**NATIONAL AERONAUTICS AND SPACE ADMINISTRATION**



**FY 2012 Service Contract Inventory Analysis**

**December 2013**

**Office of Procurement**

**NASA Headquarters**

**Washington, DC 20546**

Background

The National Aeronautics and Space Administration (NASA) is the United States government agency that is responsible for the nation’s civilian space program, as well as aeronautics and aerospace research. Its mission is to drive advances in science, technology, aeronautics, and exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.

Since its inception, NASA has accomplished its mission through the combined efforts of civil service employees and a far larger body of scientific, technical, and support personnel sustained through contracts, grants, and other agreements with industry and academia. One of NASA’s overarching strategies to strengthen the Agency and support U.S. competitiveness on a global scale is to invest in next-generation technologies and approaches to spur innovation. This would not be possible without NASA’s historically close ties with the private and academic sectors, and today NASA continues to contract with the private sector for most of the products and services it uses.

Approximately 13.5 percent of the Agency’s authorized funding is expended on full time, permanent civil service salaries and benefits. The remainder is dispersed widely in the national economy through NASA contracts, grants, and other agreements. Through these expenditures NASA acquires a variety of scientific, technical, and support services for the civilian aeronautics and space programs to achieve its six strategic goals:

1. Extend and sustain human activities across the solar system.
2. Expand scientific understanding of the Earth and the universe in which we live.
3. Create the innovative new space technologies for our exploration, science, and economic future.
4. Advance aeronautics research for societal benefit.
5. Enable program and institutional capabilities to conduct NASA’s aeronautics and space activities.
6. Share NASA with the public, educators, and students to provide opportunities to participate in our Mission, foster innovation, and contribute to a strong national economy.

NASA conducts its work through six principal organizations:

* Human Exploration and Operations: develops the systems and capabilities required for human exploration of space beyond low Earth orbit and for U.S. crew vehicle access to the International Space Station; sustains and operates the International Space Station; develops and implements future space launch complex upgrades; manages rocket testing capabilities; acquires launch vehicles (Atlas, Delta, etc. for all the Agency), maintains secure and dependable communications to ground stations between platforms across the solar system; and provides the necessary training and supports health and safety of the nation’s astronauts.
* Science: conducts scientific exploration enabled by the use of space observatories and space probes that view the Earth from space, observe and visit other bodies in the solar system and gaze into the galaxy and beyond.
* Aeronautics: expands the boundaries of aeronautical knowledge for the benefit of the Nation through partnerships with academia, industry, and other government agencies, helping to foster a collaborative research environment in which ideas and knowledge are exchanged across multiple communities; ensures the future competitiveness of the nation’s aviation industry.
* Space Technology: develops and demonstrates advanced space systems concepts and technologies enabling new approaches to achieving NASA’s current mission set and future missions not feasible today.
* Education: strengthens NASA and the nation’s future workforce; attracts and retains students in science, technology, engineering and mathematics disciplines; engages Americans in NASA’s mission.
* Mission Support: provides critical mission support capabilities necessary to maintain the operation and administration of the Agency that cannot be directly aligned to specific program or project requirements; sustains institutional capabilities for supporting NASA’s mission portfolio by leveraging resources to meet mission needs, establishing Agency-wide capabilities, and providing institutional checks and balances;

In the next 20 years, while continuing its science and aeronautics research, NASA will be laying the groundwork for sending humans not only beyond Earth’s orbit, but farther into space than humans have ever been before. NASA has also studying an asteroid redirect mission, which will identify and capture a near Earth asteroid and place it into a lunar orbit. Given its dynamic and ambitious mission, NASA carefully balances the utilization of civil service expertise and resources with the external capabilities available through acquisitions that are often unique and complex. To meet its high risk mission, NASA requires the use of flexible contract vehicles to facilitate critical research, leading edge innovation, and development of complex hardware.

Introduction

Section 743 of Division C of the Fiscal Year (FY) 2010 Consolidated Appropriations Act, P.L. 111-117, requires civilian agencies to prepare an annual inventory of their service contracts. NASA submitted and published its FY 2012 Service Contract Inventory (SCI) as required and in accordance with OMB issued guidance dated December 9, 2011. In addition agencies are to:

* perform an analysis of the data in their inventories for the purpose of determining if contract labor is being used in an appropriate and effective manner, and
* determine if the mix of federal employees and contractors in the agency is effectively balanced.

In accordance with the FY 2011 OMB guidance, which remained in effect for the 2012 Inventory, each agency was asked to identify the Product Service Codes (PSCs) on which they planned to conduct further analysis. When choosing these functions, agencies were asked to not identify functions that were previously the subject of a focused analysis unless additional analysis of those functions was necessary. Agencies were encouraged to reflect on insight gained and lessons learned from its multi-sector workforce pilots, analysis of the FY 2011 inventory, the initiative to reduce spending on management support service contracts, and agency analysis of its FAIR Act Inventory to help guide its decision.

On December 4, 2012 NASA submitted to OFPP its planned PSCs for analysis; AR12 R&D Space - Applied Research, M192 Operations of Test Buildings, and R408 Program Management Support. OMB concurred with NASA’s proposed PSCs and the agency’s intent to examine these PSCs was publicly posted on February 12, 2013. The table below lists the FY12 dollars obligated against those PSCs and a brief description of the selection rationale.

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| **PSC** | **Product or Service Description** | **Dollars Obligated in FY 2012** | **Rationale for Selection** |
| AR12 | R&D Space - Applied Research | $66,567,579 | PSC selected because it has the potential for personal services and inherently governmental work to be performed by contractors. PSC also has potential to cover some NASA critical functions. |
| M192 | Operations of Test Buildings | $36,741,752 | PSC selected because it has the potential for personal services and inherently governmental work to be performed by contractors. PSC also has potential to cover some NASA critical functions. |
| R408 | Program Management Support | $171,148,320 | PSC selected because it has the potential for personal services and inherently governmental work to be performed by contractors. PSC also has potential to cover some NASA critical functions. |

The OMB guidance also requested a pilot comparison or “crosswalk” between the SCI and the FAIR Act Inventory be attempted for the chosen PSCs. The SCI captures what functions are contracted out by an agency. The FAIR Act Inventory captures the composition of the internal civil service workforce. By comparing the results of the two initiatives an agency can review, in a comprehensive manner, how it accomplishes particular agency functions and determine if the chosen approach is most effective. To complete the requested SCI/FAIR Act crosswalk, NASA requested in its 2013 FAIR Act data call for centers to mark if the selected PSCs for analysis apply to the Federal Full Time Equivalents (FTE) listed. The Service Contract Inventory coding, which is based by industry, and FAIR Act coding, which is based on specific work functions, do not precisely correspond but there are instances where in-house functions perform similar work to a contracted function. For example, NASA employs engineers to perform engineering development functions. NASA also contracts with firms to perform engineering development functions. In this situation a center would identify the NASA internal engineers as being associated with PSC AD24.

Analysis

NASA conducted its SCI analysis in accordance with section 743(e) FY 2010 Consolidated Appropriations Act to ensure that:

* Each contract in the inventory that is a personal services contract has been entered into, and is being performed, in accordance with applicable laws and regulations;
* The agency is giving special management attention, as set forth in Federal Acquisition Regulation (FAR) 37.114, to functions that are closely associated with inherently governmental functions;
* The agency is not using contractor employees to perform inherently governmental functions;
* The agency has specific safeguards and monitoring systems in place to ensure that work being performed by contractors has not changed or expanded during performance to become an inherently governmental function;
* The agency is not using contractor employees to perform critical functions in such a way that could affect the ability of the agency to maintain control of its mission and operations; and
* There are sufficient internal agency resources to manage and oversee contracts effectively.

A highly experienced, multifunctional team was assigned to carry out the analysis. The team members possessed broad knowledge of NASA operations as well as Federal service contract requirements and procedures. A mixture of professional disciplines is vital to complete a meaningful analysis since the OMB guidance requires an understanding of the functions being performed, how they relate to the agency’s core mission, and what constitutes effective contract management.

***Methodology***

The following methodology was carried out by a team of NASA procurement and subject matter experts to support the analysis.

Step One: Determine the analysis sample. For NASA’s selected PSCs (AR12 R&D Space - Applied Research, M192 Operations of Test Buildings, and R408 Program Management) the universe of contracts falling under these PSCs was identified. From this list contracts were selected representing a mixture of NASA centers and dollar levels. A strict random sample was not utilized to ensure greater location and contract size diversity.

Step Two: For the identified contracts, collect supporting documentation. This included:

* Conformed statements of work (SOW) for the basic contract as they exist today, including any supporting documentation or details
* Specific Task Orders (and their SOWs) based on dollar size and/or importance
* Contractor Financial Management Reports (NASA Form 533) when required
* Relevant contract modifications
* Annual obligation estimates
* Estimated staffing levels

Step Three: Each SCI team member individually performed a detailed review of the collected contract documentation.

Step Four: The team members met to share their analyses and collectively discuss their thoughts.

Step Five: Based on the initial analyses, the review team conducted interviews and follow-on discussions with members of the acquisition teams managing the selected contracts. The acquisition teams included the contracting officer (CO), contracting officer representative (COR), and occasionally requirements officials. The interview questions addressed:

* Annual obligations and staffing levels estimates
* Completeness of contract requirements and methods for assigning work
* Contract funding mechanism(s)
* Contract change implementation processes
* Inherently governmental functions performed
* Functions closely related to inherently governmental functions and oversight methods
* Critical functions performed
* COR organization, placement, training, and certification
* Location of work performed, degree of monitoring by CO, and
* Procedures used for inspecting and assessing performance

Step Six: The FAIR Act Inventory data for the three PSC codes, collected in a separate process, was analyzed to gain an understanding of NASA’s overall contractor to Federal employee mix for the selected PSCs.

Step Seven: The team performed a final data review and prepared the final report.

***AR12 R&D Space - Applied Research - $66,567,579***

AR12 was selected because this PSC has above average potential for personal services and/or inherently governmental work to be performed by the contractor. R&D work is a core mission within NASA. Due to its importance one or more R&D codes will likely be selected for in-depth analysis annually.

Five contracts were selected as the sample from this PSC. The sample value was $39,686,269, representing 59.77% of the AR12 total FY12 obligated value of $66,567,579.

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| **Contractor** | **NASA Contracting Center** | **Contract #** | **Contract Title** | **Contract Amount FY2012** |
| Emergent Space Technologies | Ames Research Center (ARC) | NNA11AB16C | Cluster Flight Algorithms and Software  | $3,767,418 |
| Ball Aerospace | Marshall Space Flight Center (MSFC) | NNM12AA79C | Green Propellant Infusion | $10,520,449 |
| Vantage Partners | Glenn Research Center (GRC) | NNC12BA01B | GESS III | $18,410,011 |
| Tybrin | Dryden Flight Research Center (DFRC) | NND08RR01B | Engineering and Technical Services for Flight R&D | $3,004,248 |
| Ball Aerospace | Langley Research Center (LaRC) | NNL09AA07B | Stratospheric Aerosol and Gas Refurbishment | $3,984,170 |
|  |  |  | Total  | $39,686,296 |

**NNA11AB16C Cluster Flight Algorithms and Software** – Contract NNA11AB16C was awarded by NASA off of a Defense Advanced Research Projects Agency (DARPA) Broad Agency Announcement (BAA). NASA agreed to partner with DARPA and award the selected research contracts due to its shared applicability with NASA research objectives. Under the BAA award process, firms propose research work to be accomplished, including a Statement of Work they have written which advances the stated BAA research objectives. Emergent’s proposal was selected for award by a peer review board. This is a traditional research contract. The contractor performs the work independently and provides the results of the research to the Government at the completion of the contract. There were no personal services, inherently governmental services, or closely associated with inherently governmental duties identified. The work performed is not considered a NASA critical function. A level II certified NASA COR was assigned and was assisted with contract oversight by two DARPA task area leads. All work is performed at the contractor’s site with the government reviewing the contractor’s progress at predetermined points.

**NNM12AA79C Green Propellant Infusion Mission** – Contract NNM12AA79C was awarded to advance the knowledge of green propellants, from Technology Readiness Level (TRL) 5 to TRL 9. No personal services, inherently governmental services, or closely associated with inherently governmental work was identified. The work performed was not considered to be a NASA critical function. A NASA Level II certified COR was appointed. All work is performed at the contractor’s site with the government reviewing the contractor’s progress at predetermined points prior to launch and in space testing.

**NNC12BA01B Glenn Engineering and Scientific Support- 3(GESS-3)** – Contract NNC12BA01B provides diverse engineering and research support at Glenn Research Center. Contract requirements include engineering support, mechanical and fluids support, avionics and electrical support, space process and experiments, communications, power and propulsion, aeropropulsion and structures, and materials. No personal services or inherently governmental services were identified. No closely associated with inherently governmental duties were identified. Many critical tasks were performed. The contractor provides the principal support for engineering, research and technology development and operations at Glenn Research Center. These are the core duties at Glenn and their successful performance is central to Glenn achieving its mission. The contract consists of approximately 220 work year equivalents (WYE). These positions are based throughout the Glenn facilities and at offsite locations.

Overseeing the work are two CORs, both level II certified. Assisting the CORs are 134 technical representatives (TR) and technical monitors (TM) placed throughout the operational areas to inspect contract performance. GRC has a government staff of over 600 individuals who work in similar occupations to the contractor workforce. With a large internal workforce they have no difficulty finding qualified CORs, TRs or TMs and would be well positioned to continue critical operations in case of a contract disruption.

**NND08RR01B Engineering and Technical Services for Flight R&D** – Contract NND08RR01B is the primary contract vehicle providing support to key Dryden functions such as the engineering support, management operations, the Chief Engineer’s Office, and the Public Affairs Office. As such, it supports both critical and closely associated to inherently governmental work. No personal services were identified. The closely associated work includes manning deputy program manager (PM) positions and supporting budgeting and scheduling functions within the program offices. Despite the deputy PM titles, the contract employees do not direct or supervise government employees. The individuals filling these positions have great technical knowledge and considerable programmatic expertise. However, the Government PM retains all formal authority. Extra care is taken by the COR organization to ensure the deputy PM duties do not extend to a point where they would constitute inherently governmental duties.

The contract included language that would improperly permit inherently governmental services. In Part 1, paragraph 5 of the SOW entitled “Purchasing” the contract provides the ability to require the contractor to purchase on behalf of the government. It states – “The Government will require the contractor to make purchases of goods and services on its behalf. Purchase requests against any task order will be submitted by the Task Order Monitor for that task order…” As written these duties appear to constitute inherently governmental duties. FAR 7.503 lists activities that are considered inherently governmental. Line (12) states

(12) In Federal procurement activities with respect to prime contracts—

(i) Determining what supplies or services are to be acquired by the Government (although an agency may give contractors authority to acquire supplies at prices within specified ranges and subject to other reasonable conditions deemed appropriate by the agency);

(ii) Participating as a voting member on any source selection boards;

(iii) Approving any contractual documents, to include documents defining requirements, incentive plans, and evaluation criteria;

(iv) Awarding contracts;

(v) Administering contracts (including ordering changes in contract performance or contract quantities, taking action based on evaluations of contractor performance, and accepting or rejecting contractor products or services);

(vi) Terminating contracts;

(vii) Determining whether contract costs are reasonable, allocable, and allowable; and

(viii) Participating as a voting member on performance evaluation boards.

Specially sections 12 (iv), (12(v), and 12(vii) are in question.

The contract management team stated the use of this contract section had ceased in 2009. They found it was inefficient and costly, with the contractor adding overhead and fee to purchase for NASA. It was nothing more than a “pass through” function. The contract management team’s decision to suspend this activity in 2009 was wise. Purchasing in this manor is inefficient and violates the prohibition on contracting out inherently governmental work. Removal of these paragraphs from the SOW in a future modification would be a prudent measure to prevent an inadvertent resumption of these activities.

Critical work is performed on the contract. Extensive support is provided to key Dryden research programs. A level II certified COR is assigned and is very accomplished working contract management issues. Assisting him are over 30 task or technical monitors. A task monitor provides general oversight of a task and the technical monitors are used when there is highly detailed work being accomplished within the task. All are formally appointed and provided training by the COR. The numerous COR, task monitors, and technical monitors provide the higher level of contract surveillance that is required when closely associated to inherently governmental work is accomplished. The individuals are well positioned to monitor the contractor’s work. During the interview with the contract management team, they indicated concern that the government maybe was overly reliant on contract support. This was a general concern on their part. However, they have not had difficulty finding technical monitors, writing the SOW or contract specifications due to lack of qualified government staff.

**NNL09AA07B Stratospheric Aerosol and Gas Refurbishment (SAGE III)** – Contract NNL09AA07B assessed and refurbished a SAGE III instrument which had been in storage. No personal services or inherently governmental services were identified. No closely associated to inherently governmental duties or critical services were found in the contract. The contractor provided the labor to assess and refit an existing spacecraft that they had originally manufactured. A certified COR and alternate COR were assigned. A single COR is adequate to oversee the contract with no high risk duties covered and only one or two task orders open at a time.

***PSC M192 Operations of Test Buildings -$36,741,752***

M192 was selected for review because it is an area that supports critical NASA functions and had been cited as having the possibility of personal services. Two contracts fall within this code. The larger was selected for review. Its value of $36,726,794 represents over 99% of the $36,741,752 obligated in this category

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| **Contractor** | **NASA Contracting Center** | **Contract #** | **Contract Title** | **Contract Amount FY2012** |
| Jacobs Technology | Ames Research Center | NNA09DB39C | Aerospace Testing and Facilities O&M (ATOM) | $36,726,794 |
|  |  |  | Total | $36,726,794 |

**NNA09DB39C Aerospace Testing and Facilities O&M (ATOM)** – Contract NNA09DB39C provides contract support to assist with the operation of the test facilities at Ames Research Center (ARC). It includes testing and facility operation, development projects, operation of support facilities, maintenance and repair, and administration. No personal services or inherently governmental duties were observed on this contract. This is the third iteration of this contract. There had been issues with personal services being performed in the first contract let over ten years prior but they have now been resolved. The center had largely been an all government workforce and had some growing pains with the new blended workforce. As a result of those experiences, the contract administration team places great attention on ensuring personal services are not performed. There was an initial concern that inherently governmental services may be occurring. Tests are run jointly by teams made up of the Jacobs, ARC civil servants, and outside support personnel (employees of the customer receiving the test). The SOW indicates at times a Jacob’s employee will serve as the test manager creating a concern that inherently governmental duties (managing government employees) may be occurring. After further discussion it was confirmed when a Jacob’s employee is the test engineer they do not have oversight of government employees. Conversely there is a concern over what happens when a government employee has direct control over a test. The direction given to the Jacobs technicians by government officials is limited to technical instructions such as increase the flow rate or discontinue the test. Direction of this sort does not constitute an employer-employee relationship.

The contract is written to support test operations and there were no functions closely associated with inherently governmental duties found. NASA critical work is included in the contract. The test capabilities supported and facilities maintained are central to the Ames mission. A level II certified COR has been appointed. Assisting him are three task monitors which are aligned with the three principal areas of the contract. There has been no difficulty in identifying sufficient numbers of qualified government employees to serve as the COR or as task monitors with over 49 government personnel available in associated positions.

***PSC R408 - Program Management Support - $171,148,320***

Eight contracts were selected as the sample from this PSC. The sample’s value was $61,990,148 or 36.22% of the PSC total FY12 obligated value of $171,148,320. On the task order contracts sampled, a mixture of tasks orders skewed toward larger dollar actions were selected for review in addition to the base contract statements of work. Three GSA orders were reviewed. Each contract and the GSA orders will be discussed individually.

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| **Contractor** | **NASA Contracting Center** | **Contract #** | **Contract Title** | **Contract Amount FY2011** |
| TRAX International Corporation | Goddard Space Flight Center | NNG12AZ11C | Goddard Logistical and Technical Information Services | $29,291,426 |
| Bastion Technologies, Inc. | Johnson Space Center(JSC) | NNJ08HB13C | Program Control and Configuration Management Support (PCCMS) | $1,077,441 |
| G.R.D., Inc. | Dryden Flight Research Center | NND10AJ48T | Project Management Planning Support to the Dryden Flight Research Center  | $303,366 |
| MECX Limited Liability Company | Dryden Flight Research Center | NND06AB40B | Safety Health and Environmental On-Site Support Services | $2,294,057 |
| Crown Consulting, Inc. | Goddard Space Flight Center | NNH11CD46Z | Strategic Planning Support for the Strategy, Architecture and Analysis Office (SAA).  | $1,148,439 |
| Valador, Inc. | Goddard Space Flight Center | NNH12CD13Z | Budget, Training, Independent Assessment Support  | $15,808,179 |
| FUTRON Corporation | Johnson Space Center | NNJ07GA18C | Space Shuttle Transition Retirement | $1,837,900 |
| AL RAZAQ Computing Services | Marshall Space Flight Center | NNM11AA30C | Acquisition and Business Support Services | $10,229,340 |
|  |  |  | Total | $61,990,148 |

### NNG12AZ11C GSFC LOGISTICS AND TECHNICAL INFORMATION SERVICES – this contract provides a mixture of logistical and technical services at Goddard Space Flight Center, both at the main site in Greenbelt, MD and at the Wallops Island facility in Virginia. The work statement includes IT support and equipment upgrades, shipping, warehousing, export control, supply management, purchasing and acquisition, equipment repair, vehicle management, bus service, inventory control, forms and record management, creative services, and A/V services. The contract includes both base work and “internal” task orders to initiate previously undefined requirements. No personal services were identified on the contract.

### The contract included language that would allow the contractor to perform inherently governmental work. In Section 4.4 of the SOW entitled, Purchasing and Acquisition, the contractor is tasked to purchase “institutional and project supplies, parts, equipment and services”. They are also to provide “a system to support short-deadline commercial procurements required by customers”. Elsewhere they are to provide “purchasing and acquisition services for furniture procurements.” Section 4.4.1 provides direction on how to buy program goods and services on a reimbursable basis. These functions appear to have been in place in previous contracts since the SOW explains how outstanding purchases are to be transitioned between the contracts. FAR 7.503(c)(12 ) lists the inherently governmental restrictions associated with acquisition.

### 7.503(c)(12) In Federal procurement activities with respect to prime contracts—

(i) Determining what supplies or services are to be acquired by the Government (although an agency may give contractors authority to acquire supplies at prices within specified ranges and subject to other reasonable conditions deemed appropriate by the agency);

(ii) Participating as a voting member on any source selection boards;

(iii) Approving any contractual documents, to include documents defining requirements, incentive plans, and evaluation criteria;

(iv) Awarding contracts;

(v) Administering contracts (including ordering changes in contract performance or contract quantities, taking action based on evaluations of contractor performance, and accepting or rejecting contractor products or services);

(vi) Terminating contracts;

(vii) Determining whether contract costs are reasonable, allocable, and allowable; and

(viii) Participating as a voting member on performance evaluation boards.

The SOW as written includes items that would fit this definition. Acquisition support may be acquired through contract if certain controls are in place. Contractors can be used to support government contracting officers and program managers. Preparing documentation and making recommendations is allowed and is a common practice, but government contracting officials must make the final decisions. Contractors can buy goods and services to support their own activities. In this case buying material handling equipment or subcontracting for a specialized service function would be allowable. For example, if they are required to maintain a building, the contractor could buy equipment to replace broken plumbing or A/C equipment. This would be incidental to the main purpose of the contract - to maintain the building - and is allowed. Contractors can also provide parts to support program activities if the parts and magnitude of the needs are known prior to award. What appeared to be in place is a requirement for the contractor to acquire general items that are requested through the supply system. Further discussion with the contract management office revealed the contract language did not properly represent what is taking place. The contractor is providing materials, parts, and supplies that were called out in the RFP. The parts were limited to institutional support and specific program support. Large amounts of the parts are replacements for the bench stock items when inventories drop below established levels and are of low value. The program support parts require extensive suitability testing prior to acceptance by the government into the government inventory. This is all part of the contract’s logistics responsibilities which also includes, storage, kitting, tracking, and packaging. The contract does not provide an open ended acquisition vehicle that allows the center to buy whatever parts are requested whenever the government initiates a requirement. The contract managers agree the language as written does not represent the processes in place and that it could be construed as inherently governmental duties.

 Some closely associated to inherently governmental work was identified. The contractor issues and monitors fuel cards, they have responsibilities to record expenditures in the central accounting systems and they perform initial acceptance of government acquired products. Final acceptance, an inherently governmental function, remains with government officials. Some critical work is on the contract. The contractor warehouses and transports high value space hardware.

The center has a robust contract oversight team in place. A Level II certified COR has been assigned. The COR has five Task Monitors (TM) assisting with the oversight. They have been provided formal training and are very experienced in the specific contract operations they are assigned. The TMs are well placed to surveil the contract operations and there are adequate numbers available. This oversight structure meets the requirement for above average surveillance when closely associated to inherently governmental work is under contracts. Significant numbers of government technical experts are available to provide CORs and Task Monitors. The contract is not performing inherently governmental duties but the contract language can be construed that way.

**NNJ08HB13C PROGRAM CONTROL AND CONFIGURATION MANAGEMENT SUPPORT (PCCMS)**

This is a cost-plus fixed fee contract that provides business management, technical, and administrative support to JSC’s human space flight program. Primarily it provides support running the “Athena” system, a dedicated IT system supporting space operations. This includes development and maintenance of manifest schedules, IT management planning, developing metrics, and other schedules. The support provided is principally administrative in nature. No personal services or inherently governmental functions were identified. No closely associated to inherently governmental functions were identified. The contractor has minor interfaces with the budgeting system but all their involvement is administrative in nature. The contractor is involved in NASA critical functions. This contract supports NASA space mission operations, a core NASA function. A level II certified COR is assigned as is a level II alternate COR. This is a relatively small contract with ten work year equivalents. A single COR is adequate and was well positioned to oversee the contract.

**NND10AJ48T PROJECT MANAGEMENT PLANNING SUPPORT TO THE DRYDEN FLIGHT –** this is an order against a GSA schedule. It provides administrative support to create, maintain and rebaseline formal program schedules. No personal services or inherently governmental functions were identified. No closely associated to inherently governmental functions were identified. The contractor receives minor technical direction from the chief engineer, the program manager, and sometimes the business manager. No critical NASA work is accomplished under the contract. A single level II certified COR has been appointed. They are co-located in the facility with the two contract employees. The single COR is well positioned and adequate to perform surveillance on a contract of this size.

**NND06AB40B SAFETY, HEALTH, AND ENVIRONMENTAL ON-SITE SUPPORT SERVICES –** this contract provides support to the Safety, Health and Environmental Office at Dryden Flight Research Center. The basic contract, along with two recent task order SOWs (NND12AB47T, NND12AC76T), were reviewed. No personal services or inherently governmental functions were identified under the contract. There are no closely associated to inherently governmental functions. There are no critical services being performed. The contractor works closely with government officials however they work carrying out routine safety operations which are not closely associated to inherently governmental work. All final decisions are made by the government staff. The contractor serves in an advisory role throughout. One level II certified COR has been appointed. Helping him are five task monitors. The COR and TMs are well positioned and assigned in adequate numbers to provide contract oversight.

**NNH11CD46Z STRATEGIC PLANNING SUPPORT FOR THE STRATEGY, ARCHITECTURE AND ANALYSIS OFFICE (SAA) -** this contract action is a Blanket Purchase Agreement (BPA) issued against a Federal Supply Schedule. When work requirements arise, fixed price task orders are issued by the government after negotiating the amount of support needed from the contractor. The SOWs for orders NNH12CEO04D and NNH12CG01D were reviewed in addition to the basic BPA SOW. The contract provides miscellaneous program support such as program and project planning, transition roadmaps, subject matter expert review of proposals, and strategic studies for the Aeronautics Research Mission Directorate. No personal services or inherently governmental functions are performed under the contract. There are some closely associated to inherently governmental duties accomplished. The contractor provides proposal evaluations, recommends strategic approaches for technology transition, and represents the agency at industry forums. In all cases their duties are limited to collecting data and providing recommendations to NASA officials for consideration. No critical NASA functions are accomplished on the contract.

A single, level II certified COR has been appointed. The contractor utilizes 12 part time employees. The COR coverage is adequate for this level on contractor activity and meets the higher level of oversight needed when closely associated to inherently governmental work is under contract. The COR was well aware of the limits to contractor involvement and what constituted inherently governmental work.

**NNH12CD13Z BUDGET, TRAINING, INDEPENDENT ASSESSMENT SUPPORT –** This is a Blanket Purchase Agreement (BPA) written against a Federal Supply Schedule. Fixed price and time and materials task orders are issued when specific requirements are required. Task order NNH12CF49D was reviewed in addition to the basic BPA SOW. The BPA provides subject matter expert support to the Independent Program & Cost Evaluation Office and the Office of the Chief Engineer. Duties include creation of web-based tools and data collection, executive consultation, logistics & financial support, research & development, software development, management support, organizational development and engineering analysis. No personal services or inherently governmental functions are performed under the contract. There is extensive closely associated to inherently governmental work accomplished under the contract. The contractor is positioned in the highest level of NASA management and creates reports and recommendations that are used by senior decision-makers. Critical work is provided. The Chief Engineer is the Technical Authority for NASA. Support in conducting studies and analyses to be used to advise the Administrator in making strategic decisions is critical. Support to the Independent Program and Cost Evaluation (IPCE) office is critical as the IPCE office has independent Standing Review Boards (SRB) that assess program/project “health” and provide advice and recommendations to the Program Managers, Associate Administrators, and the Super Associate Administrator. The contract is designed to provide outside, independent views for management consideration. It supplements existing NASA capabilities. The agency would be able to continue its core responsibilities if the contractor was not available.

One level II certified COR has been appointed to the contract. Assisting him are over 30 task monitors, one assigned per task order. All of the task monitors are subject matter experts on the task they perform oversight. The COR is well positioned to oversee the work being accomplished. The large number of task monitors meets the higher level of oversight necessary for closely associated with inherently governmental work.

**NNJ07GA18C SPACE SHUTTLE TRANSITION AND RETIREMENT –** this contract was let in support of the Space Shuttle Program. One significant order, NNJ11VA14T, was reviewed in addition to the basic SOW. The contract provides a variety of program office support functions such as technical and management recommendations, budget estimates, database development and record keeping, and performance measurement. No personal service or inherently governmental functions are performed under the contract. There are some closely associated to inherently governmental duties accomplished under the contract such as providing management recommendations and budgeting support. The SOW clearly states the contractor will be only making recommendations to government officials. The great majority of the work is administrative in nature. No critical NASA functions are accomplished on the contract.

One level II certified COR is appointed to the contract. TMRs, Technical Management Representatives, are appointed to each task order to assist. This was a small contract and the level of oversight was more than adequate to provide government surveillance. The COR and TMRs were well situated to review the contractor’s performance.

**NNM11AA30C ACQUISITION AND BUSINESS SUPPORT SERVICES –** this contract provides procurement and financial management support at Marshall Space Flight Center. It is an indefinite delivery indefinite quantity (IDIQ) contract with task orders issued to implement specific work requirements. Two tasks orders NNM12AA60T and NNM11AA39T, were reviewed in addition to the basic contract SOW. One task order implemented the acquisition support and the other financial management support. The contract averages 93 work year equivalents. No personal service or inherently governmental functions are performed under the contract. There is significant closely associated to inherently governmental work accomplished since the contract provides support to Marshall’s acquisition and financial management offices, both inherently governmental functions.

Effective controls are in place to prevent accidental contractor performance of inherently governmental duties. The SOW clearly states the contractor is to play a supporting role and only make recommendations to government officials. There is a level II COR assigned as well as a level II certified alternate COR. The COR is an ex-contracting officer who is very knowledgeable about personal service issues and the prohibition on performance of inherently governmental duties by contractors. Assisting the COR are 15 technical representatives (TRs). The TRs are not formally certified but they have received adequate training on their roles and responsibilities from the COR. The contractor workforce is large enough to have contractor management personnel collocated on site with their employees which helps ward off the accidental performance of personal services or inherently governmental duties. The CORs and TRs are well positioned to monitor the contract operations being also collocated in the facility. Collectively the contract oversight meets the higher oversight standard required when closely associated with inherently governmental work is contracted out. No NASA critical work is included in this contract.

**Analysis Summary**– Overall the contract statements of work were written in a manner which indicates a strong understanding of the requirements and limitations of service contracting throughout the agency. The contract management teams were aware of their oversight responsibilities and were able to discuss in detail the contract requirements, how they accomplished surveillance, how requirements are added or removed from the contract, and how performance issues are addressed. All contracts reviewed had a properly appointed COR who had received the mandatory 40 hours of training. The contract management teams were aware of the prohibition on contractor performance of inherently governmental functions. No instances of personal services were identified during the analysis. Two contracts appeared to include performance of inherently governmental functions. One of the contracts, NND08RR01B, had already discontinued issuing tasks against that section of the contract. Three years ago the local management stopped using this capability because it represented a poor business decision. They saw the acquisitions on behalf of government organizations as a straight “pass through” costing the government overhead charges, additional handling and providing no added value. A second contract, NNG12AZ11C, as written, allows for acquisition which is inherently governmental, however the actual practices in use does not represent inherently governmental duties. The contract solicitation called out the parts and requirement frequency of the parts to be provided and which are tied to specific support requirements also the responsibility of the contractor.

**Recommendation –** *Removal of acquisition language found in contract NND08RR01B and changing the acquisition language to fit the existing practice in NNG12AZ11C would prevent the possibility of inherently governmental duties being performed. Both contracts as currently written would improperly allow the contractors to acquire goods and services at the government’s request.*

Contracting for functions closely related to inherently governmental duties was widespread. In contracts where closely related to inherently governmental functions were acquired, NASA had established robust oversight systems that met the higher oversight standards recommended for these contracts.

Critical functions also were commonly contracted out. In all instances reviewed, there was a parallel government organization or a substantial number of government employees with similar skills that were capable of providing the necessary oversight to manage the function and monitor the contractors. The government functional leadership retained responsibility for these functions and used the contractors to support their plans. NASA is compliant with Section 743(e)(2) and has ensured that contractor employees have not been used in a manner that could affect the ability of the agency to maintain control of its mission and operations.

NASA has established several controls to ensure service contracts are properly written and managed. The Baseline Performance Review (BPR) process reviews the performance of major programs periodically and their results. This process provides a check on mission requirements creep. NASA Procurement Management Reviews (PMR), which occur every two to three years for each center, determines whether applicable Federal procurement laws and regulations are being followed. Determining if inherently governmental functions are being accomplished and that adequate contract administration is in place and performing meaningful oversight are special interest items on the PMRs.

Since 2001 NASA has instituted several practical policies that help preserve the distinction between contractor and NASA employees in the workplace. Contractors, when assigned a NASA email address, have the initials “ctr” or their company name included in the address. Contract employees also have distinctive ID badges issued to them with a prominent colored stripe.

**SCI/FAIR ACT CROSSWALK**

In the OMB Instruction for Section 743 of the Consolidated Appropriations Act of FY 2010 (P.L. 111-117), a pilot program to “crosswalk “ the Service Contract Inventory data and compare it to the FAIR Act data was instituted. NASA’s FAIR Act Inventory data collection process was amended and the needed data gathered to participate in the pilot study.

This is the second year NASA has performed the pilot crosswalk. In both years there has been some difficulty in associating the PSC codes with the FAIR Act function codes. This is a structural problem since the FAIR Act function codes represent specific types of employees (accountant, engineer, contract specialist, etc.) whereas the PSC codes used in the SCI Analysis designate whole industries. This leaves the coding office to guess what type of employees may be utilized in those industries. The issue makes the FAIR Act PSC association data inconsistent, with the likelihood an agency is underreporting in the FAIR Act inventory how many government employees are associated with the chosen PSCs. Part of the association problem stems from the difficulty/reluctance of government employees to view contractors and civil servants as functionally interchangeable. Employees are consistently cautioned to maintain a clear demarcation between the two workforces, partially to prevent the issues addressed in this analysis, such as unjustified personal services and contractor performance of inherently governmental duties.

Under PSC AR12 R&D SPACE - APPLIED RESEARCH, NASA had 48 contracts with $66,567,579 in FY12 obligations. The FAIR Act data submissions indicated there were 3,565 Government Full Time Equivalents (FTE) associated with this PSC. Centers were directed to only associate their engineer workforce if they were working at the applied research stage.

Analysis – NASA is a research and development organization. It has a large internal engineering workforce and contracts out a significant amount of R&D work. By dividing the obligation value for this PSC by a factor of $200,000 per work year, there are an estimated 333 contractor WYEs working in this PSC. The work year factor was developed by analyzing burdened labor rates for highly skilled engineering talent in a variety of NASA contracts and in available industry statistics. Applying the factor to the contract obligation total creates the maximum theoretical contractor WYE count, what would be seen if the contracts were totally made up of labor costs. This approach was used to ensure we did not overestimate the numbers of government workers relative to the contractor workforce. The results show an excellent ratio of government to contractor employees with 10.7 government Full Time Equivalents (FTE) for each contractor WYE. It should be noted there are several closely related functions also performing applied research that would require the interest and oversight of NASA’s engineering workforce. Adding the value of closely related PSCs (AR22 Space Science Applied Research, AR32 Space Flight Applied Research, AR42 Space Operations Applied Research, AR52 Space and Territorial Applied Research, and AR62 Space Station Applied Research) increases the contract obligations significantly by $2,787,919,000. If the same $200,000 factor per employee was applied, another 13,939 WYE are involved in applied research at NASA. That would leave a ratio of one NASA FTE for every four WYEs. With such a large internal pool of engineering talent to draw from it is easy to locate technically competent government employees to assist with contract oversight. The large internal workforce also would allow NASA to continue research albeit at a slower pace in the case of a major contract disruption.

Under PSC M192 (a defunct code now replaced by M1JB) Operations of Test Buildings, NASA had two contracts, one representing over 99% of the $36,741,752 awarded under this PSC. The FAIR Act inventory submissions revealed 374 FTEs marked as associated with M1JB.

Analysis – One large contract received over 99% of funding obligated against this PSC. That contract averages 98 WYEs. The second contract’s manning (less than 1 WYE) is insignificant for this analysis. NASA has 374 associated positions with PSC M192, with 49 of those located at the site of the larger contract, Ames Research Center. This ratio of one government FTE to two contract employees at the site is adequate to support all contract oversight responsibilities plus maintain a fall back internal workforce if there is a contract disruption. Test events are normally staffed with a mixed workforce ensuring the technical expertise to operate the function and perform tests has been maintained internally. With another 325 associated employers located throughout the agency, NASA is well prepared to continue operations in the case of a contract disruption.

Under PSC R408 Program Management Support NASA had $171,148,320 in FY12 obligations spread out among 85 contracts. The FAIR Act inventory revealed 1,481 NASA FTEs marked as associated with R408.

Analysis – NASA contracts out a large proportion of its total budget, upwards of 80%. Numerous contracts are let for program management support to help manage this workload. Applying a factor of $175,000 per work year, there are 978 contract WYEs working under this PSC. The factor was developed by analyzing the sample contract cost reports and industry statistics for program management employees. The FAIR Act submission indicated there were 1,481 NASA employees associated with PSC R408 work. The ratio of 1.5 civil servants per contractor WYE is adequate for NASA to maintain effective control of these important functions. The large civil service program management workforce ensures NASA has extensive internal knowledge plus ensures there are numerous individuals available to assist with contract oversight. Since program management support is closely related to inherently governmental work, a highly favorable government to contractor ratio is desirable. The large number of civil servants would also permit the agency to continue operations in the case of a contract disruption.

***summary***

Overall NASA continues to effectively utilize service contracts to support its agency operations without becoming overly reliant or dependent on the contract support. The contract documents reviewed ensured the roles and responsibilities between the agency and supporting contractors were clearly delineated and fall within allowable contractor uses. The contract monitoring systems are robust with greater surveillance performed on higher risk contracts. Properly trained and appointed contracting officer representatives were present in all cases and were effectively carrying out their contract oversight functions.