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AUDIT OF NASA'S ENGINEERING SERVICES CONTRACT AT KENNEDY SPACE CENTER

May 5, 2016

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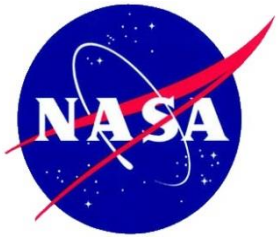

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RESULTS IN BRIEF

Audit of NASA's Engineering Services Contract at Kennedy Space Center

May 5, 2016 IG-16-017 (A-14-018-00)

WHY WE PERFORMED THIS AUDIT

Kennedy Space Center's (Kennedy) Engineering Contract with Vencore is valued at approximately $1.9 billion and provides the Center with a wide variety of services ranging from laboratory and shop maintenance to space flight engineering. This cost-reimbursement contract includes award-fee provisions and two components: a baseline and an indefinite-delivery, indefinite-quantity (IDIQ) component. The baseline covers administrative and managerial services, while the IDIQ allows NASA to issue task orders when the need for a particular service arises. Under the contract, NASA reimburses Vencore for allowable costs it incurs producing or delivering contracted goods or services, and the company may earn additional money under an award fee by meeting or exceeding predetermined performance criteria.

Our previous work has identified issues with NASA's use of award-fee contracts that raise concerns about the Agency's ability to motivate contractor performance and improve acquisition outcomes. Given these concerns and the size of the Engineering Contract, we initiated this audit to determine whether NASA is appropriately managing the Contract to accomplish mission goals in a timely and cost effective manner.

WHAT WE FOUND

The size and scope of Kennedy's Engineering Contract has made managing the Contract particularly challenging. The cost and tasks included in the baseline and task order components of the Contract are not clearly defined, managers overseeing the Contract may lack appropriate expertise, and cost allocations are not clear. In addition, several tasks Vencore is performing on a cost-reimbursable basis appear more suitable for a fixed-price arrangement.

Moreover, NASA has limited its ability to evaluate Vencore's performance by including generic milestones and deliverables in some task orders, as well as employing evaluation standards that do not align with the Federal Acquisition Regulation or the Contract's award-fee plan. As a result, NASA's evaluations of Vencore's performance do not consistently support the award-fee scores assigned or the resulting payments, and we question more than $450,000 in award-fee payments NASA made to Vencore between fiscal years 2011 and 2014.

WHAT WE RECOMMENDED

In order to more effectively manage the Engineering Contract, we made four recommendations to Kennedy's Director of Procurement, including that he examine the feasibility of utilizing smaller, more manageable contracts for engineering services including the use of a combined fixed-price/cost-plus contract, and develop Federal Acquisition Regulation-compliant evaluation standards to ensure future award fee scores are appropriately aligned with contractor performance.

In response to a draft of our report, the Agency concurred with our recommendations and proposed corrective actions. We find the actions responsive to recommendations 1 and 3 and therefore these recommendations are resolved and will be closed upon verification of the corrective actions. For recommendations 2 and 4, however, we find the Agency's proposed actions insufficient and consider the recommendations unresolved.

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Acronyms

CO	Contracting Officer
COR	Contracting Officer's Representative
E2E	End-to-End
FAR	Federal Acquisition Regulation
FY	Fiscal Year
GAO	Government Accountability Office
GSDO	Ground Systems Development and Operations Directorate
IDIQ	Indefinite-Delivery, Indefinite-Quantity
IPT	Integrated Product Team
IT	Information Technology
M&A	Management and Administrative
OCFO	Office of the Chief Financial Officer
OIG	Office of Inspector General
RFP	Request for Proposal
SLS	Space Launch System
SOFIA	Stratospheric Observatory for Infrared Astronomy
TOPES	Task Order Performance Evaluation System

INTRODUCTION

In fiscal year (FY) 2014, NASA's procurement obligations totaled $16 billion or 78.6 percent of the Agency's overall funding for the year. Of that amount, NASA spent $5.8 billion on service contracts pursuant to which contractors supplied time, effort, and expertise to perform specified tasks. At NASA's Kennedy Space Center (Kennedy), the largest contract is a services contract. Valued at approximately $1.9 billion, the Engineering Services Contract (Engineering Contract or Contract) is a cost-reimbursement contract with award-fee provisions that provides the Center with a range of services from laboratory and shop maintenance to space flight engineering. In a cost-reimbursement contract, NASA reimburses contractors for allowable costs they incur producing or delivering the contracted goods or services. Cost-type contracts pose a financial risk to the procuring agency because they do not promise delivery of a good or service at a set price. An award fee is a pool of money a contractor may earn in whole or in part by meeting or exceeding predetermined performance criteria.

Our office has identified issues with NASA's use of award-fee contracts, including vague or nonexistent evaluation factors and lack of controls for monitoring the accuracy of provisional and interim payments that raise concerns about the Agency's ability to motivate contractor performance and improve acquisition outcomes when using this type of contract vehicle.[1] Likewise, the Government Accountability Office (GAO) has consistently reported on inappropriate and ineffective use of contract award fees by NASA and other Federal agencies, including failing to compile data, conduct analyses, or develop performance measures to evaluate the effectiveness of their award-fee contracts.[2] Given these concerns and the size of the Engineering Contract, we initiated this audit to determine whether NASA is appropriately managing the Contract to accomplish mission goals in a timely and cost effective manner.

Background

NASA awarded the Engineering Contract to QinetiQ North America in 2010. In May 2014, QinetiQ's business units were sold to The SI Organization, Inc., which later changed its name to Vencore Services and Solutions, Inc. (Vencore). For ease of reference, we will refer to the contractor as Vencore in this report.

NASA released the solicitation for the Engineering Contract during the period the Agency was transitioning from the Space Shuttle to the Constellation Program.[3] At the time, the Constellation Program was in its early phase, and officials predicted that many Program requirements and milestones would change over the course of the Contract term. Accordingly, Agency procurement officials chose a cost-reimbursement rather than a fixed-price contract vehicle to allow for flexibility over a range of contract support activities.

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[1] NASA OIG, "NASA's Use of Award-fee Contracts" (IG-14-003, November 19, 2013).

[2] GAO, "Federal Contracting: Guidance on Award Fees Has Led to Better Practices but is Not Consistently Applied" (GAO-09-630, May 2009).

[3] The Constellation Program was intended to replace the retiring Space Shuttles with new capsule-based vehicles designed to launch on Ares I rockets and a larger heavy-lift rocket – Ares V – capable of launching lunar landers and rocket stages needed for Moon-bound missions.

NASA had not yet awarded the Contract when the Constellation Program was cancelled in February 2010 in favor of the Agency's current human space flight efforts – the Space Launch System (SLS) and Orion Multi-Purpose Crew Vehicle (Orion). Accordingly, the Engineering Contract has supported SLS and Orion Program activities at the Center, as well as a broad array of other NASA programs and projects.

The Engineering Contract has a 5-year base period with three, 1-year option periods and two components: a baseline and an indefinite-delivery, indefinite-quantity (IDIQ) mechanism. The baseline component includes managerial and administrative activities, such as contract management, safety and mission assurance, information technology (IT) services, and laboratory and shop maintenance.[4] The IDIQ portion allows NASA to issue task orders when the need for a particular service arises. The Agency has used the IDIQ mechanism to procure such services as engineering development for ground systems and equipment, space flight system engineering, technology development, and software development and web design. There is some overlap between the baseline and IDIQ components. For example, Safety and Mission Assurance is a baseline component task; however, there is also an IDIQ task order related to Safety, Health, Environmental, and Mission Assurance.

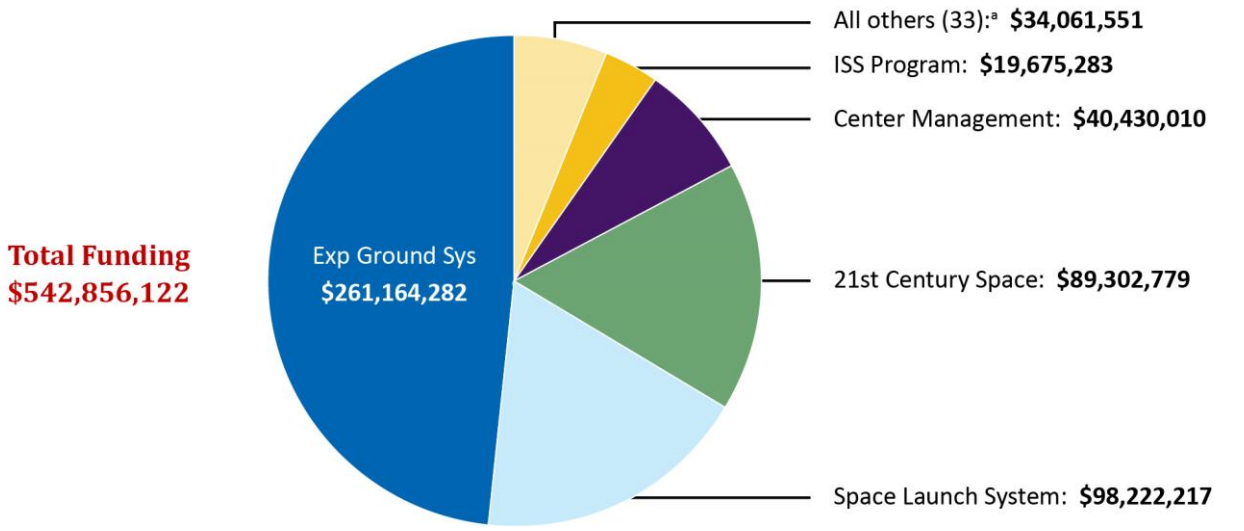
As of October 2015, the Engineering Contract was valued at $798 million. Of this amount, $729 million, or 91 percent, was associated with 264 IDIQ task orders funded by almost 40 different NASA programs and organizations. These task orders range in value from $1,400 to $47.9 million and cover such varied services as replacing the roller bearings on the Crawler Transport Vehicles to managing Kennedy's Animal Care Program.[5] Four programs or organizations – Exploration Ground Systems, the SLS Program, 21st Century Space, and Center Management Operations – provide the majority of the funding for the Contract.[6] Figure 1 illustrates contract funding by NASA program.

[4] Kennedy has a variety of laboratories and shops, ranging from the Launch Equipment Test Facility Shop, which provides ground support equipment development, prototype development, and rapid response fabrication support, to the Launch Control System Laboratory, which provides testing, launch site processing, and launch support for space exploration vehicles and their associated ground support systems.

[5] The Crawler-Transporters move rockets and spacecraft to Kennedy launch pads. NASA has been using the vehicles for this purpose for more than 40 years.

[6] Exploration Ground Systems is developing the necessary ground systems and upgrading infrastructure and facilities for the next-generation of spacecraft. 21st Century Space is an enhanced launch complex being developed to serve launches of different vehicle types. Center Management and Operations funding supports the assets, staff, and facilities at the Center.

Figure 1: Kennedy Engineering Contract Funding by Program FY 2011 – 2014



Source: Office of Inspector General (OIG) analysis of NASA obligations.

Note: ISS Program refers to "International Space Station Program"

[a] All others include: Aeronautics Research and Career Development; Advanced Exploration Systems; Agency Information Technology Services; Agency Management; Commercial Cargo; Commercial Crew; Crosscutting Spacecraft Technology Division; Environmental Compliance and Restoration; Environmental Compliance; Exploration Technology Development Program; Exploration Construction of Facilities; Exploration Technology Development; Human Research; Innovative Partnerships; Institutional Construction of Facilities; Launch Services; Living with a Star; Lunar Quest Program; Mars Exploration; Orion Program; Partnerships, Innovation and Commercial Space and the Strategic Integration Offices; Planetary Science Research; Reimbursable Cross Agency Support Program; Reimbursable Space Operations Mission Directorate Institutional; Reimbursable Space Operations Mission Directorate Programmatic; Rocket Propulsion Testing; Safety Mission Success; Small Business Innovative Research and Small Business Technology Transfer; Space Communications and Navigation; Space Operations Construction of Facilities; Space Shuttle Program; and Space Technology.

Although many programs and offices utilize services provided by the Engineering Contract, Kennedy's Procurement and Engineering and Technology Directorates and the Center's Office of the Chief Financial Officer (OCFO) are primarily responsible for administration of the Contract. The Contracting Officer (CO), located in Kennedy's Procurement Directorate, is responsible for administering and ensuring compliance with the terms of the Contract and for issuing task orders. The Contracting Officer's Representative (COR), a member of the Engineering and Technology Directorate, provides overall technical direction. In addition, task order managers are responsible for managing and evaluating Vencore's performance on each task. These managers generally work for the Engineering Directorate or other Center organizations for which Vencore is performing the specified task. Finally, OCFO program analysts track funding sources and balances for the various task orders and provide this information to the CO, COR, and task order managers. Since 2011, the Engineering Contract has been administered by two different lead COs, two support COs, and two different CORs. As of April 2015, there were 50 task order managers, some of whom were responsible for multiple task orders.

At the end of each annual award-fee period, NASA assigns Vencore a score based on the contractor's performance against specified criteria, which is used to calculate Vencore's award fee.[7] With the exception of the first two award-fee periods, the evaluation period runs from October 1 through September 30. To date, the Agency has completed five award-fee evaluation periods for the Engineering Contract. Table 1 details the award fee available and earned in each of the five periods.

Table 1: Award Fees Available and Earned

Period	Amount Available	Amount Earned	Percentage Awarded
Award-fee 1	$4,525,688	$4,118,376	91%
Award-fee 2	$3,371,776	$2,933,445	87%
Award-fee 3	$7,444,566	$6,849,000	92%
Award-fee 4	$7,679,730	$7,295,743	95%
Award-fee 5	$7,664,940	$7,205,044	94%
Total	**$30,686,700**	**$28,401,608**	**93%**

Source: OIG analysis of data from Engineering Services Contract NNK11EA08C.

The Award-fee Evaluation Plan requires the COR to evaluate Vencore on both the baseline and IDIQ components of the Contract and consider input from the CO, task order managers, and OCFO program analysts. Task order managers submit a quarterly performance survey, comprised of six questions with the opportunity to include additional descriptive information, through the Task Order Performance Evaluation System (TOPES). The COR then compiles the results of these surveys and includes them with written input from the CO and OCFO program analysts into the award-fee recommendations. These recommendations are then presented to the Award-Fee Board and the Fee Determination Official. The Board reviews the recommendations made by the COR and assists the Fee Determination Official in making the final award-fee determination. As shown in Table 2, NASA evaluates Vencore's performance on five factors to determine an overall award-fee score: Safety, Technical Performance, Schedule Performance, Small Business Subcontracting, and Cost Control. Each factor is assigned a score between 0 and 100 and weighted between 10 and 35 percent of the total score.

[7] The first award-fee period ran from March 1, 2011, to February 29, 2012, and the second from March 1 to September 30, 2012. NASA also evaluates Vencore at the mid-point of the period, but only the final score is used to determine Vencore's award fee.

Table 2: Award-fee Evaluation Factors and Weights

Evaluation Factor	Weight
Safety	15%
Technical Performance	35%
Schedule Performance	15%
Small Business Subcontracting	10%
Cost Control	25%

Source: Engineering Services Contract NNK11EA08C, Attachment J-03

Federal Acquisition Regulation

The Federal Acquisition Regulation (FAR) outlines the contract vehicles available to Federal agencies for acquiring goods and services, including fixed-price and cost-reimbursement contracts. In fixed-price contracts, the contractor agrees to deliver a product or service at a set price. Agencies generally use fixed-price contracts when costs and risks can be clearly defined. In contrast, in cost-reimbursement contracts agencies agree to pay all allowable costs the contractor incurs in delivering the service or product up to a predetermined ceiling the contractor may not exceed (except at its own risk) without the CO's approval. Cost-reimbursement contracts involve increased risk for the Government and are generally more appropriate when performance uncertainties or the likelihood of changes make it difficult to accurately estimate costs in advance. COs are required to document in a written acquisition plan the rationale for the contract type their agencies select.

In award-fee contracts a predetermined amount of money is set aside for the contractor to earn based on performance. Government agencies offer several rationales for using award-fee contracts. For example, tying monetary incentives to particularly important tasks or goals can serve to focus contractors' attention on those issues, and award-fee contracts provide flexibility to adjust criteria over time. In addition, because periodic evaluations provide an opportunity to address performance issues, award-fee contracts may enhance communication between the Government and contractors. At NASA, the Assistant Administrator for Procurement must approve the use of award-fee contracts.

To assist agencies in evaluating contractor performance for purposes of award fees, the FAR provides adjectival ratings and definitions for numerical scores on a scale of 0 to 100. Table 3 identifies the adjectival ratings, percentage available to be earned, and a description of award-fee ratings.

Table 3: FAR Adjectival Rating, Percentage Available to be Earned, and Description of Award-fee Ratings

Adjectival Rating	Amount Available To Be Earned	Description
Excellent	91–100%	Contractor has *exceeded almost all* of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Very Good	76–90%	Contractor has *exceeded many* of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Good	51–75%	Contractor has *exceeded some* of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Satisfactory	50%	Contractor has *met* overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.
Unsatisfactory	less than 50%	Contractor has *failed* to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. **No award-fee shall be paid for an unsatisfactory rating.**

Source: FAR 16.401(e)(3)(iv), "Award-fee Plan" and NASA FAR Supplement 1816.405-275(b), "Award-fee Evaluation Rating."

NASA's History with Award-fee Contracts

NASA has struggled over the years with properly executing award-fee contracts. Since 2009, we have issued several audit reports outlining concerns with the Agency's use of award-fee contracts. In a November 2013 report, we identified that COs incorrectly calculated provisional and interim award-fee payments, lacked controls for monitoring the accuracy of provisional and interim payment calculations, and employed questionable evaluation and acquisition practices that contributed to ineffective use of award-fee contracts.[8] In a 2009 report examining Kennedy's prior engineering services contract, we found that the Agency's performance evaluations provided little evidence that the approximately $2.2 million in award fees for FY 2007 were fully justified or were an accurate reflection of the contractor's performance.[9] In a third report, we linked the failure by managers of NASA's Stratospheric

[8] NASA OIG, "NASA's Use of Award-fee Contracts" (IG-14-003, November 19, 2013).

[9] NASA OIG, "NASA's Evaluation and Oversight of University-Affiliated Spaceport Technology Development Contract Needed Improvement" (IG-09-012, March 19, 2009).

Observatory for Infrared Astronomy Program to include cost control as a performance evaluation factor in two cost-plus-award-fee contracts to the award of $233,600 in fees that did not meet the Agency's own requirements.[10] Finally, we found NASA evaluators provided incomplete assessments or assigned inappropriate ratings when evaluating the California Institute of Technology's operation of the Jet Propulsion Laboratory under a $7.5 billion award-fee contract.[11] We also identified that NASA had not proportionately weighted evaluation criteria by a project's overall importance to the Agency or by cost, which allowed exceptional performance on smaller projects to mask less impressive performance on larger, more important projects.

[10] NASA OIG, "Final Memorandum on the Audit of the Stratospheric Observatory for Infrared Astronomy (SOFIA) Program Management Effectiveness" (IG-09-013, March 27, 2009). SOFIA is an airborne observatory fitted with a telescope mounted onboard a Boeing 747 that studies the universe, including the formation of massive stars and the environment surrounding stars that leads to the formation of planets.

[11] NASA OIG, "NASA Should Reconsider the Award Evaluation Process and Contract Type for the Operation of the Jet Propulsion Laboratory (Redacted)" (IG-09-022-R, September 25, 2009).

COMPLEXITY AND SCOPE OF ENGINEERING CONTRACT MAKES MANAGING AND EVALUATING CONTRACTOR PERFORMANCE PARTICULARLY CHALLENGING

The complex and complicated structure of Kennedy's Engineering Contract, its expansive scope, and overlap with other Center contracts have made managing the $1.9 billion contract particularly challenging. Adding to these challenges, the tasks intended to be included in the baseline component are not clearly defined or adequately funded, some managers with responsibility for overseeing the Contract lack appropriate expertise, and Vencore's method for assigning costs to some Contract activities is unclear. In addition, by including generic milestones and deliverables, NASA has limited its ability to evaluate contractor performance and decreased contractor accountability. Finally, we identified several tasks that Vencore is performing on a cost-reimbursable basis that appear suitable for a fixed-price arrangement.

Contract Structure and Expansive Scope

The Engineering Contract differs from the Center's previous engineering services contract in two important respects. First, the previous contract had no baseline component and the Center utilized task orders for all services, including management and administrative costs. In contrast, the Engineering Contract has a baseline component that covers these administrative-type costs and some reoccurring services. Second, with the predecessor contract Kennedy issued task orders to specify "what" service NASA needed and relied on the contractor to determine "how" it would provide that service. Specifically, NASA issued each task order request as a Request for Proposal (RFP) and the contractor submitted its bid, requiring task order managers to review the bid, return it for any necessary revisions, and perform independent Government estimates and technical evaluations. Under the Engineering Contract, NASA and Vencore personnel may team up to develop and plan task orders, giving the contractor the opportunity to provide input regarding the best approach to meeting the Agency's needs before submitting a proposal. NASA explained this change as part of an overall Agency strategy to "partner" with contractors by pairing Agency and contractor employees when task orders are developed with the intent of producing higher quality products and services at a better price.

In theory, partnering should have shortened the time necessary to formulate and create task orders by reducing the need for Agency review of contractor proposals and various drafts before reaching agreement on a final task order. However, we found that this has not been the experience at Kennedy and that there has been no appreciable difference in the amount of time it takes to finalize task orders. We also found that when drafting the RFP for the Engineering Contract, the Source Evaluation Board underestimated the level of support the contractor would provide on the task order component.[12] For

[12] The Source Evaluation Board is a group of civil servants representing functional and technical disciplines charged with evaluating contractor proposals and developing summary facts and findings. The Board assists the Source Selection Authority by providing expert analyses of the proposals in relation to the evaluation factors contained in the solicitation.

example, the RFP estimated 2.9 million total labor hours for FYs 2011 through 2014 for support tasks such as engineering and technology development. However, actual hours for the period were 4.4 million – a difference of 1.5 million hours or the equivalent of over 180 full-time employees per year.

The expansive scope of the Engineering Contract has also led to an increase in the Government resources required to perform contract oversight. Three different Center organizations – the Procurement Directorate, the Engineering and Technology Directorate, and the OCFO – are involved in the administration of the Contract, and the CO, the COR, and the assigned program analysts all work in different organizations. Each organization has multiple layers of supervision with input into management and evaluation decisions. In addition, the organizations and programs for which specific tasks are being performed are also involved in contract management and evaluation.

We found that having so many different organizations involved in contract oversight has led to cost and performance issues as well as management struggles and "turf wars" between organizations and directorates. For example, the Ground Systems Development and Operations Directorate (GSDO) relies on the Engineering Directorate to manage task orders because GSDO does not have the personnel to do so itself. Although the Engineering Directorate is heavily involved in the administration of GSDO task orders, GSDO is driving the majority of the associated requirements. As one GSDO program manager pointed out, this situation is not ideal because it leaves GSDO with limited control over contractor employees working on its behalf.

In an attempt to simplify the task order process, the contracting team and programs that use the Engineering Contract have tried to break some larger task orders into smaller, more manageable pieces. For example, GSDO attempted to consolidate task orders in the first year of the Contract, but soon abandoned this strategy and began breaking task orders apart again in order to make them more manageable. In another example, GSDO closed the task order associated with the End-to-End Command and Control Development Project due to issues with its broad scope and replaced it with three separate task orders to better align tasks to the organizations and projects being supported.[13]

The expansive scope of the Engineering Contract has also created workload and duplication conflicts with other large contracts at Kennedy. According to the Engineering Contract COR, there has been confusion over the scope of the Contract in relation to the Institutional Services Contract and the Test and Operations Support Contract.[14] These three contracts overlap in areas such as construction and sustainment activities. For example, the Institutional Services Contract includes design and construction support for facilities, systems, equipment, and utilities – tasks similar to those in the Engineering Contract. Likewise, the Test and Operations Support Contract provides for sustainment services related

[13] The End-to-End (E2E) Element Integrated Team (EIT) is part of the GSDO Command, Control, Communication, and Range (C3R) Integrated Product Team (IPT). The Spaceport Command and Control System (SCCS) is a system that will help fulfill the requirements of the E2E EIT. The SCCS software at Kennedy provides the end-to-end command and control infrastructure for launch and off-line processing for the next generation of space flight and consists of the Launch Control Subsystem and the Kennedy Ground Control Subsystem. NASA intends for SCCS software to support the launch of the SLS rocket and Orion spacecraft and any commercial entities that may launch from Kennedy in the future.

[14] The Institutional Services Contract provides design and construction support to ensure that NASA facilities, systems, equipment, and utilities meet NASA's existing and future mission needs. The Test and Operations Support Contract provides ground processing for launch vehicles, spacecraft, and payloads in support of emerging programs, commercial entities, and other government agencies. Services include advanced planning and studies; development of ground systems; operational support for the design and development of flight hardware and ground systems; spacecraft, payload and launch vehicle servicing and processing; ground systems services; and logistics.

to ground processing for launch vehicles, spacecraft, and payloads, comparable to tasks described in the Engineering Contract. Therefore, when Kennedy receives requests for construction or sustainment work from programs and offices, the CORs from each contract must evaluate and determine which contractor should be performing the work.

In these cases, construction requests have to be compared with the Institutional Services Contract and sustainment operations requests compared to the Test and Operations Support Contract. This has introduced inefficiencies to an already complex process and resulted in Vencore performing work that should have been done under another contract, leaving those contractor employees without sufficient work. For example, a GSDO project manager responsible for the development of ground support systems told us that upon completion, the systems should have been turned over to the Test and Operations Support contractor for operations and maintenance. However, the Engineering and Technology Directorate and Vencore were reluctant to turn over control of the systems and, as a result, Vencore's task order incurred additional costs. The GSDO manager stated that after numerous meetings, the Engineering Directorate and Vencore finally turned over maintenance of the systems to the other contractor but Vencore continues to perform operational tasks.

Duplicative Baseline and Task Order Components

The Engineering Contract includes a task order component that provides for an indefinite quantity of services over a fixed period. When NASA made the transition from a solely task order-based contract to the Engineering Contract, the Agency did not adequately fund the Contract's baseline component. As a result, NASA is using task orders to procure services that should have been covered in the baseline. For example, the previous COR told us the original intent was to include operations and maintenance of all Kennedy laboratories and shops in the baseline component so they were all under one contract. However, as funding discussions with the Programs were held, guaranteed funding for the Contract's baseline component could not be established and it was determined that the baseline would cover only maintenance services and that operational services would be procured via task orders.

The Engineering Contract's previous CO told us that early in performance of the Contract, Kennedy's Procurement Directorate received task orders that appeared to augment baseline component tasks. To deter this, the Directorate began requiring additional information in task order requests. However, after the COR objected to this requirement, the Procurement Directorate rescinded the requirement and agreed to rely on the COR's assessment that a task order was the appropriate vehicle for procuring the required service. The understanding of the contracting team in place at the time of our audit is that the baseline covers maintenance and administration while task orders are for operational functions. However, the team and a baseline component manager confirmed that the baseline component does not have sufficient money to support some administrative tasks, such as configuration and data management, and therefore task orders have been used to procure those tasks.

Safety and Mission Assurance is also a baseline component task. However, we identified a Safety, Health, Environmental, and Mission Assurance task order with costs in excess of $11 million. The manager for this task order explained that NASA requires a safety plan for every task order and that safety personnel must review those plans and implement associated processes; however, these costs were not accounted for in the baseline component. Therefore, GSDO funded a separate task order to pay for these services. According to the Chief of the Program Development and Operations Division within the Safety and Mission Assurance Directorate, the safety and mission assurance requirements included in the baseline component should be included in the contractor's overhead rate and the

additional costs for safety tasks should be charged to each task order or broken down by sub-system, and not included in a single, overall safety task order. In his opinion, the contractor is making tasks more labor intensive than necessary rather than finding efficiencies in performing tasks.

Inexperienced Managers

Since inception, the Engineering Contract has had 6 managers for the baseline component and 94 task order managers. The number of task order managers fluctuates with the workload and the associated opening and closing of task orders. As of August 2015, the Contract had 6 baseline managers and 50 task order managers. Although task order managers perform most of the day-to-day functions related to the management and evaluation of the contractor, the CO has not appointed them in writing and most lack formal training related to their duties. In addition, each of the baseline and task order managers obtain input on contractor performance from other NASA civil servants associated with the service at issue, further increasing the number of civil servants involved in contract management.

The Contract states that the COR may elect to have one or more "Technical Management Representatives" for the purposes of contract monitoring of specified work areas and that the representatives will be appointed in writing by the CO and their authority limited to that specified in the CO's Letter of Appointment.[15] The baseline and task order managers are effectively serving the function of technical managers and, therefore, we believe the CO should have input in appointing them and do so in writing as required by the Contract.

Moreover, while the task order managers have responsibility for managing and evaluating the contractor, many are not adequately trained and some do not appear interested in the job. Baseline and task order managers receive training twice per year and, generally speaking, the contracting team believes the training is adequate. Although the training is mandatory, the contracting team told us that some managers do not attend. Further, contracting officials noted that few task order managers have project management skills, such as budgeting or forecasting costs. We spoke with a program manager funding a $20 million task order who indicated the task order manager had very little overall control and, in several instances, relied heavily on NASA lead design engineers and Engineering Contract system leads for assistance in accomplishing tasks.

Vencore has expressed concerns regarding the level of experience of some task order managers and at the pace with which these managers are replaced. The contractor has also indicated that new managers often do not receive adequate training and that even veteran managers do not use the Task Order Management System frequently enough to stay familiar with the process or the rules. To help address these issues, Vencore created a guide for its employees designed to help NASA task order managers create and revise task order requests. The guide suggests that insufficiently trained or inexperienced task order managers can impact the efficiency of the task order process and cause an increase in labor and costs due to errors in their work.

[15] Engineering Services Contract, Section G.20 titled "Designation of Contracting Officer's Technical Management Representatives (TMRs)."

Cost Allocation Pools Confusing and Inconsistently Applied

Vencore is utilizing different cost allocation pools to account for management and administrative costs. The first pool is for management costs related to baseline and task order activities and the second is for labor costs related to management of the task orders. We found the allocation pools confusing, time consuming to manage, and inconsistently applied.

Management and Administrative Costs Confusing and Time Consuming to Manage

Vencore pools together direct costs associated with contract management, safety and mission assurance, and information technology and data management activities as Management and Administrative (M&A) costs.[16] Although these pooled costs are baseline requirements, the Contract requires they be allocated across all components of the Contract, including task orders. The M&A concept was intended to provide support on an as-needed basis, prevent a "standing army" of contract management personnel, minimize associated management and administrative costs, and provide a standardized pricing methodology for task orders.

However, because the description and handling of M&A costs in the original Contract was confusing, NASA issued two Contract modifications that moved a portion of the M&A costs and fees from the baseline component to the task order component so the Agency could track M&A costs for funding and disbursing purposes. Further, the application of M&A costs across the entire Contract helps the Agency ensure the NASA program paying for a particular effort will also pay the associated M&A costs. Although moving M&A costs across the baseline and task order components facilitates payment of the associated effort by individual programs, the contracting team's analysis of total M&A costs and rates must be performed as if all M&A costs remained entirely in the baseline. As a result, while M&A costs are paid from the baseline component of the Contract, 80 percent of these costs are incurred under task orders and consolidated back into the baseline for evaluation and to determine whether an overrun exists. The contracting team indicated that this process is very confusing, time consuming, burdensome, and increases opportunities for errors. In fact, disputes have arisen about how NASA was calculating M&A costs and determining overruns. In 2013, Vencore submitted two M&A cost and fee overrun proposals and a claim for underpayment of M&A costs in a prior period. NASA paid Vencore $829,759 based on the proposals and as consideration for withdrawal of the underpayment claim.

Task Order Execution Costs Not Always Beneficial or Consistently Applied

Vencore is allocating its direct costs associated with task order management, referred to as task order execution costs, to all task orders regardless of whether there is a beneficial or causal relationship between the skills needed and provided for that task order. Task order execution costs are management and administrative costs directly related to a task order not covered by M&A and include

[16] Direct costs are costs specifically identified with completing the contracted work, such as the cost of associated labor, materials, and supplies. In contrast, indirect costs are costs the contractor bears that are not directly attributable to a specific project or function, such as the cost of administrative staff, employee health benefits, and payroll taxes.

direct labor and benefit costs for contractor and subcontractor employees. Some of the labor categories included in this allocation are group managers for various disciplines, project management, planners and schedulers, administrative assistants, and shipping and receiving staff. Vencore representatives explained that allocating task order execution costs in this manner reduces the time and effort required for them to estimate and account for these costs.

However, the NASA contracting team expressed concern that the rate Vencore charges for task order execution costs is composed of a skill mix and charged to task orders whether or not employees with that skill work on a particular task order. In other words, the cost is similar to a tax added to every task order to account for the contractor's administrative costs. The contracting team stated they are not sure that all task orders should bear this cost because not every task order receives a benefit. For example, an IT-related task order may be charged for services provided by an Engineering Services Group Manager. We were also unable to determine a cause-benefit relationship between the costs Vencore includes in the task order allocation rate and the task orders assessed. For example, we noted costs associated with a Fluids and Propellants Systems Manager and an Electrical and Avionics Manager allocated to a task order supporting Kennedy's Animal Care Program. In addition, Vencore sometimes adds additional technical management costs beyond the task order allocation rate. In such cases, if Vencore believes it will need additional time from a technical manager, they will add this as a direct labor cost. In sum, because of the way Vencore is allocating these costs, NASA programs and projects are paying for charges related to services they are not actually receiving.

We calculated that NASA paid approximately $6.2 million in task order execution costs in award-fee periods 2 through 4.[17] We performed an analysis of these charges by selecting four non-consecutive months during this period and determined the allocation of task order execution costs was not consistently applied in 3 out of the 4 months. Specifically, we found instances where task orders were charged an allocation rate of $0.06 per direct labor hour while others were charged $3.97 per hour. We also found instances in which the allocation of task order execution costs was applied despite an absence of direct labor hours associated with the task order. Conversely, we found other task orders that were charged direct labor hours but for which the allocation was not applied. Although we requested information on the nature of these differences on multiple occasions, the explanations the contracting team provided were not sufficient to account for the anomalies. As a result, we question the contractor's cost methodology and application of task order execution costs.

Task Orders May Not Contain Milestones or Deliverables

At the time of our audit, 68 mission support task orders were associated with the Engineering Contract. These task orders provide NASA with an on-hand contractor workforce to support a variety of programs and projects. The programs and projects associated with this type of task order are typically led by a NASA civil servant with Vencore employees providing support for a specific period of time. According to the Engineering Contract COR, mission support task orders often have unclear technical requirements and schedules.

[17] We could not segregate these costs for award-fee period 1 because for that period Vencore charged task order execution costs directly to the task order with which they were associated. Vencore changed its methodology in award-fee periods 2 through 4. NASA did not provide input on the change as they deemed it an internal management decision for Vencore.

For example, during the first 3 years of Contract performance, mission support task orders typically contained support orientated milestones or deliverables, such as "hardware development support" and "support for program management," with specific start and end dates. In an effort to lessen the contract management burden, the COR issued guidance in early 2014 stating that task orders with no specific milestones or deliverables should include an explicit statement to that effect. A few months later, the COR altered the language to indicate that contractor personnel would provide support for tasks with generic milestones or in instances in which milestones could not be reasonably identified. In August 2015, the COR revised the statement to make clear the contractor was not obligated to meet milestones or deliverables not specifically identified in the task order. The language currently states that NASA, not the contractor, is responsible for milestones and deliverables not specifically identified in the task order.

In our view, the statement is not sufficient to motivate contractor performance. NASA civil servants are responsible for accomplishing the assigned tasks, leaving Vencore with minimal responsibility for project success and the Agency with little criteria for evaluating contractor performance. For example, Vencore management stated that because NASA is managing the activities and Vencore employees providing support as directed, generic milestones are not included, tracked, or measured in the contractor's internal system. We found that in six of the eight high-value task orders we reviewed, valued at a combined total of $216.6 million, support-orientated milestones were removed and replaced with these generic statements.

The absence of more specific milestones and deliverables in mission support task orders means that NASA's review of contractor performance is subjective. In our audit of the previous engineering services contract, we identified 113 of 191 task orders that did not include milestones and, from those results, statistically selected a sample of 51 task orders for further review. Of those 51 task orders, we found 46 (90 percent) did not include specific dates for contract deliverables. We recommended the CO require the COR and task order manager to develop specific performance evaluation criteria tied to contract deliverables, milestones, and desired outcomes for any new task order issued during the remaining option years of the contract. Kennedy's Procurement Director concurred with this recommendation.

Consideration of Combined Fixed-Price/Cost-Type Contract

In 2009, the Office of Management and Budget issued a memorandum identifying cost reimbursement contracts as a high-risk area for improvement. Similarly, because 80 percent of NASA's budget is expended through contracts, in 2013 the NASA Administrator charged the Agency's procurement workforce with reducing procurement transaction costs through the use of efficient contracting practices. The Administrator highlighted inefficiencies such as the use of single-award task order contracts that require multiple task order solicitations and proposals where a core statement of work could instead be used and the use of award-fee provisions that require significant administration and do not effectively provide incentives for contractors to be efficient. As part of this effort, NASA made changes to its FAR Supplement, including requiring advance approval from the Assistant Administrator

for Procurement for the use of award-fee incentive contracts.[18] To gain this approval, a Determination and Findings report must be prepared detailing the other types of contracts considered and the reasons an award-fee incentive is the appropriate choice.

For the Engineering Contract, Kennedy's Procurement Office submitted a Determination and Findings report to the Headquarters Office of Procurement in August 2009. In the report, Kennedy officials stated they had considered but did not recommend firm-fixed-price, cost-plus-incentive-fee, and cost-plus-fixed-fee contract vehicles. They concluded that the dollar value, proposed performance period, and the criticality of the services to be procured warranted the additional administrative effort necessary to manage and administer a cost-plus-award-fee contract. Kennedy officials detailed the expected benefits resulting from using an award-fee contract as greater insight into the contractor's operations, tighter cost controls, enhanced technical capability, and the ability to reward the contractor for achieving or surpassing small business subcontracting goals. The Assistant Administrator for Procurement authorized use of an award-fee contract in November 2009.

The FAR states the use of a firm-fixed-price contract is suitable when the contracting officer can establish fair and reasonable prices for the procured goods or services at the outset. Fixed-price contracts place maximum risk and full responsibility for all costs and resulting profit or loss on the contractor, provide maximum incentive for the contractor to control costs and perform effectively, and lessen the administrative burden on the contracting parties. However, if a reasonable basis for firm pricing does not exist, other contract types should be considered and negotiations should be directed toward selecting a contract type, or combination of types, that will appropriately tie profit to contractor performance. While fixed-price contracts would not be appropriate for all of the services that the Engineering Contract provides, we believe Kennedy officials possess sufficient knowledge based on historical contract and operational experience to appropriately define requirements and estimate costs for some tasks.

The baseline component of the Contract includes routine tasks that are considered "steady state," such as IT and data management activities. In addition, several of the baseline managers we interviewed agreed that the work they oversee could be structured using some type of fixed-priced vehicle. One manager stated that a fixed-price arrangement could work when using a defined number of support personnel. For example, while neither NASA nor Vencore can predict when a software update or a patch will be necessary, they can predict the number of staff required to perform the work and pay for this support on a fixed-price basis. Another manager stated that several tasks included in the baseline – for example, IT support for engineering software – are sufficiently routine that some type of fixed-price arrangement could be developed. Because many tasks have been performed repeatedly since 2006, we believe NASA and Vencore have significant historical cost data to develop realistic and practical cost estimates.

The IDIQ component of the Contract currently includes 103 active task orders, 35 of which NASA has identified as completion or project-type task orders. According to the Agency's definition, this type of task order has clear and well defined technical requirements, schedule, and costs, with the contractor leading the project and typically working independently with little or no interdependencies from the Government. With this type of task order, the Government trades reduced risk in meeting requirements for little to no flexibility, which is very similar to the information required for a fixed-price contract vehicle. For example, the program manager overseeing contractor support for launch pad electrical

[18] NASA FAR Supplement Part 1816.405-270, "CPAF Contracts."

ground support equipment stated that the work could have been completed using a fixed-price contract. While the contracting team admitted that a completion or project task order includes very detailed requirements, they were not sure a fixed-price task order could be issued because the fixed-price option is not specified in the existing Contract.

In our view, several of the tasks included in the baseline component of the Engineering Contract could have been accomplished using some type of fixed-price contract vehicle. In addition, numerous task orders have clear and well defined technical requirements, schedule, and cost – several of the key elements for a fixed-price agreement. A fixed-price option could potentially reduce costs and administrative burden as well as shift more risk and responsibility to the contractor. We note that in October 2015 Kennedy transitioned the Institutional Services Contract from a cost-reimbursement to a fixed-price contract.

AWARD-FEE EVALUATIONS DO NOT CONSISTENTLY SUPPORT AWARD-FEE SCORES

Between March 2011 and September 2015, NASA paid Vencore approximately $28.4 million of the available $30.7 million award-fee pool, or 93 percent.[19] Similar to findings in several previous audits, we found instances in which NASA's evaluations of Vencore's performance did not support the award-fee scores or the associated payments.[20] We believe multiple layers of evaluators, subjectivity in the process, and inconsistent evaluation standards have contributed to inflated award-fee scores. We also identified several issues that should have affected Vencore's scores that were downplayed or not considered. For instance, Vencore failed to meet half of its small business subcontracting goals in all four award-fee periods but received scores of "good" and "very good" in this category. Additionally, in three award-fee periods Vencore received ratings of "excellent" and "very good" in the safety and schedule subcategories even though the accompanying evaluations did not support these ratings. Moreover, problems with Vencore's management information system, accounting system, and financial reports in multiple award-fee periods were not factored into the contractor's award-fee scores. Finally, we question the accuracy of NASA's evaluation of the cost control element because costs were evaluated from contract inception instead of by award-fee period and not on an individual task order basis. Based on these findings, we are questioning $462,612 in award-fee payments.

Multiple Layers of Evaluators

Multiple organizations and individuals are involved in managing the Engineering Contract and therefore provide input into Vencore's award-fee scores, which makes the process cumbersome. There are six managers for the seven major baseline components of the Engineering Contract and each receives input regarding contractor performance from multiple sources, and must receive concurrence from their management prior to assigning a final score.[21] For example, a baseline manager and approximately 20 managers of individual laboratories and shops at Kennedy participate in evaluating Vencore's performance delivering services to those locations.

Similarly, task order managers receive performance input from individuals responsible for the various programs and projects Vencore personnel support. Moreover, some task order managers told us they meet with other managers in their Directorates and with Branch Chiefs to discuss and obtain management's agreement on evaluations and scores.

Completed evaluations are then submitted to the overall baseline manager, as well as the COR, and compiled into one overall score for each of the evaluation factors. While the baseline and task order

[19] As of September 2015, NASA has completed five award-fee periods. We reviewed award-fee periods 1 through 4 during this audit.

[20] NASA OIG, "Audit of NASA's Management of International Space Station Operations and Maintenance Contracts" (IG-15-021, July 15, 2015), and NASA OIG, "NASA's Use of Award-Fee Contracts" (IG-14-003, November 19, 2013).

[21] There is no separate manager for the Contract management component of the baseline. Rather, all baseline and task order managers offer input into the score for this component.

evaluations are taking place, the CO and Kennedy's OCFO personnel are also compiling their evaluations. Each of these personnel submits their evaluations through their respective management chain: the CO through the Procurement Directorate, program analysts through the OCFO, and the COR and baseline manager through the Engineering Directorate. Once these evaluations are completed, they are returned to the COR for final compilation.

Lack of Consistent Evaluation Standards

NASA is not using consistent, FAR-compliant standards when evaluating Vencore's performance. We compared the adjectival ratings, percentages, and descriptions included in the Award-fee Evaluation Plan to the FAR and NASA FAR Supplement and found them in alignment.[22] However, when we compared them to the TOPES rating scale we found significant differences.[23]

As shown in Table 4, the TOPES rating scale does not use the same numerical scale as the FAR or the Award-fee Evaluation Plan and the definition of the adjectival ratings varies. For example, in the Award-fee Evaluation Plan a "satisfactory" with a numerical score of 50 percent correlates to:

> Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.

The TOPES rating scale defines "fully met requirements" with a numerical range of 81-90 percent as:

> Performance fully met government requirements and expectations. The contractor performed within scope, schedule, cost, etc. as contractually required and expected.

Table 4: Award-fee Evaluation Tables

Award-fee Evaluation Plan		TOPES Rating Scale	
Adjectival Rating	**Numerical Range**	**Adjectival Rating**	**Numerical Range**
Excellent	91–100%	Exceeded Requirements	91–100%
Very Good	76–90%	Fully Met Requirements	81–90%
Good	51–75%	Marginally Met Requirements	71–80%
Satisfactory	50%	Failed to Meet Requirements	70% or below
Unsatisfactory	less than 50%	No Rating	N/A

Source: NASA and Engineering Services Contract NNK11EA08C, Attachment J-03.

[22] The FAR states that all contracts providing for award fees shall be supported by an award-fee plan that establishes the procedures for evaluating award-fee and an Award Fee Board for conducting the award-fee evaluation. Table 3 in the background section describes the adjectival rating and associated descriptions as well as the award-fee pool earned percentages that the award-fee plans shall utilize.

[23] As discussed in the background, TOPES is the system through which task order managers evaluate Vencore's performance on individual task orders.

While the adjectival definitions are similar, the numerical ranges are very different, which has a significant impact on award-fee dollars earned. Specifically, TOPES evaluations and ratings are factored into the performance elements related to the Award-fee Evaluation Plan. Therefore, a higher rating on TOPES evaluations could translate into a higher rating on one of the five performance elements and therefore a higher award fee. Moreover, in the TOPES system, a rating of "fully met requirements" does not require the rater to provide any supporting comments while the other rating categories (exceeded requirements, marginally met requirements, and failed to meet requirements) require justifying comments. Some task order managers we spoke with noted that negative comments in TOPES require justification with internal management while positive comments do not.

The training documentation the COR provides to task order managers includes the following statements: (1) For the Government to be successful the contractor needs to be successful, and (2) TOPES comments and scores play an important role in the success of the contractor and therefore the Government. These statements combined with comments made by task order managers during our interviews suggest that some evaluators may be overly generous in their evaluations for fear that critical evaluations of the contractor translate to a perception that they or the Agency are also not performing well. For instance, one task order manager stated that there is a perception among some NASA civil servants that if a contractor is failing, or receives negative comments, the NASA manager is also seen as failing. Another task order manager told us that although he tries to be fair, he is aware that management does not like to see low evaluation scores for the contractor. Therefore, evaluators may be inclined to give the contractor high scores so the evaluation does not reflect badly on them.

Unsupported Award-fee Scores

We reviewed the final evaluations for each of the five performance factors in award-fee periods 1 through 4. We also reviewed supporting documentation for the evaluations, including Vencore's Internal Surveillance Reports and NASA's TOPES ratings. We identified $462,612 in questioned costs for the four award-fee periods related to unsupported award-fee scores.

In instances where we questioned the score for an individual factor, we lowered the score for that factor and recalculated the overall score based on the weighted formula in the Award-fee Evaluation Plan. Because the cost control factor is dependent on the scores assigned to the other four factors, we are unable to show questioned costs by individual factor. Instead, we have calculated questioned costs for each award-fee period by taking the difference between the award-fee earned under NASA's evaluation and the award-fee earned from our analysis and lowering the scores for the individual factors. Table 5 illustrates NASA's evaluation and score for each factor along with the award-fee earned for the period compared to our calculated scores and award-fee earned. We italicized those award-fee scores that we lowered. The table also details the award-fee amount NASA paid to Vencore, and the award-fee amount the contractor should have earned, per our analysis. The difference between the two is the total amount of questioned costs for that award-fee period. Finally, the narrative below details our review of each factor and the basis for questioning those scores.

Table 5: Award-fee Analysis and Questioned Costs by Period

	Award-fee Period 1		Award-fee Period 2		Award-fee Period 3		Award-fee Period 4	
Factor	**NASA**	**OIG**	**NASA**	**OIG**	**NASA**	**OIG**	**NASA**	**OIG**
Safety	95%	95%	94%	*90%*	98%	98%	99%	99%
Technical Performance	96%	96%	90%	90%	93%	93%	96%	96%
Schedule Performance	89%	89%	88%	*75%*	97%	*90%*	98%	*91%*
Small Business Subcontracting	89%	*50%*	50%	50%	75%	*60%*	75%	*70%*
Cost Control	90%	90%	92%	92%	91%	91%	98%	98%
Award-fee Score	**91%**	**88%**	**87%**	**84%**	**92%**	**90%**	**95%**	**94%**
Award-fee Earned	$4,118,376	$3,982,605	$2,933,445	$2,832,292	$6,849,000	$6,700,109	$7,295,743	$7,218,946
Questioned Cost[a]	$135,771		$101,153		$148,891		$76,797	
Total	**$462,612**							

Source: OIG analysis of NASA Final Award-fee Evaluations Periods 1 through 4.

[a] Questioned cost is the difference between the Agency's calculation of award-fee earned and the OIG's calculation of the award-fee earned.

Safety Evaluation Factor

The safety performance factor is an assessment of Vencore's safety program. Specifically, the contractor is evaluated on the overall management of safety and mission assurance, occupational safety metrics, compliance with safety and health-related practices, and development of a quality management system.[24] In all four award-fee periods, Vencore received a rating of "excellent" for this factor. We take exception to this rating for award-fee period 2.

For period 2, the final evaluation states that overall Vencore met NASA's expectations for Safety Performance, exceeded requirements for safety and mission assurance and quality, met requirements for occupational safety, and met most requirements for operational safety. However, the Agency gave the contractor an overall rating of 94 percent or "excellent," which corresponds to exceeding almost all significant award-fee criteria. During award-fee period 2, Vencore had four property damage mishaps, resulting in property damage of $27,000. The standard operating procedure for this metric allows a maximum of one mishap with a value of $1,000 to $50,000. Although the dollar value of the mishaps were within the allowable range, the contractor exceeded the allowable number of mishaps. During this period, NASA Headquarters also performed an internal quality review assessment at Kennedy and found

[24] Occupational Safety metrics are based on Occupational Safety and Health Administration requirements.

eight non-conformances associated with the Engineering Contract, in areas such as training and certifications, quality management, and action item tracking. Based on Vencore exceeding the number of mishaps allowed and the internal quality non-conformances, we take exception to the overall score of "excellent" and lowered the score to a 90 percent or "very good," to align with the Award-fee Evaluation Plan for exceeding many significant criteria.

Technical Performance Evaluation Factor

The technical performance evaluation factor includes an assessment of Vencore's performance in areas such as contract administration and compliance, customer satisfaction, labor relations, risk, and subcontract management, as well as consideration of the contractor's efforts in achieving contract requirements, including effectiveness, quality, and flexibility. The factor also includes "areas of emphasis" – performance elements the NASA contracting team deems important and deserving of special attention – as designated by the CO for the given period. The technical evaluation factor contains the most elements and is weighted higher than any other factor.

For the technical performance evaluation factor, Vencore received a rating of "excellent" in award-fee periods 1, 3, and 4, and a "very good" in period 2. Because multiple elements comprise the technical performance factor evaluation, we did not attempt to adjust individual scores. Rather, we identified systemic issues spanning multiple award-fee periods that did not appear to have been factored into the contractor's overall scores.

The Engineering Contract tasks Vencore with creating a management information system with interoperability across all of Kennedy's management, operations, administrative, and financial systems. Vencore's system, QinetiQ-Kennedy Engineering Services System, allows users to plan, manage, control, integrate, approve, document, track, and monitor all elements of contract work. For example, the system generates task order status reports to provide detailed data on technical accomplishments and the cost and status of task order milestones.

Although Vencore was required to have the system operational at contract inception, it was not fully functional until award-fee period 4 and implementation of the system was deemed an area of emphasis by the CO in award-fee periods 1, 2, and 3. In the evaluation write-ups for award-fee periods 1 and 3, NASA stated Vencore had met performance requirements related to the management information system area of emphasis but that additional work was required to complete the system. We question whether contract requirements were met when additional work on the system was required and the CO continued to deem the system an area of emphasis. In these award-fee periods, NASA gave Vencore technical ratings of 96 and 93 percent, respectively. While we understand that consideration of areas of emphasis are only one piece of the overall technical factor, the completion of the management information system is an integral part of contract execution, as without a fully functioning system NASA cannot be certain the Agency is receiving reliable data. For award-fee period 2, the evaluation write-up stated the contractor had not met the requirements of a fully functioning information system and therefore the contractor deserved a technical score of 90 percent or "very good."

Another area of emphasis highlighted by the CO in award-fee periods 2, 3, and 4 related to overall financial management and reporting and the adequacy of Vencore's systems. This area of emphasis required Vencore to work with its subcontractors to ensure incurred costs were reported in the appropriate accounting period and to make affirmative progress toward getting an approved accounting, billing, and estimating system. Vencore was having issues reporting and reconciling invoices received from its subcontractors for various task orders, which, in turn, was delaying the final cost

reconciliation and closeout process for completed task orders. Additionally, Vencore could not reconcile invoices for individual task orders to NASA Form 533, a summary financial status report completed by contractors for the Agency's benefit, and to its own books and records. Finally, the CO recognized Vencore's accounting, billing, and estimating systems were not approved by the Defense Contract Management Agency and the Defense Contract Audit Agency and that the contractor needed to take the necessary steps to obtain approval, including working with those agencies to have the appropriate reviews completed on their systems.

Vencore received approval for its accounting system from both the Defense Contract Management Agency and Defense Contract Audit Agency in September 2014, 3 years after the start of the Contract. However, the contractor's billing and estimating systems had not been reviewed or approved by either agency at the time of our review. Moreover, the financial reconciliation issues were resolved by the end of award-fee period 4. In all three award-fee evaluations, NASA stated that Vencore had met expectations but that the area of emphasis would continue into the next award-fee period. We question scores of "very good" and "excellent" for this technical area when these issues lingered for multiple award-fee periods.

Schedule Performance Evaluation Factor

The schedule performance evaluation factor includes an assessment of the contractor's performance and effectiveness in meeting contract milestones. We found Vencore struggled to meet the Standard of Performance and the Acceptable Quality Level schedule metrics in all four award-fee periods.[25] For example, in three of the award-fee periods, the contractor did not meet the established metric for generating task order plans or submitting accurate, required reports timely.[26] Nevertheless, Vencore received two scores of "very good" and two of "excellent" in these award periods. Further, NASA's evaluation of the metrics fluctuated. In several award-fee periods, the Agency considered Vencore to have exceeded a metric if the contractor exceeded the Acceptable Quality Level but did not meet the Standard of Performance. The Acceptable Quality Level is the lowest outcome accepted by NASA for any given metric, while the Standard of Performance is the highest outcome reflecting exemplary performance and, if met, means Vencore exceeded the metric. In other award-fee periods, if Vencore exceeded the Acceptable Quality Level but did not meet the Standard of Performance, the contractor's performance merited a "meets" rather than an "exceeds" rating. Further, NASA's evaluation in three of the four award-fee periods does not support the overall score because Vencore did not meet or exceed all of the schedule performance metrics, and yet it received scores of "very good" and "excellent." Based on our review of the schedule performance factor, we question the scores provided in award-fee periods 2, 3, and 4.

In award-fee period 2, Vencore received a score of 88 percent, or "very good," which is defined as exceeding many significant award-fee criteria. However, based on the written evaluation for this award-fee period, the contractor failed to meet the Acceptable Quality Level for the metric requiring it to submit task order plans and revisions to existing task orders within 15 working days. Vencore delivered 81 percent of the plans and revisions on time, falling short of the 90 percent Acceptable Quality Level and the 100 percent Standard of Performance. This also represented a dip in the

[25] Standard of Performance is the measure that reflects exemplary performance for the metrics established by the contractor in the Internal Surveillance Plan. The Acceptable Quality Level is the measure that reflects satisfactory performance and is the lowest outcome the Government will accept for the given metric.

[26] Data Requirement Descriptions are reports and submittals due to NASA throughout the award-fee period. These include the Risk Management and Internal Surveillance Plans and various financial reports.

contractor's performance on this metric compared to the first award-fee period. For two other metrics – on-time delivery of task order products and services and on-time completion of task order milestones – the contractor exceeded the Acceptable Quality Level but did not meet the Standard of Performance and therefore did not "exceed" these metrics. Moreover, the percentage of task order products and services the contractor delivered on time was lower than in the first award-fee period. Vencore also did not meet the schedule for pressure vessel certifications required during the award-fee period. NASA's evaluation for award-fee period 2 states that Vencore's schedule performance met expectations. We believe that failing to meet the acceptable level for one metric, the drop from the first award-fee period in on-time delivery of task order plans and task order products and services, and the missed certifications did not merit an overall score of 88, which was only a 1 point decrease from the score given in award-fee period 1 in which no such issues were identified. In our recalculation, we lowered the score to a 75 or "good," which is in line with the contractor exceeding some but not all award-fee criteria.

In award-fee period 3, Vencore received a score of 97 percent, or "excellent," indicating that the contractor had exceeded almost all of the criteria for the schedule performance factor. However, while Vencore exceeded the Acceptable Quality Level, the contractor did not meet the Standard of Performance for all of the schedule metrics. For award-fee period 3, only 22 percent of task order managers cited exceptional schedule performance in TOPES, while 74 percent indicated that the contractor fully met requirements, and yet the written evaluation translated these rating into an overall "exceeds." Although Vencore submitted 97 percent of the required data reports early or on time, 30 percent of those reports had to be returned for revision. In our opinion, if 74 percent of task order managers indicated Vencore was fully meeting requirements, the overall rating on this metric should have been "fully meets." We are also troubled by a 30 percent return rate for required reports. Based on these factors, we lowered the overall score for the award-fee period to 90 percent or "very good."

Finally, Vencore received a score of 98 percent or "excellent," for award-fee period 4. The contractor exceeded both the Acceptable Quality Level and the Standard of Performance for metrics related to on-time delivery of documents and task order products and services. However, for the metrics related to meeting task order milestones and delivery of task order plans within 15 days, the company exceeded the Acceptable Quality Level but did not meet the Standard of Performance. NASA's written evaluation categorized the latter two factors as "fully meets," stating that because Vencore did not meet the Standard of Performance, it did not exceed the metrics. In addition, delivering task order plans within 15 days is a contractual requirement. NASA nevertheless gave the contractor a score of 98 percent – the highest to date in the schedule factor. We believe the score is inconsistent with the written evaluation considering two of the metrics were categorized as "fully meets." Based on NASA's evaluation and in line with the scores given in the other award-fee periods, we lowered the score to 91 percent.

Small Business Utilization Evaluation Factor

The small business utilization evaluation factor assesses Vencore's performance during each award-fee period in meeting goals related to the use of various types of small businesses as subcontractors as well as the complexity and quantity of work assigned. The Award-fee Evaluation Plan weighs the small business utilization factor as 10 percent of the overall award-fee score. In its first four award-fee evaluations, Vencore did not meet its small business subcontracting goals; however, the scores NASA gave the contractor in three of the four award-fee evaluation periods do not reflect this deficiency. Although objective criteria exist for assessing the Contractor's progress in meeting small business goals, NASA's evaluations reflect a subjective approach to determining the scores for this factor. NASA officials explained that their evaluation focuses on whether the contractor is making a "good faith effort" to

execute the requirements of the Small Business Subcontracting Plan (Subcontracting Plan), such as submitting periodic subcontracting reports and performing outreach efforts. In addition, in NASA's view achievement of the small business subcontracting goals is highly desirable, but not as important as the level of effort the contractor exerted to try and meet the goals. We do not believe the Agency should be providing an award-fee score based on "good faith effort." Rather, the award should be based on achievement of the goals included in the Subcontracting Plan.

NASA's solicitation for the Engineering Contract required respondents to submit a Subcontracting Plan with goals equivalent to or greater than percentages set by the Agency. Vencore's Plan, which became part of the Contract, contained goals that exceeded NASA's percentages in six out of the seven categories. The percentages by which Vencore exceeded the Agency goals ranged from 0.29 percent to 12.04 percent. Within its Plan, the contractor committed to meeting or exceeding its goals and stated it understood that the goals would serve as the measurement for compliance with the Plan. Table 6 illustrates the small business subcontracting percentages, which are based on total contract value, set by NASA at the time the Engineering Contract was solicited.

Table 6: Solicitation Goals Based on Total Contract Value

Business Type	Government Goals Percentage
Small Businesses (SB)	30.0%
Small Disadvantaged Business (SDB) Concerns[a]	5.00%
Women-Owned Small Business (WOSB) Concerns	4.00%
Veteran-Owned Small Business (VOSB) Concerns	3.00%
Service-Disabled Veteran-Owned Small Business (SDVOSB) Concerns	2.00%
HUBZone (HBZ) Small Business Concerns	1.00%
Historically Black Colleges and Universities (HBCU)	0.20%

Source: Engineering Services Contract NNK11EA08C, Attachment J-14.

[a] Includes SDBs in represented and underrepresented areas.

In award-fee period 1, Vencore met only one of seven goals, and NASA scored the company's performance at 89 percent or "very good." In award-fee period 2, Vencore met two of seven goals, and the Agency scored the contractor at 50 percent, or "satisfactory." In award-fee period 3, Vencore met three of seven goals, and NASA scored the contractor's performance at 75 percent or "good." In award-fee period 4, Vencore met four of seven goals and, again, received a 75 percent score. Table 7 summarizes Vencore's progress in meeting its small business subcontracting goals and outlines the percentages Vencore was under or over in meeting its goals.

Table 7: Small Business Subcontracting Results

Business Type	Percentage Vencore was *Under*/Over Proposed Goals			
	Award-fee Period 1	Award-fee Period 2	Award-fee Period 3	Award-fee Period 4
SB	*-1.11%*	*-2.70%*	4.06%	5.91%
SDB	*-3.48%*	*-4.11%*	*-4.52%*	*-2.97%*
WOSB	*-1.54%*	*-2.18%*	*-0.68%*	0.63%
VOSB	0.16%	0.44%	1.24%	2.88%
SDVOSB	*-0.25%*	0.12%	0.80%	2.35%
HUBZone	*-4.76%*	*-5.38%*	*-5.78%*	*-5.64%*
HBCU	*-0.20%*	*-0.20%*	*-0.17%*	*-0.16%*
Award-fee Period Rating	**Very Good**	**Satisfactory**	**Good**	**Good**
Award-fee Period Score	**89**	**50**	**75**	**75**

Source: NASA.

We take exception to the scores for award-fee periods 1, 3, and 4. The Award-fee Evaluation Plan includes adjectival ratings, definitions, and numerical ranges to define the various levels of performance under the Contract. The numerical percentage of 50 percent is considered "satisfactory" and is the lowest score the Agency can give without failing the contractor. In our adjustment, we lowered the score for award-fee period 1, during which Vencore only met one goal, from 89 to 50 in order to more closely align with the score received in award-fee period 2 when the contractor met two of seven goals. In award-fee period 3, Vencore met three of seven goals, and we adjusted its score to 60.[27] Finally, in award-fee period 4, Vencore met a fourth goal and we adjusted its score to 70. These adjusted scores reward Vencore's progress while continuing to incentivize the contractor to make further progress.

Cost Control Evaluation Factor

The cost control evaluation factor includes an assessment of the contractor's cost management, cost estimating accuracy, and overall ability to control costs. The main criteria is a comparison of actual contract charges for each performance period against estimated costs for those periods – in other words, whether the contractor's actual costs are above or below the expected contract price. In all four award-fee periods, Vencore was given credit for being below planned costs. Award-fee scores ranged from 90 percent or "very good" in award-fee period 1 to scores of 92, 91, and 98 percent ("excellent"), respectively in award-fee periods 2 through 4. We question whether NASA accurately evaluated Vencore's performance for this factor.

[27] Meeting two goals in award-fee period 2 gave Vencore a score of 50. Therefore, for each subsequent award-fee period when the company achieved an additional goal, we increased the score by 10. Using this methodology, if Vencore were to eventually meet all 7 goals, they would receive a score of 100.

We conducted an analysis of the end-of-year cost data for award-fee period 4 and determined that 30 task orders totaling $5 million were in a cost overrun status at the end of the period. For one-third of these orders, actual costs were 15 percent higher than planned costs. NASA's final evaluation report for this award-fee period states:

> During [award-fee period] 4 there were instances in which the actual costs for the period exceeded the contract value for [the baseline] and IDIQ Task Orders. There were only 3 out of an average of 108 Task Orders. The major driver of the [baseline] overrun was attributed to the Furlough, which was not within the contractor's control. However, there were minor instances where individual overruns occurred that were within the contractors control.

We questioned Kennedy OCFO officials as to why the final evaluation highlighted only 3 task orders with minor overruns when we found overruns on 30 task orders. They explained that they were aware of the 30 instances but did not consider most of them pertinent to the award-fee evaluation. Specifically, they said the overruns resulted from timing issues such as incurring direct costs in one period but accounting for those costs in the next period and adjustments made to Vencore's indirect rates.

We compared the 30 task orders to the Negotiated Estimated Cost Report Vencore provides to NASA to explain any variances in planned versus actual costs by baseline and task order components. The report highlights variances by overall category, such as labor and other direct costs, and not on an individual task order basis. Therefore, if one task order had an overrun of labor costs and another task order an underrun of labor, the net effect in the report would be zero. Of the 30 task orders we identified, none were identified by the Agency as having an overrun in labor costs and only four were highlighted as having an overrun due to other direct costs. For example, in our analysis of task order 149, we found a cost overrun of $807,731. Of this amount, $412,650 was related to labor costs and $395,081 was related to other direct costs. When we reviewed Vencore's report, task order 149 was highlighted as having a variance in the "Other Direct Costs" category but made no mention of an overrun in the "Labor" category. Although NASA officials stated they were aware of the overruns on the 30 task orders that we identified, they did not provide an adequate explanation or evaluation showing why they considered only three overruns significant. Therefore, we question how the Agency can accurately determine which task orders were in an overrun status when the reports they use do not provide variances by individual task orders.

OCFO officials also explained that they evaluated actual versus planned costs from contract inception to date rather than for a particular award-fee period. Evaluating costs from contract inception instead of for individual award-fee periods may give Vencore an unfair advantage by allowing it to "cover" overruns from one period by underrunning costs in another period. As a result, NASA did not accurately evaluate the costs and may have provided the contractor with a higher award-fee score. Not only does a higher award-fee score result in additional money, but it also may give the contractor an advantage when NASA decides whether to extend the Contract since effective cost management is one of the considerations in that decision.

During award-fee period 5 that ended in September 2015, NASA emphasized the importance of managing costs against the Contract value in the current award-fee period as well as from contract inception. NASA and Vencore also began holding weekly meetings to discuss specific task orders that may be overrunning for the award-fee period. Further, a tracking tool to alert the Agency's contract team when Vencore is over- or under-billing has been developed. While NASA did not re-evaluate the prior award-fee periods and re-assess the scores previously given, we see these as positive steps towards improving contract oversight.

CONCLUSION

The size and scope of the $1.9 billion Engineering Contract has made managing the Contract particularly challenging. Moreover, the cost and tasks included in the baseline and task order components of the Contract are not clearly defined, managers overseeing the Contract may lack appropriate expertise, and cost allocations are not clear. NASA should explore ways to reduce the challenges the Agency faces in managing and evaluating this multi-faceted Contract, including considering a contract vehicle that offers both fixed-price and cost-type components. Although this would represent a major change in the contract structure, the advantages include shifting some cost risk from NASA to the contractor, reducing the administrative burden on both the Agency and the contractor, incentivizing the contractor to build efficiencies into performing tasks, and increasing contractor accountability.

Finally, NASA has limited its ability to evaluate contractor performance by including generic milestones and deliverables in some task orders, as well as employing evaluation standards that do not align with the FAR or the Contract's Award-fee Evaluation Plan. As a result, NASA's evaluations of Vencore's performance do not consistently support the award-fee scores assigned or the resulting payments to the contractor and we question more than $450,000 in award-fee payments made between fiscal years 2011 and 2014.

RECOMMENDATIONS, MANAGEMENT'S RESPONSE, AND OUR EVALUATION

In order to more effectively manage the Engineering Contract, we recommended Kennedy's Director of Procurement, working in conjunction with the Kennedy Center Director:

1. identify where efficiencies can be gained in the execution of the Contract, including reducing the level of resources dedicated to evaluating contractor performance and working to reduce confusion regarding the scope of various Center service contracts;

2. require performance evaluation criteria for all new task orders be tied to contract deliverables, milestones, and desired outcomes;

3. examine the feasibility of utilizing smaller, more manageable contracts for engineering services, including the use of a combined fixed-price/cost-plus contract; and

4. develop and use FAR-compliant evaluation standards to ensure future award-fee scores are appropriately aligned with contractor performance.

We provided a draft of this report to NASA management, who concurred with all four recommendations and proposed corrective actions. We find the Agency's proposed actions responsive to recommendations 1 and 3, and therefore these recommendations are resolved and will be closed upon verification of the corrective actions. For the reasons discussed below, we find the actions management proposes with regard to recommendations 2 and 4 insufficient to meet their intent.

With regard to recommendation 2, the Agency pointed to an internal review initiated in July 2015 to determine the best way to address the OIG's concern and subsequent actions, including reevaluating task orders each time they are revised. We do not believe the review and practices the Agency cites are sufficient to address the problem of imprecise performance evaluation criteria. Indeed, we made a similar finding and recommendation in our prior audit of the previous engineering contract 7 years ago to which management agreed and proposed corrective action. However, as demonstrated by the findings in this report, the Agency still has not adequately addressed the problem. Accordingly, we believe a more proactive approach is necessary, and the recommendation will remain unresolved pending further discussion with the Agency.

In response to recommendation 4, the Agency insists it already uses FAR-compliant standards to ensure award-fee scores are appropriately aligned and stated the TOPES management tool is not intended to be the same rating scale as the FAR, but rather a tool to gather and consolidate input from task order managers. Nevertheless, the Agency stated it will evaluate whether to apply the Award-fee Evaluation Plan ratings to TOPES if the current contract is extended. The Agency also said it has taken actions to improve task order managers' skills, including requiring comments for all scores. Moreover, the contract team at Kennedy will determine if similar "oversight" systems exist on other contracts and, if

so, compare and make adjustments to the Engineering Contract system, as appropriate. Finally, the Agency said it will ensure that future Center self-assessment reviews and Procurement Management Reviews include an examination of compliance with award-fee processes and documentation.

For the reasons stated in the report, we disagree that the Agency is using FAR-compliant standards. Moreover although the Agency is taking positive steps in response to our recommendation, we believe that if the current contract is extended, the Agency needs to adjust the TOPES rating scale to match the rating scale defined in the FAR and the Award-Fee Evaluation Plan. Accordingly, the recommendation remains unresolved pending a decision on contract renewal and the Agency's evaluation of whether to apply the Award-Fee Evaluation Plan ratings to TOPES.

Management's response to our report is reproduced in Appendix B. Their technical comments have also been incorporated and sensitivity concerns addressed, as appropriate.

Major contributors to this report include Laura Nicolosi, Mission Support Director; Julia Eggert, Project Manager; Tekla Colon, Project Manager; Jason Hensley, Team Lead; Aleisha Fisher, Auditor; Earl Baker, Associate Counsel; and, Benjamin Patterson, Editor.

If you have questions about this report or wish to comment on the quality or usefulness of this report, contact Laurence Hawkins, Audit Operations and Quality Assurance Director, at 202-358-1543 or laurence.b.hawkins@nasa.gov.

Paul K. Martin
Inspector General

APPENDIX A: SCOPE AND METHODOLOGY

We performed this audit from September 2014 through March 2016 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.

To determine whether Vencore was meeting the contractual performance goals on time and within cost and also whether NASA's management of the Contract was sufficient, we reviewed contract documentation including the signed contract, statement of work, and contractor performance reports. We statistically selected 35 task orders of which we judgmentally reviewed 8 with the highest dollar value. We did not review the remaining task orders because we determined that we had sufficient evidence to support our findings by reviewing the top eight. We interviewed contracting officers, contracting officer's representatives, financial personnel, and 18 task order managers to gain an understanding of their roles and responsibilities. We also reviewed the task order plans including performance metrics, milestones, and deliverables for each of the eight high-dollar value task orders. Finally, we reviewed the NASA Form 533, "Financial Report" for each of the task orders to determine whether the contractor was over- or under-running the Contract. All work was conducted at Kennedy.

To determine whether NASA properly evaluated Vencore's performance and paid an appropriate award fee, we reviewed the contract's Award-fee Evaluation Plan, final award-fee evaluations from the Performance Evaluation Board, the Fee Determination Official's determination memorandum, and contract modifications authorizing award-fee payments. We also interviewed contracting officers and the contracting officer's representatives to understand the award-fee process, scoring, and calculation of award fees.

To determine whether the contract vehicle was adequately established and whether it was being properly used, we reviewed NASA's justification and approval for the use of a cost-type contract. We also determined whether other Centers with engineering services contracts utilized cost-type contracts. We interviewed contracting officers, contracting officer's representatives, baseline component managers, and task order managers.

We reviewed the following Federal, NASA, and Kennedy Space Center Policies:

- Federal Acquisition Regulation (FAR) Subpart 16.3, "Cost-Reimbursement Contracts"
- FAR Subpart 16.4, "Incentive Contracts"
- FAR Subpart 37.1, "Service Contracts"
- NASA FAR Supplement Subpart 1816.4, "Cost-Reimbursement Incentive Contracts"
- NASA "Award-Fee Contracting Guide," June 27, 2001
- Kennedy NASA Policy Directive KNPD 5101.1, "Award-Fee Evaluation Policy," May 2, 2013
- Kennedy Policy Directive, KDP-KSC-P-2402, "Award-Fee Evaluation Process"
- KSC-DES-0038, "Fee Determination Official," May 10, 2011

Use of Computer-Processed Data

We used limited computer-processed data such as contract documents, monthly contractor NASA Form 533 financial reports, task-order evaluation reports, performance reports, and award-fee evaluation documents. Generally, we concluded that the data was valid and reliable for purposes of our review.

Review of Internal Controls

We reviewed and evaluated internal controls related to NASA's management of the Engineering Contract. We reviewed the appropriate policies, procedures, regulations, and conducted interviews with contract personnel. In addition, we reviewed award-fee evaluations and performance reports. We concluded that the internal controls were adequate, except for those discussed in the report. Our recommendations, if implemented, should correct the weaknesses identified.

Prior Coverage

Over the past several years, the NASA OIG and GAO have issued 10 reports of significant relevance to the subject of this report. Unrestricted reports can be accessed at https://oig.nasa.gov/audits/reports and http://www.gao.gov, respectively.

NASA Office of Inspector General

Audit of NASA's Management of International Space Station Operations and Maintenance Contracts (IG-15-021, July 15, 2015)

NASA's Launch Support and Infrastructure Modernization: Assessment of the Ground Systems Needed to Launch SLS and Orion (IG-15-012, March 18, 2015)

NASA's Use of Award-Fee Contracts (IG-14-003, November 19, 2013)

NASA Should Reconsider the Award Evaluation Process and Contract Type for the Operation of the Jet Propulsion Laboratory (Redacted) (IG-09-022-R, September 25, 2009)

Final Memorandum on the Audit of the Stratospheric Observatory for Infrared Astronomy (SOFIA) Program Management Effectiveness (IG-09-013, March 27, 2009)

Evaluation and Oversight of NASA's University-Affiliated Spaceport Technology Development Contract Needed Improvement (IG-09-012, March 19, 2009)

Government Accountability Office

General Government: Award-Fee Contracts, GAO Action Tracker, March 6, 2013

Opportunities to Build Strong Foundations for Better Services Contracts (GAO-11-672, August 9, 2011)

Application of OMB Guidance Can Improve Use of Award-Fee Contracts (GAO-09-839T, August 2009)

Federal Contracting: Guidance on Award Fees Has Led to Better Practices but Is Not Consistently Applied (GAO-09-630, May 2009)

APPENDIX B: MANAGEMENT'S COMMENTS

National Aeronautics and Space Administration
Kennedy Space Center
Kennedy Space Center, FL 32899

April 8, 2016

Reply to Attn of: AA-I2

TO: NASA Headquarters
Attn: Assistant Inspector General for Audits

FROM: AA/Director

SUBJECT: Agency Response to Office of Inspector General Draft Report, "Audit of NASA's Engineering Services Contract at Kennedy Space Center" (A-14-018-00)

NASA appreciates the opportunity to review and comment on the Office of Inspector General (OIG) draft report entitled "Audit of NASA's Engineering Services Contract at Kennedy Space Center," (A-14-018-00), dated March 10, 2016.

In the draft report, the OIG makes four recommendations addressed to the Director, Kennedy Space Center (KSC), and the Director of Procurement, KSC, intended to more effectively manage the Engineering Services Contract (ESC) at KSC.

Specifically, the OIG recommends the KSC Director of Procurement, working in conjunction with the Center Director:

Recommendation 1: Identify where efficiencies can be gained in the execution of the Contract, including reducing the level of resources dedicated to evaluating contractor performance and working to reduce confusion regarding the scope of various Center service contracts.

Management's Response: KSC concurs with this recommendation. We continually look to gain efficiencies on this contract and will continue to do so. The optimum manner in which to obtain required engineering services continues to be reviewed at KSC and across the Agency. Both specific and general reviews related to the timing of the exercise of future option periods and consideration of alternative methods of obtaining contracted services within this area (contract procedures, baseline requirements, Task Order (TO) content and processes, packaging of requirements) are ongoing. Further, activities designed to implement efficiencies in contract administration and assignment of work requirements on the ESC have been and will continue to be the subject of multifunctional reviews at KSC. The ESC is valued at approximately $2 billion. Option Year 1 was exercised, which began on March 1, 2016, and will end on February 28, 2017.

Based on the complexity of contract requirements, various levels of review and evaluation are needed to ensure that the contractor is meeting NASA requirements and to ensure an accurate evaluation of the contractor's performance under the contract's award-fee plan. Through the education of Task Order Managers (TOMs), efficiencies can be obtained as TOMs understand their role in assigning and managing TO work. NASA KSC will look into streamlining the level of resources, placing requirements, and managing and evaluating contractor performance if the current life of the ESC is prolonged. NASA KSC Procurement continues to work to maintain clearly defined scope, placement and differentiation of requirements between contracts, and clarification and simplification of contractor interfaces and hand-offs on future contracts at KSC.

Estimated Completion Date: Immediate actions are projected to be completed by August 2016. Ongoing activities related to future acquisitions will be tied to schedules supporting need dates for future procurements. Activities affected by NASA's Business Services Assessment (BSA) actions may further be impacted by those BSA implementation schedules.

Recommendation 2: Require performance evaluation criteria for all new task orders be tied to contract deliverables, milestones, and desired outcomes.

Management's Response: KSC concurs with this recommendation. Subsequent to the OIG review and prior to the draft report, this concern has been addressed by the NASA Contract Management Team. A Kaizen (a practice of continuous improvement) was initiated in July 2015 to determine the best way to address this concern. As a result of the Kaizen, the NASA Contract Management Team continues to monitor TOs to ensure appropriate TO types are used and milestones/deliverables are identified. Currently, TOs are reevaluated each time they go through a revision to determine if the TO can be transitioned from Mission support to Project support (completion form). This action continues to take place on TO revisions as well as new TOs.

- TOMs will continue to be educated as to when to use Project support versus Mission support TOs to fulfill their requirements.
    - A Project support TO has clear and well-defined technical requirements, schedule, and cost. With this type of TO, the contractor leads the project and typically works independently to complete the project with little to no interdependencies from the Government.
    - A Mission support TO is used when there are unclear technical requirements, schedule, and cost. With this type of TO, the Government leads the project, and the contractor typically provides support where needed for a period of time and provides reports as appropriate.

Estimated Completion Date: Implementation of the process is complete. This action has already been performed and will continue being performed throughout the life of this contract.

Recommendation 3: Examine the feasibility of utilizing smaller, more manageable contracts for engineering services, including the use of a combined fixed-price/cost-plus contract.

Management's Response: KSC concurs with this recommendation. An alternative contract vehicle or a mix of contract vehicles will be considered during the acquisition planning process for follow-on or new engineering service contracts. The optimum placement of specific requirements within the scope of existing KSC contracts is already performed as new requirements are identified. In addition, the feasibility of utilizing smaller, more manageable contracts will be examined. Scope, content, and administration of these will necessarily include consideration of the interrelation of the involved systems, the need for integration (contract or in-house), and the ability to properly task and hold accountable individual contractors for complete and workable systems for which they are responsible. Moreover, when considering the ability to place requirements under a fixed-price or hybrid contract, the appropriate allocation of risks (as contemplated by the Federal Acquisition Regulation [FAR] Subpart 16.1 and NASA FAR Supplement [NFS] 1816.1) must be taken into consideration along with potential pricing impact from included contingencies in high-risk activities, as well as the risks of mischarging or misallocation of underlying costs (e.g., similar labor skills) in an hybrid contract. For purposes of clarity, the current ESC is only one of many contractors charged with support to KSC's Exploration Ground Systems design and development activities. In addition to ESC and other Center contractors that may be assigned certain responsibilities related to systems they already manage or for which they will take over certain operations, maintenance, and/or sustaining responsibilities, KSC also has discipline-based Architect and Engineering (A&E) contractors, multiple award ground support equipment fabrication contractors (often utilizing designs derived from the ESC or A&E contracts), and various discrete construction and fabrication contractors performing ground systems development work on a fixed-price basis.

Estimated Completion Date: Work is ongoing as new requirements are identified and is ongoing for each service contract that is recompeted or where new service contracts are identified and pursued.

Recommendation 4: Develop and use FAR-compliant evaluation standards to ensure future award-fee scores are appropriately aligned with contractor performance.

Management's Response: KSC concurs with this recommendation. We already use FAR-compliant standards to ensure award-fee scores are appropriately aligned with contractor performance. Currently, the ESC Award-Fee Evaluation Plan (contract attachment J-03) is used to evaluate the contractor performance and is applied to the "overall contract level" review. Contract attachment J-03 identifies five specific adjective

ratings and definitions used for the evaluation of overall contractor performance (excellent, very good, good, satisfactory, and unsatisfactory), consistent with Table 16-1, under FAR 16.401(e)(3)(iv), "Award Fee Plan," and also NFS 1816.405-275(b), "Award Fee Evaluation Rating."

- The rating scale used within the Task Order Performance Evaluation System (TOPES) is not intended to be the same rating scale as the FAR. The intent of TOPES is for the TOMs to provide a level of performance (exceed, meet, and fail) which is then used as a tool to assess the contractor performance for each individual task order. The Contracting Officer's Representative (COR) utilizes all the TOPES inputs to then provide overall assessment for the award fee, using the adjectival and numerical range required by the FAR and the Award Fee Evaluation Plan.

- The TOPES is a *tool* that is used to gather inputs from TOMs for each TO. The inputs from this tool are reviewed and rolled into the overall contract evaluation. TOPES is used by the TOMs to evaluate contractor performance under each TO and is a tool used to gather inputs. Other tools used for the award-fee process include the Baseline Performance Evaluation System (BPES), the Kennedy Action Tracking System, and ESC Internal Surveillance Metrics. Currently, TOPES/BPES ratings are based on generic ratings (exceed, meet, and fail). NASA KSC will evaluate whether to apply the J-03 Award Fee Evaluation Plan ratings to TOPES/BPES if the current life of the ESC is prolonged.

- The following actions have been implemented to improve TOMs' skills in managing TOs and providing consistent ratings on the contractor's performance as follows:

  - TOMs and TOPES training packages have been updated to capture new requirements such as:

    - TOMs are now required to complete training and pass the ESC TOM exam.

    - TOMs are now required to provide comments for all scores in the TOPES and BPES. As TOMs provide comments and scores, the NASA Contract Management Team continues to ensure comments and scores are aligned with the contractor's performance by reviewing the submissions and following up with TOMs as appropriate.

  - The NASA Contract Management Team is working to determine if surveillance systems similar to those on the ESC are in existence. If so, the COR team will compare and make adjustments to the current ESC surveillance systems, if necessary. The NASA Contract Management Team will also coordinate any changes made with customers on Center to ensure agreement with the forward plan.

NASA Headquarters Procurement conducts periodic Procurement Management Reviews (PMRs) and the Centers conduct self-assessment reviews on a recurring basis. The purpose of the PMR is to provide continuous oversight and a periodic review of contracting activities throughout NASA. Each Center, on a regular basis, conducts a procurement process and actions self-assessment. The Center self-assessments also identify and assess potential areas of concern resulting from PMR findings, audit findings, or a regulatory change. The compliance with award-fee processes and documentation, along with inputs into the appropriate past performance database associated with contractor performance and award-fee evaluations, will be added as a recommended topic in these future reviews.

Estimated Completion Date: This action in the first paragraph is being worked and is projected to be completed by June 2016. Activities related to the last paragraph are conducted on a recurring schedule, with reports to Headquarters Procurement and Center management made following each review. Any necessary actions resulting from these reviews are prepared following the reviews and include estimated completion dates and status reports.

We have reviewed the draft report for information that should not be publicly released. As a result of this review, we identified the following information that should not be publicly released:

We take exception to the release of earned award-fee evaluation scores (both overarching scores and subcategory evaluation scores), including the disclosure of the available and earned award-fee pools where a score can be derived, and to the release of Vencore's proposed small business subcontractor goals (Table 1, page 4; Table 5, page 19; Table 6, page 23; Table 7, page 24). Earned award-fee evaluation scores, available and earned award-fee dollars, and small business subcontractor goals are considered as confidential business information under 5 U.S.C. § 552(b)(4), which NASA does not release under the Freedom of Information Act.

Certain past performance information is also viewed as past performance information that is Source Selection Sensitive, in accordance with FAR 42.15—Contractor Performance Information, paragraph 42.1503, Procedures, subparagraph (d), which states, in part:

> (d) Agency evaluations of contractor performance, including both negative and positive evaluations, prepared under this subpart shall be provided to the contractor as soon as practicable after completion of the evaluation. The contractor will receive a CPARS-system generated notification when an evaluation is ready for comment. Contractors shall be afforded up to 14 calendar days from the date of notification of availability of the past performance evaluation to submit comments, rebutting statements, or additional information. Agencies shall provide for review at a level above the contracting officer to consider disagreements between the parties regarding the evaluation. The ultimate conclusion on the performance evaluation is a decision of the contracting agency. Copies of the evaluation, contractor response, and

> review comments, if any, shall be retained as part of the evaluation. These evaluations may be used to support future award decisions, and should therefore be marked "Source Selection Information". . . . The completed evaluation shall not be released to other than Government personnel and the contractor whose performance is being evaluated during the period the information may be used to provide source selection information. Disclosure of such information could cause harm both to the commercial interest of the Government and to the competitive position of the contractor being evaluated as well as impede the efficiency of Government operations. Evaluations used in determining award or incentive fee payments may also be used to satisfy the requirements of this subpart. A copy of the annual or final past performance evaluation shall be provided to the contractor as soon as it is finalized. (*Emphasis added.*)

In keeping with all of the above and other proprietary considerations, we request that the award-fee evaluation scores, available and earned fee, and small business subcontractor goals be redacted from the report and not be released to the public. In addition, we request the verbiage throughout the draft report redact any and all award-fee scores, both overarching award-fee score for a specific award-fee period(s) and subcategory (component) evaluation scores for Safety, Technical, Schedule, Small Business Subcontracting, and Cost Control. NASA only provides the contractor the adjectival ratings by subcategory and does not provide the subcategory evaluation scores. Therefore, the subcategory evaluation scores are considered Sensitive But Unclassified information. If you desire, we will provide you the actual proposed redactions on your final draft or would be willing to examine the specific redactions you include in your report prior to its publication.

Additional comments relating to specific report content are provided in the enclosure following this memo.

Once again, thank you for the opportunity to review and comment on the subject draft report. If you have any questions or require additional information regarding this response, please contact Mr. Rey Diaz at 321-867-1461.

Robert D Cabana

Robert D. Cabana

Enclosure

cc:
KSC/GG/Ms. Kroskey
KSC/LX/Mr. Bolger
KSC/NE/Dr. Simpkins
KSC/OP/Mr. McCarty (Acting)
HQ/Assistant Administrator for Procurement/Mr. McNally

APPENDIX C: REPORT DISTRIBUTION

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Non-NASA Organizations and Individuals

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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 Space, Science, and Competitiveness

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

(Assignment No. A-14-018-00)