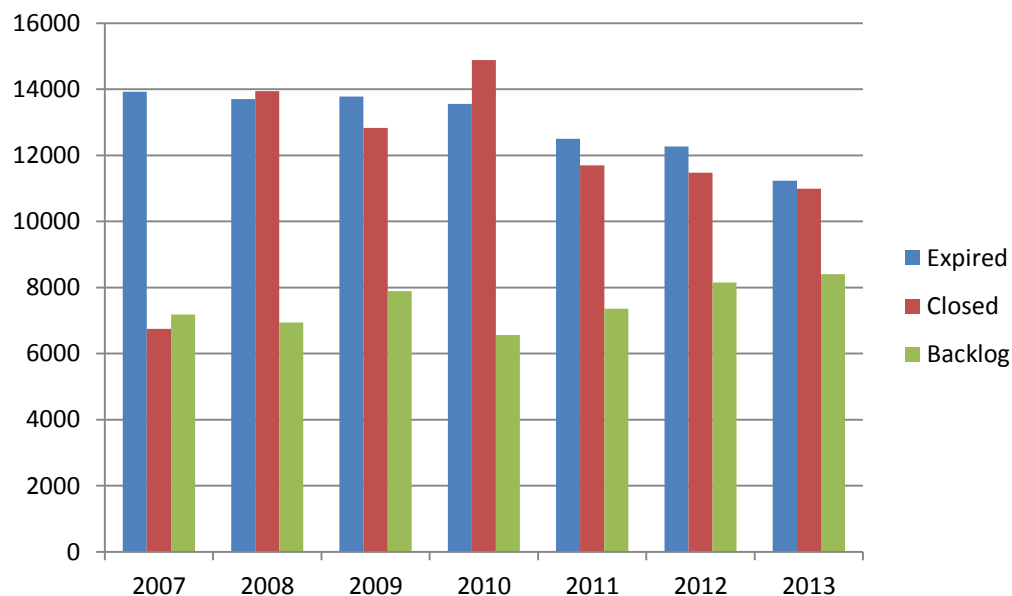
^a Indefinite Delivery Indefinite Quantity contracts provide for an indefinite quantity of services over a fixed period.

The NSSC administers the BEI contract. Thirty-five BEI employees located at the NSSC and at NASA's 10 Centers work under the contract. Staffing levels at each Center vary from one to five full-time equivalent positions depending on the quantity and type of instruments at a particular Center. Although the BEI contract was established to provide closeout services Agency-wide and Centers are encouraged to use BEI's services, they are not required to do so and may instead use Center procurement staff to close instruments. Therefore, Center management determines the level of involvement BEI will have in the closeout process at their respective Centers, including the types and number of instruments the Center will direct to the company for closure. Although there are no provisions in the contract that guarantee BEI will receive a minimum number of instruments to close, the contract's performance targets were based on historical data concerning the number of instruments the Centers had referred to previous contractors, as well as the number of award instruments expiring in the future.

BEI is responsible for submitting monthly progress reports to NASA detailing metrics such as the number of instruments the company received for closeout, the number it closed, and whether required timeframes were met. In addition, the reports state the top reasons instruments were not closed that month. BEI provides metrics for each Center as well as an Agency-wide summary report. NASA officials use these reports to monitor BEI's progress and to determine if BEI is meeting or exceeding its performance goals.

Closeout Backlog. As shown in Figure 2, NASA’s backlog of instruments awaiting closeout has remained consistent, averaging approximately 7,500 for the past 7 years.¹² Since 2008, the Agency has made a concerted effort to close expired instruments. As shown in Figure 2, an average of 13,000 instruments expired in each of the past 7 years, and the Agency consistently closed on average 12,000 instruments each year. However, in order to reduce the backlog the Agency will have to focus greater effort on not only closing instruments that expire each year but also instruments that have accumulated as backlog from prior years.

Figure 2. Closeout Backlog



Source: NASA Enhanced Procurement Data Warehouse Statistics (October 2013).

Objectives

The overall objective of our audit was to determine whether NASA had adequate procedures in place to ensure that award instruments are closed in a timely manner in accordance with established requirements and that any unused funds are appropriately identified and deobligated. See Appendix A for details of the audit’s scope and methodology, our review of internal controls, and a list of prior coverage.

¹² The backlog shown in the chart is cumulative only for the years listed.

ADDITIONAL IMPROVEMENTS NEEDED IN NASA'S AWARD CLOSEOUT PROCESS

Although NASA has slowed the growth of its backlog of award instruments awaiting closeout, the Agency needs to make further improvements to its closeout process. First, we found that NASA's closeout process is not uniform across the Agency. Specifically, Centers vary in the types of instruments they send to the contractor for processing and when they do so. As a result, some Centers are not optimizing the contractor's services, which contributes to the Agency's backlog. Similarly, contract personnel at the Centers use different guidance when closing out instruments, which impairs their ability to share information and work across the Centers. Second, although we found that NASA generally deobligates unused funds in a timely manner, we nevertheless identified \$2.7 million in our sample of instruments that was not timely deobligated. Based on our statistical projections, we estimate that the Agency has more than 4,000 instruments with \$61 million in funds that were not deobligated in a timely manner, \$44 million of which relates to expired instruments with funds that could possibly be put to better use. Third, we found that the Agency incurred \$6,699 in service fees associated with grant accounts in our sample that remained open past the period of expiration. Statistically projected, this amounts to an estimate of approximately \$170,000 in unnecessary service fees. Fourth, we found that the Agency closed some award instruments without sufficient evidence that the associated funding had been appropriately spent. Consequently, NASA has increased risk that the costs associated with over \$43 million in awards may not be allowable and reasonable. Finally, we identified best practices that, if applied across the Agency could help strengthen NASA's closeout process.

Inconsistent Closeout Process Across Centers

NASA does not mandate that Centers use BEI for all closeout activity. Consequently, we found wide variation among the Centers in how they utilized the contractor's services. We also found no standardized guidance for closeout across the Agency.

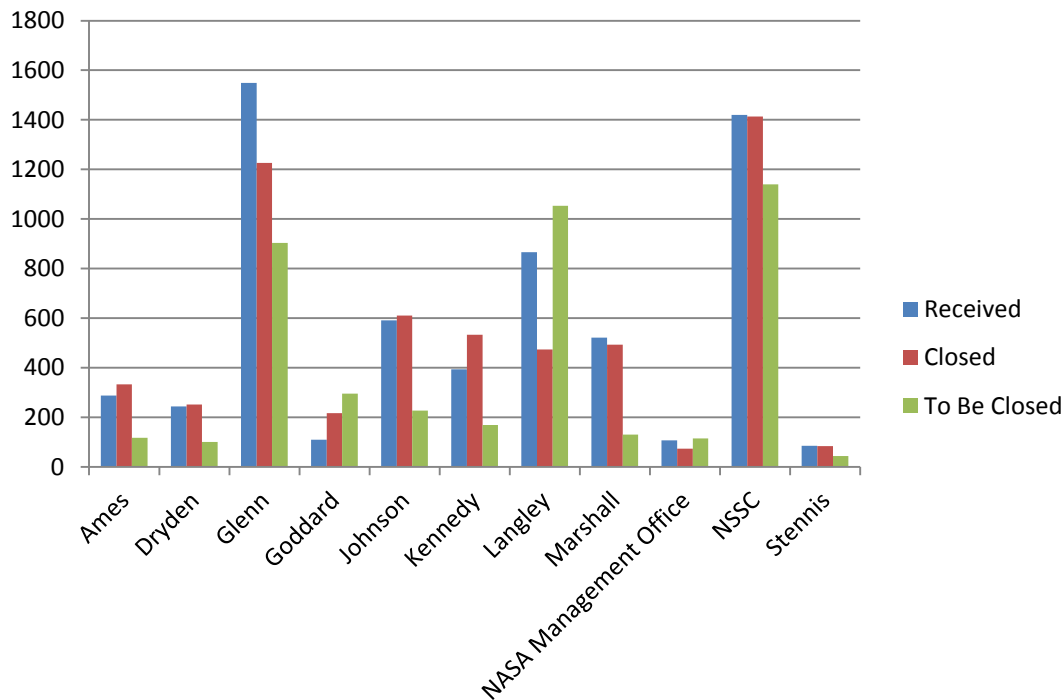
Varying Use of Closeout Contractor. We found that some Center procurement officials utilize a "cradle to grave" approach to award instruments, performing all activities from pre-award to closure themselves. At other Centers, officials use the closeout contractor for all types of award instruments, while at others, contractor involvement is limited to certain types of instruments. For example, at Goddard Space Flight Center (Goddard) procurement staff may send instruments to BEI for closeout or close the instruments themselves; the practice varied among individual staff members. In contrast, at Kennedy Space Center (Kennedy), procurement officials routinely sent most types of instruments

to BEI, including most recently cost-type contracts. At Johnson Space Center (Johnson), delivery and task orders are sent to BEI only when the base contract is ready for closure, while at Langley Research Center (Langley) they are sent when the individual orders are complete.

We understand that each Center varies in the number and type of awards made, thus affecting the pool of instruments that may be referred to BEI for closure. However, we noted that while Goddard handles among the largest number of procurements at NASA (22 percent of the total Agency procurements in FYs 2012 and 2013), the number of instruments it transfers to BEI for closure is quite small in comparison – roughly 8 percent.

Figure 3 shows the variation among the Centers in the number of instruments sent to BEI for closure between February and September 2013 and BEI's progress in closing those instruments.

Figure 3. Variances in BEI Closeout Status (February-September 2013)



Source: BEI Progress Report for the period February-September 2013.

Note: "To Be Closed" represents BEI's backlog of instruments in need of closeout and includes instruments carried over from the previous contractor. As a result, in some instances the number of closed instruments exceeds the number of expired instruments.

In addition to differences in the number and type of instruments provided to the contractor, we also noted differences in the extent of closeout-related work Center procurement officials perform before they transfer instruments to BEI. For example, at three Centers, procurement officials obtained all required documentation, including financial and performance reports and final invoices, and deobligated any unused funds before sending instruments to BEI, leaving the company with only the tasks of reviewing the files to ensure all required documentation was included and entering closing dates in NASA's electronic procurement system. At other Centers, expired instruments are referred to BEI to perform the full range of closeout activities, including obtaining the required documentation from the contractor or grantee and working with procurement officials to obtain final invoices and reports.

As previously stated, NASA encourages but does not require use of the closeout contractor. Center procurement officials we spoke with explained that in some cases they do not refer instruments to the contractor because officials believe that contractor personnel cannot handle the workload. However, we believe that BEI has the capacity to close more instruments and that referring more work to the company could help NASA reduce its backlog.

Although NASA did not establish performance metrics for the base period of the contract, we noted that BEI has closed more than 5,200 instruments as of September 2013, including, as shown in Table 2, all of the instruments it received from the Centers in three of five categories (purchase orders, fixed price contracts, and interagency agreements). As a gauge of BEI's performance, we calculated a minimum performance target for the base period using the metrics that will apply to the first option period of the contract.¹³ For the 8-month base period, BEI met the minimum performance target for cost reimbursement contracts and for all other categories except grants and cooperative agreements, closing at least 80 percent of the minimum target number of instruments. Moreover, for the instruments BEI received but had not yet closed, we found company employees had made progress on many, for example, working to obtain final invoices and reports needed for closure.

¹³ We calculated the minimum performance target for the base period by taking two-thirds (8 months) of the standard performance range for the first option period of the contract. See Table 1 for the performance range of the first 12-month option period.

Table 2. BEI Cumulative Received, Closed and Performance Target

Instrument Type	Instruments Received ^a	Instruments Closed ^b	Performance Target
Purchase, Delivery, and Task Orders	3,443	3,610	4,000
Fixed Price Contracts	203	358	433
Cost Reimbursement Contracts	925	142	100
Interagency Agreements	188	272	333
Grants and Cooperative Agreements	1,174	885	2,333

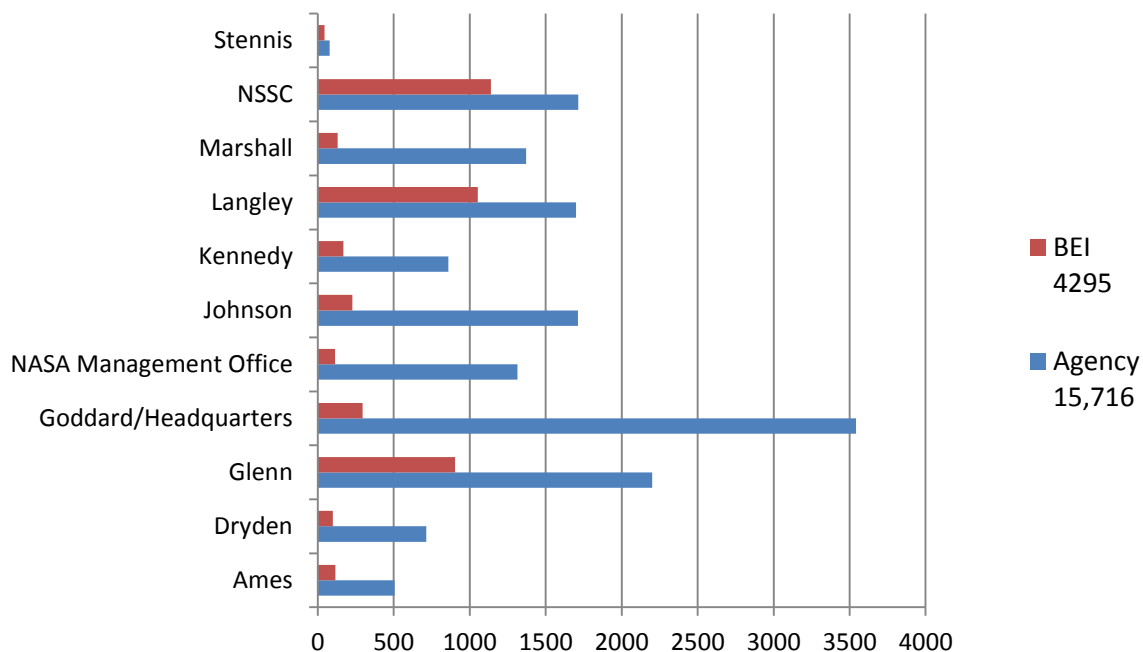
Source: BEI monthly reports February-September 2013, BEI contract; and OIG analysis.

Instruments received by BEI are for the period February through September 2013 and do not include instruments left by the previous contractor.

^b BEI closed more instruments than it received in some categories because of backlog left by the previous contractor.

The purpose of the contract with BEI is to reduce NASA's backlog of instruments in need of closeout and enable Agency contracting officers to focus on other critical aspects of contract management. Failing to utilize the contract for the full range of closeout activities limits the Agency's ability to achieve these goals. As of October 2013, the Agency had more than 15,000 instruments that were expired but not closed. In contrast, in its most recent monthly report BEI reported a backlog of more than 4,200 instruments.¹⁴ Figure 4 depicts the differences between the instruments in need of closure listed in the Agency's procurement system versus the instruments in need of closure reported by BEI. Given that during the base period BEI has closed at least as many instruments as NASA has referred to it in all categories and more than that number in other categories, we believe that NASA could further reduce its overall backlog if the Centers referred more instruments to BEI for closure.

¹⁴ BEI reports solely on the backlog on instruments that have been turned over to them for closure and not on the entire Agency backlog.

Figure 4. Agency and BEI Reported Backlog of Instruments

Source: BEI Progress Report for the period February-September 2013; NASA's Enhanced Procurement Data Warehouse (as of October 2013).

We also found that NASA has no Agency-wide policy or guidance on when instruments should be sent to the closeout contractor. As a result, procurement officials sometimes hold on to instruments longer than necessary, sending them to BEI only after the timeframe for closeout has passed. In addition, when procurement officials leave the Agency, files are more likely to be lost or discarded if they have not been turned over to the contractor for closure in a timely manner. Without guidance on when to provide instruments to the closeout contractor or emphasis on the importance of doing so in a timely manner, the Agency is unlikely to make further progress in reducing its backlog.

Lack of Standardized Guidance. We determined that BEI staff at the Centers do not consistently follow the same guidance for closing out instruments. Specifically, not all contractor staff use the Agency-wide Contract Closeout Service Delivery Guide (Delivery Guide) developed and maintained by NSSC procurement staff. Although BEI's standard operating procedures state that the FAR, NASA FAR Supplement, and the Delivery Guide take precedence over Center-specific guidance or processes for closeout, we found that BEI staff at four Centers and the NSSC utilize the Delivery Guide, while staff at the remaining five Centers follow Center-specific guidance.¹⁵

¹⁵ Johnson is in the process of developing Center-specific guidance.

The Delivery Guide and Center-specific guidance require different levels of documentation in the instrument files. For instance, the Delivery Guide requires screen shots from NASA's procurement and financial systems as evidence that instruments are closed in those systems, while Center-specific guidance was generally silent regarding the need for such documentation. Further, some Center processes require email documentation as evidence that certain reports are not applicable and therefore not included in the files. Procurement officials at one Center expressed the view that the Delivery Guide required too much documentation and said they therefore instructed contractor staff not to follow it, while officials at another Center described the Delivery Guide as too general and preferred contractor staff use more detailed, Center-specific processes.

Differing documentation requirements can be problematic in ensuring closeout is completely and accurately performed. Moreover, procurement officials at one Center also expressed concern that using different processes makes it difficult for contractor staff to ask questions of their colleagues at other Centers or to perform closeout work at another Center, which may be required depending on closeout needs across NASA. Although we found all Center-specific processes consistent with the FAR and NASA FAR Supplement, we believe contractor staff should be using standardized processes to ensure consistency and efficiency and allow for flexibility in the use of staff.

Instruments Not Closed Timely. NASA continues to close instruments well outside allowable timeframes and has an extensive backlog of expired instruments in need of closure. We found that Agency and contractor personnel generally ensured that excess funds were identified and deobligated in a timely manner even when the rest of the closeout process was not completed on time. Nevertheless, in our sample of 416 instruments we identified \$2.7 million that was not timely deobligated. Based on our statistical projections, this results in \$61 million in funds not deobligated timely (\$17 million from closed instruments that have since been deobligated and \$44 million from expired instruments that could still be put to better use). We also found that the Agency incurred \$6,699 in unnecessary service fees associated with grant accounts in the sample that remained open past their expiration.

Closed Instruments. We reviewed a statistical sample of 213 instruments NASA closed in FYs 2011 and 2012 to determine if they had been closed in accordance with requirements and whether any excess funds were deobligated in a timely manner. We found that 47 percent of these instruments were not closed within the timeframes required by the FAR and NASA guidance. The level of tardiness ranged from an average of 178 days for purchase, delivery, and task orders to 2,443 days (6.7 years) for cost type contracts (see Table 3).

Table. 3 Instruments Closed Late

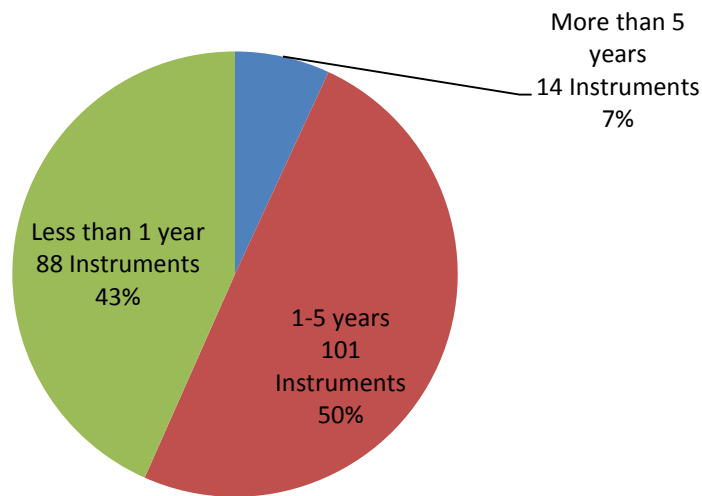
Instrument Type	Number Reviewed	Number Late	Average Days Late	Funds Deobligated Late
Purchase, Delivery, and Task Orders	55	30	178	\$6,940
Fixed Price Contracts	44	24	709	\$1,000
Cost Type Contracts	6	3	2,443	\$148,132
Interagency Agreements	53	19	750	\$174,901
Grants/Cooperative Agreements	55	25	262	\$99,292
Total	213	101		\$430,265
Percentage Closed Late		47%		

Source: NASA instrument files.

Although not all steps in the closeout process were completed within required timeframes, we found that Agency and closeout contractor personnel generally ensured that excess funds were identified and deobligated in a timely manner. Nevertheless, from our sample of 213 closed instruments, we identified \$430,265 associated with 31 instruments that were deobligated late. Based on our statistical projections, we estimate that the Agency's untimely closure of instrument files in FYs 2011 and 2012 delayed the deobligation of more than \$17 million in excess funds that could have been used for other Agency priorities or returned to the U.S. Treasury (see Appendix B for details of our sampling methodology and projection analysis).

Expired Instruments. We also reviewed a statistical sample of 203 instruments that were expired but not closed.¹⁶ We reviewed these instruments to gain an understanding of the reasons they had not been closed and the impact of the delay. We found that 115 (57 percent) of these instruments were more than a year overdue for closeout (see Figure 5).

¹⁶ Instruments were past timeframe for closeout as of January 2013 when the sample was selected.

Figure 5. Expired Award Instruments Past Due as of January 2013

Source: NASA instrument files.

We also identified \$2.3 million in undisbursed funds associated with these awards.¹⁷ Projecting these findings, we estimate that the Agency could have more than \$44 million in excess funds associated with expired instruments that have yet to be deobligated and made available for other Agency or government use (see Appendix B for details of our sampling methodology and projection analysis).

Reasons for Untimely Closure. We found that both internal and external factors affected the timeliness of NASA's closeout process. Center officials pointed to difficulty in obtaining final deliverables from some contractors and grantees as well as the need for contract and grant officials to reconcile final invoices and obtain final audits and past performance evaluations as impediments to timely closeout. For example, cost type contracts require completion of a final incurred cost audit before they may be closed. However, obtaining this audit can take years depending on the workload of the Defense Contract Audit Agency (DCAA), the organization that generally performs these reviews. In addition, obtaining a final invoice or other required closing documents varies depending on the contractor or grantee.

Procurement staff also pointed to other impediments to the completion of timely closeout. For example, NASA and the Department of the Army have an interagency agreement for construction and engineering design services. Kennedy and Langley officials said that for these types of agreements, it is sometimes difficult to obtain the final invoice from the partner agency. In some cases, the other agency may be awaiting a final audit of a contractor's costs. Because obtaining such audits can take years, this creates a domino

¹⁷ During our audit, NASA worked towards closing these expired instruments to include paying final invoices and deobligating excess funds that remained.

effect in that the Center must leave the agreement open until all required documentation is obtained.

Procurement officials also noted they sometimes have difficulty obtaining final property or new technology reports from the responsible offices within their own Centers.¹⁸ To remedy this issue, officials at one Center told us they reached an agreement with their Property Office to dedicate one day per month to the processing of property reports. BEI staff informed us that this effort helped them obtain these reports more timely.

We also identified concerns with the diligence of some Agency and contractor personnel in handling the closeout process. Specifically, we identified instances where personnel took no action to seek required documentation from contractors or grantees. In other instances, we found that instruments had not been closed because the responsible procurement official left the Agency and no other Agency representative could locate the pertinent file. Table 4 depicts the reasons for the untimely closure of the instruments we sampled.

Table 4. Reasons for Untimely Closure

Reason Provided	Percentage of Files Impacted
File missing	3%
Financial issues – missing final invoice or financial reconciliation	23%
Waiting on final audit	6%
Unable to locate vendor or key official	1%
Missing other closing documents ^a	30%
Recently closed; awaiting closure; no other reason provided	36%
Under investigation	1%
Total	100%

Source: NASA.

^a These files are both awaiting documents from the contractor or grantee and awaiting closeout personnel to request the required information.

We believe that by requiring procurement officials to more timely transfer instruments to the closeout contractor, the Agency could avoid many of the issues we identified as impediments to timely closeout. Because BEI personnel are tasked solely with closing out instruments, they are best positioned to focus the necessary time and effort to track down reports from Center officials and documents from contractors and grantees.

Payment Management System Fees. In addition to untimely deobligation, we found that NASA was incurring unnecessary service fees associated with expired grants and cooperative agreements. In accordance with a Memorandum of Understanding between NASA and the Department of Health and Human Services, NASA pays a service fee of

¹⁸ Property reports are required for final disposition of all federally owned property under the contract or grant. New technology reports provide assurance that any new technology associated with the instrument is properly identified.

approximately \$5.42 per month for every open grant and cooperative agreement in the Department's Payment Management System.¹⁹ In our sample, we identified 25 grants that were closed late and 49 grants that were expired but not closed. We found that the Agency incurred \$6,699 in unnecessary service fees associated with these grants. Based on our statistical projections, we estimate that NASA incurred approximately \$170,000 in unnecessary service fees associated with agreements that were not closed in a timely manner. At the close of our review, the Agency informed us of a newly developed initiative to eliminate unnecessary service fees for expired grant accounts with zero unliquidated obligations. While this new initiative has no impact on the fees identified in our audit, if implemented effectively, it could help to reduce similar fees in the future.

Appropriateness of Closeout

In general, NASA closed the instruments we reviewed in accordance with Federal and Agency regulations. However, we identified files that lacked all required documents or in which the documentation submitted was inadequate and two instances in which awards were closed without a required final audit.

Twelve of the 213 (6 percent) closed instruments we reviewed were missing either the new technology report, final performance evaluation report, or the contract completion statement. These reports are required per FAR and Agency regulations.²⁰ New technology reports provide assurance that any new technology associated with the instrument has been properly identified, while final performance reports evaluate the contractor's performance. Contract completion statements provide assurance that all required closeout steps have been completed and verified. Without these reports, the Agency has limited assurance or accountability that new technology was properly identified, contractor performance was adequate, or that the appropriate closing steps were completed for the 12 instruments identified.

In addition, we identified two closed cost type contracts that lacked evidence of a final audit. In one case, the procurement official was unaware as to the reason the contract was closed without a final audit. In response to our finding, the procurement official contacted DCAA to gather more information regarding its efforts to review this contract. As of the end of our fieldwork, DCAA had not provided NASA with the requested information. In the second instance, the contract was closed without the audit because the responsible procurement official waited 7 years to request an audit from DCAA, at which time DCAA determined it was not cost effective to perform the audit. Agency officials could not provide an explanation as to why the delay in requesting the audit occurred and to our knowledge no penalties were assessed against the procurement officials involved. As a result, NASA has increased risk that the costs associated with over \$43 million in awards may not be allowable and reasonable.

¹⁹ The Department of Health and Human Services Payment Management System provides financial and administrative services for Federal agency grants payments.

²⁰ FAR 4.804-5, "Procedures for Closing out Contract Files."

Furthermore, 11 of the grants we reviewed were closed with a Summary of Research Report, Final Faculty Report, or Final Educational Report that was either inadequate or missing entirely. Each of these reports is required per the NASA Grant Handbook as part of a grantee's final reporting requirements.²¹ In one instance, we found evidence that the Technical Officer for a research grant concluded that the grantee's progress reports and final summary of research report were inadequate.²² The three reports were identical in nature and did not show evidence of the evolution of the research over the life of the grant.²³ While the Technical Officer made note of the inadequacy of the reports in the file, the grant was closed nevertheless. In our opinion, if the Technical Officer was not satisfied with the reporting for this grant, it should not have been closed. Without adequate progress and summary reports, NASA has no assurance that the grantee appropriately used the \$339,000 in funds associated with this grant.

In another example, the scope of work on an educational grant was changed in order to allow a grantee to expend the remaining funds after the original principal investigator passed away. The original scope of work was for the grantee to develop a plan to digitize film materials brought back from the Moon. After the principal investigator's death, two no-cost extensions were requested and approved. Once the period of performance ended, the Agency initiated the closeout process. However, in the midst of the closeout process the grantee submitted and was approved for an additional no-cost extension. Almost a year later and after the grant once again went to closeout, the grantee submitted an additional extension and reactivation request along with a justification for new work to be performed with the remaining grant funds. The request was submitted almost 4 months after the period of performance end date and requested permission for the grantee to use the remaining funding to host a conference on the importance of samples returned from the solar system. The request claimed the conference was an extension of the work from the original grant; however, the grantee used the funds to pay stipends for scientists as well as for conference expenditures and event catering. The Grant Handbook allows for a one time no-cost extension received at least 10 days prior to the expiration of the award. In this case, multiple no cost extensions were provided, two after expiration of the award.²⁴

²¹ Per NPR 5800.1 "NASA Grant and Cooperative Agreement Handbook," the Final Summary of Research Report is required for Research Grants, Final Educational Activity Report for Education Grants, and Final Faculty Report for Training Grants.

²² Technical officers have expertise in the proposed area of work and are responsible for monitoring the grantee's performance through review of performance reports. However, Grant Officers are primarily responsible for the grant awards.

²³ Progress reports are required as part of a grantee's normal reporting requirements and are intended to describe the work accomplished during the reporting period. The Summary of Research report is a comprehensive summary of the significant accomplishments achieved during the duration of the grant.

²⁴ Per NPR 5800.1 "NASA Grant and Cooperative Agreement Handbook" Section 1260.23, a recipient may make a one-time no-cost extension, not to exceed 12 months, prior to the established expiration date. The NASA Grant Officer must receive written notification of such an extension, with the supporting reasons, at least ten days prior to the expiration of the award.

A Grant Research Assistant at NASA assigned to this award received approval from the Technical Officer to extend the grant. The Research Assistant stated that the funds would have expired if they deobligated the money so it was in NASA's best interest to approve the request. In our view, given the late receipt of multiple requests for extension and the substantial change of scope in the proposal, the original grant should have been closed and the remaining funds deobligated. If new work was determined to be necessary by the Center, a new grant should have been awarded. Furthermore, while the Grant Research Assistant had permission to approve requests and sign off as the Grant Officer for awards under \$100,000, we believe in this case the Grant Officer should have been consulted regarding the scope change. We spoke with the responsible Grant Officer who told us that although the circumstances we described were concerning, she was not familiar with the file. Because the Grant Officer is ultimately responsible for the grant, we believe she should have been consulted on this material change in scope.

Best Practices

During our review, we identified closeout practices at several Centers that may benefit NASA if implemented Agency-wide. First, we found that some Centers have begun tracking the total number of instruments in need of closeout as well as the number of instruments referred to the closeout contractor. This practice helps focus management's attention on the instruments retained by Center personnel for closeout. Second, procurement offices at two Centers hold "closeout days" during which officials set-aside time to focus on getting instruments ready for closeout. Third, as previously discussed, one Center reached an agreement with its Property Office to designate one day per month to processing property reports in order to help keep the closeout process moving. Fourth, two Centers established requirements for when and which types of instruments procurement officials are required to send to the contractor for closeout. Establishing timeframes for when instruments must be provided to the closeout contractor and ensuring the contractor is aware of the status of the instrument helps ensure instruments are closed timely and accurately. Fifth, the NSSC developed a process that automatically notifies grantees of due dates for required reports. These notifications help to remind grantees of the steps they need to take to prepare for closeout and reduce the risk that the Agency will be waiting on final documentation from the grantee to close instruments.

Finally, BEI continues to develop best practices and share ideas among Center staff, including a tracking tool to identify the impediments to closeout in order to provide suggestions to NASA for improvement. In the past few months, the contractor identified a large backlog of cost type contracts, an area managers felt BEI personnel had less experience in closing. In an effort to enhance performance in this area, the contractor provided training to its closeout personnel to familiarize them with requirements for this type of instrument. In addition, contractor officials said that they continually communicate with procurement officials at the Centers to encourage the use of a "quick closeout" process for cost type contracts in which contracting officers negotiate final indirect rates without obtaining a final audit in appropriate circumstances.

Recommendations, Management's Response, and Evaluation of Management's Response

NASA is making strides to address its backlog of instruments in need of closeout. Maximizing use of the Agency's closeout contractor is critical to making further progress on this issue. While the current contract with BEI is designed to incentivize progress on reducing the backlog, it will not be effective without a strong commitment from procurement officials Agency-wide. Standardizing when and which instrument types are turned over to the closeout contractor and requiring procurement officials to adhere to this policy would enable NASA to maximize the contract and allow Agency procurement officials to focus on other critical responsibilities.

In order to improve award closeout across NASA, we recommended the Assistant Administrator for Procurement:

Recommendation 1. Standardize the award closeout process across all Centers to include developing and implementing a policy requiring Centers to maximize use of the closeout contractor and establishing a timeframe for procurement staff to turn instruments over to the contractor.

Management's Response. The Assistant Administrator for Procurement concurred, stating that NASA will review the current closeout process across all Centers to develop and implement a standardized policy, which establishes timeframes where applicable to transition files to the closeout contractor and includes maximizing utilization of any closeout contract executed by the Agency. The Assistant Administrator anticipates completion of this action within 180 days of issuance of our report.

Evaluation of Management's Response. Management's proposed actions are responsive to our recommendation. Therefore, we consider the recommendation resolved and will close it upon receipt and verification of those actions.

Recommendation 2. Engage Center procurement officials to ensure closeout contractor staff use standardized procedures, as specified in the contract, across the Centers.

Management's Response. The Assistant Administrator concurred and anticipates completion of the proposed corrective action within 180 days of the issuance of our report.

Evaluation of Management's Response. Management's proposed actions are responsive to our recommendation. Therefore, we consider the recommendation resolved and will close it upon receipt and verification of those actions.

Recommendation 3. As part of the process of standardizing the closeout process, implement as applicable the best practices identified in this report and any other best practices the Agency identifies.

Management's Response. The Assistant Administrator concurred and anticipates completion of the proposed corrective action within 180 days of the issuance of our report.

Evaluation of Management's Response. Management's proposed actions are responsive to our recommendation. Therefore, we consider the recommendation resolved and will close it upon receipt and verification of those actions.

Recommendation 4. Review the backlog of instruments in need of closeout and transfer additional work to the closeout contractor as appropriate and consistent with the recommendations of this report.

Management's Response. The Assistant Administrator concurred and anticipates completion of the proposed corrective action within 180 days of the issuance of our report.

Evaluation of Management's Response. Management's proposed actions are responsive to our recommendation. Therefore, we consider the recommendation resolved and will close it upon receipt and verification of those actions.

Although the Assistant Administrator concurred with our recommendations, he expressed concern with our findings that the Agency did not timely deobligate \$2.7 million in funds and that NASA has increased risk that the costs associated with more than \$43 million in awards may not be allowable and reasonable. We respond to the Assistant Administrator's comments about these issues in the Overview for this report.

SCOPE AND METHODOLOGY

We performed this audit from January 2013 through January 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We performed work at NASA Headquarters; the NSSC; and nine Centers: Ames Research Center, Dryden Space Flight Center, Glenn Research Center, Goddard Space Flight Center, Johnson Space Center, Kennedy Space Center, Langley Research Center, Marshall Space Flight Center, and Stennis Space Center. We conducted interviews across multiple levels of procurement management at Headquarters and each Center in order to gain an understanding of the closeout process. We interviewed closeout contractor personnel at each Center as well as the Project Manager to understand the contractor's role in closeout the process. Finally, we interviewed procurement management at the NSSC to gain an understanding of their oversight of the closeout contract. In addition, we obtained and reviewed copies of each Center's guidance for closeout.

In order to determine whether NASA closed award instruments timely and in accordance with requirements, we obtained the universe of all award instruments closed in FYs 2011 and 2012 from NASA's Enhanced Procurement Data Warehouse. In addition, to determine the reasons instruments were not being closed timely and whether funds were deobligated timely, we obtained the universe of award instruments expired as of January 3, 2013, but not closed. This universe included only instruments that were past their timeframe for closeout (purchase orders-90 days, fixed price contracts-180 days, cost type contracts-36 months, interagency agreements-20 months, and grants-180 days). We used a simple random sample to select 416 instruments (both closed and expired) to review (see our sampling methodology and projection of results in Appendix B).

For the closed instruments, we reviewed the file to determine whether the instrument was closed timely, if the file contained all the required documentation and reports, and if excess funds were deobligated timely. In addition, for the expired instruments, we sent questionnaires to contracting/grant officers and closeout personnel to obtain an understanding of where the instrument was in the closeout process, the reason that it had not been closed, and whether excess funds existed. For the instruments, we verified the amount of undisbursed funding for each instrument to the PRRPT 24 Purchasing Report obtained from SAP Business Warehouse. These universes are the basis for the analysis performed and discussed in this report.

We also reviewed the closeout contract effective February 1, 2013, along with the contractor's monthly status reports from February 2013 through September 2013.

Federal Laws, Regulations, Policies, and Guidance. We reviewed all applicable Federal, Agency, and Center level regulations and guidance, including the following:

- Code of Federal Regulations (C.F.R.), Title 2, Part 215, "Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals and Other Non-Profit Organizations (OMB Circular A-110)," January 1, 2012
- C.F.R., 14 PART 1273, "Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments"
- FAR Part 4.804, "Closeout of Contract Files"
- FAR Part 42.708, "Quick Closeout Procedures"

NASA Policies and Procedures

- NASA Procedural Requirement (NPR) 5800.1, "Grant and Cooperative Agreement Handbook," Section A, June 13, 2008, Section B, April 20, 2007, Section C May 19, 2005, and Section D July 23, 2007)
- NASA Procedural Requirement (NPR) 9680.1A, "NASA's Management of Grants and Cooperative Agreements," November 10, 2011
- NASA FAR Supplement PART 1804.804, "Closeout of contract files"
- 210-WI-5104.0.1B, "Goddard Space Flight Center Work Instruction, Contract Closeout Procedures," March 21, 2012
- GLWI-CH-5104.1, Revision J, "Glenn Research Center Work Instruction, Closeout Initiation," February 27, 2012
- KDP-P-1660, Revision I-2, "Kennedy Space Center Marking and Disposition of Contract Files Including Contract Closeout"
- LMS-OP-4531, "Langley Space Center Closeout of Procurement Files," March 21, 2014
- NSSC-PR-SDG-0009, Revision 2, "NASA Shared Services Center Service Delivery Guide 2.0," November 24, 2008
- PS-OWI-13, Revision N-1, "Marshall Space Flight Center Organizational Work Instruction," March 11, 2011

Use of Computer-Processed Data. To assess the reliability of NASA’s award closeout data for instruments closed in FYs 2011 and 2012 and expired instruments as of January 2013, we reviewed the query parameters used to extract the data universe of instruments from NASA’s Enhanced Procurement Data Warehouse; randomly selected a sample of 416 instruments to test and verify completeness and accuracy of the data; and interviewed Agency and Center officials. We did identify instances where data in the Enhanced Procurement Data Warehouse system was not accurate; however, the instances were immaterial in relation to our sample. Therefore, we deemed the data reliable for purposes of this audit.

Review of Internal Controls

We reviewed and evaluated the internal controls associated with the award closeout process. This included reviewing each Center and the NSSC’s process for closing all instrument types (purchase orders, contracts, grants, and interagency agreements). In addition, we reviewed the controls each Center and the NSSC had in place to monitor the work of the closeout contractor. The weaknesses we identified are discussed in this report. Our recommendations, if implemented, should correct the identified weaknesses.

Prior Coverage

During the last 5 years, the NASA OIG and the GAO have issued seven reports of particular relevance to the subject of this report. Unrestricted reports can be accessed over the Internet at <http://oig.nasa.gov/audits/reports/FY11> (NASA OIG) and <http://www.gao.gov> (GAO).

NASA Office of Inspector General

“Audit of NASA Grant Awarded to HudsonAlpha Institute for Biotechnology” (IG-12-09, August 3, 2012)

“Audit of NASA’s Grant Administration and Management” (IG-11-026, September 12, 2011)

Government Accountability Office

“Defense Contracting: DOD Initiative to Address Audit Backlog Shows Promise, but Additional Management Attention Needed to Close Aging Contracts” (GAO-13-131, December 18, 2012)

“Grants Management: Improving the Timeliness of Grant Closeouts by Federal Agencies and Other Grants Management Challenges” (GAO-12-704T, July 25, 2012)

“Grants Management: Action Needed to Improve the Timeliness of Grant Closeouts by Federal Agencies” (GAO-12-360, April 16, 2012)

“Federal Grants: Improvements Needed in Accountability and Oversight Processes”
(GAO-11-773T, June 23, 2011)

“Grants Management: Attention Needed to Address Undisbursed Balances in Expired Grant
Accounts” (GAO-08-432, August 29, 2008)

SAMPLING METHODOLOGY AND PROJECTION OF RESULTS

Sampling Methodology

For this audit, we used a statistical sampling method of simple random sampling with an 80 percent confidence level that involves the selection of items from a universe in such a way that each item in the universe has an equal probability of being selected as each sampling unit is drawn. An 80 percent confidence level allows us to review enough instruments in each category but keeps the sample size at a manageable level. We selected 416 items from universe of 28,490 with a value of \$53,208,820,518. We performed two substantive tests to determine whether: (1) instruments were closed in a timely manner and (2) funds were appropriately deobligated from these instruments. Based on our analysis, we determined that 304 files were not closed on time and 101 files had \$2,754,094 in funds that were not deobligated on time.

Projection of Results

Based on the results of our statistical analysis, we are 80 percent confident that between 1,136 and 1,960 of expired files and 1,365 and 3,609 of closed files in our universe had funds that were not deobligated on time, as shown in Table 5.²⁵ This resulted in a projected dollar amount of \$44,429,678 for expired instruments and \$17,008,427 for closed instruments, as shown in Table 6.

²⁵ We performed the statistical sampling, analysis and projections using WinStats Version 1.0.

Table 5. Projection of Instruments Late with Deobligation Dollars Based on 80 Percent Confidence Level

Late Closing Out	Population Size	Sample Size	Error Docs	Lower Limit	Upper Limit	Mean
Expired Purchase Orders	3,015	53	14	562	1,031	796
Expired Interagency Agreements	443	50	34	266	337	301
Expired Grants	655	49	8	64	150	107
Expired Contracts	1,250	51	14	244	442	343
Subtotal Expired Instruments	5,363	203	70	1,136	1,960	1,547
Closed Contract	852	50	3	15	87	51
Closed Interagency Agreements	1,420	53	8	126	303	214
Closed Grants	4,258	55	17	975	1,657	1,316
Closed Purchase Orders	16,597	55	3	249	1,562	905
Subtotal Closed Instruments	23,127	213	31	1,365	3,609	2,487
Stratified Summary Totals	28,490	416	101	2,500	5,569	4,034

Source: OIG analysis of NASA data.

Table 6. Projection of Dollars Deobligated Late Based on 80 Percent Confidence Level

Deobligations	Population Size	Sample Size	Error Amounts	Lower Limit	Upper Limit	Mean
Expired Purchase Orders	\$818,074,523	\$3,647,710	\$131,952	\$2,195,677	\$12,816,961	\$7,506,319
Expired Interagency Agreements	\$562,592,985	\$26,923,574	\$1,000,028	\$5,635,516	\$12,084,987	\$8,860,252
Expired Grants	\$729,007,356	\$34,487,768	\$104,853	\$419,366	\$2,383,851	\$1,401,609
Expired Contracts	\$42,764,182,821	\$723,183,772	\$1,087,789	\$8,630,594	\$44,692,403	\$26,661,499
Subtotal Expired Instruments	\$44,873,857,685	\$788,242,824	\$2,324,622	\$16,881,154	\$71,978,203	\$44,429,678
Closed Purchase Orders	\$2,248,681,975	\$3,292,292	\$6,940	\$126,841	\$4,061,505	\$2,094,173
Closed Interagency Agreements	\$1,407,017,264	\$52,669,886	\$174,901	\$386,952	\$8,985,105	\$4,686,029
Closed Grants	\$1,784,935,411	\$21,493,787	\$99,292	\$1,545,989	\$13,828,048	\$7,687,019
Closed Contracts	\$2,894,328,183	\$272,029,248	\$149,132	\$203,347	\$4,879,066	\$2,541,206
Subtotal Closed Instruments	\$8,334,962,833	\$349,485,213	\$430,265	\$2,263,129	\$31,753,725	\$17,008,427
Stratified Summary Totals	\$53,208,820,518	\$1,137,728,037	\$2,754,887	\$19,144,282	\$103,731,928	\$61,438,105

Source: OIG analysis of NASA data.

Based on the results of our statistical analysis, we are 80 percent confident that between 5,363 of expired files and between 9,956 and 13,959 of closed files in our universe were closed late. There is no associated dollar amount with this test, as shown in Table 7.

Table 7. Instruments Late Closing 80 Percent Confidence Level

Late Closing Out	Population Size	Sample Size	Error Docs	Lower Limit	Upper Limit	Mean
Expired Purchase Orders	3,015	53	53	3,015	3,015	3,015
Expired Interagency Agreements	443	50	50	443	443	443
Expired Grants	655	49	49	655	655	655
Expired Contracts	1,250	51	51	1,250	1,250	1,250
Subtotal Expired Instruments	5,363	203	203	5,363	5,363	5,363
Closed Purchase Orders	16,597	55	30	7,614	10,492	9,053
Closed Interagency Agreements	1,420	53	19	390	628	509
Closed Grants	4,258	55	25	1,568	2,303	1,935
Closed Contracts	852	50	27	385	536	460
Subtotal Closed Instruments	23,127	213	101	9,956	13,959	11,958
Stratified Summary Totals	28,490	416	304	15,319	19,322	17,321

Source: OIG analysis of NASA data.

Based on the results of our statistical analysis, we are 80 percent confident that between 655 of expired grants and between 1,568 and 2,303 of closed grants that were closed late in our sample had Payment Management System service fees, as shown in Table 8. This resulted in projected dollar amounts of \$72,878 for expired grants and \$96,523 for closed grants, as shown in Table 9.

Table 8. Projection of Instruments with Payment Management System Service Fees 80 Percent Confidence Level

Late Closing Out	Population Size	Sample Size	Error Docs	Lower Limit	Upper Limit	Mean
Expired Grants	655	49	49	655	655	655
Closed Grants	4258	55	25	1568	2303	1935
Stratified Summary Totals	4,913	104	74	2,223	2,958	2,590

Source: OIG analysis of NASA data.

Table 9. Projection of Payment Management System Service Fees 80 Percent Confidence Level

Late Closing Out	Population Size	Sample Size	Error Docs	Lower Limit	Upper Limit	Mean
Expired Grants	\$729,007,356	\$34,487,768	\$5,452	\$58,166	\$87,591	\$72,878
Closed Grants	\$1,784,935,411	\$21,489,787	\$1,247	\$60,475	\$132,571	\$96,523
Stratified Summary Totals	\$2,513,942,767	\$55,977,555	\$6,699	\$118,641	\$220,162	\$169,401

Source: OIG analysis of NASA data.

TABLE OF MONETARY FINDINGS

Funds Put to Better Use^a	Amount	Page
Expired Instruments with funds not deobligated timely	\$ 44,429,678	14
Payment Management System Fees	\$169,401	16
Total Monetary Findings	\$44,599,079	

Source: OIG analysis.

^a We identify “funds put to better use” as funds that could potentially be used more efficiently if NASA took actions to implement and complete the recommendation of ensuring instruments are closed timely and excess funds are deobligated timely.

MANAGEMENT COMMENTS

National Aeronautics and Space Administration
Headquarters
Washington, DC 20546-0001



FEB 10 2014

Reply to Attn of:

Office of Procurement

TO: Assistant Inspector General for Audits

FROM: Assistant Administrator for Procurement

SUBJECT: Response to OIG Draft Report, "NASA's Award Closeout Process"
(Assignment No. A-13-005-00)

The Office of Procurement (OP) appreciates the opportunity to review the Office of Inspector General (OIG) draft report entitled "NASA's Award Closeout Process" (Assignment No. A-13-005-00). We are pleased by the OIG findings, which acknowledged NASA's concerted effort to close expired awarded instruments and reduce the growth in backlog of awarded instruments awaiting closeout. Additionally, NASA concurs with the overall findings and recommendations in the OIG report. However, NASA has concerns with the OIG's conclusory statements with respect to timely de-obligation of funds, incurred cost, and final audits. Of specific concern are the OIG's conclusions, "... \$2.7 million in our sample of instruments that was not timely de-obligated" and "... NASA has increased risk that the costs associated with over \$43 million in awards may not be allowable and reasonable."

The timely de-obligation of \$2.7 million conclusory statement does not take into consideration that a significant amount of the remaining funds could not have been de-obligated from the audited contracts until: final incurred cost audits had been completed by the Defense Contract Audit Agency (DCAA); provisional indirect rate agreements had been finalized by the Office of Naval Research (ONR), and final invoices had been received from the contractors. In order to ensure compliance with the Antideficiency Act, most of the remaining funds could not have been de-obligated until those events occurred.

The OIG also identified two "closed (i.e., physically complete and at the records retention Center)" cost-type contracts that lacked evidence of a final audit. NASA acknowledges that there is potential risk in not conducting a final audit; however, NASA does not agree that the "increased risk" cited by the OIG pertains to the entire contract values of these two contracts. Since both contracts are cost reimbursable, there are several other measures that provide assurances related to the allowability and reasonableness of a contractor's incurred cost. For example, Federal Acquisition Regulation (FAR) 16.301-3(3) requires contractors with cost-type contracts to have adequate accounting systems, and FAR 42.702 requires contractors to use audited billing rates for indirect rates (e.g., overhead and G&A). Additionally, multiple parties within NASA review monthly NF533 reports and invoices throughout performance of the contract. Further, the DCAA performs pre-award audits,

costs analysis, and yearly incurred cost or desk reviews to determine allowableness and reasonableness of “all” costs incurred. Each of these review activities minimizes any potential risk to the Government.

For the contract valued at \$43 million, NASA Headquarters Office of Procurement was able to validate that yearly incurred cost audits were conducted. In addition, the contracting officer, in coordination with the DCAA, conducted a risk-assessment in which they determined it was appropriate to waive the final audit and close out the contract. Furthermore, the DCAA considered the contractor a low risk, based on the numerous desk reviews that DCAA conducted for incurred cost. Therefore, the total \$43 million contract value was not at risk of being considered unallowable or unreasonable.

In support of the draft report, NASA concurs with the four (4) recommendations the OIG outlined to strengthen NASA’s award closeout process. To complete the stated recommendations, NASA has identified a Headquarters representative who will work collaboratively with each Center to develop and implement an Agency standardized closeout process that includes best practices for all to utilize in an effort to continue reducing the Agency closeout backlog. NASA’s response to the OIG’s recommendations, including planned corrective actions and estimated completion dates, is as follows:

Recommendation 1: Standardize the award closeout process across all Centers to include developing and implementing a policy requiring Centers to maximize use of the closeout contractor and establishing a timeframe for procurement staff to turn instruments over to the contractor.

Management’s Response: NASA concurs with comments. NASA will review the current closeout process across all Centers to develop and implement a standardized policy, which establishes, where applicable, timeframes to transition files to the closeout contractor and includes maximizing utilization of any closeout contract executed by the Agency.

Estimated Completion Date: OP anticipates completion of this action within 180 days of the issuance of the final OIG Audit Report.

Recommendation 2: Engage Center procurement officials to ensure closeout contractor staff uses standardized procedures, as specified in the contract, across the Centers.

Management’s Response: NASA concurs with this recommendation.

Estimated Completion Date: OP anticipates completion of this action within 180 days of the issuance of the final OIG Audit Report.

Recommendation 3: As part of the process of standardizing the closeout process, implement as applicable the best practices identified in this report and any other best practices the Agency identifies.

Management’s Response: NASA concurs with this recommendation.

Estimated Completion Date: OP anticipates completion of this action within 180 days of the issuance of the final OIG Audit Report.

Recommendation 4: Review the backlog of instruments in need of closeout and transfer additional work to the closeout contractor as appropriate and consistent with the recommendations of this report.

Management's Response: NASA concurs with this recommendation.

Estimated Completion Date: OP anticipates completion of this action within 180 days of the issuance of the final OIG Audit Report.

We have reviewed the draft report for information that we believe should not be publicly released, and we have not identified any concerns regarding public release of this information by the OIG.

Again, thank you for the opportunity to review and comment on the subject draft report. If you have further questions or require additional information regarding this response, please contact LaVerne Randolph at 202-358-4801.


William P. McNally

REPORT DISTRIBUTION

National Aeronautics and Space Administration

Administrator
Associate Administrator
Chief of Staff
Chief Financial Officer
Deputy Chief Financial Officer
Assistant Administrator for Procurement
Acting Executive Director, NASA Shared Services Center
Supervisory Contract Specialist, NASA Shared Services Center
Director, Ames Research Center
Director, Dryden Flight Research Center
Director, Glenn Research Center
Director, Goddard Space Flight Center
Director, Johnson Space Center
Director, Kennedy Space Center
Director, Langley Research Center
Director, Marshall Space Flight Center
Director, Stennis Space Center
Director, Program Operations Division

Non-NASA Organizations and Individuals

Office of Management and Budget
 Deputy Associate Director, Energy and Science Division
 Branch Chief, Science and Space Programs Branch
Government Accountability Office
 Director, Office of Acquisition and Sourcing Management
 Managing Director, Office of Financial Management and Assurance

Congressional Committees and Subcommittees, Chairman and Ranking Member

Senate Committee on Appropriations
 Subcommittee on Commerce, Justice, Science, and Related Agencies
Senate Committee on Commerce, Science, and Transportation
 Subcommittee on Science and Space
Senate Committee on Homeland Security and Governmental Affairs
House Committee on Appropriations

Subcommittee on Commerce, Justice, Science, and Related Agencies
House Committee on Oversight and Government Reform
Subcommittee on Government Operations
House Committee on Science, Space, and Technology
Subcommittee on Oversight
Subcommittee on Space

Major Contributors to the Report:

Laura Nicolosi, Director, Mission Support Directorate

Tekla Colón, Project Manager

Myra Thompson, Team Leader

Amanda Parker, Management Analyst

Arnold Pettis, Statistician

Sarah McGrath, Editor

FEBRUARY 12, 2014

REPORT No. IG-14-014



OFFICE OF AUDITS

OFFICE OF INSPECTOR GENERAL

ADDITIONAL COPIES

Visit <http://oig.nasa.gov/audits/reports/FY14/> to obtain additional copies of this report, or contact the Assistant Inspector General for Audits at 202-358-1232.

COMMENTS ON THIS REPORT

In order to help us improve the quality of our products, if you wish to comment on the quality or usefulness of this report, please send your comments to Mr. Laurence Hawkins, Audit Operations and Quality Assurance Director, at Laurence.B.Hawkins@nasa.gov or call 202-358-1543.

SUGGESTIONS FOR FUTURE AUDITS

To suggest ideas for or to request future audits, contact the Assistant Inspector General for Audits. Ideas and requests can also be mailed to:

Assistant Inspector General for Audits
NASA Headquarters
Washington, DC 20546-0001

NASA HOTLINE

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