



United States Government Accountability Office  
Washington, DC 20548

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November 17, 2011

The Honorable Kay Bailey Hutchison  
Ranking Member  
Committee on Commerce, Science, and Transportation  
United States Senate

The Honorable Ralph M. Hall  
Chairman  
The Honorable Eddie Bernice Johnson  
Ranking Member  
Committee on Science, Space, and Technology  
House of Representatives

The Honorable Bill Nelson  
Chairman  
Subcommittee on Science and Space  
Committee on Commerce, Science, and Transportation  
United States Senate

*Subject: Key Controls NASA Employs to Guide Use and Management of Funded Space Act Agreements Are Generally Sufficient, but Some Could Be Strengthened and Clarified*

In the National Aeronautics and Space Act of 1958, Congress granted the National Aeronautics and Space Administration (NASA) authority to enter into transactions other than contracts, leases, and cooperative agreements; this gave the agency greater flexibility in achieving its mission.<sup>1</sup> NASA uses its other transaction authority through three kinds of instruments known as Space Act agreements. Specifically, NASA uses reimbursable agreements when costs associated with an undertaking are reimbursed by the agreement partner (in full or in part); the agency uses non-reimbursable agreements when each party bears the cost of participation in mutually beneficial activities. In 2006, NASA began to use a third kind of agreement—referred to as funded Space Act agreements—that have involved NASA providing significant funds to private industry partners to stimulate the development of large-scale commercial space transportation capabilities.<sup>2</sup>

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<sup>1</sup> Pub. L. No. 85-568, § 203.

<sup>2</sup> While this was the first time NASA has used its other transaction authority specifically to stimulate development of private-sector capabilities, NASA has used its other transaction authority in the past to enter into joint sponsored research agreements with private industry that shared funding and technical assistance on technology development efforts of mutual interest.

Under a funded Space Act agreement, appropriated funds are transferred to a domestic partner, such as a private company or a university, to accomplish an agency mission. These agreements differ from Federal Acquisition Regulation (FAR) contracts in that they do not include requirements that generally apply to government contracts entered into under the authority of the FAR. For example, under these agreements, partners are not required to comply with government contract quality assurance requirements.<sup>3</sup> NASA policy provides that this authority may only be used when agency objectives cannot be achieved through the use of a procurement contract, grant, or cooperative agreement.<sup>4</sup>

NASA's intent in using funded Space Act agreements was to encourage innovation in the private sector and stimulate development of a new commercial market; the agency's commercial partners were to be both the principal drivers and beneficiaries of the effort to develop commercial cargo and crew capabilities. NASA anticipated receiving the ancillary benefit of being able to use the emerging commercial market to procure safe, reliable transportation services to the space station at a reasonable price, as commercial partners are expected to make their own significant investments.

As of October 31, 2011, NASA has used funded Space Act agreements to provide industry partners with \$833.1 million for completion of developmental milestones, with the aim of potentially procuring crew (i.e., transporting astronauts) and cargo transportation services to the space station. Partners can collectively earn another \$248.3 million under these agreements through the first half of 2012. It is important that NASA have strong internal controls in place to ensure proper use and management of funded Space Act agreements because they (1) permit considerable latitude by agencies and companies in negotiating agreement terms and (2) may not include the same oversight requirements found in traditional FAR-governed contracts.<sup>5</sup> NASA has established policies and guidance for implementing agreements under its other transaction authority, specifically *NASA Policy Directive 1050.11, Authority to Enter into Space Act Agreements* and *NASA Advisory Implementing Instruction 1050-1A, Space Act Agreements Guide*.<sup>6</sup> In this context, you asked us to evaluate the extent to which NASA's controls ensure the agency appropriately manages funded Space Act agreements and enters into funded Space Act agreements only

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<sup>3</sup> Quality assurance requirements ensure that supplies and services acquired under a government contract conform to the contract's quality and quantity requirements. FAR Part 46. See for example, FAR Clauses 52.246-4, Inspection of Services—Fixed Price and 52.246-5, Inspection of Services—Cost Reimbursement.

<sup>4</sup> NASA Policy Directive 1050.11, *Authority to Enter into Space Act Agreements* (Dec. 23, 2008). FAR, 48 C.F.R. ch. 1 (2011).

<sup>5</sup> NASA's Inspector General issued a report on June 30, 2011 that discussed challenges that NASA must pay particular attention to in its decision-making process for determining the acquisition instrument for future rounds of its commercial crew efforts. NASA Inspector General, *NASA's Challenges Certifying and Acquiring Commercial Crew Transportation Services*, IG-11-022 (June 30, 2011).

<sup>6</sup> According to NASA's Office of General Counsel, the chapter on funded Space Act agreements found in prior versions of the *Space Act Agreements Guide* has been deleted from the most recent one, dated June 10, 2011, as the information it contained was out of date and inconsistent with the agency's current practice. New guidance relating to funded Space Act agreements is forthcoming. For the purposes of this report, unless otherwise noted, when we refer to NASA guidance we are referring to the current NASA Space Act Agreements Guide, NASA Advisory Implementing Instruction 1050-1B (June 10, 2011).

when its objectives cannot be achieved through any other agreement instrument, such as a federal procurement contract.

This letter is the third based on your request to review NASA's use of Space Act agreements. The previous two letters dealt with NASA's use of reimbursable Space Act agreements.<sup>7</sup> We have also testified recently on NASA's Commercial Orbital Transportation Services (COTS) program, which has been executed under funded Space Act agreements.<sup>8</sup> COTS is focused on supporting and stimulating the development of a commercial market for space transportation, from which NASA could potentially acquire cargo transportation services (e.g., delivery of supplies to maintain the space station and equipment to conduct research).

### **Scope and Methodology**

To determine the extent to which NASA's internal controls ensure proper use and management of funded Space Act agreements, we reviewed federal laws, NASA policies and procedures for funded Space Act agreements, NASA's broader agency acquisition and risk management policies, and GAO's *Standards for Internal Control in the Federal Government*.<sup>9</sup> We compared NASA's controls as outlined in agency policies and guidance with controls we found relevant in GAO's Standards, specifically those associated with delegation of authority, separation of duties, risk assessment, documentation, and training. We also reviewed NASA planning documents related to the agency's commercial cargo and crew capability development efforts including instrument selection papers and acquisition strategy documents. In addition, we reviewed laws, regulations, and policies relating to other transaction authority at the Department of Defense (DOD) and Department of Homeland Security (DHS) since these agencies have also been granted other transaction authority by Congress. We conducted interviews with NASA officials in its Office of General Counsel, and Human Exploration and Operations Mission Directorate regarding their approach for using funded Space Act agreements and their internal controls for managing these agreements, and with DOD and DHS procurement officials regarding their use of other transaction authority.

We conducted this performance audit from July 2011 to October 2011 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.

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<sup>7</sup> GAO, *Training Necessary to Address Data Reliability Issues in NASA Agreement Database and to Minimize Potential Competition with Commercial Sector*, GAO-11-552R (Washington, D.C.: May 26, 2011); GAO, *Reimbursable Space Act Agreements: NASA Generally Adhering to Fair Reimbursement Controls, but Guidance on Waived Cost Justifications Needs Refinement*, GAO-11-553R (Washington, D.C.: May 26, 2011).

<sup>8</sup> GAO, *Commercial Launch Vehicles: NASA Taking Steps to Manage Delays and Risks*, GAO-11-692T (Washington, D.C.: May 26, 2011).

<sup>9</sup> GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November, 1999).

## Summary

In accordance with GAO's *Standards for Internal Control in the Federal Government*, NASA policy and guidance provide internal controls for certain aspects of using and managing funded Space Act agreements, such as separation of duties and delegation of authority. For example, NASA separates duties associated with authorizing, managing, and reviewing funded Space Act agreements.

According to GAO's *Standards for Internal Control in the Federal Government*, risk assessment is also an important control for ensuring programmatic objectives can be met, and NASA policy and guidance provide for varying levels of risk assessment. NASA's Space Act agreement policy and guidance provide controls for risk assessment related to reasonableness of cost estimates and whether or not a Space Act agreement is the appropriate legal instrument, but do not require specific documentation related to these assessments, as GAO's *Standards for Internal Control in the Federal Government* call for. Other risks that are traditionally assessed when making programmatic decisions, including safety and technical risks, for example, are not addressed in NASA's Space Act agreement policy. According to NASA, once it becomes clear that the agency can appropriately use a funded Space Act agreement for a given initiative, it is not necessary to assess such additional risks because these are borne by the agreement partner. When appropriate use of a funded Space Act agreement is less definitive based on programmatic objectives, according to NASA additional risks such as safety and technical risks are addressed through use of the agency's strategic acquisition approach and related policies. It is not always clear, however, when and if the objectives of a program drive the need to follow NASA's strategic acquisition approach and assess additional programmatic risks.

Finally, though federal standards for internal control highlight the importance of training to maintaining competence, NASA does not require or offer formal training for individuals responsible for managing funded Space Act agreements. For its Commercial Crew program, NASA did develop and document a process to guide program officials through procedures associated with its agreements. Although the documented process is a positive step for the Commercial Crew program, given the unique nature of funded Space Act agreements and the judgment that can be executed by agreement managers, training could help ensure that future agreements are executed appropriately. We are recommending that NASA incorporate additional internal controls relating to documentation and training in its policy and guidance for funded Space Act agreements, and that NASA clarify if, how, and to what extent agency officials should refer to NASA's broader acquisition and risk management policies when considering use of a funded Space Act agreement. Commenting on a draft of this report, NASA concurred with our recommendations.

## Background

NASA uses funded Space Act agreements to invest government funds and tailor the level of involvement by the government in sharing technical expertise to stimulate development of commercial capabilities, when the result may not provide a direct benefit to the agency. As such, in 2005 NASA established the COTS program to develop and demonstrate

commercial cargo transport capabilities.<sup>10</sup> Under this program, NASA currently has funded Space Act agreements with Space Exploration Technologies Corporation (SpaceX) and Orbital Sciences Corporation (Orbital). Upon successful completion of all agreement milestones, SpaceX and Orbital will have received \$396 million and \$288 million, respectively.<sup>11</sup>

In 2010, NASA entered into similarly structured funded Space Act agreements with five companies to stimulate development and demonstration of commercial human spaceflight capabilities. Under this Commercial Crew Development effort (CCDev 1), NASA awarded Blue Origin, The Boeing Company (Boeing), Paragon Space Development Corporation, Sierra Nevada Corporation (Sierra Nevada), and United Launch Alliance agreements to further establish vehicle designs and develop and test key technologies and subsystem concepts. Those agreements ended earlier this year, with the companies collectively earning approximately \$50 million. NASA subsequently awarded a second round of funded Space Act agreements (CCDev 2), worth nearly \$270 million, to Blue Origin, Boeing, Sierra Nevada, and SpaceX. NASA recently provided its procurement strategy for the remaining phases of the commercial crew effort to Congress for its review.<sup>12</sup>

Since 1958, other federal agencies including the Department of Defense<sup>13</sup> (DOD) and the Department of Homeland Security<sup>14</sup> (DHS) have also been granted other transaction authority. Unlike NASA's, however, DOD's and DHS's statutes explicitly authorize these agencies to develop and acquire prototypes for the direct benefit of their departments.<sup>15</sup> NASA's statute does not provide this authority. In implementing its other transaction authority, NASA must comply with the Federal Grants and Cooperative Agreements Act of 1977 (Chiles Act).<sup>16</sup> This act outlines the principal purposes of various agreement instruments according to the relationships they reflect between participants, as well as the level of involvement between the agency and participant. For example, a procurement contract must be used when the principal purpose of the instrument is to acquire property or services for the direct benefit of the government, or when the agency decides that in a specific instance its use is appropriate; grants and cooperative agreements are used when

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<sup>10</sup> GAO, *Commercial Partners Are Making Progress but Face Aggressive Schedules to Demonstrate Critical Space Station Cargo Transport Capabilities*, GAO-09-618 (Washington, D.C.: June 16, 2009).

<sup>11</sup> NASA initially entered into COTS agreements with SpaceX and Rocketplane Kistler; however, in October 2007 NASA terminated its agreement with Rocketplane Kistler after the company failed to complete financial and technical milestones; the company had earned \$32 million for milestones completed up to that point. Orbital was awarded its COTS agreement in February 2008.

<sup>12</sup> NASA submitted a procurement system review which includes its acquisition strategy for its next commercial crew phases to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Science, Space and Technology of the House of Representatives on September 16, 2011. GAO is required to assess NASA's strategy and plans and report to these committees within 90 days after NASA's submission. National Aeronautics and Space Administration Authorization Act of 2010, Pub. L. No. 111-267, § 403.

<sup>13</sup> National Defense Authorization Act for Fiscal Years 1990 and 1991, Pub. L. No. 101-189, § 251 (1989).

<sup>14</sup> Homeland Security Act of 2002, Pub. L. No. 107-296, § 831.

<sup>15</sup> 10 U.S.C. § 2371 and 6 U.S.C. § 391.

<sup>16</sup> Pub. L. No. 95-224 (1978) (codified at 31 U.S.C. § 6301 et seq.).

the principal purpose of the relationship is to transfer something of value to a recipient to accomplish a public purpose of support or stimulation, with varying levels of involvement from the government agency. Because NASA must comply with the Chiles Act, consideration of provisions of this Act has been a key element of NASA's recent decisions to use funded Space Act agreements for its COTS and CCDev efforts.

## **NASA Policy Addresses Most Key Internal Controls but Some Could Be Strengthened and Clarified**

### NASA Space Act Agreements Policy Provides Internal Controls for Separation of Duties

Consistent with GAO's *Standards for Internal Control in the Federal Government*, NASA's policy regarding funded Space Act agreements provides internal controls for the separation of duties pertaining to authorizing, managing, and reviewing funded agreements. According to these internal controls, in order to reduce the risk of error or fraud, responsibilities and key duties should be divided among different positions such as authorizing, processing, and reviewing transactions. Separation of duties is important because work responsibilities should be separated so that one individual does not control all critical stages of a process. In addition, dividing duties between various individuals diminishes the likelihood that errors and wrongful acts will go undetected, because the activities of one group or individual will serve as a check on the activities of the other.

NASA's policy regarding funded Space Act agreements is in line with this standard. For example, agreement officers manage and track funded agreements as they go through the approval process to ensure they proceed in a timely and appropriate manner. For headquarters agreements, the Office of the Chief Financial Officer is responsible for preparing and reviewing cost estimates of funding and any other NASA contributions to be committed under the agreement. The signing official<sup>17</sup> is given the responsibility of executing the agreement as well as ensuring that NASA's proposed contribution is fair and reasonable compared to NASA program risks, corresponding benefits to NASA, and the funding and resources to be contributed by the agreement partner. Lastly, NASA policies specify the agency general counsel's responsibilities associated with reviewing funded Space Act agreements before execution to ensure compliance with applicable statutes, regulations, and policies. Table 1 below identifies how various duties were separated relating to review, authorization and management for the funded agreements we reviewed.

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<sup>17</sup> According to agency policy, a signing official is a NASA employee delegated the responsibility to execute agreements for the agency. In the case of funded agreements, individuals delegated such authority may be one level below the official authorized to execute, amend, and terminate such agreements (authorizing officials include mission directorate associate administrators, officials-in-charge of headquarters offices, center directors, and the manager of the NASA Management Office—Jet Propulsion Laboratory, depending on where the agreement is initiated).

**Table 1: Separation of Duties for Executing and Managing Funded Space Act Agreements.**

Role	Duties			Responsibilities
	Review	Authorize	Manage	
Agreement Officer (i.e., contracting officer)			X	Conducting daily transactions; tracking agreement through approval process
Chief Financial Officer	X			Preparing and reviewing cost estimates
General Counsel	X			Reviewing the use of funded agreement to ensure compliance with statutes, regulations, and policies
Signing Official (e.g., Mission Directorate Associate Administrator)		X		Executing agreement and determining NASA's contribution is fair and reasonable

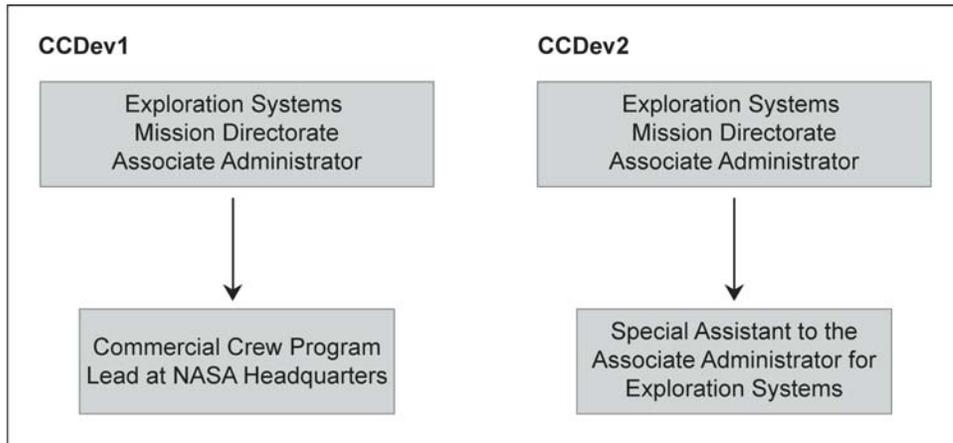
Source: NASA.

Note: Data are from NASA Policy Directive 1050.11.

**NASA Space Act Agreements Policy Provides Internal Controls for Delegation of Authority**

NASA policy also provides appropriate internal controls for delegation of authority, as it relates to funded Space Act agreements. According to GAO’s *Standards for Internal Control in the Federal Government*, transactions and other significant events should be authorized and executed only by persons acting within the scope of their authority, and this authority should be clearly communicated to managers and employees. These standards state the control environment is often affected by the manner in which the agency delegates authority and responsibility throughout the agency. Delegation covers authority and responsibility for operating activities, reporting relationships, and protocols for authorizations. For funded Space Act agreements, NASA policy states that the delegation of authority to execute, amend, and terminate funded Space Act agreements can only be delegated one level below the authorized official; delegation authority must be in writing and indicate the extent of the delegation. For example, the policy states that either the mission directorate associate administrators, the officials in charge of headquarters offices, or the directors of NASA centers—depending on where the agreement is initiated—have the responsibility for the negotiation, execution, amendment, and termination of funded agreements. Further, it states that these individuals may delegate agreement execution authority to signing officials. Figure 1 provides an example of the delegation of authority as exercised in accordance with NASA’s policy in CCDev 1 and CCDev 2.

**Figure 1: Delegation of Authority on CCDev 1 and CCDev 2**



Source: NASA.

Note: The Exploration Systems Mission Directorate is now the Human Exploration and Operations Mission Directorate.

NASA Policy and Guidance Provide Controls for Varying Levels of Risk Assessment, but When, If, and the Extent to Which These Controls Are to Be Followed Is Not Always Clear and Documentation Requirements Could Be Strengthened

In accordance with GAO's *Standards for Internal Control in the Federal Government*, NASA's Space Act agreement policy provides internal controls for conducting an assessment of risks, though the policy is limited in the types of risks it covers and does not require documentation of such assessments. GAO's standards direct agencies to identify and analyze risks to meeting their objectives. Analysis may include:

- estimating the risk's significance;
- assessing the likelihood for the risk to occur; and
- deciding how to manage the risks and what specific actions to undertake.

Additionally, these standards state that internal controls, transactions, and important events should be clearly documented and such documentation should be readily available for examination.

NASA's Space Act agreement policy and guidance require assessment of risks associated with the fair and reasonableness of cost estimates and whether a Space Act agreement is the appropriate legal instrument. Specifically, the policy requires the agency's chief financial officer to prepare and review cost estimates to give signing officials a basis for determining that NASA's proposed contribution is fair and reasonable. The policy requires that costs be weighed against program risks, corresponding benefit to NASA, and the funding and resources to be contributed by the agreement partner. According to the Space Act agreement policy and guidance, agency officials must also determine whether the agency objectives can be achieved through any other instrument. According to NASA and based on the documentation we reviewed, this determination includes an analysis of the Chiles Act. The policy, however, contains no specific requirements for how, and if at all, to document these assessments. As a result, different programs had varying levels of documentation of

these assessments. For example, in some cases the COTS program provided memos signed by the Chief Financial Officer asserting that estimated costs were fair and reasonable. For CCDev 1 and 2, NASA indicated that no specific documentation was developed for the cost estimates and that the information was encompassed in source selection documentation.<sup>18</sup> This documentation, however, was not prepared or reviewed by the Chief Financial Officer, as the policy directs. The absence of controls requiring clear documentation in NASA Space Act agreement policy could diminish NASA's ability to ensure that decisions associated with use of funded Space Act agreements are being consistently made and documented.

Other key risk considerations that could affect the agency's ability to meet programmatic objectives, such as safety and technical risks that generally apply to developmental programs, however, are not addressed in the Space Act agreement policy and guidance. According to NASA, the objectives of a program or project define the appropriate level and type of risk assessment necessary and inform the type of instrument used to implement the program. Agency officials stated that if program objectives are such that NASA is not procuring goods or services for its direct benefit, thereby enabling agency use of a funded Space Act agreement, assessment of additional developmental risks becomes unnecessary because they are borne primarily by NASA's agreement partners. Agency officials emphasized that in such instances NASA's risk is limited only to ensuring that its contribution of resources supports programmatic objectives. Further, according to NASA, its source selection process<sup>19</sup> for funded Space Act agreements also allows the agency to ensure that awarded agreements align with programmatic objectives.

According to NASA, where the objectives of a program are such that appropriate use of a funded Space Act agreement is less certain and involve a greater emphasis on meeting NASA's mission needs, additional risks are assessed through NASA's strategic acquisition approach and related acquisition and risk management policies.<sup>20</sup> This involves development of a strategic approach to implementing a program or project in support of NASA's long term goals and objectives. More specifically, NASA's broader acquisition and risk management policies provide controls for ensuring that other risks to meeting programmatic objectives, such as safety, technical, cost, and schedule risks, are considered as the agency formulates an acquisition strategy.

When appropriate use of a funded Space Act agreement has been clear, as was the case with the COTS and CCDev 1 and 2 programs, NASA addressed very few elements of programmatic risk in initiating these programs. For example, NASA officials stated that given the programmatic objectives of these efforts (i.e. the agency was spending funds to stimulate private sector capabilities and was not actually acquiring anything), a funded

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<sup>18</sup> The documents outline how potential partners' proposals were evaluated based on their business cases—including their financial contribution and the funding requested from NASA—and their technical approach.

<sup>19</sup> NASA uses an independent Participant Evaluation Panel to evaluate proposals, support the signing official for the funded Space Act agreement, and develop the formal selection statement for the awards.

<sup>20</sup> NASA Policy Directive 1000.5A, *Policy for NASA Acquisition* (Jan. 15, 2009, revalidated Mar. 17, 2010).

Space Act agreement was determined to be the appropriate legal instrument in each instance and risk considerations were limited primarily to the fairness and reasonableness of NASA's contributions to the efforts.<sup>21</sup> In contrast, for the next phases of its Commercial Crew effort NASA determined that meeting its space station crew transportation needs was a key program objective and, therefore, appropriate use of a funded Space Act agreement was less definite. As a result, the cost, technical, and schedule risks associated with using contracts, cooperative agreements, and funded Space Act agreements—to the extent they would affect the programmatic objectives—were all considered during the process of selecting an appropriate legal instrument for these phases. NASA also produced a risk management plan for the Commercial Crew Program as required per NASA's risk management policy. Additionally, as part of its overall risk analysis, NASA assessed risks associated with its ability to impose requirements for certifying vehicles on commercial partners (i.e., verifying that the system has met technical requirements and is safe to carry NASA crewmembers).<sup>22</sup> Through this process, the agency decided that it could not use a Space Act agreement for this effort.

We did not assess the appropriateness of NASA's decision to use or not use a funded Space Act agreement for its commercial crew and cargo efforts. Similarly, we did not assess NASA's adherence to its broader acquisition and risk management policies, because the policies do not explicitly apply to funded Space Act agreements. In practice, NASA has used the basic framework provided by its broader acquisition and risk management policies in guiding some decisions that have contemplated the use of a funded Space Act agreement. It remains unclear, however, when and if program managers need to use this framework when a funded Space Act Agreement is being considered among a number of instrument options. Lack of clear direction for using relevant agency policies could result in insufficient assessment and consideration of programmatic risks during formulation of an overall strategy that includes consideration of the use of a funded Space Act agreement.

#### NASA Policy and Guidance Do Not Require Training for Space Act Agreement Officers

NASA policy and guidance do not require training for officials involved in executing funded Space Act agreements. GAO's *Standards for Internal Control in the Federal Government* stipulate that all personnel need to possess and maintain a level of competence that allows them to accomplish their assigned duties as well as understand the importance of developing and implementing good internal controls. Additionally, management needs to identify appropriate knowledge and skills needed for various jobs and provide appropriate training. NASA's policy and past and current guidance regarding funded Space Act agreements does not require agreement officers, who are responsible for managing the agreements on a daily basis, to attend training prior to exercising their responsibilities. A

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<sup>21</sup> NASA's authorization act for fiscal year 2008 directed the agency to use competed, funded Space Act agreements for its initial commercial crew effort (CCDev 1). Similarly, in fiscal year 2011 NASA was operating under a continuing resolution and restrictions on starting new programs; however, the agency's authorization act for fiscal year 2010 provided for a continuation of NASA's existing commercial crew effort. Thus, CCDev 2 agreements were awarded as a follow-on effort to CCDev 1.

<sup>22</sup> According to NASA officials, these additional risks were considered for the next phase of the commercial crew effort in connection with how use of a funded Space Act agreement factored into NASA's overall acquisition strategy—specifically the eventual need to certify commercial systems for human spaceflight. This was not the case with CCDev 1 and 2 because those efforts did not involve development of fully integrated launch and spaceflight systems intended to carry NASA crewmembers—they were focused on maturing technologies and subsystem designs.

NASA official told us that they do not require or offer formal training for funded agreements because they are used infrequently.

While not providing training, the Commercial Crew program has developed a documented process to guide agreement officers<sup>23</sup> in fulfilling their duties relative to these specific agreements. For example, a specific milestone payment process was established for agreements executed under the commercial crew program. Additionally, direction is provided to agreement officers to manage funded agreements through knowledge transfer from earlier agreement officers, as well as support from the Office of General Counsel. For example, officials at the Johnson Space Center jointly managed aspects of the commercial crew effort for a time to assist their counterparts at the Kennedy Space Center who would be taking over responsibility for the program. This was intended to facilitate an effective transfer of knowledge between the centers for agreement officer support and other program functions.

We acknowledge that these steps have value but, as we have previously reported, the unique nature of other transaction agreements requires staff with experience in planning and conducting research and development acquisitions, strong business acumen, and sound judgment to enable them to operate in a relatively unstructured business environment.<sup>24</sup> Although NASA's other transaction authority is not bounded by the same legal framework that applies to DHS's authority, DHS policy, for example, requires its other transaction contracting officers to hold a certification for the most sophisticated and complex contracting activities and to take training on the use of this authority. A documented process for one program may not necessarily provide those managing these agreements with the skill set necessary to manage the flexibility and exert appropriate judgment when executing funded Space Act agreements in general. As a result, the lack of required targeted training for use of funded Space Act agreements could diminish NASA's ability to ensure that such agreements are being properly executed.

## Conclusions

In recent years, NASA has for the first time used its other transaction authority to help fund development of large-scale commercial space transportation systems. In light of this unprecedented use and the fact that these agreements are not subject to many of the laws that apply to traditional contracts executed under the FAR, it is important that NASA ensure this authority is used and managed appropriately. Internal controls are a key element of effective management and help to facilitate good program outcomes and foster accountability. NASA's policies provide for such controls regarding separation of duties and delegation of authority, as well as for conducting risk assessments associated with the decision to use funded Space Act agreements. However, there are no documentation requirements associated with these assessments. Although NASA considers its strategic acquisition framework and related policies the mechanism by which additional risks are

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<sup>23</sup> A NASA official explained that agreement officers are warranted contracting officers who are permitted to commit government funds under agreements. Contracting officers obtain warrants as a certificate of their authority to enter into, administer, or terminate contracts and make related determinations and findings. Contracting officers may bind the government only to the extent of the authority delegated to them.

<sup>24</sup> GAO, *Department of Homeland Security: Improvements Could Further Enhance Ability to Acquire Innovative Technologies Using Other Transaction Authority*, GAO-08-1088 (Washington, D.C.: Sept. 23, 2008).

considered when use of a funded Space Act agreement is being considered among a range of instruments, it is not clear from this framework and accompanying policies if, how, or the extent to which they apply in such cases. As a result, it may be difficult for NASA to ensure these policies are appropriately followed for future efforts that contemplate the use of a funded Space Act agreement along with other instrument types. Additionally, while a formal process is now in place for administering NASA's commercial crew effort, the agency does not require or offer training specific to the use of funded Space Act agreements. This could affect NASA's ability to ensure this authority is used appropriately and effectively.

### **Recommendations for Executive Action**

To continue to ensure funded Space Act agreements are used and managed appropriately, we recommend that the Administrator of NASA direct the appropriate offices to update the agency's policies and guidance to:

- Incorporate controls for documenting, at a minimum, the agency's decision to use a funded Space Act agreement and its analysis supporting the determination that no other instrument is feasible, as well as the agency's assessment of the fairness and reasonableness of the costs it is contributing to an effort conducted using a funded Space Act agreement;
- Clarify if, how, and to what extent NASA officials are to refer to the agency's broader acquisition and risk management policies when contemplating use of a funded Space Act agreement; and
- Ensure training is provided to officials involved in executing funded Space Act agreements, when appropriate.

### **Agency Comments**

We provided a copy of the draft report to NASA for comment, and the agency agreed with our overall findings and concurred with our recommendations. In commenting on the draft, NASA indicated that the agency has plans to take actions to address the issues we raised. For example, NASA stated that it will update its guidance to ensure a written determination on the proposed use of funded Space Act agreements, including appropriate analysis supporting the determination, is required prior to the initiation of any funded Space Act Agreement activities. Additionally, the agency clarified that current policy regarding cost estimates for funded Space Act agreements assumes agreements are handled independently with a defined level of funding. In practice, however, funded agreements have been awarded using a competitive process with the signing official authorized to evaluate proposals and make awards based on agency objectives and overall funding limits. NASA said the policy will be updated to reflect this practice. NASA stated that the agency's acquisition management policy will be updated to include the proposed use of a funded Space Act agreement as an element in the development of a strategy for implementing its mission. Finally, NASA said it will develop appropriate guidance on the roles and responsibilities of agreements officers and will implement the guidance through training all agreements officers assigned to support funded Space Act agreements. NASA also provided technical comments that we have incorporated as appropriate.

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We are sending copies of this report to interested congressional committees. In addition, the report will be available at no charge on GAO's website at <http://www.gao.gov>.

If you or your staff have any questions regarding this report, please contact me at (202) 512-4841 or [chaplainc@gao.gov](mailto:chaplainc@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this letter. Key contributors to this report were Shelby S. Oakley, Assistant Director; Andrew Redd; Laura Greifner; Jean McSween; Kenneth Patton; Megan Porter; and Alyssa Weir.



Cristina T. Chaplain  
Director  
Acquisition and Sourcing Management

Enclosure

## Enclosure

### Comments from the National Aeronautics and Space Administration

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



NOV 10 2011

Reply to Attn of: Office of the General Counsel

Cristina Chaplain  
Director  
Acquisition and Sourcing Management  
United States Government Accountability Office  
Washington, DC 20548

Dear Ms. Chaplain:

The National Aeronautics and Space Administration (NASA) appreciates the opportunity to review and comment on the Government Accountability Office (GAO) draft report entitled, "NASA: Key Controls NASA Employs to Guide Use and Management of Funded Space Act Agreements are Generally Sufficient, but Some Could be Strengthened and Clarified," (GAO-12-230R). NASA is committed to continuous improvement of its process and controls for development of acquisition strategy, including its use of funded Space Act Agreements when appropriate. NASA values the open and constructive communications between the NASA and GAO teams during each phase of this engagement.

NASA accepts and concurs on all recommendations in the draft report for improving controls associated with the use and management of funded Space Act Agreements. NASA's goal is to implement all recommendations during FY2012.

In the draft report, GAO provides three recommendations to the NASA Administrator. Our responses to GAO's recommendations, along with preliminary plans of action intended to implement the recommendations follow.

**Recommendation 1:** To ensure funded Space Act Agreements are used and managed appropriately, we recommend that the Administrator of NASA direct the Office of the General Counsel to update the agency's policies and guidance to incorporate controls for documenting, at a minimum, the agency's decision to use a funded Space Act agreement and its analysis supporting the determination that no other instrument is feasible, as well as the agency's assessment of the fairness and reasonableness of the costs it is contributing to an effort conducted using a funded Space Act agreement.

**Management's Response:** Concur. Under NASA Policy Directive (NPD) 1000.3, the NASA Office of General Counsel is responsible for administering policy and guidance relating to the use of NASA's "other transactions" authority.<sup>1</sup> The determination that use of a

<sup>1</sup> See NPD 1000.3D at 4.12.2.1(h).

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funded Space Act Agreement is more appropriate to support the defined programmatic objectives than a contract, grant, or cooperative agreement rests on a sound legal analysis of the relevant authorities in light of the stated programmatic objectives. NASA will update its guidance to ensure, consistent with NPD 1000.3, a written determination by the Office of General Counsel on the proposed use of funded Space Act Agreements, including appropriate analysis supporting the determination, is required prior to the initiation of any funded Space Act Agreement activities.

Under NASA's current version of NPD 1050.11, Authority to Enter Into Space Act Agreements, the NASA CFO (for Headquarters Agreements) or Center CFO (for Center Agreements) is responsible for preparing and reviewing a cost estimate of funding and, as appropriate, the value of any other NASA resources to be committed under the Agreement so that the Agreement Signing Official has a basis for determining that the proposed NASA contribution is fair and reasonable. This NPD assumes that each agreement is handled independently with a defined level of funding. NASA's current policy and practice is to award all funded Space Act Agreements through an open, competitive process.<sup>2</sup> The role of the NASA CFO is to support the budget planning process that informs the development of the Agency's acquisition strategy, thereby authorizing funding for the program or project eventually implemented through the use of funded Space Act Agreements. NASA will clarify its current written policy to reflect this current practice. Once funding is authorized for the use of funded Space Act Agreements, NASA uses a competitive process that includes an evaluation and review of the proposed partnerships. In such case the Signing Official, as the selection authority for the competition, has authority to evaluate the proposed partnerships and, in the exercise of reasonable discretion, make those awards which best meet the Agency's objectives within the funding limits set for the program.

**Recommendation 2:** To ensure funded Space Act Agreements are used and managed appropriately, we recommend that the Administrator of NASA direct the Office of the General Counsel to update the agency's policies and guidance to clarify if, how, and to what extent NASA officials are to refer to the agency's broader acquisition and risk management policies when contemplating use of a funded Space Act agreement.

**Management's Response:** Concur. The use of funded Space Act Agreements is one approach the Agency may consider in developing a strategy to support NASA's goals and objectives. As such, considerations relating to use of funded Space Act Agreements are appropriately addressed in the context of NASA's overall acquisition strategy development processes. NPD 1000.5, Policy for NASA Acquisition, is the governing document for the Agency processes for obtaining the systems, research, services, construction and supplies the Agency needs to fulfill its mission. In addition to procurement activities, NASA, in the accomplishment of its missions, may provide financial assistance in the form of grants or cooperative agreements to foster activities that advance the objectives and goals of the Agency. The development of strategy for the use of grants and cooperative agreements is

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<sup>2</sup> The Competition in Contracting Act, 41 U.S.C. 253, does not apply to NASA's use of its "other transaction" authority. NASA currently chooses as a matter of policy to use a competitive process to award funded Space Act Agreements.

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also covered by NPD 1000.5. Finally, NPD 1000.5 also defines NASA's process for assessing risks associated with these different strategies for achieving NASA's mission.

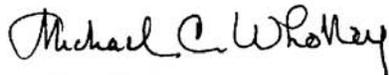
Currently, NPD 1000.5 does not address those situations where support for others is provided under funded Space Act Agreements. The Office of General Counsel will work with appropriate Headquarters offices to update the processes and requirements contained in NPD 1000.5 so that the policy also covers the proposed use of funded Space Act Agreements as an element of the Agency's development of appropriate strategy for implementing its mission.

**Recommendation 3:** To ensure funded Space Act Agreements are used and managed appropriately, we recommend that the Administrator of NASA direct the Office of the General Counsel to update the agency's policies and guidance to ensure training is provided to officials involved in executing funded Space Act agreements, when appropriate.

**Management's Response:** Concur. NASA agrees that the role of the Agreements Officer in supporting the administration of funded Space Act Agreement is inadequately documented. The NASA Office of General Counsel will develop appropriate guidance on the roles and responsibilities of Agreements Officers and will implement the guidance through training all Agreements Officers assigned to support funded Space Act Agreements.

Thank you for the opportunity to comment on this draft report. If you have any questions or require additional information, please contact Richard McCarthy at (202) 358-2031.

Sincerely,



Michael Wholley  
General Counsel

(120971)

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