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**POLICY ISSUE**

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(Information)

October 11, 2016

SECY-16-0118

FOR: The Commissioners

FROM: Victor M. McCree  
Executive Director for Operations

SUBJECT: PROGRAMMATIC ASSESSMENT OF LOW-LEVEL RADIOACTIVE  
WASTE REGULATORY PROGRAM

PURPOSE:

To provide the Commission with a description and results of the staff's programmatic assessment of the U.S. Nuclear Regulatory Commission's (NRC) low-level radioactive waste (LLRW) regulatory program. The results of this programmatic assessment include a prioritized list of ongoing and future staff activities, their schedules and resource estimates. This paper does not address any new commitments.

BACKGROUND:

In 2007, due to developments in the national program for LLRW disposal, as well as changes in the regulatory environment, the NRC's LLRW program faced new challenges and issues. New technical issues related to protection of public health, the environment, and security emerged. These challenges and issues included: 1) need for greater flexibility and reliability in LLRW disposal options; 2) increased use of onsite storage of Class B and Class C LLRW because of the potential closing of the Barnwell, South Carolina, disposal facility to out-of-compact waste generators; 3) the potential need to dispose of large quantities of power plant decommissioning waste, as well as depleted uranium (DU) from enrichment facilities; 4) increased safety concerns; 5) need for greater LLRW program resources than were available; 6) increased security

CONTACTS: Stephen Dembek, NMSS/DUWP  
301-415-2342

Melanie Wong, NMSS/DUWP  
301-415-2432

concerns related to storing LLRW in general and sealed radioactive sources in particular; and 7) potential for generation of new waste streams (e.g., by the next generation of nuclear reactors and the potential reemergence of nuclear fuel reprocessing in the United States).

Based on extensive stakeholder input, the NRC developed a variety of activities to include in the 2007 assessment and evaluated them based on the overall strategic objectives for ensuring safety, security, and other factors. A list of 20 activities responsive to identified programmatic needs was developed. These activities were assigned priorities of high, medium, or low and ranged from narrowly focused activities such as updating LLRW storage guidance to broader activities such as suggesting legislative changes to Congress to improve the LLRW national program.

The NRC published the strategic assessment in late 2007 in SECY-07-0180, "Strategic Assessment of Low-Level Radioactive Waste Regulatory Program" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML071350291). The 2007 assessment identified and prioritized the NRC's tasks to ensure that the LLRW program continued to: 1) ensure safe and secure LLRW disposal; 2) improve the effectiveness, efficiency, and adaptability of the NRC's LLRW regulatory program; and 3) ensure regulatory stability and predictability, while allowing flexibility in disposal options. The NRC has completed several high priority tasks identified in the 2007 assessment, including updating guidance for LLRW storage as well as evaluating the disposal of DU and the measures needed to ensure its safe disposal. Also, the NRC continues to work on the revisions to Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR) and implementation of the recently issued Concentration Averaging and Encapsulation Branch Technical Position (BTP) (ADAMS Accession No. ML12254B065 (Volume 1) and ML12326A611 (Volume 2)). In addition, the national LLRW program continues to evolve.

To set the direction for the NRC's LLRW regulatory program in the next several years, the NRC staff decided to conduct a new evaluation of the NRC's LLRW program (referred to as a programmatic assessment). The objective of this more recent programmatic assessment remains the same as the 2007 strategic assessment; that is, to identify and prioritize tasks that the NRC can undertake to ensure a stable, reliable, and adaptable regulatory framework for effective LLRW management, while also considering future needs and changes that may occur in the nation's commercial LLRW management system. This programmatic assessment analyzed the progress of the regulatory program from 2007, identified new challenges, and will be used to optimize resources going forward. This activity is consistent with the Project AIM focus to identify ways to enhance the NRC's ability to plan and execute its mission more efficiently while adapting in a timely and effective manner to a dynamic environment.

#### DISCUSSION:

In carrying out this programmatic assessment, the NRC reviewed the 2007 assessment and solicited public comment on what changes, if any, should be made to the current LLRW program's regulatory framework, as well as specific actions that the NRC might undertake to facilitate such changes. Using a variety of means to elicit stakeholder inputs, the NRC requested comments on March 7, 2014, at a public workshop in Phoenix, Arizona; in the *Federal Register* on May 15, 2014 (79 FR 27772), and March 13, 2015 (80 FR 13451); and at webinars on June 17, 2014, and July 8, 2014. The NRC sought comments on the LLRW regulatory program developments that would affect licensees and Agreement States that host LLRW disposal sites

(sited States) over the next several years, and on the actions that the NRC could take to ensure safety, security, and the protection of the environment with regard to LLRW.

The NRC received 15 comment submissions in response to the *Federal Register* notices and also received numerous comments at the public meeting and during the two webinars. The comment submissions are available on the Federal rulemaking web site at <http://www.regulations.gov> under Docket ID NRC-2014-0080. A summary of the comments is provided in Enclosure 1.

As detailed in Enclosure 1, the NRC identified and prioritized ten tasks. The staff ranked six tasks as high priority (including three tasks that are being conducted in response to Commission direction), two tasks as medium priority, and two tasks as low priority. Table 1 indicates which tasks were assigned a high priority. As shown in the table, the staff projects that it will complete three of the high priority tasks by the end of fiscal year (FY) 2017. If tasks are completed sooner than expected, then staff would evaluate whether resources could be dedicated to the medium priority tasks that are listed in Enclosure 1.

Table 1: LLRW Program Tasks Prioritized as High

Task	Schedule
1. Complete and Implement Site-Specific Analysis Rulemaking.	FY 2017 – 2020 <sup>1,2</sup>
2. Address update to the 10 CFR Part 61 Waste Classification Tables.	FY 2017 <sup>2</sup>
3. Implement the Updated Concentration Averaging and Encapsulation BTP.	FY 2017
4. Prepare a regulatory basis and conduct potential rulemaking for Greater-Than-Class C and transuranic waste disposal.	FY 2017 – 2019 <sup>2</sup>
5. Finalize internal procedure/Standard Review Plan for 10 CFR § 20.2002 requests to improve alternate disposal process.	FY 2017
6. Update NUREG/BR-0204, Rev. 2 (July 1998), "Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest."	FY 2017 – 2019

In addition to these tasks, staff will continue to perform the baseline LLRW program which includes:

- providing support to other NRC offices and programs on matters such as rulemakings, licensing activities, allegations, and technical support on LLRW issues (e.g., review of dose assessments for 10 CFR § 20.2002 requests);
- providing technical assistance to Agreement States;

<sup>1</sup> SECY-16-0106, "Final Rule: Low-Level Radioactive Waste Disposal" dated September 15, 2016, is with the Commission for review. If approved, the rule is expected to be published in 2017 and would be effective one year later. As proposed, Agreement States will have three years from the date of the rule to adopt NRC requirements (approximately 2020). After 2017, staff expects to provide consultation with the Agreement States during the development of their regulations. There are four existing low-level waste disposal facilities in the United States that accept various types of low-level waste. All are in Agreement States.

<sup>2</sup> Commission directed tasks.

- participating in Integrated Materials Performance Evaluation Program reviews of Agreement States' LLRW programs;
- assisting the Office of International Programs in the review of license applications for the import and export of radioactive waste;
- participating in activities that involve international agreements, such as the review of draft standards developed by the International Atomic Energy Agency and the review of National Reports prepared by contracting parties to the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management;
- assisting external stakeholders such as the U.S. Government Accountability Office, U.S. Department of Energy, U.S. Environmental Protection Agency, National Academy of Sciences, U.S. Army Corps of Engineers, Conference of Radiation Control Program Directors, members of the public, waste generators and processors, and the media;
- responding to Commission direction on selected issues; and
- monitoring developments in the national LLRW disposal system by maintaining liaison with LLRW stakeholders.

The staff will proactively engage the Commission on any policy issues identified during the conduct of the LLRW programmatic assessment tasks or baseline activities.

RESOURCES:

Enclosure 2, "Resource Implications of Completing Listed Tasks," includes an estimate of the resources needed for this work.

COORDINATION:

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

*/RA/*

Victor M. McCree  
Executive Director  
for Operations

Enclosures:

1. Programmatic Assessment of LLRW Regulatory Program
2. Resource Implications of Completing Listed Tasks (non-public)

- providing technical assistance to Agreement States;
- participating in Integrated Materials Performance Evaluation Program reviews of Agreement States' LLRW programs;
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- participating in activities that involve international agreements, such as the review of draft standards developed by the International Atomic Energy Agency and the review of National Reports prepared by contracting parties to the Joint Convention on the Safety of Spent Fuel Management and the Safety of Radioactive Waste Management;
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OFFICE	DUWP	DUWP	DUWP	DUWP	DUWP	DUWP	DUWP
NAME	SDembek	TMoon	MWong	DLowman	GSuber	CMcKenney	AKock
DATE	7/24/15	7/28/15	7/27/15	7/28/15	7/6/16	7/7/16	7/15/16
OFFICE	DUWP	OGC	OCFO	NMSS	NMSS	NMSS	EDO
NAME	JTappert	SClark	RNg	CSchum	WMoore	MDapas	VMcCree
DATE	7/22/16	8/4/16	7/12/16	8/10/16	8/18/16	9/20/16	10/11 /16

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