

LOW-LEVEL RADIOACTIVE WASTE FORUM, INC.

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U.S. Nuclear Regulatory Commission

NRC Schedules Public Scoping Meeting and Webinar re Financial Planning and Management of Byproduct Material

October 7, 2015 from 1:00 to 4:00 pm EDT

On October 7, 2015, the U.S. Nuclear Regulatory Commission (NRC) will hold a public scoping meeting and webinar on financial planning for the management of radioactive byproduct material from 1:00 -4:00 p.m. in the Commissioner's hearing room at the agency's headquarters (NRC One White Flint North) located at 11555 Rockville Pike in Rockville, Maryland.

The meeting and webinar are being held in an effort to obtain stakeholder input on the NRC staff's scoping study to determine if financial planning requirements for decommissioning and end-of-life management for some radioactive byproduct material are necessary.

The development and implementation of financial planning requirements for disused sources was a key recommendation contained in the March 2014 report from the Disused Sources Working Group (DSWG) of the Low-Level Radioactive Waste Forum (LLW Forum).

A presentation on the NRC's byproduct material financial scoping study, as well as an extended brokers and processors panel on disused source management and disposition, have been scheduled for the fall 2015 LLW Forum meeting—which will be held in Chicago, Illinois on October 22-23, 2015.

The March 2014 DSWG report, as well as other resource documents and information, can be found on the DSWG web site at www.disusedsources.org.

Information about the fall 2015 LLW Forum meeting—including the meeting bulletin, registration form and agenda—can be found at the bottom of the Home Page of the LLW Forum's web site at www.llwforum.org.

Additional details regarding the NRC public scoping meeting and webinar can be found in the attached meeting notice or at <http://meetings.nrc.gov/pmns/mtg?do=details&Code=20151315>.

Meeting, Webinar and Teleconference Logistics

Please note the following information regarding participation in the meeting:

On Site Attendees NRC strongly encourages stakeholders that are interested in attending this meeting in person to pre-register by contacting Ryan Whited at Ryan.White@nrc.gov or at (301) 415-1154 or James Shaffner at James.Shaffner@nrc.gov or at (301) 415-5496 no later than 3 days before the meeting.

Webinar Participation You may register for the Webinar at <https://attendee.gotowebinar.com/register/1907657440991552769> using Webinar Meeting Number111-469-083.

Teleconference Details The participate in the meeting via teleconference, please call the bridge number at (888) 4695450 and enter passcode 2079968.

Agenda

The following is the agenda for the meeting:

- 1:00 p.m. welcome/introduction/logistics NRC staff
- 1:10 pm background and overview of the NRC staff's financial scoping study NRC staff
- 1:30 pm receive stakeholder comments all meeting participants who wish to provide comments
- 3:50 pm summation and closing remarks NRC staff
- 4:00 pm meeting adjourned

Federal Register Notice

In a *Federal Register* notice published on August 3, 2015, NRC announced that the agency plans to conduct a financial scoping study to determine if financial planning requirements for decommissioning and end-of-life management for some radioactive byproduct material are necessary. (See 80 *Federal Register* 46,057 dated August 2, 2015.)

The NRC is seeking stakeholder input and perspective on this issue. Commenters are asked to consider recommendations from recent studies addressing this topic, national and international activities, and specific questions posed by the NRC staff in the *Federal Register* notice when preparing their responses. (See *LLW Notes*, July/August 2015, pp. 1, 29 – 36.)

The deadline for submitting comments is October 19, 2015. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received on or before this date.

The *Federal Register* notice announcing the staff's financial scoping study can be found at ADAMS accession number: ML15120A342 or at <https://www.federalregister.gov/a/2015-18891>.

Overview and Questions for Respondents

The NRC is conducting this financial scoping study to determine if financial planning requirements for decommissioning and end-of-life management for some radioactive byproduct material are necessary. The NRC is seeking stakeholder input and perspective on this action. Respondents are asked to consider the background material discussed in the *Federal Register* notice when preparing their comments and insights. In addition, the NRC staff requests that respondents consider the following topical areas, and specifically the eight listed questions, that an NRC staff internal working group has identified.

Consideration of Feasible Disposition Paths Other Than Disposal According to NRC, disposition pathways other than disposal may be available and appropriate for sources, including reuse and recycling. Factors important for financial planning for these disposition pathways may be significantly different from those associated with disposal.

Question 1: What disposition pathways are available to various licensee types beyond the traditional disposal pathway and should be considered in any potential new financial planning requirements?

Establishing Funding Requirements for Dispositioning NRC believes that establishing appropriate and equitable funding requirements sufficient for the disposition of certain individual sources is a challenge. Funding requirements must account for interim storage, conditioning, and packaging for transportation and disposal, as well as the transportation and disposal costs. NRC states that, in many cases, it is difficult to establish accurate values for each of these elements even with current information. Furthermore, NRC contends that there will be uncertainty regarding the adequacy of financial surety requirements in the future. Some sealed sources may have a service life of decades; therefore, a financial surety established today may not be adequate 20 to 30 years from now. NRC states that, at present, it may be easier to articulate an appropriate decommissioning funding plan or fixed dollar amount for Category 3 and 4 sources than for Category 1 and 2 sources because disposal access is more readily available for smaller sources.

Question 2: What should be the primary considerations in establishing and imposing appropriate and equitable financial planning requirements on radioactive sealed sources?

Timeliness in Declaring Disused Sources Currently there is no NRC requirement for licensees to declare licensed sources as disused, although they are encouraged to do so. Financial planning requirements may establish an appropriate time (i.e., two years) for applying requirements to sources considered disused by the licensee.

Question 3: Should licensees be required to specifically declare disused sources? If so, how long after a source is disused must a licensee declare it as disused?

Source Characteristics According to NRC, financial planning must also account for source characteristics such as type of radioactive material, half-life, physical form, and remaining useful life. For relatively short half-life byproduct material, there is a need to evaluate the equitable application (and removal) of financial planning requirements for sources that may decay below the quantities of concern.

Question 4: How should source characteristics be factored into establishing equitable financial planning requirements for end-of-life management?

Compatibility With Agreement State Requirements NRC acknowledges that any agency rulemaking must involve Agreement State regulators in determining the compatibility category assigned to a potential rule.

Question 5: If NRC rulemaking is initiated as a result of this scoping study, how should NRC engage with and consider the impact on Agreement States? What would be the primary considerations in establishing compatibility levels for rule requirements?

Applicability to General Licensees NRC states that the applicability of financial planning requirements to licensees possessing generally licensed sealed sources should be considered.

According to the 2014 Disused Sources Working Group report, there are at least a few licensees who possess generally licensed sources in quantities of concern.

Question 6: When necessary, what mechanism should be used to administer financial planning requirements on general licensees?

Characteristics and Qualifications of the Fund Custodian Another consideration in establishing financial planning requirements, as identified by NRC, is how to determine the proper custodian for the fund that is to be earmarked for disposition.

Question 7: What are the ideal characteristics and qualifications for an entity that will act as the custodian for any funds earmarked for long-term management of disused sealed sources? For instance, what characteristics and qualifications should be taken into consideration regarding the custodian's relationship to the licensee (e.g., the ability of the custodian to access the funds, or the custodian's independent financial viability)? In the event that there is a residual amount remaining in the fund following payment of disposition cost, what should be the fate of the residual funds?

Tracking NRC states that, for licensees possessing Category 1 or 2 radioactive sealed sources, regulators can access the National Source Tracking System (NSTS) to determine the number and type of licensees that would be potentially impacted by end-of-life financial assurance requirements. For new sources, source manufacturers or suppliers could be contacted to determine how they would be impacted by any new requirements. However, it may be more difficult to implement requirements and ensure accountability regarding sources that are not tracked in the NSTS (e.g., Category 3 and lower).

Question 8: What are the key characteristics of a tracking system for byproduct material (sealed sources) subject to financial planning requirements? Which of these characteristics are not available as part of the NSTS?

Path Forward and Next Steps

In the *Federal Register* notice, NRC states that the topical areas and questions that agency staff has identified are consequential, but not exhaustive. "Varied perspectives from a broad range of stakeholders will be beneficial," states NRC. "Further, NRC staff anticipates that stakeholders will identify and provide their perspectives on additional issues they identify that are relevant to financial planning for management of disused or unwanted radioactive byproduct material."

Based on the results of the expanded byproduct material financial scoping study, NRC staff will compile a report with study results and recommendations for next steps to be provided to the Commission in the spring of 2016. NRC staff recommendations could include options such as limited rulemaking, broad scope rulemaking, advance notice of proposed rulemaking, development of guidance, issuance of a generic communication, or no action.

Obtaining Information

Please refer to Docket ID NRC-2015-0182 when contacting the NRC about the availability of information for this action. Interested stakeholders may obtain publicly available information related to this action by any of the following methods:

- Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for Docket ID NRC-2015-0182.
- NRC's Agency-wide Documents Access and Management System (ADAMS): Interested stakeholders may obtain publicly available documents online in the ADAMS Public Documents collection at <http://www.nrc.gov/reading-rm/adams.html>. To begin the search,

select “ADAMS Public Documents” and then select “Begin Web-based ADAMS Search.” For problems with ADAMS, please contact the NRC’s Public Document Room (PDR) reference staff via phone at (800) 397–4209 or (301) 415–4737 or via email at pdr.resource@nrc.gov.

Submitting Comments

Interested stakeholders may submit comments by any of the following methods:

- Federal Rulemaking Web site: Go to <http://www.regulations.gov> and search for Docket ID NRC–2015–0182. Address questions about NRC dockets to Carol Gallagher at (301) 415–3463 or at Carol.Gallagher@nrc.gov.
- Mail comments to: Mail comments to Cindy Bladey, Office of Administration, Mail Stop: OWFN–12–H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

Stakeholder are requested to please include Docket ID NRC–2015– 0182 in the subject line of any comment submissions. The NRC cautions stakeholders not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. The NRC posts all comment submissions at [http:// www.regulations.gov](http://www.regulations.gov), as well as enters the comment submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

Background

The issue of adequacy of financial mechanisms for end-of-life management of disused Category 1 and 2 sealed sources was raised in the 2006 report by the Radiation Source Protection and Security Task Force (Task Force), which can be found at <http://www.nrc.gov/security/byproduct/task-force.html>). The Energy Policy Act of 2005 created the Task Force, which is comprised of 14 federal agencies and the Organization of Agreement States (OAS), to evaluate the status of various factors affecting the security of Category 1 and 2 sealed sources. In Recommendation 9–2 of the 2006 report, the Task Force recommended that the NRC “evaluate the financial assurance required for possession of Category 1 and 2 radioactive sources to assure that funding is available for final disposition of the sources.”

Similarly, in the NRC staff’s 2007 “Strategic Assessment of the U.S. Nuclear Regulatory Commission’s Low- Level Radioactive Waste Regulatory Program” (Strategic Assessment), financial assurance scoping for byproduct material was identified as one of seven high priorities. (See ADAMS Accession No. ML071350291.) The Strategic Assessment identified the issue more broadly than the Task Force, whose charter was to focus on security related to Category 1 and 2 sources. In fact, the NRC staff proposed to also review the “adequacy of financial assurance requirements to anticipate the ultimate costs of disposal of or dispositioning radioactive sources not addressed by the Task Force.”

Two recent drivers that prompted the NRC staff to initiate this financial scoping study were specific recommendations related to financial planning in the 2014 Task Force report (ADAMS Accession No. ML14219A642) and recommendations related to financial assurance in a March 2014 report issued by the LLW Forum’s DSWG (ADAMS Accession No. ML14084A394).

During a September 18, 2014, Commission briefing on management of low-level radioactive waste, high-level radioactive waste and spent nuclear fuel, the Director of the Division of Waste Management and Environmental Protection (now the Division of Decommissioning, Uranium Recovery, and Waste Programs) stressed the timeliness of a scoping study related to financial requirements for end-of-life management of byproduct material, in particular disused radioactive sealed sources (ADAMS Accession No. ML14265A396), stating as follows:

The 2007 programmatic assessment [i.e., the Strategic Assessment of the U.S. Nuclear Regulatory Commission's Low-Level Radioactive Waste Regulatory Program] included an activity to perform a scoping study of the need to revise or expand byproduct material financial assurance. Resource constraints unfortunately delayed that initiative. However, it has become more important and timely based upon the recommendation of the 2014 Radiation Source Protection and Security Task Force report as well as a report prepared by the Low-Level Waste Forum Task Group on disused cell [sealed] sources. And the staff now intends to focus on this important and emerging issue.

In a Staff Requirements Memorandum (SRM) dated September 24, 2014, in response to the briefing, the Commission stated that “[t]he staff should provide the Commission with the results of the byproduct financial scoping study and provide recommendations on next steps.” (See ADAMS Accession No. ML14267A365.) The staff received subsequent administrative instructions to report the results of the scoping study and recommendations by April 13, 2015. In preparing a response to the Commission in compliance with the first directive in the SRM, the staff determined that the byproduct material financial scoping study would benefit from much broader stakeholder involvement than was originally envisioned. NRC staff identifies the four primary reasons for the expanded involvement as follows:

1. Recent reports (the 2014 Task Force report and the 2014 DSWG report) addressing this topic have been generated by a limited group of federal and state stakeholders. The views and perspectives of important external stakeholders such as industry, users groups, and current licensees are needed to fully inform the scoping study and any subsequent NRC staff's recommendations.
2. Currently, there are a number of ongoing national initiatives and activities that could add perspective to the staff's consideration of options and recommendations to address byproduct material financial planning.
3. Financial planning associated with end-of-life management of byproduct material has also garnered the attention of the international community. The financial scoping study would benefit from consideration of international experience and perspectives.
4. An NRC internal working group has identified a number of topical areas that are relevant to financial planning. Broader stakeholder input would assist the NRC staff in analyzing these topical areas and potentially identifying other financial planning issues.

Recommendations Warranting Broader Review The NRC staff believes that the following recommendations warrant broader review in the scoping study and asks that respondents consider them when developing their comments.

- Summary recommendations from the report by the Interagency Working Group (IWG) on Financial Assurance for Disposition of Category 1, 2, and 3 Radioactive Sealed Sources (ADAMS Accession No. ML100050105): To address the financial assurance concerns raised in the 2006 Task Force Report, an Interagency Working Group (IWG) on Financial Assurance for Disposition of Category 1, 2, and 3 Radioactive Sealed Sources was established in December 2008. The IWG was tasked with proposing a comprehensive list of viable financial assurance solutions to increase the likelihood that Category 1, 2, and 3 radioactive sealed sources will be disposed of in a safe, appropriate and timely manner. The IWG identified three main areas of concern including: (1) lack of disposal capacity for sources, (2) an inadequate supply of containers for transportation of these sources for final disposition/disposal, and (3) storage of these sources by licensees for extended periods of time.

The IWG recognized that certain financial assurance options might mitigate, but not resolve, these concerns. Possible options considered in the evaluation included:

1. Develop risk-based financial assurance requirements and lower financial assurance thresholds in § 30.35 of Title 10 of the *Code of Federal Regulations* to capture all Category 1, 2, and 3 radioactive sealed sources.
2. Assess a universal surcharge on all licensees to cover the cost of disposal.
3. Assess an up-front surcharge on all new Category 1, 2, and 3 sources to cover the entire anticipated cost of packaging and disposal.

The IWG report has recently been made publicly available. The recommendations from the IWG report were also articulated in the 2010 Radiation Source Protection and Security Task Force report. (See ADAMS Accession No. ML102230141).

- Recommendation 2 of the 2014 Task Force Report: According to NRC, the 2014 Task Force report highlighted that significant progress has been made to address the commercial sealed source management and disposal challenges identified in the 2006 and 2010 Task Force reports. Disposal options for many commercial Class A, B, and C sealed sources are now available to low-level radioactive waste generators in all 50 states, including the 36 states which had been without such an option when the 2010 Task Force report was published. The 2014 Task Force report also found that progress has also been made in addressing ongoing challenges regarding both the transportation and disposal of the highest activity sealed sources. The Task Force noted that although disposal options for many sealed sources are now available, there are currently few incentives for generators to dispose of their disused sealed sources in a timely fashion. In addition, commercial disposal options are still unavailable for many Category 1 and 2 sources, and challenges remain regarding the availability of certified Type B shipping containers required for transport of these sources. Consequently, the 2014 Task Force report contains a specific recommendation, Recommendation 2, related to financial planning that states as follows:

The Task Force recommends that the NRC evaluate the need for sealed source licensees to address the eventual disposition/disposal costs of Category 1 and 2 quantities of radioactive sources through source disposition/disposal financial planning or other mechanisms.

Disposition costs should include the cost of packaging, transport, and disposal (when available) of these sources.

- Recommendations from the 2014 DSWG Report: The 2014 report from the LLW Forum's DSWG contained a recommendation that the NRC develop financial assurance requirements for sealed source radionuclides of concern for all categories. The report suggested that the requirement apply to general licensees as well as specific licensees. The vast majority of licensees possessing Category 1 and 2 sources are specific licensees. However, some sources in the lower categories (Category 3–5) are possessed under a general license. The DSWG offered several recommendations directly related to financial assurance including:
 1. To encourage timely disposal, the NRC should develop robust financial assurance requirements for all licensees with sources that pose a threat to national security (Categories 1 through 3). The financial assurance requirements should be adequate to cover the entire cost of packaging, transport, and disposal.
 2. The existing NRC-Conference of Radiation Control Program Directors (CRCPD) program should be adequately funded to address orphaned and abandoned sources throughout the United States. Individual states should retain the ability to operate their own orphaned and abandoned source programs, such as is currently done in Texas.
 3. Federal research agencies should require applicants to budget for the full life-cycle cost of use and disposition in grant applications.

Relevant National Activities Related to Byproduct Material Financial Planning In recent years, several important activities have ensued related to byproduct material financial assurance. The NRC invites public comment and perspective as to the impact that these activities, individually or in combination, may have on financial planning related to end-of-life management of radioactive sealed sources (or other byproduct material) including:

1. The NRC staff published a revised Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP), which increased the recommended activity limit for Cs-137 disposal from 30 curies to 130 curies allowing disposal of more Cs-137 sources. (See ADAMS Accession No. ML14169A380).
2. The Waste Control Specialists disposal facility in Texas was authorized to collect and dispose of sealed sources on April 25, 2012.
3. The Office of Radiological Security (ORS), formerly Global Threat Reduction Initiative (GTRI), of the U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) continued to offer federally funded security upgrades based on best practices. (See <http://nnsa.energy.gov/mediaroom/factsheets/reducingthreats>.) When requested by a licensee, the ORS works to assess existing security conditions, provide recommendations on security enhancements, and (when warranted) fund the procurement and installation of jointly agreed-upon security best practices. These voluntary security enhancements complement and do not replace the NRC's current requirements. Also, some sealed sources are recovered through ORS' Offsite Source Recovery Project (OSRP).
4. The Source Collection and Threat Reduction Program (SCATR), administered by the CRCPD, was created in early 2007 to provide sealed source licensees in states which do not have access to a low-level radioactive waste disposal facility an opportunity to dispose of certain unwanted radioactive sealed sources. (See <http://www.crcpd.org/StateServices/SCATR.aspx>). SCATR is funded through a grant provided by the DOE/ NNSA.
5. New Type B packages were available for use beginning in 2014. The DOE/NNSA's ORS procured vendor services for the design, development, testing, and certification of two Type B packages to support the recovery and transportation of Category 1 and Category 2 sources commonly used in irradiators and cancer treatment devices. The new containers will enable shipment of nearly 100 percent of all commercially used devices containing Cs-137 and cobalt-60 (Co-60).
6. The CRCPD is currently convening a working group to consider revising Agreement State financial planning requirements, to include restructuring the criteria used to determine what radioactive material requires financial surety to ensure proper end-of-life management, particularly (but not exclusively) Category 1 and 2 sealed sources.

Recent International Activities Related to Byproduct Financial Planning There are also recent activities in the international community related to byproduct material financial planning. In November 2014, IAEA Nuclear Energy Series No. NW-T-1.3 was released, which summarizes the reviewed information distributed in previous IAEA publications. It also provides an up-to-date, overall picture of the management of disused sealed radioactive sources based upon the current status and trends in this field. Section 5.5 of the publication addresses aspects of financing including cost distribution, cost uncertainty, and financial implications of the lack of availability of an ownership transfer path.

In addition, the Joint Convention on the Safety of Spent Nuclear Fuel and on the Safety of Radioactive Waste Management requires that contracting parties address aspects of end-of-life source management.

NRC invites respondents with insight into relevant international initiatives to provide their perspectives regarding international best practices or other experiences that the NRC staff should consider.

For additional information, please contact Ryan Whited at (301) 415-11 or at Ryan.Whited@nrc.gov or James Shaffner at (301) 415-5496 or at James.Shaffner@nrc.gov, both of whom are staff in the NRC's Office of Nuclear Material Safety and Safeguards.

September 16, 2015

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