SUMMARY OF NRC ACTIONS

RESPONSE TO GAO REPORTS

ENCLOSURE

GAO Testimony - Nuclear Security: Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources Are Not Effective
July 2007
(GAO-07-1038T)

In its report, "Nuclear Security: Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources Are Not Effective," the U.S. Government Accountability Office (GAO) made recommendations to correct weaknesses in the U.S. Nuclear Regulatory Commission's (NRC's) materials licensing program that were identified during GAO's testing of the licensing program using covert investigative methods. The recommendation to the NRC that remained open as of the agency's last report is provided below.

Recommendation 3

NRC should explore options to prevent individuals from counterfeiting NRC licenses, especially if this allows the purchase of more radioactive materials than they are approved for under the terms of the original license.

Status:

The Materials Program Working Group was established in 2007 and chartered to prepare a report that would assess specific and potential security vulnerabilities in NRC's radioactive materials program and provide recommendations to address any identified vulnerabilities. As part of its assessment, the Working Group evaluated options to prevent counterfeiting of radioactive materials licenses and improve license verification. The Working Group concluded that properly implemented measures for license verification and material tracking will render the physical counterfeiting of a paper license ineffective. The Working Group recommended that the NRC and the Agreement States[1] develop mechanisms to verify licensee authorizations and inventory compliance in conjunction with the source tracking capabilities of the National Source Tracking System (NSTS). On December 31, 2008, the NSTS was deployed and made available to NRC and Agreement State licensees to track risk-significant sources.

The NRC worked with the Agreement States to develop a secure nationwide web-based license verification system (LVS), whereby licensees and other authorized individuals will be able to verify that radioactive material transactions are authorized and do not exceed license limits by verifying transaction information against the regulator's licensing data. The LVS interfaces with the Web-Based Licensing (WBL) system. The WBL was deployed August 31, 2012. The LVS was deployed May 31, 2013. NRC and Agreement States conduct prelicensing visits to new license applicants to verify the validity of the information submitted to obtain a new radioactive material license. Also, new regulations were developed for transactions of Category 1 and 2 radioactive materials that require licensees to verify with the license-issuing authority that the transferee's license authorizes the receipt of the type, form, and quantity of the radioactive material requested, and, for Category 1 shipments, to verify the validity of the address where radioactive material is requested to be delivered. These regulations are included in the final rule Title 10 of the *Code of Federal Regulations* Part 37, Physical Protection of Byproduct Material, which was approved by the

[1] Section 274 of the Atomic Energy Act of 1954, as amended, provides a statutory basis under which NRC relinquishes to the States portions of its regulatory authority. Through the Agreement State Program, 37 States have signed formal agreements with the NRC, under which those States have assumed regulatory responsibility over certain byproduct and source material, as well as small quantities of special nuclear material.

Commission and published in the *Federal Register* on March 19, 2013. The rule was effective on May 20, 2013, and NRC licensees must be in compliance by March 19, 2014. The implementation of the NRC's electronic LVS and promulgation of 10 CFR Part 37 fully addresses this GAO recommendation for NRC and Agreement State radioactive material licenses.

The NRC considers this GAO recommendation to be closed.

GAO Report - Nuclear Security: NRC and DHS Need to Take Additional Steps to Better Track and Detect Radioactive Materials
June 2008
(GAO-08-598 and GAO-08-839SU)

In its report, "Nuclear Security: NRC and DHS Need to Take Additional Steps to Better Track and Detect Radioactive Materials," the U.S. Government Accountability Office (GAO) assessed the progress the U.S. Nuclear Regulatory Commission (NRC) has made in implementing recommendations from GAO's 2003 report, "Nuclear Security: Federal and State Action Needed to Improve Security of Sealed Radioactive Sources" (GAO-03-804), and other steps NRC has taken to improve its ability to track radioactive materials. GAO provided NRC two recommendations to ensure priority attention is given to implementing new tracking and licensing systems, and to include additional radioactive sources in its tracking systems. The recommendation that remained open as of the NRC's last report is provided below:

Recommendation 1

The Chairman of the NRC take steps, consistent with sound systems development practices, to ensure that priority attention is given to meeting the current January 2009, and summer 2010 target dates for launching the National Source Tracking System (NSTS), Web-Based Licensing System (WBL), and the new License Verification System (LVS), respectively.

Status:

The Commission has placed a high priority on the deployment of these systems. The NSTS was deployed on December 31, 2008, and the WBL was deployed on August 31, 2012. The LVS was deployed on May 31, 2013.

An integrated project team, with representatives from all involved offices, met weekly to discuss the progress of individual projects, coordinate actions and identify any potential issues for senior management attention. Prior to deployment of the LVS, senior managers from all involved offices met quarterly on these projects to ensure that appropriate focus was maintained, that challenges to success were systematically identified and addressed, that progress was properly communicated throughout the organization, and that tasks and resources were coordinated and prioritized. Since deployment, senior managers from all involved offices meet on an as needed basis.

In accordance with Office of Management and Budget guidance, the NRC has employed sound system development practices. The NRC (1) assigned professionally certified project managers to the NSTS, WBL, and LVS projects, (2) set reasonable performance baselines and integrated project schedules for each of these projects, and (3) is employing earned value management on each of the three projects: NSTS, WBL, and LVS.

A request for proposals to acquire implementation services for NRC's Integrated Source Management Portfolio was issued in September 2009. The Integrated Source Management Portfolio is a set of information technology tools that provide a Web-based solution to (1) enable an up-to-date accounting of the possession of the most risk-significant radioactive sources in the nation, (2) authenticate the validity of radioactive material licenses, and (3) modernize materials licensing. The contract, awarded in May 2010, provided services that include developing the LVS. A requirements validation workshop was held at NRC Headquarters in October 2010 with representatives from the NRC regional offices, Agreement States, and licensees. A similar workshop for the LVS was held in March 2011 and the LVS requirements were delivered to the

contractor in April 2011. The system architectures for the WBL and LVS were approved in July 2011 and October 2011, respectively. The NRC staff, through a joint NRC/Agreement State working group, established a process to include Agreement State license data in the WBL. The WBL includes all Category 1 and 2 license images (and revisions when appropriate) submitted by Agreement States.

The NRC considers this GAO recommendation to be closed.

GAO Report – Information Security: Federal Agencies Have Taken Steps to Secure Wireless Networks, but Further Actions Can Mitigate Risk
November 2010
(GAO-11-42SU)

The U.S. Government Accountability Office (GAO), in its report: "Information Security: Federal Agencies Have Taken Steps to Secure Wireless Networks, but Further Actions Can Mitigate Risk," made three recommendations to the U.S. Nuclear Regulatory Commission (NRC) to improve the security controls with regard to agency use of wireless networks. In response, on January 26, 2011, the Chairman of the NRC informed Congress about the actions planned in response to the GAO recommendations. The status of the actions taken by the NRC in response to the GAO recommendations is provided below.

Recommendation 1

Finalize and implement a policy regarding usage restrictions and implementation guidance for wireless networks, including wireless network and wireless-security specific security controls.

Status:

The NRC issued Management Directive (MD) 12.5, "NRC Cyber Security Program," on August 15, 2013. The Management Directive and its accompanying Handbook were revised to incorporate current Federal direction, address current threats, and update NRC organizational changes. NRC also finalized and implemented standards and procedures detailing usage restrictions and implementation guidance for wireless networks, including wireless network and wireless-security specific controls.

The NRC considers this GAO recommendation to be closed.

Recommendation 2

Finalize and implement a written policy for configuring mobile devices when taken on international travel or to other potentially risky locations and for applying preventative measures to devices when they are returned.

Status:

The NRC has provided high-level requirements for mobile devices taken on international travel in CSO-STD-0020, "Organization Defined Values for System Security Controls," associated with NIST SP-800-53 controls. NRC is also developing international travel guidance for NRC staff travelling to other countries and standards for NRC electronic devices taken on such travel.

This GAO recommendation remains open.

GAO Report – GAO Report - Nuclear Regulation: Nuclear Regulatory Commission's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened
May 2012
(GAO-12-258)

The U.S. Government Accountability Office (GAO), in its report, "Nuclear Regulatory Commission's Oversight of Nuclear Power Reactors' Decommissioning Funds Could Be Further Strengthened," provided five recommendations to the U.S. Nuclear Regulatory Commission (NRC) regarding decommissioning funding oversight. The status of the actions taken by the NRC in response to the GAO recommendation is provided below.

Recommendation 1

Ensure reliability as part of the agency's process of reevaluating its decommissioning funding formula, by defining what the agency means by the "bulk" of the funds that licensees will likely need to decommission their reactors.

Status:

On June 20, 2013, NRC staff provided to the Commission SECY-13-0066, "Staff Findings on the Table of Minimum Amounts Required to Demonstrate Decommissioning Funding Assurance." In that paper, staff recommended against revising its decommissioning funding formula and its adjustment factors. The foundation for the staff's conclusion was developed through reviewing the formula in light of more recent information and decommissioning experiences. Staff contracted with Pacific Northwest National Laboratory (PNNL) to evaluate new information and the adequacy of the minimum decommissioning funding requirement, held a public meeting to discuss and solicit input from the public, industry, and other interested groups on potential adjustments to the formula, and reassessed the formula in light of the PNNL study and stakeholder comments. Staff determined that the minimum formula represents the low end of the range of decommissioning costs in most cases, and thus represents the "bulk" of decommissioning costs. Staff determined that the current formula is acceptable because significantly raising the minimum could result in requiring some licensees to provide financial assurance greater than the funds needed to decommission. In addition, the minimum formula does not relieve the licensee from providing assurance that funds will be available when needed for the full cost of radiological decommissioning. The current regulatory system provides for the cases where the cost estimate exceeds the minimum formula by requiring a site specific cost estimate (SSCE) five years before permanent shutdown, or within two years following a premature shutdown. The SSCE then becomes the amount of financial assurance the licensee must certify and provide. The regulatory system has been successful in the past, since no reactor has failed to perform its decommissioning obligation due to lack of funds.

Based on staff's analysis and recommendation, the NRC will not be revising the minimum decommissioning funding formula or its adjustment factors at this time.

The NRC considers this GAO recommendation to be closed.

Recommendation 2

Ensure reliability as part of the agency's process of reevaluating its decommissioning funding formula by using the cost-estimating characteristics as a guide for a high-quality cost-estimating formula in the event that NRC chooses to update the formula.

Status:

The NRC will continue to ensure that its decommissioning funding formula provides a credible and well-documented basis, as recommended by the GAO guidelines, for establishing the minimum amount of funding needed to decommission a reactor. As discussed under Recommendation 1 above, on June 20, 2013, NRC staff provided to the Commission SECY-13-0066, "Staff Findings on the Table of Minimum Amounts Required to Demonstrate Decommissioning Funding Assurance." In that paper, staff recommended against revising its decommissioning funding formula and its adjustment factors. The foundation for the staff's conclusion was developed through reviewing the formula in light of more recent information and decommissioning experiences. Staff had contracted with PNNL to evaluate new information and the adequacy of the minimum decommissioning funding requirement, held a public meeting to discuss and solicit input from the public, industry, and other interested groups on potential adjustments to the formula, and reassessed the formula in light of the PNNL study and stakeholder comments. Staff determined that the current formula is acceptable.

Based on staff's analysis and recommendation, the NRC will not be revising the minimum decommissioning funding formula or its adjustment factors at this time.

The NRC considers this GAO recommendation to be closed.

Recommendation 3

Better ensure that licensees are providing reasonable assurance that they will have the necessary funds and improve the consistency of information the agency collects by documenting procedures describing the steps the staff should take in their reviews analyzing licensee documentation and verifying that the amount licensees report to NRC in decommissioning Funding Status reports match the amount on their year-end bank statements.

Status:

The NRC identified the need for revising decommissioning funding assurance review guidance for the agency's financial analysis staff, delineated in Office of Nuclear Reactor Regulation Office Instruction LIC-205, "Procedures for NRC's Independent Analysis of Decommissioning Funding Assurance for Operating Nuclear Power Reactors," and initiated the revision in late 2010. NRC staff is finalizing updates to LIC-205 that will more thoroughly document procedures used to verify decommissioning fund balances. The updated version of LIC-205 should be completed by June 2014.

This GAO recommendation remains open.

Recommendation 4

Better ensure that licensees are providing reasonable assurance that they will have the necessary funds and improve the consistency of information the agency collects by continuing the reviews of fund balances in a way that is most-efficient and effective for the agency.

Status:

At the time of the GAO audit completion, the NRC was considering discontinuing licensee site reviews due to budget and travel constraints; however, the NRC continues to review fund balances reported by licensees against the records maintained by the fund trustees, whether at the licensee's

site or another location. The NRC will continue to coordinate with licensees and the respective financial institutions, where the decommissioning trust fund records are kept and will also continue to review the fund balances in a manner that is most efficient and effective for the NRC and the licensee.

The NRC considers this GAO recommendation to be closed.

Recommendation 5

Consider reviewing a sample of the licensees' investments to determine if licensees are complying with decommissioning investment standards and determine whether action should be taken to enforce these standards.

Status:

Following completion of the staff's review of the 2013 decommissioning funding status reports as communicated to the Commission on October 2, 2013, in SECY-13-0105, "Summary Findings Resulting from the Staff Review of the 2013 Decommissioning Funding Status Reports for Operating Power Reactor Licensees," staff initiated an evaluation of whether additional information is needed to better understand the current methods used by licensees, investment managers, and trustees to assure compliance with the NRC's regulations. Based on this analysis, the NRC will consider alternative methods for reviewing licensee compliance with the regulations.

This GAO recommendation remains open.

GAO Report – Nuclear Regulatory Commission: Natural Hazard Assessments Could Be More Risk-Informed
April 2012
(GAO-12-465)

The U.S. Government Accountability Office (GAO), in its report: "Nuclear Regulatory Commission: Hazard Assessments Could Be More Risk-Informed," made a recommendation to the U.S. Nuclear Regulatory Commission (NRC) to analyze whether licensees of operating reactors should be required to develop Probabilistic Risk Assessments (PRAs) that address natural hazards. In response, on July 30, 2012, the NRC Chairman Allison M. Macfarlane informed Congress about the actions directly related to this issue. The status of the actions taken by the NRC in response to the GAO recommendation is provided below.

Recommendation

Analyze whether licensees of operating reactors should be required to develop PRAs that address natural hazards.

Status:

The NRC's Office of Nuclear Regulatory Research is conducting a Level 3 PRA for Vogtle Electric Generating Plant, Units 1 and 2. This Level 3 PRA effort encompasses natural hazards typically considered in previous external event PRAs (e.g., seismic events, tornadoes, hurricanes, and external flooding), and addresses the impact of these natural hazards on one or both operating reactors at the site, as well as on spent fuel stored on site (in either pools or dry casks). This study may identify accident prevention, accident mitigation, and emergency planning improvements for the reactors, the spent fuel pools, and dry cask storage in response to natural hazards or other causes. This Level 3 PRA project and its potential uses are discussed in SECY-12-0123, "Update on Staff Plans to Apply the Full-Scope Site Level 3 PRA Project Results to the NRC's Regulatory Framework," dated September 13, 2012.

In 2011, NRC Commissioner George Apostolakis led a risk management task force to develop a strategic vision and options for adopting a more comprehensive, holistic, risk-informed, performance-based regulatory approach for nuclear reactors, as well as for materials, waste, the fuel cycle, and transportation. This task force produced a report, NUREG-2150, "A Proposed Risk Management Regulatory Framework," that provides recommendations on whether the NRC should make modifications to the regulatory framework. An interoffice working group has been created to identify options and make recommendations, including the potential development of a Commission policy statement. In developing the options, the staff will consider modifications to the regulatory framework that could be incorporated into important agency policy documents, such as the Strategic Plan. This group's report will be provided six months after the staff requirements memorandum on the NRC's Fukushima Near-Term Task Force Recommendation 1, which states that the agency should establish a logical, systematic, and coherent regulatory framework for adequate protection that appropriately balances defense-in-depth and risk considerations.

Since issuance of a "Request for Information" letter on March 12, 2012, the NRC staff continued to address the seismic and flooding hazards at nuclear power plant sites through the implementation of Fukushima Near-Term Task Force Recommendations 2.1 and 2.3. The NRC staff worked with industry to develop multiple guidance documents and interim staff guidance documents for both recommendations. As of November 2012, all plant "walk-down" inspections

associated with Recommendation 2.3 have been completed, and reports are being reviewed by the NRC staff. The NRC staff has received the first set of flood hazard reevaluation submittals per the prioritization scheme, "Prioritization of Response Due Dates for Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54 (f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident." The seismic hazard reevaluation submittals are expected in March 2014 for central-eastern US plants (≈approximately 95 plants) and March 2015 for western US plants (≈approximately 3 plants). The NRC staff will review the reevaluation reports, including proposed interim actions, as part of the longer-term reevaluation of natural hazards.

In addition, on January 29-31, 2013, the NRC hosted a multi-agency federal workshop on probabilistic flood hazard assessment. This workshop was attended by specialists from several federal agencies, contractors, industry, academia, and other subject-matter experts. Specialists from several NRC offices developed the workshop together with their counterparts at the Department of Energy, the Federal Energy Regulatory Commission, the Army Corps of Engineers, the Bureau of Reclamation, and the U.S. Geological Survey. The workshop was part of an effort to inform future incorporation of flood event probabilities into a risk-informed approach for external hazards.

This GAO recommendation remains open.

GAO Report – Uranium Mining: Opportunities Exist to Improve Oversight of Financial Assurances
May 2012
(GAO-12-544)

The U.S. Government Accountability Office (GAO), in its report "Uranium Mining: Opportunities Exist to Improve Oversight of Financial Assurances," made one recommendation to the U.S. Nuclear Regulatory Commission (NRC) and the Secretary of the Interior regarding coordination on financial assurances for In Situ Recovery (ISR) operations. The status of the actions taken by the NRC in response to the GAO recommendation is provided below.

Recommendation

To help better ensure that financial assurances are adequate for uranium mining operations on federal land, the Secretary of the Interior and the Chairman of the Nuclear Regulatory Commission should enhance their coordination on financial assurances for ISR operations through the development of a Memorandum of Understanding (MOU) that defines roles and promotes information sharing.

Status:

The NRC and the Bureau of Land Management (BLM) signed an MOU in February 2013 to improve interagency communication and share their respective expertise with one another. One of the areas highlighted in the MOU is coordinating on financial assurances for uranium operations. Specifically, the MOU states that NRC and BLM will coordinate and share information on financial assurances and conduct periodic joint meetings involving staff or senior management.

The NRC considers this GAO recommendation to be closed.

.

GAO Report – Organizational Transformation: Enterprise Architecture Value Needs to be Measured and Reported
September 2012
(GAO-12-791)

The U.S. Government Accountability Office (GAO), in its report "Organizational Transformation: Enterprise Architecture Value Needs to be Measured and Reported," made recommendations to several government entities, including the U.S. Nuclear Regulatory Commission (NRC), on measuring and reporting enterprise architecture value. The status of the actions taken by the NRC in response to the GAO recommendations is provided below.

Recommendation 1

The secretaries and agency heads of the Departments of Agriculture, the Air Force, the Army, Commerce, Defense, Education, Energy, Homeland Security, the Interior, Labor, the Navy, State, Transportation, the Treasury, and Veterans Affairs; the Attorney General; the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, and Small Business Administration; the NRC and Social Security Administration; and the National Science Foundation and the Office of Personnel Management should ensure that an approach is fully established for measuring enterprise architecture outcomes, including a documented method (i.e., steps to be followed) and metrics that are measurable, meaningful, repeatable, consistent, actionable, and aligned with the agency's enterprise architecture's strategic goals and intended purpose.

Status:

The Office of Management and Budget (OMB) issued enterprise architecture guidance to agencies during Fiscal Year 2013, including sufficient details on the method and metrics that could be used to measure architecture program outcomes. The NRC has established an approach according to the OMB published guidance for measuring enterprise architecture outcomes, including a documented method (i.e., steps to be followed) and an initial set of metrics aligned with the agency's enterprise architecture's strategic goals and intended purpose.

The NRC considers this GAO recommendation to be closed.

Recommendation 2

The secretaries and agency heads of the Departments of Agriculture, the Air Force, the Army, Commerce, Defense, Education, Energy, Homeland Security, the Interior, Labor, the Navy, State, Transportation, the Treasury, and Veterans Affairs; the Attorney General; the Environmental Protection Agency, General Services Administration, National Aeronautics and Space Administration, and Small Business Administration; the NRC and Social Security Administration; and the National Science Foundation and the Office of Personnel Management should ensure that enterprise architecture outcomes and benefits are periodically measured and reported to top agency officials (i.e., executives with authority to commit resources or make changes to the program) and to the OMB.

Status:

As discussed under Recommendation 1, the OMB provided relevant guidance to the agencies. The NRC has incorporated that guidance and its recommended methodology, including reporting to top agency officials and the OMB on NRC Information Technology governance activities. The NRC's Information Technology/Information Management Portfolio Executive Council governance structure has been augmented to incorporate an Architecture Council that focuses on the governance of architecture standards and the management of those standards within existing and future projects. The enterprise architecture valuation is included in the annual submission of the NRC Enterprise Roadmap to OMB. The next submission of this roadmap, following an internal review by NRC top agency officials, is scheduled for March 2014. Subsequent submissions will follow the same process as will interim updates, as necessary.

The NRC considers this GAO recommendation to be closed.

GAO Report – Spent Nuclear Fuel: Accumulating Quantities at Commercial Reactors Present Storage and Other Challenges
Aug 15, 2012
(GAO-12-797)

The U.S. Government Accountability Office (GAO), in its report "Spent Nuclear Fuel - Accumulating Quantities at Commercial Reactors Present Storage and Other Challenges," recommended that the U.S. Nuclear Regulatory Commission (NRC) develop a mechanism for identifying and accessing all classified studies to help facilitate decisions on storing and disposing of spent nuclear fuel over the coming decades. The status of the actions taken by the NRC in response to the GAO recommendation is provided below.

Recommendation

To help facilitate decisions on storing and disposing of spent nuclear fuel over the coming decades, the Chairman of the NRC should direct agency staff to develop a mechanism that allows individuals with appropriate clearances and the need to know to easily identify and access classified studies so as to help ensure that institutional knowledge is not lost.

Status:

The NRC staff committed to developing and implementing a pilot program database to include non-classified information detailing key attributes of a document to identify location and points of contacts by June 30, 2013. The pilot program was completed in 2013 and focused on spent nuclear fuel studies. The NRC staff has completed a review of the pilot program database. In the effort to address lessons learned during the initial pilot, the staff intends to conduct an expanded follow-on study, which will be completed by the end of calendar year 2014. At that point, a decision on whether the database will be operationalized will be made.

This GAO recommendation remains open.

GAO Report – Nuclear Nonproliferation: Additional Actions Needed to Improve Security of Radiological Sources at U.S. Medical Facilities
September 2012
(GAO-12-925)

The U.S. Government Accountability Office (GAO), in its report "Nuclear Nonproliferation: Additional Actions Needed to Improve Security of Radiological Sources at U.S. Medical Facilities," made four recommendations to the U.S. Nuclear Regulatory Commission (NRC) and the U.S. Department of Energy (DOE) regarding security at NRC and Agreement State licensed medical facilities. The status of the actions taken by the NRC in response to the GAO recommendations is provided below.

Recommendation 1

The GAO recommends that the Administrator of the National Nuclear Security Administration (NNSA), in consultation with the Chairman of the NRC and Agreement State officials, increase outreach efforts to promote awareness of and participation in the NNSA's security upgrade program. Special attention should be given to medical facilities in urban areas or in close proximity to urban areas that contain medical equipment with high-risk radiological sources.

Status:

The NRC has and will continue to support the NNSA's outreach activities to promote licensee awareness of and participation in the NNSA's security upgrade program within the limits of our authorities and available resources. The NRC, the NNSA, the Department of Homeland Security and the Federal Bureau of Investigation meet routinely to discuss the NNSA's activities regarding voluntary security upgrades at commercial facilities.

The NRC considers this GAO recommendation to be closed.

Recommendation 2

The GAO recommends that the Chairman of the NRC strengthen NRC security requirements by providing hospitals and medical facilities with specific measures they must take to develop and sustain a more effective security program, including specific direction on the use of cameras, alarms, and other relevant physical security measures.

Status:

While the NRC acknowledges that GAO favors more prescriptive security regulation, the NRC does not agree that the NRC's security requirements for risk-significant radioactive material need to be strengthened, nor with GAO's conclusion regarding the need for prescriptive security controls. The NRC's existing performance-based security program for licensees who possess risk-significant radioactive materials, including those at medical facilities, is effective and provides adequate protection. Performance-based regulation is a key principle of the NRC's regulatory approach that applies to virtually all NRC-regulated activities. A performance-based requirement establishes measurable performance standards, and provides appropriate flexibility to the regulated party as to the means of achieving the mandated outcomes. The NRC and the Agreement States verify licensee performance during the inspection process. Because of the wide variety of nearly 3,000 licensed facilities affected by these security requirements, prescribing specific security measures without regard to the type of facility and licensee operations may impose excessive and

unnecessary requirements and burdens on licensees. In other cases, a prescriptive approach may result in a level of protection that is too low. A "one-size-fits-all" prescriptive approach is neither practical nor desirable from a safety or security perspective. Security concerns such as those mentioned in the GAO report are effectively addressed through established NRC and Agreement State inspection and enforcement processes and are not indicative of a weakness in the regulations. Since issuance of GAO's report, the NRC staff has worked with the Agreement States to pursue the examples of security issues documented in the report. The staff has concluded that three of the four examples were not compliance issues or security concerns. The appropriate Agreement State is pursuing whether the fourth example is a compliance issue.

The GAO report notes concerns that some of the licensee personnel with security responsibilities lack expertise in physical security, which may result in inconsistent application of security controls to their programs. In response to these concerns, the NRC plans to develop and provide additional written guidance to instruct licensees on best practices, including specific guidance on the effective application of cameras, alarms, and other relevant physical security measures to consider in the implementation of their security programs. This "best practices" guidance document will be in addition to the implementing guidance document already developed to accompany the new final rule, 10 CFR Part 37, "Physical Protection of Byproduct Material." The "best practices" guidance document is being developed in response to Recommendation 4 below.

The NRC considers this GAO recommendation to be closed.

Recommendation 3

The GAO recommends that the Chairman of the NRC ensure that NRC and Agreement State inspectors receive more comprehensive training to improve their security awareness and ability to conduct related security inspections.

Status:

The current training program provides effective classroom instruction on a performance-based methodology to evaluate and assess the adequacy of a physical protection system to protect against theft or sabotage of materials subject to the Increased Controls. This training, combined with on-the-job training, periodic refresher training, and as well as other requirements to be a qualified radioactive material safety inspector, prepares NRC and Agreement State inspectors to conduct security inspections. As part of the implementation of the final rule, 10 CFR Part 37, "Physical Protection of Byproduct Material," NRC has reviewed the inspector qualification program for radioactive materials security inspections and revised it accordingly to include training on the new Part 37 rule. In November 2012, a Part 37 Implementation Working Group was formed including representatives from across NRC and the Organization of Agreement States. This group updated the training modules for inspectors to reflect the Part 37 rule and to include additional emphasis on best security practices, including specific guidance on the effective application of cameras, alarms, and other relevant physical security measures. This updated training class entitled "NRC Materials Control and Security Systems and Principles" was first offered in February 2014. This class is scheduled several times a year.

The NRC considers this GAO recommendation to be closed.

Recommendation 4

The GAO recommends that the Chairman of the NRC supplement existing guidance for facility officials, including Radiation Safety Officers, who may be responsible for implementing the NRC's security controls, in how to adequately secure equipment containing high-risk radiological sources and conduct trustworthiness and reliability determinations.

Status:

The NRC must maintain independent, objective oversight of licensees and may not operate in a consultative role. However, the NRC has and will continue to provide guidance to licensees on how to comply with regulatory requirements. As discussed above in the NRC response to Recommendation 2, the NRC plans to develop an additional guidance document with specific emphasis on security best practices and effective application of security technology that licensees may consider in developing their security programs. This "best practices" guidance document will be in addition to the implementing guidance document already developed to accompany the new final rule, 10 CFR Part 37, "Physical Protection of Byproduct Material." In November 2012, a 10 CFR Part 37 Implementation Working Group was formed including representatives from across NRC and the Organization of Agreement States. This group is in the final stages of developing a security "best practice" guidance document and is planning to complete this document by spring 2014.

This GAO recommendation remains open.

GAO Report – Emergency Preparedness: NRC Needs to Better Understand Likely Public Response to Radiological Incidents at Nuclear Power Plants
February 2013
(GAO-13-243)

The U.S. Government Accountability Office (GAO), in its report, "Emergency Preparedness: NRC Needs to Better Understand Likely Public Response to Radiological Incidents at Nuclear Power Plants," reviewed emergency preparedness at nuclear power plants. Specifically the GAO looked at (1) federal, licensees' and local and state authorities' responsibilities in radiological emergency preparedness, (2) the activities NRC and FEMA take to oversee licensee and local and state radiological emergency preparedness, and (3) NRC and FEMA requirements for informing the public on preparedness and NRC's understanding of public awareness. The status of the actions taken by the NRC in response to the GAO recommendations is provided below.

Recommendation

That NRC obtain information on public awareness of radiological emergency preparedness for communities outside the 10-mile emergency planning zone (EPZ) and the likely response of those communities and consider how this may affect the estimates for shadow evacuations outside the EPZ.

Status:

In the NRC response to the GAO, the NRC staff noted that the discussion on the emergency preparedness programs at nuclear power plants was complete. However, the NRC staff did not agree that the report accurately reflected the NRC's basis for the NRC staffs' understanding of the impact of shadow evacuations (people evacuating outside of the designated evacuation area) in the public beyond the 10-mile EPZ. The NRC staff has conducted considerable research into evacuations, including the impact of shadow evacuations on evacuation outcomes. Based on this research, NRC has confidence that shadow evacuations generally have no significant impact on traffic movement, and concludes that the licensee's current emergency planning bases continue to provide reasonable assurance of protection of the public's health and safety.

In addition, the NRC staff identified (see SECY-11-0137) the basis of the plume exposure pathway EPZ size for review in light of the lessons learned from the Fukushima accident. To date, the NRC staff finds no immediate information to suggest that the NRC's existing basis for EPZ size is inadequate. However, the staff decided to add this activity as an "additional issue" so that it could perform a confirmatory analysis once additional insights are gained from the ongoing research and assessments of Fukushima. The staff expects it will be several years until these other activities are complete.

The NRC considers this GAO recommendation to be closed.

GAO Report – Nuclear Power: Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight
September 2013
(GAO-13-743)

The U.S. Government Accountability Office (GAO), in its report: "Nuclear Power: Analysis of Regional Differences and Improved Access to Information Could Strengthen NRC Oversight," made three recommendations to the U.S. Nuclear Regulatory Commission (NRC). In response, on December 16, 2013, the Chairman of the NRC informed Congress about the actions planned response to the recommendations identified by GAO. The status of the actions taken by the NRC in response to the GAO recommendations is provided below.

Recommendation 1

To better meet its goal of implementing objective and consistent oversight, direct agency managers to conduct a comprehensive analysis of the causes of the differences in the identification and resolution of findings.

Status:

The NRC's Enforcement Policy, Enforcement Manual, and Reactor Oversight Process (ROP) all provide tools to inspect and assess licensee performance, with the goal of being objective, predictable, and risk informed. In addition, the NRC emphasizes inspector training, internal self-assessments, staff knowledge transfer, and use of operating experience to further enhance objective and consistent oversight. The NRC has determined that the existing guidance has been effective in providing the agency with objective assessments of its licensees' performance. Notwithstanding, the NRC will revisit its initiatives with respect to implementation of the ROP and the non-escalated enforcement process to identify potential enhancements.

The NRC is conducting an analysis to determine the causes of regional differences in the identification and resolution of very low-safety-significant findings, which was the focus of this GAO recommendation. The analysis will examine program criteria used to evaluate potential findings and determine how the regions apply those criteria. The NRC will use the results of the analysis to identify what program enhancements are appropriate to continue to ensure consistent and objective regulatory oversight.

This GAO recommendation remains open.

Recommendation 2

To improve transparency and better enable the public Congress, and others to independently track findings, all documents related to the findings, and the finding's resolution, direct the agency to either modify NRC's publicly available recordkeeping system to do so or develop a publicly accessible tool that does so.

Status:

The NRC's official recordkeeping system is the ADAMS. All retained NRC documents, related findings, and their resolution, as applicable, are stored in ADAMS and made publicly available, with the exception of sensitive or protected information. As part of the ROP enhancement project, which was initiated at the direction of the Commission in late 2012, the NRC is working on ways to

improve openness. The NRC will identify ways to improve transparency, and effectively and efficiently track documents related to inspection findings through improved tools to facilitate public access to inspection information.

This GAO recommendation remains open.

Recommendation 3

To help NRC staff more efficiently use past experiences in its oversight activities, direct agency officials to evaluate the challenges inspectors face in retrieving all relevant information on plant performance and previous oversight activities, and improve its systems accordingly to address these challenges.

Status:

The NRC will make plant performance and oversight information more readily searchable and available to NRC inspection staff and other NRC personnel. The NRC is working to upgrade the Reactor Program Systems software and improve inspector access to operating experience. This will make plant performance and oversight information more readily available to appropriate NRC staff.

This GAO recommendation remains open.