

# LOW-LEVEL RADIOACTIVE WASTE FORUM, INC.

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September 15, 2014

Attention: Cindy Bladey  
Office of Administration  
Mail Stop: 3WFN-06-44M  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Re: Docket ID NRC-2014-0080

Dear Ms. Bladey:

On behalf of the Low-Level Radioactive Waste Forum (LLW Forum), please accept the attached comments on the announcement published by the U.S. Nuclear Regulatory Commission (NRC) at 79 *Federal Register* 38,796 (July 9, 2014) seeking input and feedback on an update to the agency's 2007 Strategic Assessment of the Low-Level Radioactive Waste Program from stakeholders and other interested members of the public.

The LLW Forum is an organization established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 Amendments and to promote the objectives of low-level radioactive waste regional compacts. Due to the primary role assigned to the states and compacts for issues related to the management and disposal of low-level radioactive waste under federal law, the LLW Forum believes it is important to provide perspectives on behalf of the states and compacts as NRC revisits the 2007 Strategic Assessment.

The attached comments include our strong recommendation that NRC assign a high priority when reassessing the document and prioritizing agency tasks related to

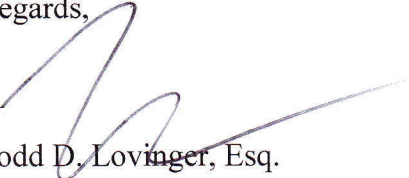
- proper life-cycle management and disposition of disused sources as detailed in the issues, findings and recommendations presented in the March 2014 report from the LLW Forum's Disused Sources Working Group (DSWG); and,

- the need to directly communicate with, seek feedback from, and give enhanced consideration to perspectives from representatives of the states and compacts with operating low-level radioactive waste disposal facilities on the proposed revisions to 10 CFR Part 61

The LLW Forum expresses its appreciation to NRC staff for their outreach and assistance during our review of the Strategic Assessment. We believe this is an important document that has potentially significant impacts on the management and disposition of low-level radioactive waste and we sincerely appreciate the opportunity to provide the attached feedback and comments.

If you have questions or require additional information, please feel free to contact me at (754) 779-7551/office or at (202) 423-6920/cell or at [LLWForumInc@aol.com](mailto:LLWForumInc@aol.com).

Regards,



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Project Manager of the DSWG and P61 WG

Enclosure

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# **Updating of the U.S. Nuclear Regulatory Commission's Low-Level Radioactive Waste Strategic Assessment**

## **Comments Submitted by the LLW Forum September 2014**

### **Overview and Background**

On May 15, 2014, the U.S. Nuclear Regulatory Commission (NRC) issued a *Federal Register* notice announcing that the agency is conducting an update to the Strategic Assessment of its low-level radioactive waste regulatory program. According to the notice, the objective of this assessment is to identify and prioritize activities that the staff can undertake to ensure a stable, reliable and adaptable regulatory framework for effective low-level radioactive waste management, while also considering future needs and changes that may occur in the nation's low-level radioactive waste management system.

In particular, NRC staff is seeking comments on anticipated developments to the low-level radioactive waste regulatory program in the next several years that would affect licensees and sited states, as well as actions that the NRC could take to ensure safety, security, and the protection of the environment.

### **General Comments**

The following comments are submitted on behalf of the Low-Level Radioactive Waste Forum (LLW Forum) — an organization established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 Amendments (LLRWPA) and to promote the objectives of low-level radioactive waste regional compacts.

The LLW Forum is dedicated to the goals of educating policy makers and the public about the management and disposal of low-level radioactive wastes and fostering information sharing and the exchange of views between state and compact policy makers, federal officials, industry representatives and other interested stakeholders. Directors that serve on the Board of the LLW Forum are appointed by Governors and compact commissions.

In the development of the new strategic assessment of the NRC's low-level radioactive waste program:

- It is imperative that the criteria established by the NRC for prioritizing the low-level radioactive waste program activities consider both public health and & safety and

national security as the most important factors for ranking program tasks or assigning a priority.

- An important factor to consider is that low-level radioactive waste management and disposal issues are evolving and as such, the NRC should be able to exercise flexibility and be able to change priorities expeditiously to face new challenges. The NRC is discouraged from undertaking unnecessary regulatory initiatives that could divert resources away from high priority tasks.
- When undertaking new regulatory initiatives, the NRC should refrain from considering “one size fits all” approach as a standard practice. However, the NRC should always consider the unintended consequences and potential impact [of a new regulatory initiative] on Agreement States, the sited states and the existing low-level radioactive waste disposal facilities. This is of particular importance now that the NRC is proposing revisions to 10 CFR Part 61 regulations.
- The NRC should consider a new initiative or task to “actively” discourage radioactive materials licensees from unnecessary storage of low-level radioactive waste including disused sealed sources (disposal being the preferred option) and to promote source reduction (in addition to volume reduction) as being a key element of an effective waste minimization program.

## **Disused Sources**

The need to address increased security concerns was one of the key factors in developing the current strategic assessment. In this regard, the management and disposition of disused sources should be assigned a high priority when reassessing the document and prioritizing agency tasks.

While society derives many benefits from the use of sealed sources, the current paradigm for the management of disused sources does not fully reflect the reality of the post 9/11 threat environment.

In September 2011, at the request of the U.S. Department of Energy (DOE) National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI), the LLW Forum formed the Disused Sources Work Group (DSWG) to develop recommendations for improving the management of disused sealed sources that pose a threat to national security.

After soliciting input from a broad range of stakeholders at 19 meetings over a 30-month period, the DSWG issued its final report in March 2014. The report contains 24 recommendations to be considered by the states, federal agencies and industry representatives in implementing individual contributions towards a timely and comprehensive solution.

The DSWG encourages NRC to identify as a high priority the review and implementation of issues, findings and recommendations contained in

- the March 2014 DSWG Report titled, “A Study of the Management and Disposition of Sealed Sources from a National Security Perspective,” and
- the 2006, 2010 and recently-released 2014 reports from the interagency Radiation Source Protection and Security Task Force (RSPSTF).

*A copy of the DSWG report can be downloaded from the LLW Forum’s web site at <http://www.llwforum.org/pdfs/LLW%20Forum%20DSWG%20Report%20Final%203.19.14.pdf>.*

## **Part 61 Rulemaking Initiative**

On February 20, 2014, NRC released a Staff Requirements Memorandum (SRM-SECY-13-0075) related to a proposed rule that would amend Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 61), “Licensing Requirements for Land Disposal of Radioactive Waste.” In the document, dated February 12, 2014, the Commission approves publication of the proposed rule and the associated draft guidance for public comment, subject to listed comments and changes.

As states and compacts have primary responsibility for issues related to the management and disposal of low-level radioactive waste under the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments, states and compacts have a primary and vested interest in and will be directly impacted by any proposed revisions to Part 61. Moreover, all current operating low-level radioactive waste disposal facilities are located in and regulated by Agreement States.

Accordingly, in an effort to coordinate and promote perspectives from states and compacts on NRC’s Part 61 rulemaking initiative, the LLW Forum formed a Part 61 Working Group (P61 WG) which includes participation by the designated representatives of each of the four sited states.

The P61 WG encourages NRC to directly communicate with and seek feedback from representatives of the states and compacts with operating low-level radioactive waste disposal facilities on the proposed revisions to 10 CFR Part 61. In addition, the P61 WG encourages NRC to identify as a high priority and give enhanced consideration to comments from the sited states and compacts as contained in

- the P61 WG’s initial comments in advance of submittal of the technical basis document as submitted by letter dated July 30, 2012;
- the P61 WG’s comments on the November 2012 preliminary rule language (docket ID NRC-2011-0012) as submitted by letter dated January 7, 2013; and,

- the P61 WG's briefing paper on SRM-SECY-13-0075 which will be submitted to the Commission shortly.

## **Comments in Response to Specific NRC Questions**

The LLW Forum provides the following responses to specific questions posed by NRC:

### Regarding the Current National Low-Level Radioactive Waste Disposal Landscape

1. *What changes are anticipated in the low-level radioactive waste area with regard to safety, security, and the protection of the environment?*

The most significant change since the 2007 strategic assessment is the opening of the Waste Control Specialists low-level radioactive waste disposal facility in Texas to both in-compact and out-of-compact generators. In recognition of national security concerns, the NRC now has the opportunity to implement strategic initiatives to facilitate disposal of disused sources and other Class A, B, and C low level waste rather than continuing to allow long term storage. The NRC must also continue to work with the DOE to facilitate their collection of disused sources that are Greater-than-Class C waste.

2. *As a result of those changes, what activities should remain on the list of proposed activities developed during the 2007 strategic assessment, and are these activities appropriately prioritized in order to ensure safe and secure low-level radioactive waste disposal, improve the effectiveness of NRC's regulations, and assure regulatory stability and predictability while allowing flexibility in disposal options? What new activities should be added?*

The following items should be removed from the list of proposed activities developed during the 2007 strategic assessment as no longer necessary given that all states now have disposal access:

- evaluate potential changes to LLW regulatory program as a result of severe curtailment of disposal capacity; and,
- identify and evaluate potential legislative changes.

In regard to the previously identified high priority tasks, please note the following:

- *perform scoping study of the need to revise/expand byproduct material financial assurance to account for life cycle:* NRC should reaffirm the value and benefit of this study, especially since the DSWG report could be used to complement its focus and provide much needed direction.

- *develop procedures and guidance for import/export review:* The existing regulatory exemptions (1 & 6) for radioactive sealed sources currently provides for the import of sources from foreign countries that certain compacts would not provide access for disposal.

New activities that should be added as a high priority include consideration and implementation of the DSWG and RSPSTF issues, findings and recommendations including:

- Provide regulatory clarification when a source becomes a waste.
- Implement a 24-month maximum time limit for storage of disused sources for all licensees. *(See DSWG Recommendation 10 and 2006 RSPSTF Action 7-1.)* Additional consideration should be given to establish authority to require sealed source manufacturers and suppliers to dispose of sources that have no reuse or recycle value on a prescribed basis – e.g., annually. *(See DSWG Recommendation 12.)* Inspection procedures must include investigation of disused sources in storage to support this recommendation. *(See DSWG Recommendation 11.)*
- To provide financial incentives for disposal, explore assessing additional fees for storage and/or use of sources possibly on a fee per source basis (similar to what Oregon now has in place) and pass rulemaking implementing such fees. *(See DSWG Recommendation 9.)*
- Revisit financial assurance thresholds, as they are too low for sealed sources, with insufficient dollar amounts assessed, and they fail to address all Category 1, 2 and 3 sources. The NRC should still perform the scoping study on financial assurance and then perform rulemaking to correct these deficiencies.
- Revisit guidance allowing importation of foreign disused sources that do not have a disposal pathway in the United States. *(See DSWG Recommendation 13.)*
- In recognition that many Category 1 and 2 sources must be transported in a Type B container, more actively promote the development and certification of Type B containers so they are more readily available for collection and disposal of disused sources. *(See 2010 RSPSTF Recommendation 8 and DSWG Recommendations 20-21.)* In addition, fast track approval of foreign certified Type B containers for domestic use. *(See DSWG Recommendation 19.)*
- Perform a study on how best to promote reuse and recycling of sealed sources including the establishment of a sealed source exchange. *(See DSWG Recommendations 14-15.)*
- Although not a formal recommendation from the DSWG, at least one state recommends that NRC consider performing a study of disused sources that could

be disposed of as low activity waste and add that to the proposed low activity waste rulemaking task.

New activities that should be added as a high priority regarding the Part 61 rulemaking initiative include:

- Regulatory Compliance Period: The Part 61 rulemaking initiative proposal to set the regulatory compliance period at 1,000 years is a reasonable, practical, and achievable approach for short-lived and most long-lived nuclides. Longer periods of performance assessment should be required, however, for large quantities of depleted uranium and for the limited number of other radionuclides contributing to dose (i.e., C-14, Tc-99, and I-129). NRC should clarify whether the language in 61.13 specifically requiring these analyses to be performed trumps the grandfather language in 61.1.a.
- Compatibility: As NRC proceeds with the Part 61 rulemaking initiative, NRC staff and the Agreement States (specifically the sited states) should collaborate to determine an appropriate compatibility category for various elements of the revised Part 61. This would alleviate and/or minimize the potential for unintended consequences.

For instance, under a category B compatibility designation, a site-specific analysis is somewhat compromised by the need to base the analysis on requirements that must be essentially identical to the corresponding federal regulations. Compatibility category C allows states the added flexibility to meet state-specific program needs and unique, critical regulatory situations and site conditions. The possible need for consistency by establishing a prescribed process for all performance assessments will likely come at the expense of the inherent flexibility needed to account for site-specific short-term and long-term circumstances and factors. A compatibility designation of Category B would only be reasonable if the more significant proposed changes (e.g., Period of Compliance) have some built-in flexibility. For example, a separate or tiered compliance period could be applied to depleted uranium (or other long-lived nuclides) and the proposed 1,000-year period applied only to short-lived nuclides.

If NRC's rulemaking working group is drafting a table that will clearly assign compatibility categories to each section of the regulation where language is revised or added, it is strongly recommend that the table be released at the same time that the new revised rule language is released.

- Intruder Assessment Analysis: The Part 61 rulemaking initiative proposal for waste sites to provide a qualitative analysis covering a performance period of 10,000 years or more after site closure for evaluation of long-term risks associated with the disposal of long-lived low-level radioactive waste makes sense for sites not yet constructed. However, the original provision to allow grandfathering of sites currently in operation from new regulatory requirements should be allowed for currently operating sites, provided that their acceptance criteria does not allow for

large quantities of long-lived radionuclides and that they can demonstrate compliance with the Federal and State rules.

There is a need to make a distinction between unique waste streams such as depleted uranium and routine commercial waste streams to account for the differences in physical and chemical form and radiological properties. Longer periods of qualitative performance assessment should be required for large quantities of depleted uranium and for the limited number of other radionuclides contributing to dose (i.e., C-14, Tc-99, and I-129), but not for the routine low-level radioactive waste streams, which contain mostly short-lived radionuclides.

- Regulatory Dose to the General Public: The Part 61 rulemaking initiative proposal to set the regulatory dose to the general public at 25 mrem/yr during the 1,000-year compliance period is reasonable and is consistent with dose standards currently found in Part 61. All sites' facilities have demonstrated compliance with the 25 mrem/year standard.
- Defense in Depth: It is important that any proposed changes to Part 61 rule language regarding defense in depth (DID) should be general in nature to afford existing closed and operational sites flexibility in meeting any specific requirements. Detailed DID attributes should be identified in the technical guidance supporting the proposed revisions but not be required for compatibility. Several states could encounter problems if NRC chooses to make DID requirements a compatibility B or A category.

#### Regarding the Current Low-Level Radioactive Waste Disposal Regulatory System

1. *As a result of the new national landscape, what are your key safety concerns relative to low-level radioactive waste disposal?*

One key safety concern is that licensees continue to store disused sealed sources rather than dispose of them thus making them more accessible to terrorists than they should be. This can be alleviated by consideration of alternative technologies; reuse and recycle; and, the imposition and enforcement of storage time limits.

2. *What vulnerabilities or impediments, if any, are in the current regulatory approach toward low-level radioactive waste disposal in the U.S. that need to be addressed in order to strengthen the NRC's ability to ensure safe and secure low-level radioactive waste disposal, improve the effectiveness of its regulations, and assure regulatory stability and predictability while allowing flexibility in disposal options?*

The current regulatory approach does not

- include financial incentives to encourage disposal;
- include rules that require the timely disposal of disused sources and waste when the licensee is conducting otherwise normal operations;

- include financial assurance requirements that approach the real cost of sealed source disposal (*see DSWG Recommendation 7*);
- place enough emphasis on the need for timely development and certification of Type B containers for sealed source disposal (*see DSWG Recommendations 19-22*).

The proposed Part 61 rulemaking initiative appears to provide no additional health and safety benefits for disposal of routine low-level radioactive waste and seems to be driven more by the need to allow disposal of large volumes of depleted uranium at operating low-level radioactive waste sites.

3. *What actions could be taken by the NRC and other federal and state authorities, as well as by private industry and national scientific and technical organizations, to optimize management of low-level radioactive waste? Which of the following actions are most likely to yield benefits?*

The NRC should continue to support collection efforts of orphaned and abandoned sources such as programs operated by the NNSA and Conference of Radiation Control Program Directors (CRCPD) while insisting that operating licensees take responsibility for their own source disposal.

In addition, the NRC should convene a working group made up of representatives from each of the sited states to provide input and recommendations as the agency proceeds with the Part 61 rulemaking initiative.

*a. changes in regulations;*

Regulatory change is the most likely to produce results. Many licensees of disused sources will not dispose of their sources unless the regulatory costs associated with continuing to store the sources exceed the disposal cost. Changes in regulations are necessary to implement new fees and enforceable storage time limits. Regulatory changes are also required to adjust the financial assurance regulations to match real disposal costs.

The original provisions of Part 61 allowed grandfathering of sites in operation prior to the implementation of the regulations. If a low-level waste site has demonstrated compliance with the current regulations and does not intend to change its acceptance criteria, it should be grandfathered and exempted from the proposed changes.

*b. changes in regulatory guidance;*

*c. changes in industry practices; and,*

*d. other (name).*

The NRC should invite the LLW Forum to participate on important issues regarding low-level radioactive waste management and disposal in the same manner that it does with regard to other state organizations such as the Conference of Radiation Control Program Directors (CRCPD) and Organization of Agreement States (OAS). Doing so makes sense given that (1) federal law assigns a primary role to the states and compacts for issues related to the management and disposal of low-level radioactive waste and (2) state and compact members of the LLW Forum's Board of Directors are appointed by Governors and compact commissions as official representatives on issues related to the management and disposal of low-level radioactive waste.

4. *Are there additional actions (regulatory and/or industry initiated) that can/should be taken regarding specific issues such as:*

The NRC should work with NNSA, DSWG, RSPSTF and other stakeholders to educate and encourage industry and professional organizations so that licensees recognize the threat to national security and willingly chose to dispose of disused sealed sources.

The NRC should convene a working group made up of representatives from each of the sited states to provide input and recommendations as the agency proceeds with the Part 61 rulemaking initiative.

5. *What unintended consequences might result from the potential changes identified in response to questions 3 and 4?*

One potential unintended consequence of the proposed Part 61 rulemaking initiative is that it may make future site development more difficult. The application of the new requirements to a site such as the Barnwell, South Carolina facility that is approximately 95% decommissioned (closed) for further waste burial does not seem to reflect stability or predictability. This may make states hesitant to authorize construction of such a facility in the future as they have no assurance that the rules will not change in the future, even when the majority of the site is in the post-closure phase.