

**NUCLEAR REGULATORY COMMISSION**

**[NRC-2018-0026]**

**Very Low-Level Radioactive Waste Scoping Study**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Scoping study; public meeting and request for comment.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is conducting a very low-level radioactive waste (VLLW) scoping study to identify possible options to improve and strengthen the NRC's regulatory framework for the disposal of the anticipated large volumes of VLLW associated with the decommissioning of nuclear power plants and material sites, as well as waste that might be generated by alternative waste streams that may be created by operating reprocessing facilities or a radiological event. The NRC is seeking stakeholder input and perspectives on this action. Respondents are asked to consider specific questions posed by the NRC staff and other Federal agencies in this notice when preparing their responses.

**DATES:** Submit comments by **[INSERT DATE 90 DAYS FROM THE DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. 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.

**ADDRESSES:** You may submit comments by any of the following methods (unless this document describes a different method for submitting comments on a specific subject):

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2018-0026**. Address questions about NRC dockets to Jennifer Borges; telephone: 301-287-9127; e-mail: [Jennifer.Borges@nrc.gov](mailto:Jennifer.Borges@nrc.gov). For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **Mail comments to:** May Ma, Office of Administration, Mail Stop: OWFN-2-A13, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

For additional direction on obtaining information and submitting comments, see “Obtaining Information and Submitting Comments” in the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FORTHER INFORMATION CONTACT:** Maurice Heath, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-3137; e-mail: [Maurice.Heath@nrc.gov](mailto:Maurice.Heath@nrc.gov).

## **SUPPLEMENTARY INFORMATION:**

### **I. Obtaining Information and Submitting Comments**

#### **A. Obtaining Information**

Please refer to Docket ID **NRC-2018-0026** when contacting the NRC about the availability of information for this action. You 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-2018-0026**.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You 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 at 1-800-397-4209, 301-415-4737, or by e-mail to [pdresource@nrc.gov](mailto:pdresource@nrc.gov). The ADAMS Accession Number for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in the **SUPPLEMENTARY INFORMATION** section.

- **NRC's PDR:** You may examine and purchase copies of public documents at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

## B. Submitting Comments

Please reference Docket ID **NRC-2018-0026** in your comment submission. If your comment contains proprietary or sensitive information, please contact the individual listed in the **FOR INFORMATION CONTACT** section of this document to determine the most appropriate method for submitting your comment.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. All comment submissions are posted at <http://www.regulations.gov> and entered into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment submissions into ADAMS.

## **II. Background**

In 2007, following developments in the national program for Low-Level Radioactive Waste (LLRW) disposal, as well as changes in the regulatory environment, the NRC conducted a strategic assessment of its regulatory program for LLRW. The results of this assessment were published in late 2007 in SECY-07-0180, “Strategic Assessment of Low-Level Radioactive Waste Regulatory Program” (ADAMS Accession No. ML071350299). The strategic assessment identified the need to coordinate with other agencies on consistency in regulating LAW disposal and to develop guidance that summarizes disposition options for low-end materials and waste.

In 2016, the NRC staff conducted a programmatic assessment of the LLRW program to identify and prioritize tasks that the NRC could undertake to ensure a stable, reliable, and adaptable regulatory framework for effective LLRW management. The results of this assessment were published in October 2016, in SECY-16-0118, “Programmatic Assessment of Low-Level Radioactive Waste Regulatory Program” (ADAMS Accession No. ML15243A192). The programmatic assessment identified the need to perform a LAW scoping study as a medium priority.

In International Atomic Energy Agency (IAEA) Safety Guide No. GSG-1, “Classification of Radioactive Waste” ([http://www-](http://www-iaea.org/publications/gsg1/)

[pub.iaea.org/MTCD/publications/PDF/Pub1419\\_web.pdf](http://pub.iaea.org/MTCD/publications/PDF/Pub1419_web.pdf)), the IAEA defines VLLW as waste that does not meet the criteria of exempt waste, but does not need a high level of containment and isolation, and, therefore, is suitable for disposal in a near surface landfill type facility with limited regulatory control. The NRC currently does not have a formal regulatory definition for VLLW, nor has it adopted the IAEA definition. However, the NRC uses the term VLLW consistent with the international regulatory structure. In general, the NRC considers VLLW as material containing some residual radioactivity, including naturally occurring radionuclides that may be safely disposed of in hazardous or municipal solid waste landfills.

The LAW scoping study, later renamed the VLLW Scoping Study, will combine several tasks initially defined in the 2007 strategic assessment into one. These tasks include: 1) coordinating with other agencies on consistency in regulating LAW; 2) developing guidance that summarizes disposition options for low-end materials and waste; and 3) promulgating a rule for disposal of LAW. As part of the scoping study, the NRC will also evaluate regulatory options that would define the conditions under which LAW, including mixed waste, could be disposed of in Resource Conservation and Recovery Act (RCRA) Subtitle C hazardous waste facilities.

Consistent with SECY-16-0118, the NRC is conducting this VLLW Scoping Study, which will consider disposal of waste as defined by 10 CFR part 61 as the isolation, by emplacement in a land disposal facility, of radioactive wastes from the biosphere that is inhabited by man and that contains his food chains. As such, the scoping study will not address non-disposal related disposition pathways including unrestricted release, clearance, reuse, or recycle of materials.

The purpose of the VLLW Scoping Study is to identify possible options to improve and strengthen the NRC's regulatory framework for the disposal of the

anticipated large volumes of VLLW associated with the decommissioning of nuclear power plants, and waste that might be generated by alternative waste streams that may be created by fuel reprocessing or a radiological event. Additionally, the NRC plans to evaluate regulatory options that could define the conditions under which VLLW, including mixed waste, could be disposed of in RCRA hazardous waste facilities.

### **III. Specific Request for Comment**

The NRC is interested in receiving comments from a broad range of stakeholders, including professional organizations, licensees, Agreement States, and members of the public. Likewise, respondents to this request with insight into relevant international initiatives are invited to provide their perspectives regarding international best practices related to VLLW disposal or other experiences that the NRC staff should consider. All comments will be considered and the results of the scoping study will be documented in a publicly available report, which will inform the Commission of the staff's recommendation for addressing VLLW disposal.

All comments that are to receive consideration in the VLLW Scoping Study must be submitted electronically or in writing as indicated in the **ADDRESSES Section** of this document. Respondents are asked to consider the background material discussed in Section II above when preparing their comments. In responding, commenters are encouraged to provide specific suggestions and the basis for suggestions offered. Specifically, the NRC staff requests comment on the following questions:

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.

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 Greater Than Class C. 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?

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?

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?

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?

6. Environmental Protection Agency-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?

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

8. What analytical methods/tools should be used to assess the risk of disposing of VLLW at licensed LLW disposal facilities or RCRA Subtitle C and D facilities? (i.e., generic or site-specific)

9. How should economic factors be considered in the VLLW Scoping Study?

#### **IV. Public Meeting**

To facilitate the understanding of the public and other stakeholders of these issues and the submission of comments, the NRC staff has scheduled a public meeting for February 22, 2018 from 9:00 a.m. to 3:00 p.m. (EST) in the NRC's Two White Flint Auditorium at 11545 Rockville Pike, Rockville, MD. In addition, those wishing to participate by webinar will be able to view the presentation slides prepared by the NRC staff and electronically submit comments over the Internet. Participants must register to participate in the webinar. Registration information may be found in the meeting notice at <https://www.nrc.gov/pmns/mtg?do=details&Code=20180033>). The meeting notice can also be accessed through the NRC's public Web site under the headings Public Meetings & Involvement > Public Meeting Schedule; see Web page <https://meetings.nrc.gov/pmns/mtg>.

The NRC staff will also post the meeting notice on the Federal rulemaking Web site at <http://www.regulations.gov> under Docket ID **NRC-2018-0026**. The NRC staff may post additional materials related to this document, including public comments, on the



Federal rulemaking web site. The Federal rulemaking web site allows you to receive alerts when changes or additions occur in a docket folder. To subscribe: 1) navigate to the docket folder (**NRC-2018-0026**); 2) click the "Sign up for E-mail Alerts" link; and 3) enter your e-mail address and select how frequently you would like to receive e-mails (daily, weekly, or monthly).

The final agenda for the public meeting will be posted no fewer than 10 days prior to the meeting date. Those who are unable to participate in person or via webinar may choose to participate via teleconference by dialing the bridge number (800) 857-9840 and entering the pass code 4975456.

Dated at Rockville, Maryland, this 9<sup>th</sup> day of February, 2018.

For the Nuclear Regulatory Commission

**/RA/**

Gregory F. Suber, Acting Deputy Director  
Division of Decommissioning, Uranium  
Recovery, and Waste Programs,  
Office of Nuclear Material Safety  
and Safeguards.

SUBJECT: FEDERAL REGISTER NOTICE FOR VERY LOW-LEVEL RADIOACTIVE  
WASTE SCOPING STUDY AND NOTICE OF PUBLIC MEETING **DATE**  
**February 14, 2018**

**ADAMS Accession No.: ML18038A694**

<b>OFC</b>	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP	OGC	NMSS/DUWP: DD
<b>NAME</b>	MHeath (by email)	KJamerson	ASchwartzman for CMcKenney	MArribas-Colon	Ilrvin (by email)	GSuber
<b>DATE</b>	02/08/18	02/08/18	02/08/18	02/08/18	02/08/18	02/09/18