

POLICY ISSUE
(Information)

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SECY-17-0025

FOR: The Commissioners

FROM: Marc L. Dapas, Director
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and Safeguards

SUBJECT: UPDATE ON SOURCE SECURITY AND ACCOUNTABILITY
ACTIVITIES

PURPOSE:

The purpose of this paper is to provide the Commission with an update on source security and accountability activities pertaining to the recommendations from the two working groups formed in response to the findings and recommendations made by the Government Accountability Office (GAO) in materials licensing audit GAO-16-330, entitled "NRC Has Enhanced the Controls of Dangerous Radioactive Materials, but Vulnerabilities Remain." This paper also informs the Commission of the initiation of Category 3 source security and accountability initiatives to address the tasks in the Staff Requirements Memorandum (SRM) for COMJMB-16-0001, "Proposed Staff Re-Evaluation of Category 3 Source Accountability," (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16292A812), and potential strategies for addressing rulemaking activities affecting materials licensees. This paper does not address any new commitments or resource implications.

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SUMMARY:

After analyzing the findings and recommendations in GAO-16-330, the Enhancements to Pre-Licensing Guidance Working Group (PLWG) and the License Verification and Transfer of Category 3 Sources Working Group (LVWG) made a number of recommendations to enhance the materials licensing program. These recommendations were reviewed by a Steering Committee that was co-chaired by U.S. Nuclear Regulatory Commission (NRC) and Agreement State representatives and included proposals to pursue rulemaking, guidance development, and program changes such as training enhancements.

The NRC staff is preparing an action plan to implement PLWG recommendations that do not require rulemaking and that were endorsed by the Steering Committee, such as the development of additional guidance and training. Recommendations involving rulemaking will be addressed in an integrated manner with other planned rulemaking activities affecting materials licensees. Analyses and recommendations developed by the LVWG will be considered by a new working group that was formed to address the recent Commission direction in SRM-COMJMB-16-0001 for the staff to re-evaluate Category 3 source protection and accountability. This working group – the Category 3 Source Security and Accountability Working Group – will present the results of their working group activities to the Steering Committee for consideration. The NRC staff will provide the resultant recommendations to the Commission in August 2017 in a notation vote paper.

In order to maximize efficiency and minimize the cumulative effects of regulatory changes on materials licensees, the staff will provide an integrated rulemaking plan to the Commission for its consideration subsequent to receipt of Commission direction on the August 2017 notation vote paper. The rulemaking plan will include the PLWG recommendation that requires rulemaking (Title 10 of the *Code of Federal Regulations* (10 CFR) Parts 30, 40, and 70); planned rulemaking activities pertaining to 10 CFR Part 37; and any rulemaking recommendations that result from ongoing working group activities performed in response to SRM-COMJMB-16-0001.

BACKGROUND:

In 2014, the GAO initiated an audit of the materials licensing program to determine whether the licensing vulnerabilities identified in its 2007 investigation (GAO-07-1038T, entitled “Nuclear Security: Actions Taken by NRC to Strengthen Its Licensing Process for Sealed Radioactive Sources Are Not Effective”) had been addressed by the NRC and the Agreement States. In 2015, as part of the audit, the GAO conducted an investigation that again attempted to obtain radioactive materials licenses, this time from one NRC regional office and two separate Agreement States, using a fictitious company. The 2015 investigation went beyond the investigation in 2007 in its sophistication and planning, such that the GAO rented storefront/warehouse space to demonstrate its legitimacy during pre-licensing visits. The GAO was successful in one of three attempts, acquiring a license for a Category 3 well-logging source. Subsequently, GAO was able to place an order for one Category 3 source, then alter the license and place an order for a second Category 3 source. The investigation demonstrated that the GAO could have acquired an aggregated Category 2 quantity of material, although at no point in the investigation were radioactive materials actually shipped to the fictitious company.

Once notified of the investigation results by the GAO in October 2015, the NRC took a number of immediate actions, including: 1) working with the impacted Agreement State to ensure that the license obtained by GAO was immediately terminated and relevant manufacturers and distributors were notified; 2) issuing a notice to the Agreement States on the importance of following pre-licensing guidance, conducting site visits during the licensing process, and suspending use of the “good-faith” presumption during the licensing process; 3) asking the Agreement State that issued the license to GAO to perform a self-assessment and root cause analysis of the State’s action in association with the GAO application and pre-licensing visit; and 4) requesting NRC regions and Agreement States to perform self-assessments of their implementation of the pre-licensing guidance and provide their results to the NRC. As a longer term activity, the NRC also formed two NRC-Agreement State working groups to evaluate the results of the GAO audit and investigation. Specifically, one working group considered enhancements to the pre-licensing guidance (the PLWG) while the second working group evaluated the need for enhancements to existing requirements or guidance for license verification and source tracking beyond Category 1 and Category 2 thresholds of radioactive material (the LVWG).

In addition, the Commission directed the staff to take specific actions to evaluate whether it is necessary to revise NRC regulations or processes governing source protection and accountability. Specifically, on October 18, 2016, the Commission issued SRM-COMJMB-16-0001 directing the staff to re-evaluate Category 3 source accountability given the agency’s operating experience with higher-risk sources and in response to the findings by GAO. As a result of the SRM, the Category 3 Source Security and Accountability Working Group was formed to complete the tasks identified in the SRM and to produce a notation vote paper that will be submitted to the Commission in August 2017.

Additional activities related to source management and protection have recently been completed by the NRC. Specifically, in December 2016, the Commission provided a report to Congress documenting the NRC staff’s evaluation of the effectiveness of the requirements in 10 CFR Part 37, “Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material” (ADAMS Accession No. ML16348A230). The report detailed the results of the NRC’s comprehensive program review of 10 CFR Part 37, which concluded that the requirements in 10 CFR Part 37 are effective in protecting Category 1 and 2 quantities of radioactive material. However, the report did identify specific areas in which revisions to the rule, development or revision of implementing guidance, and enhanced communication efforts with licensees would be beneficial in improving the clarity of the regulations and licensees’ implementation of source security measures. As such, the NRC staff will undertake a number of activities to address the enhancements identified as a result of the program review. These actions include preparation of a rulemaking plan, consistent with Commission direction in the SRM for SECY-15-0129, “Commission Involvement in Early Stages of Rulemaking,” dated February 3, 2016 (ADAMS Accession No. ML15267A716), to seek Commission approval to proceed with proposed rule changes identified as a result of the program review.

On June 12, 2014, the Nuclear Energy Institute (NEI) submitted a petition for rulemaking (PRM), PRM-37-1 (ADAMS Accession No. ML14199A570), seeking to amend 10 CFR Part 37 to: 1) allow for all byproduct material kept within any area for which 10 CFR Part 73 requires access control to be exempted from 10 CFR Part 37 requirements regardless of whether the byproduct material activities are specifically included in a 10 CFR Part 73 security plan; 2) remove

ambiguity as to what type of wastes are exempted from 10 CFR Part 37 requirements; and 3) add an exemption to address large components and storage of radioactive material in robust structures due to the low risk of theft or diversion of these materials. In June 2015, the NRC staff closed the docket for PRM-37-1 (80 FR 33450) and determined that the issues raised in the PRM would be considered in rulemaking. Review of the associated rulemaking plan was deferred in February 2016 due to the then-ongoing Part 37 program review. The NRC staff anticipates including the request to enter the rulemaking process to evaluate and address issues raised by PRM-37-1 in the same rulemaking plan that will be prepared to address the rulemaking recommendations identified as a result of the Part 37 program review. The exact wording of revisions to 10 CFR Part 37, if any, will be determined during the rulemaking process.

In a separate effort, in October 2016, the NRC staff submitted SECY-16-0115, "Rulemaking Plan on Financial Assurance for Disposition of Category 1 and 2 Byproduct Material Radioactive Sealed Sources" (ADAMS Accession No. ML16200A223), to request Commission approval to initiate a rulemaking to require financial assurance for the disposition of Category 1 and 2 byproduct material radioactive sealed sources (RSSs). The rulemaking seeks to revise 10 CFR 30.35, "Financial Assurance and Recordkeeping for Decommissioning," to establish financial assurance requirements for the dispositioning of all byproduct material Category 1 and 2 RSSs that are required to be tracked in NSTS. Staff is awaiting final Commission direction on this rulemaking plan.

DISCUSSION:

The PLWG and LVWG completed their chartered activities in October 2016, and the Steering Committee for the working groups met later that month to discuss and evaluate the proposed working group recommendations, while taking into consideration the recent Commission direction in SRM-COMJMB-16-0001. The Steering Committee endorsed the majority of the PLWG's recommendations, while deciding to defer endorsement of the LVWG's recommendations due to: 1) the existence of substantial overlap between the LVWG's activities and tasks in SRM-COMJMB-16-0001; 2) the need to consider new cost/benefit, vulnerability, and threat analyses required by SRM-COMJMB-16-0001 to inform any decisions on the LVWG's recommendations; and 3) the need to develop the project plan for responding to SRM-COMJMB-16-0001 in order to determine potential decision-making timeframes for recommendations related to Category 3 source security and accountability.

A summary of the recommendations made by the PLWG and LVWG, and the results of the Steering Committee's deliberation on these recommendations, are provided in the enclosure to this paper. The staff will implement recommendations from the PLWG through development of a rulemaking plan for Commission consideration as well as a separate action plan for those activities that do not require rulemaking. Activities not requiring rulemaking will be performed in accordance with budgeted resources and agency priorities. Recommendations from the LVWG will be considered as part of the Category 3 source security and accountability initiatives described below.

Category 3 Source Security and Accountability Initiatives

Staff formed the Category 3 Source Security and Accountability working group to address SRM-COMJMB-16-0001 and has commenced work on those activities. The working group includes NRC and Agreement State participation and is responsible for evaluating whether it is necessary to revise NRC regulations or processes governing source security and accountability to continue to ensure adequate protection of public health and safety. The working group's charter can be found in ADAMS (Accession No. ML17010A017). A total of nine tasks were identified in SRM-COMJMB-16-0001,¹ and the working group plans to address them through four targeted activities:

Activity 1: Expand on the analyses and recommendations developed by the LVWG. This activity addresses Tasks 1, 2, 3, 6, 7, and 8 from SRM-COMJMB-16-0001 and includes efforts to: 1) Evaluate and assess the pros and cons of different methods of requiring transferors of Category 3 sources to verify the validity of a transferee's license prior to transfer; 2) Evaluate and assess the pros and cons of including Category 3 sources in the NSTS; 3) Assess any additional options for addressing source accountability recommendations made by the GAO; 4) Identify potential regulatory actions that would not require changes to NRC regulations to include changes to guidance, training, and other program improvements; 5) Identify any other factors arising from the staff's currently ongoing assessment that the staff concludes would bear on the Commission's deliberation on the proposed change; and 6) Assess the risks posed by the aggregation of Category 3 sources into Category 2 quantities.

Activity 2: Perform a vulnerability assessment which identifies changes in the threat environment between 2009 and today that argue in favor or against extending enhanced security measures for the protection of Category 3 quantities of radioactive materials and expansion of the NSTS to include Category 3 sources. This activity addresses Task 4 from SRM-COMJMB-16-0001.

Activity 3: Perform a regulatory impact analysis of the accrued benefit and costs of the changes requiring rulemaking to include the impacts to the NRC, Agreement States, non-Agreement States, and regulated entities. This Activity addresses Task 5 from SRM-COMJMB-16-0001.

Activity 4: Solicit feedback from Agreement State partners, non-Agreement States, regulated entities, public interest groups, industry groups such as those in the medical and industrial fields, and the reactor community on Activities 1 through 3. This Activity addresses Task 9 from SRM-COMJMB-16-0001 and includes efforts to: 1) Prepare and issue a *Federal Register* notice (FRN), which provides specific questions for stakeholders to consider; 2) Hold public meetings/webinars to facilitate feedback on the FRN; and 3) Give presentations to industry groups and professional organizations.²

¹ SRM-COMJMB-16-0001 included a list of tasks numbered from 1-7. In subsequent paragraphs of the SRM, direction was given to conduct activities such as considering the risks of aggregation of Category 3 sources into Category 2 quantities and soliciting feedback from stakeholders. In order to ensure appropriate tracking of these activities, staff numbered them sequentially, with the assessment of aggregation being identified as Task 8 and the solicitation of stakeholder feedback being identified as Task 9.

² On January 9, 2017, the FRN providing questions for stakeholders to consider regarding the re-evaluation of Category 3 source security and accountability (82 FR 2399) was issued with a 60-day comment period closing on March 10, 2017. A correction to the FRN was published on January 17, 2017 (82 FR 4938). A public meeting was

The products produced from each of the four activities performed by the working group will be used as input to the Commission notation vote paper required by SRM-COMJMB-16-0001.

Integration of Rulemaking Activities

The NRC staff intends to increase efficiency and address the cumulative effects of regulatory changes by integrating, to the extent practicable, rulemaking initiatives that are related to the same set of materials licensees. This will entail the consolidation of rulemaking activities pertaining to 10 CFR Parts 30, 37, 40, and 70 as well as any rulemaking recommendations that result from ongoing working group activities in response to SRM-COMJMB-16-0001, as described below.

10 CFR Part 37. The NRC staff plans to address: 1) recommendations for rule changes resulting from the program review of 10 CFR Part 37, and 2) any potential rule changes being considered in response to PRM-37-1.

10 CFR Parts 30, 40, and 70. The PLWG recommended rulemaking to amend 10 CFR Parts 30, 40, and 70 to require safety and security equipment to be in place before granting a license for an unknown entity.

Other Rulemaking Activities. While rulemaking was recommended by the LVWG, Steering Committee endorsement of the rulemaking recommendations was deferred until after completion of the Category 3 Source Security and Accountability working group chartered activities to allow for consideration of the results of additional analysis activities required by SRM-COMJMB-16-0001. Consideration of the LVWG recommendations and the results of the Category 3 Source Security and Accountability working group chartered activities could result in recommendations for rulemaking in additional areas.

In order to consolidate the rulemaking activities described above, the NRC staff anticipates preparing an integrated rulemaking plan approximately 3 months following Commission direction on the August 2017 Commission vote paper required by SRM-COMJMB-16-0001. The integrated rulemaking plan will include recommendations to amend 10 CFR Parts 30, 37, 40, and 70, as well as other parts of 10 CFR as appropriate.

If final Commission approval has been received on SECY-16-0115, the staff plans to recommend incorporation of the rulemaking to amend 10 CFR Part 30 to establish financial assurance requirements for the disposition of Category 1 and 2 RSSs, into the integrated rulemaking initiative in the August 2017 Commission vote paper. If approved, this integration would occur at the regulatory basis phase, as the rulemaking plan for financial assurance was provided to the Commission in October 2016 in SECY-16-0115.

held at NRC Headquarters on January 31, 2017. Two additional public meetings outside the Washington, DC, area (dates and locations yet to be confirmed) and two webinars (February 21, 2017, and March 2, 2017) will be held during the comment period. NRC representatives will also participate in meetings and workshops held by industry groups and professional organizations to provide presentations on the staff's activities with respect to Category 3 source security and accountability and to solicit feedback. Further details regarding these activities can be found at the following website: <https://www.nrc.gov/security/byproduct/category-3-source-security-accountability-reevaluation.html>.

CONCLUSION:

The staff is developing an action plan to implement the PLWG recommendations that do not require rulemaking and that were endorsed by the Steering Committee. The activities described in the action plan will be performed in accordance with budgeted resources and agency priorities. In addition, the staff provided copies of the PLWG and LVWG reports and the Steering Committee meeting summary to the Agreement States to ensure that they are fully informed of NRC actions in response to GAO-16-330 and SRM-COMJMB-16-0001.

As noted above, the staff intends to provide an integrated rulemaking plan to the Commission that incorporates all the existing activities that are relevant to source security and accountability approximately 3 months following Commission direction on the August 2017 Commission vote paper required by SRM-COMJMB-16-0001. This integrated rulemaking plan will include the request to undertake rulemaking to address:

- 1) Recommendations resulting from the program review of 10 CFR Part 37 and issues raised by PRM-37-1;
- 2) The recommendation for rulemaking to amend 10 CFR Parts 30, 40, and 70 made by the PLWG; and
- 3) Subject to appropriate Commission direction following the August 2017 Commission paper, any rulemaking recommendations proposed by the Category 3 Source Security and Accountability Working Group, including consideration of the LVWG deferred recommendations.

In addition, pending Commission direction on SECY-16-0115, the staff plans to recommend incorporation of the rulemaking activity to amend 10 CFR Part 30 to require financial assurance for the disposition of Category 1 and 2 RSSs, into the integrated rulemaking effort beginning at the regulatory basis phase of the rulemaking.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections. The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

/RA/

Marc L. Dapas, Director
Office of Nuclear Material Safety
and Safeguards

Enclosure:

Conclusions Made by the Steering
Committee Regarding the Recommendations
Made By the Pre-Licensing Guidance and
License Verification and Transfer of
Category 3 Sources Working Groups

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