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Very Low-Level Radioactive Waste Scoping Study

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## Submitter Information

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## General Comment

UT DWMRC Response to Questions for VLLW Scoping Study

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## Attachments

UT DWMRC Response VLLW Scoping Study Questions DRC-2018-004761

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DIVISION OF WASTE MANAGEMENT  
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Scott T. Anderson  
*Director*

May 15, 2018

May Ma  
Office of Administration  
Mail Stop: OWFN-2-A13  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555-0001

**RE: Response to Questions for Very Low-Level Radioactive Waste Scoping Study  
Published at 83 FR 6619 (February 14, 2018)  
Docket ID NRC-2018-0026**

Dear Ms. Ma:

On behalf of the Utah Division of Waste Management and Radiation Control, I appreciate the opportunity to provide responses to questions posed by the Nuclear Regulatory Commission (NRC) in the *Federal Register* on February 14, 2018 (83 FR 6619), as part of a scoping study for very low-level radioactive waste (VLLW). I also appreciate the NRC's efforts to receive stakeholder input during the early stages of this important initiative. Please find enclosed our responses to the questions posed in the referenced *Federal Register*.

In submitting our comments, I also note that since Utah is a member of the Northwest Interstate Compact on Low-Level Radioactive Waste and the Low-Level Radioactive Waste Forum, I offer support for the comments submitted separately by both of these organizations.

If you have any questions, please contact Rusty Lundberg at (801) 536-4257 or by email at [rlundberg@utah.gov](mailto:rlundberg@utah.gov).

Sincerely,

Scott T. Anderson, Director  
Division of Waste Management and Radiation Control

STA/RL/ka

DRC-2018-004761

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Enclosure: Response – Utah Division of Waste Management and Radiation Control (UDWMRC)  
(DRC-2018-004762)

c: John Tappert, NRC, DUWP  
Todd D. Lovinger, LLW Forum  
Earl Fordham/Kristen Schwab, Northwest Interstate Compact

**U.S. NUCLEAR REGULATORY COMMISSION (NRC)**  
**VERY LOW-LEVEL RADIOACTIVE WASTE SCOPING STUDY**  
(83 FR 6619, February 14, 2018)

**UTAH DIVISION OF WASTE MANAGEMENT AND RADIATION CONTROL**  
**RESPONSES TO QUESTIONS**

**QUESTIONS:** The NRC staff will consider the responses to the following questions as it prepares the scoping study.

- 1. The United States does not have a formal regulatory definition of VLLW. What should the NRC consider in developing its own regulatory definition for VLLW? Is there another definition of VLLW that should be considered? Provide a basis for your response.**

*One of the primary bases for creating a new regulatory definition for VLLW is to bring added consistency and greater regulatory alignment with existing international waste categorization systems—possibly resulting in less regulatory confusion and increased waste management certainty. Additionally, from a more domestic perspective, creating a VLLW definition and an associated waste classification category should be consistent with the current Part 61 waste classification framework (e.g., bottom 10% of the Class A limit).*

*However, establishing a regulatory definition for VLLW will likely cause a significant impact to existing compacts, especially those with an operating disposal facility, as to their economic viability due to the potential loss of a large volume of waste that would fall under the definition of VLLW and could otherwise be disposed in a RCRA-regulated disposal facility.*

*In creating a new definition for VLLW, concurrent changes to Part 61 would likely be necessary in order to clarify that VLLW remains a low-level radioactive waste under the Low-Level Radioactive Waste Policy Amendments Act of 1985 and therefore does not result in an automatic regulatory exemption from applicable compact or other LLW management requirements that ensure protection of public health and safety.*

- 2. The existing regulatory framework within 10 CFR 61.55 divides low-level radioactive waste into four categories: Class A, Class B, Class C, and GTCC. Should the NRC revise the waste classification system to establish a new category for VLLW? What criteria should NRC consider in establishing the boundary between Class A and VLLW categories?**

*As noted in the response to the previous question, any changes to the current LLW classification in order to create a new category for VLLW could be established in a manner that ensures regulatory certainty, such as setting a limit for VLLW at 10% of the Class A limit. However, the economic factors and considerations in setting a new category for VLLW are also at play and may result in significant revenue and costs shifts to be borne directly by compacts, waste disposal facilities, and LLRW waste generators.*

*The NRC will need to collaborate with and coordinate the implementation of a new VLLW category with the EPA and ASTSWMO in terms of addressing the potential added public health and environmental risks associated with RCRA disposal facilities receiving and managing VLLW.*

**3. The NRC's alternative disposal request guidance entitled, "Review, Approval, and Documentation of Low- Activity Waste Disposals in Accordance with 10 CFR 20.2002 and 10 CFR 40.13(a)," which is undergoing a revision, allows for alternative disposal methods that are different from those already defined in the regulations and is most often used for burial of waste in hazardous or solid waste landfills permitted under the Resource Conservation and Recovery Act (RCRA). Should the NRC expand the existing guidance to include VLLW disposal or consider the development of a new guidance for VLLW disposal? Why or why not?**

*Because of the potential added risk to public health and the environment at RCRA (or state equivalent) permitted disposal facilities, the NRC should revise existing guidance primarily due to the significant volumes associated with VLLW (i.e., decommissionings, radiological event debris, reprocessing, etc.).*

*Additionally, the NRC should coordinate any guidance revisions with the EPA (and ASTSWMO) in order to address the potential for revising existing RCRA disposal guidance to ensure best management practices and risk-based considerations are addressed and implemented.*

**4. If the NRC were to create a new waste category for VLLW in 10 CFR Part 61, what potential compatibility issues related to the approval of VLLW disposal by NRC Agreement States need to be considered and addressed? How might defining VLLW affect NRC Agreement State regulatory programs in terms of additional responsibilities or resources?**

*Any changes to Part 61 to incorporate a new waste category for VLLW should retain the compatibility category already assigned to 61.55. Agreement states will need to coordinate with sister agencies responsible for administering the RCRA waste management program in order to ensure the safe disposal of large volumes of VLLW at such facilities. This coordination could be resource intensive depending on the number, frequency or complexity of VLLW disposal determinations.*

**5. Following the Low-Level Radioactive Waste Policy Amendments Act of 1985, states formed regional compacts for the disposal of low-level radioactive waste. If the NRC were to create a new waste category for VLLW, does it fall within regional compact authority to control VLLW management and disposal? How might defining VLLW affect regional compacts in terms of additional responsibilities or resources?**

*Please see response to Question 1 regarding the potential economic impact to compacts.*

*Additionally, if a new waste category for VLLW is created, the new category would still fall within the definition of low-level radioactive waste as envisioned by the LLWPA and*

*therefore would be subject to a compact's authority and control. As such, additional resources may be necessary in order to ensure such waste is properly categorized and meets the waste acceptance criteria of the receiving disposal facility. In terms of LLW that is exported out of a compact, those compacts that have instituted specific requirements (technical as well as financial) regarding waste exports will likely realize an increase in resources in order to ensure that such VLLW exports, as a newly defined category of LLW, comply with all export requirements. While such waste is now typically considered Class A LLW, creating a new category for VLLW would undoubtedly result in added administrative costs/controls and oversight activities.*

**6. U.S. Environmental Protection Agency (EPA)-imposed waste analysis requirements for facilities that generate, treat, store and dispose of hazardous wastes are defined in 40 CFR Parts 264 through 270. How would NRC incorporate and apply waste analysis requirements for VLLW at RCRA Subtitle C and D facilities? Should the NRC impose concentration limits and/or treatment standards for VLLW disposal?**

*Any changes to the current LLW classification in order to create a new category for VLLW could be established in a manner that ensures regulatory certainty, such as setting a limit for VLLW at 10% of the Class A limit. However, the economic factors and considerations in setting a new category for VLLW are also at play and may result in significant revenue and costs shifts that will be borne directly by compacts, waste disposal facilities, and LLW generators.*

**7. Are there any unintended consequences associated with developing a VLLW waste category?**

*Economic viability of compacts as well as implementation issues associated with specific import and export requirements, including the potential for some compacts to develop new export (or revise existing) fees or other requirements.*

*Increased costs for the disposal of non-VLLW to replace revenue loss previously realized in managing all LLRW in order to maintain economic viability of existing licensed LLRW disposal facilities.*

**8. What analytical methods/tools should be used to assess the risk of disposing of VLLW at licensed low-level radioactive waste disposal facilities or RCRA Subtitle C and D facilities — i.e., generic or site- specific?**

*Because of the potential significant volumes of VLLW containing radioisotopes, a site-specific risk/dose assessment will enable a more robust and necessary evaluation of the radioisotopes and their radiological/environmental characteristics.*

**9. How should economic factors be considered in the VLLW scoping study?**

*Overall viability of compacts with a compact-by-compact analysis to account for both import and export considerations and legal requirements specific or unique to each compact.*

*Additionally, the operational viability of a licensed LLW disposal facility may need to make up any revenue losses due to a loss in receiving VLLW waste volumes by increasing waste management costs for all other low-level radioactive wastes. Consequently, to fully inform all stakeholders, especially waste generators and disposal facility operators, an important economic factor to be considered in the scoping study should incorporate cost and revenue shifts to sustain economic viability.*