Background:

On July 29, 2009, the Office of Management and Budget (OMB) issued memorandum M-09-26 to the Heads of Departments and Agencies, regarding "Managing the Multi-Sector Workforce". This memorandum requires that agencies conduct a pilot human capital analysis of at least one program and report the results to OMB by April 30, 2010. OMB's requirements for conducting the multi-sector workforce pilot are described by Attachment 2 to M-09-26. In an October 1, 2009 interim response required by the memorandum, the U.S. Nuclear Regulatory Commission (NRC) informed OMB that the subject of the required multi-sector workforce pilot would be NRC's Computer Security Office (CSO) and that Patrick Howard, the NRC's Chief Information Security Officer, would be the official responsible for the pilot.

Subsequent to the interim response, OMB's memorandum requires the pilot organization to:

- Develop a multi-sector workforce inventory that maps out its current workload and to determine how in-house capacity and contracted labor is used by the organization to meet this workload;
- Conduct a gap analysis between the current workforce configuration and desired classification of work functions, identify the organization's optimal workforce configuration of employees and contractors, and develop appropriate plans to remedy gaps;
- Document the processes used and offices that participated in each part of the assessment; and
- Report the findings to OMB, including a summary of the process that was used to fulfill the requirements of M-09-26.

The purpose of the following is to address these requirements while providing the required summary of the process that was used.

Summary:

To address the requirements of OMB's memorandum M-09-26, a project team was assembled that included representatives from the following NRC offices:

- CSO
- Office of the Executive Director for Operations
- Office of the Chief Financial Officer
- Office of General Counsel
- Office of Human Resources
- Office of Administration

The project team developed several documents for the purpose of achieving early alignment among team members and responsible officials. These documents included a project charter, key stakeholder identification, key stakeholder roles and responsibilities, high level process steps, and a project plan.

Throughout the process, alignment was maintained by conducting weekly meetings, distributing meeting summaries to all key stakeholders, and by conducting alignment meetings with responsible officials.

Upon assembling the project team, the development of a planning model for CSO's multi-sector workforce and its subsequent analysis and plans, proceeded as follows:

1. Determined all functions required to accomplish CSO's mission and goals;
2. Categorized all functions;
3. Identified the skills required for each function;
4. Developed a multi-sector workforce inventory of CSO's current state;
5. Determined CSO's required[1] state;
6. Developed a full-time equivalent (FTE) gap analysis between the current state and the required state;
7. Conducted a cost analysis and determined other best mix considerations;
8. Conducted additional gap analyses to determine the results of the multi-sector workforce analysis; and
9. Developed potential solutions and plans for addressing the identified gaps.

Each of these steps is described in more detail as follows:

1. <u>Determined all functions required to accomplish CSO's mission and goals</u> – Each team within CSO (Federal Information Security Management Act (FISMA) Compliance and Oversight Team (FCOT); Cyber Situational Awareness Analysis and Response Team (CSAART); and the Policy, Standards and Training Team (PSTT)) developed a comprehensive list of core functions required to accomplish their segment of CSO's mission and goals. These functions were derived from requirements established in related legislation, standards and other sources, including the following:

   - The requirements set forth in the FISMA;
   - The documents associated with the Commission's Establishment of the CSO in 2007;
   - National Institute of Standards and Technology documents;
   - Guidance from the Committee on National Security Systems; and
   - Guidance and definitions provided in the Information Technology Security Essential Body of Knowledge developed from the Department of Homeland Security /United States Computer Emergency Readiness Team.

   The scope was limited to just those functions for which CSO is directly responsible. Required functions for CSO's Administrative Team (Admin) were determined based on necessary functions performed in other NRC offices of similar size and configuration.

2. <u>Categorized all functions</u> – All functions for each CSO team (FCOT, CSAART, PSTT, and Admin) were collected on a spreadsheet which would serve as both a planning model and multi-sector workforce inventory. Each function was designated as one of the following categories in accordance with the definitions provided by M-09-26:

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[1] Although OMB memorandum M-09-26 uses "desired" and "optimal" to refer to the target state, the NRC Multi-Sector Working Group determined that these terms were too subjective and left too much room for interpretation. As a result, "Required" was used to refer to the target state and is defined as the minimum workload, skill set, and resources required to effectively and efficiently perform CSO functions.

- Inherently governmental (I);
- Critical, performed by government (CG);
- Critical, performed by either (CE); and
- Essential (performed by either government or contractor) (E).

3. <u>Identified the skills required for each function</u> – Consistent with OMB's guidance for the annual inherently governmental and commercial functions inventory, each categorized function was rolled up under a job-specific position (e.g. Senior Information Technology (IT) Security Officer, Senior IT Specialist, etc.), which is responsible for performing the function. The skill set, level of experience, and education required to perform the functions under each position was then determined. It should be noted that the accomplishment of a specific function may require the involvement of multiple positions with different skill sets. Furthermore, some positions perform a mixture of I, CG, CE, and E functions. In these cases, the category of the position was determined by the category of the highest level function where "I" is the highest and "E" is the lowest. For example, any position performing at least one "I" function is considered an "I" position. The positions and their respective skill set, experience, and education were used later to conduct labor category mapping during the cost analysis.

4. <u>Developed a multi-sector workforce inventory of CSO's current state</u> – The following information, as required by M-09-26, was added to the planning model spreadsheet to depict the current state of CSO's multi-sector workforce inventory:

- Type of resource currently filling the position (i.e. government employee or contractor);
- Location of resource currently filling each position (i.e., Onsite at NRC Headquarters or offsite at the contractors' locations);
- Current workload in terms of FTE; and
- Associated funding source

The following information was added to the planning model spreadsheet to enhance the team's analysis:

- Agency Code, Abbreviation, and Organization Unit. This identifies the NRC pilot organization, and CSO team, which are consistent with the data fields used in the annual inherently governmental and commercial functions inventory report.
- OMB Function Activity Code. This shows the traceability to CSO's inherently governmental and commercial functions inventory report from last year.
- Current Total Effort. This accounts for overtime data, which is a key statistic in revealing excessive overtime, which may lead to deficiencies in a healthy work-life balance.

The following assumptions were applied when the data for the current state was added to the planning model spreadsheet:

- One FTE at the NRC accounts for training, sick leave, annual leave, and holidays;
- One contractor FTE accounts for 10 holidays and 10 days of vacation;
- Current FTE includes current on-board full-time staff; and
- Overtime is tracked separately.

5. <u>Determined CSO's required state</u> – The following data was added to the planning model spreadsheet for each position and their respective functions in order to determine the required state:

    - Workload required in terms of hours or FTE. These values are estimates based on either expertise or experience with regard to the workload to complete the required number of tasks under a given function per year.
    - Resource type and distribution. These values identify the best mix of government and contractor FTE based on the analyses discussed below.

    The following assumptions were applied when the data for the required state was added to the planning model spreadsheet:

    - The FTE assumptions for the current state are applicable to the required state.

6. <u>Conducted an FTE gap analysis between the current state and the required state</u> – The planning model spreadsheet calculated FTE gaps for each position once the FTE for the required state was entered. A negative value in the gap column indicates that more resources are needed to achieve the required state, a positive value in the gap column indicates that more resources are available than are needed in the required state, and a value of zero indicates that there is no FTE gap associated with the specific position.

    In addition to determining FTE gaps, the planning model spreadsheet was reviewed to determine if there were any other potential gaps. The results of that analysis are listed in section 8.

7. <u>Conducted a cost analysis and determined other best mix considerations</u> – A cost analysis was performed on all out-sourceable positions (i.e. Critical functions performed by a government employee or contractor; and Essential functions performed by either a government employee or contractor) for potential in-sourcing.

8. <u>The Department of the Navy's *Human Resources Cost Analysis Tool (HRCAT[2])*</u> – This tool was used to obtain the government position cost information for the grade levels that mapped to the out-sourceable position, skill and experience requirements. The tool included base pay, fringe benefit factor, training and recruiting costs. The one-time facilities and equipment fee for setting up either a government or on-site contractor was not included because it was the same for both.

    For contractors, the General Services Administration Advantage web site was used to search the schedule price lists and derive labor categories. A mapping of the labor categories was necessary since companies use different position/labor category titles to refer to a certain skill set, level of experience, and education. Costs were obtained for both on-site contractors and off-site contractors. The average of the three hourly rates was used to determine an average hourly rate for each location scenario. The average hourly rate was then used to determine the average annual cost for contractors. Both the on-site and off-site contractor costs included wages, overhead, general and administrative expenses, and profit. In addition, the off-site contractor costs also included facilities and equipment

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[2] This tool can be found at http://hrcat.serco-na.com/HRCAT.aspx

costs. Again, the one-time facilities and equipment fee for setting up either a government or on-site contractor was not included because it was the same for both.

The results of the cost analysis demonstrated that annual costs between government employees and contractors were generally comparable, and that cost was not a significant factor except for senior level positions. However, there are other considerations for determining best mix that outweigh cost, even if cost appears to be a significant factor. OMB's memorandum M-09-26 emphasizes the need for agencies to continually strengthen their acquisition practices, as well as to be able to recognize situations where excessive reliance on contractors undermines the ability of the Federal government to accomplish its mission. In addition, the best mix of public and private labor resources should prevent erosion of in-house capacity essential for effective government performance, support investments in human capital planning, recruitment, hiring, and training necessary for building strong internal capacity. Furthermore, the best mix would provide assurance that government employees have the skill sets sufficient to properly oversee contractors and ensure the continuation of agency operations.

Therefore, when determining the best mix, the project team recognized cost as being just one of many factors that should be considered when determining whether contractors or government employees should fill out-sourceable positions. More specifically, it may be more cost effective to utilize a contractor's capacity to accomplish a sudden but temporary rise in workload or to utilize a contractor's expertise when it is needed for only a short period of time. Otherwise, the benefits of hiring Federal employees, such as their commitment to the mission, their authority to direct activities to accomplish the mission, their flexibility to adjust direction, their accountability, reduced liability, continuity of skills and effectiveness, absence of organizational conflicts of interest, rapid response capability, etc., constitute very important considerations that may very well outweigh the benefits of utilizing contractors, even if cost is a significant factor.

9. <u>Conducted additional gap analyses to determine the results of the multi-sector workforce analysis</u> – The data from the gap analysis was reviewed to determine if there were any potential gaps in the following areas:

- Redundant functions being performed among CSO employees and its contractors.
- Contractors performing inherently governmental functions.
- Contractors performing critical governmental functions.
- Insufficient internal capability to control CSO mission and operations.
- Insufficient internal capacity to control CSO mission and operations.
- Required functions that are not being performed:
  - by Inherently Governmental positions.
  - by out-sourceable positions.

The results of the multi-sector workforce analysis revealed the following gaps:

- There are no apparent redundant functions being performed;
- Contractors are not performing inherently governmental functions;
- Contractors are currently performing critical government functions under Federal oversight;
- CSO should supplement its internal capability to control its mission and operations with regard to contractor oversight;

- CSO should supplement its internal capacity to execute CSO mission and operations;
- Current CSO resources cannot effectively support continuous high volumes of activity;
- There are inherently governmental functions to which CSO should explore directing resources; and
- There are out-sourceable functions to which CSO should explore directing resources.

10. <u>Developed potential solutions and plans for addressing the identified gaps</u> – The following are some of the potential solutions for addressing CSO's gaps:

- Acquire additional FTE and funding for CSO in order to supplement CSO's internal and external capacity and capability.
- Redistribute responsibility for administrative or computer security functions to non-CSO resources.
- Utilize rotational or temporary staff to perform administrative or computer security functions.
- Provide computer security training to NRC management and staff.
- Identify and streamline repetitive processes that consume significant CSO resources.

The following are general plans for managing the multi-sector workforce at the NRC:

- Revise appropriate policies, procedures, and guidance related to managing the multi-sector workforce.
- Inform managers of the requirements, and other considerations, to appropriately manage the multi-sector workforce.
- Integrate planning models utilized at the NRC.

Conclusion:

As required by OMB's memorandum M-09-26, the NRC conducted a multi-sector workforce pilot for NRC's CSO organization and developed a multi-sector workforce analysis process that can be applied to other organizations and agencies. The methodology developed and applied to NRC's CSO organization identified gaps related to managing the multi-sector workforce. Additional analyses need to be conducted on the identified gaps, and on the criteria by which the best mix of resources can be acquired, in order for CSO to more efficiently and effectively execute its mission. The NRC will use existing processes, and those developed as part of the multi-sector workforce pilot, to enhance its management of the multi-sector workforce. The NRC will also look to OMB for further guidance [61 FR 16188] with regard to inherently governmental functions and its potential impact on the development of plans to complete the overall project.