



CHAIRMAN

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

May 8, 2019

The Honorable Gene L. Dodaro  
Comptroller General of the United States  
U.S. Government Accountability Office  
441 G Street, NW.  
Washington, DC 20548

Dear Mr. Dodaro:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to your letter dated April 4, 2019. Your letter called attention to open recommendations to which the U.S. Government Accountability Office (GAO) believes the NRC should give high priority. Those recommendations are related to the following: (1) the security of radiological sources, (2) the reliability of cost estimates, and (3) strategic human capital management. Please find in the enclosure an update on the actions that the NRC is taking to address GAO's recommendations.

Please feel free to contact me or have your staff contact John Jolicoeur, Executive Technical Assistant, Office of the Executive Director for Operations, at (301) 415-1642, if you have any questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kristine L. Svinicki".

Kristine L. Svinicki

Enclosure: As stated

cc: M. Gaffigan, GAO  
M. Mulvaney, OMB

**The U.S. Nuclear Regulatory Commission Actions to Address Priority Open U.S. Government Accountability Office Recommendations**

**1. Address the Security of Radiological Sources**

In this area the U.S. Government Accountability Office (GAO) priority recommendations addressed source security of Category 3 sources (GAO-16-330).

In GAO-16-330, "Nuclear Security: NRC Has Enhanced the Controls of Dangerous Radioactive Materials, but Vulnerabilities Remain," GAO recommended that the U.S. Nuclear Regulatory Commission (NRC) do the following:

- 1) Take the steps needed to include Category 3 sources in the National Source Tracking System (NSTS) and add Agreement State Category 3 licenses to the Web-Based Licensing System as quickly as reasonably possible.
- 2) At least until such time that Category 3 licenses can be verified using the License Verification System, require that transferors of Category 3 quantities of radioactive materials confirm the validity of a would-be purchaser's radioactive material license with the appropriate regulatory authority before transferring any Category 3 quantities of licensed material.

The NRC and its Agreement States partners maintain a robust, risk-informed national framework for the security of all radioactive material through existing requirements for the safety and control of radioactive materials. Specifically, the requirements in 10 CFR Parts 20, 30, 31, 32, 34, 35, 36, 37, and 39 (as applicable, and based upon the intended civilian use of the material) include specific provisions to ensure the safety and security of all radioactive materials, regardless of category. For example, all radioactive material must be secured from unauthorized access when in storage and must be under constant surveillance by licensee personnel when in use. Additionally, each practice or use of radioactive material by a licensee is subject to additional controls that are specific to that use. For example, licensees who conduct well logging operations using Category 3 sources (for natural resource exploration) must perform periodic inventories of their radioactive sources, must maintain daily logs of the use of each source by authorized personnel, and have special requirements to maintain safety and security for the transport of these sources within the United States. The requirements for safety and security during transport are consistent with, and in addition to, the requirements of the Department of Transportation that are in place for transporting hazardous materials.

In early 2016, the NRC formed a working group, the "License Verification and Transfer of Category 3 Sources Working Group" (LVWG), to evaluate license verification and transfer requirements for Category 3 sources. The LVWG evaluated the inclusion of Category 3 licenses in the NRC's Web-Based Licensing System (WBL) and the methods available for verifying the legitimacy of licenses held by those licensees prior to the transfer of material. The working group also evaluated the inclusion of Category 3 sources in the NSTS for the specific purpose of preventing licensees from accumulating Category 3 sources into Category 2 or higher quantities of radioactive material. The LVWG made recommendations to enhance the existing processes for license verification and source tracking beyond Category 1 and Category 2 thresholds. These recommendations were provided to the Commission as part of the staff's reevaluation of Category 3 sources as outlined below.

On October 18, 2016, the Commission issued the Staff Requirements Memorandum (SRM) for COMJMB-16-0001, "Proposed Staff Re-Evaluation of Category 3 Source Accountability," that directed the NRC staff to re-evaluate Category 3 source accountability given the agency's operating experience with higher-risk sources and in response to findings made by GAO. In the SRM, the Commission directed the staff to assess the risks posed by the aggregation of Category 3 sources into Category 2 quantities as part of its efforts to re-evaluate Category 3 source accountability.

The "Category 3 Source Security and Accountability Working Group" was formed to evaluate the pros and cons of different methods for verifying the validity of a license before a Category 3 source is transferred; evaluate the pros and cons of including Category 3 sources in the NSTS; assess any additional options to address the source accountability recommendations made by the GAO; identify changes in the threat environment since 2009 and evaluate whether those changes support expanding the NSTS to include Category 3 sources; assess the risks posed when a licensee possesses enough Category 3 sources to require the higher level protections for Category 2 quantities; and collaborate with our Agreement State partners, non-Agreement States, licensees, public interest groups, industry groups, and the reactor community to fully assess the regulatory impact of any recommendation made by the Working Group. In its evaluation, the Category 3 Source Security and Accountability Working Group considered the recommendations made by the LVWG and the results of the NRC staff's review of the effectiveness of 10 CFR Part 37, the results of which were reported to Congress in December 2016.

As directed by the Commission, the Category 3 Source Security and Accountability Working Group developed a notation vote paper that was submitted to the Commission in August 2017 (SECY-17-0083, "Re-Evaluation of Category 3 Source Security and Accountability in Response to SRM-COMJMB-16-0001"). The Commission is currently considering the staff's analysis and recommendations.

Further, the NRC continues to work with Agreement States who have expressed interest in using the WBL as their licensing system, beyond the current inclusion of all licenses for those who possess Category 1 and 2 sources. Multiple Agreement States are currently using the WBL, and several Agreement States are in different stages of the process to do so.

With regard to verification of a license for Category 3 quantities of radioactive materials, the LVWG analysis was considered by the Category 3 Source Security and Accountability Working Group. The Commission is currently considering the staff's analysis and recommendations.

Your letter also references GAO's April 2019 report, GAO-19-468 and requests that the Commission consider this new information. As noted in the NRC's January 25, 2019, letter to GAO, the NRC staff conducted a thorough review of GAO's draft report and the Statement of Facts that preceded it, and the NRC concluded that the GAO's primary references – namely, studies conducted by Sandia National Laboratories and views expressed during the National Academies-facilitated panel discussion – do not provide sufficient additional information to change the NRC staff's recommendation to the Commission.

## **Improve the Reliability of Cost Estimates**

Regarding improving the reliability of cost estimates, GAO-15-98 stated that the NRC should align its cost-estimating procedures with relevant best practices identified in the GAO Cost Estimating and Assessment Guide.

The NRC is updating its cost-benefit guidance to incorporate cost estimating best practices and the treatment of uncertainty to support the development of realistic estimates of the costs to implement proposed requirements. This guidance update addresses relevant best practices provided by the GAO and feedback provided by licensees, the Nuclear Energy Institute, and other stakeholders. This update will also consolidate guidance documents, incorporate recommendations from the GAO report on the NRC's cost-estimating practices and cost-estimating best practices from the GAO guide, and capture best practices for the consideration of qualitative factors in accordance with Commission direction in the SRM for SECY-14-0087, "Qualitative Consideration of Factors in the Development of Regulatory Analyses and Backfit Analyses."

The draft cost-benefit guidance update was released on April 14, 2017, for a 60-day public comment period. The NRC staff resolved the comments received and the Commission is considering the staff's recommendation to publish the final NUREG.

## **Improve Strategic Human Capital Management**

Regarding improving strategic human capital management, GAO issued GAO-17-233, "Strategic Human Capital Management: NRC Could Better Manage the Size and Composition of Its Workforce by Further Incorporating Leading Practices." In this report, Recommendation 1 states that the NRC should set agencywide goals, which could be ranges, for overall workforce size and skills composition that extend beyond the 2-year budget cycle.

On July 5, 2017, the NRC's Executive Directive for Operations (EDO) initiated a three-office pilot project of an Enhanced Strategic Workforce Planning (SWP) process for NRC that better integrates workload projection, skills identification, human capital management, individual development, and workforce management activities. Two offices at NRC headquarters and one regional office participated in the pilot project, which concluded in June 2018. A lessons-learned report found that the six steps of the SWP provided a sound, repeatable process that was used to prepare a projection for staff of the anticipated type and amount of work in the pilot organizations. Following the lessons learned report, the NRC SWP implementation team made recommendations for adjusting the process and expanding implementation to additional offices and regions.

In August 2018 the agency began implementing Phase II of SWP in 11 offices, including all 4 regions, and other major NRC offices, representing approximately 79% of the agency's workforce. The phased approach helps to build capability to support the process. The results of Phase II will be available in July 2019, at which time the EDO will determine the scope of Phase III.

The pilot results demonstrated that the enhanced SWP process can identify short and long-term strategies and action plans to address gaps and overages in workforce needs. The strategies developed demonstrated a deeper understanding of the workload forecasted and the competencies needed beyond the typical 2-year budget cycles. These strategies and action

plans will improve the agency's human capital management activities, identify employee opportunities for career growth, and provide for a greater understanding of the future workload of the NRC.

The information collected in the pilot indicated that when more offices are participating, the SWP information will help the agency develop long-range full-time equivalent forecasts and better inform the strategic planning activities to meet agency goals for overall workforce size and skills composition. When Phase II is complete (by June 30, 2019), the NRC will analyze the data and determine if the information is sufficient to establish agencywide goals in the form of ranges for overall workforce size and skills composition that extend beyond the 2-year budget cycle. If the agency finds that it requires greater office participation in the process to establish these ranges, it will expand the scope of SWP to additional offices to be able to address this recommendation.