

NUCLEAR REGULATORY COMMISSION

10 CFR Part 61

RIN-3150-AI92

[NRC-2011-0012]

Low-Level Radioactive Waste Regulatory Management Issues

AGENCY: Nuclear Regulatory Commission.

ACTION: Public meeting; request for comment.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC or the Commission) plans to conduct a public meeting to discuss proposed changes to its current regulatory requirements as directed by the Commission in a January 19, 2012, Staff Requirements Memorandum. Information will be gathered from invited subject matter experts, stakeholders, and other interested members of the public regarding the changes proposed by the Commission. Specifically, the NRC staff is interested in gaining a better understanding of the issues associated with specifying a regulatory time of compliance for a low-level radioactive waste disposal facility, allowing licensees the flexibility to implement waste acceptance criteria as an alternative to the current waste classification system, and revising the NRC's licensing requirements for land disposal of radioactive waste.

DATES: The public meeting will be held on July 19, 2012, in Rockville, Maryland. Comments on the issues and questions presented in Section V of the SUPPLEMENTARY INFORMATION

section of this document should be submitted by July 31, 2012.

ADDRESSES: The public meeting will be held on July 19, 2012, from 8:00 a.m. to 5:00 p.m. (registration begins at 7:30 a.m.) at the Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road; Salons G & H, Rockville, Maryland 20852. The NRC will accept written comments at the public meeting and welcomes active participation from those attending. You may access information and comment submissions related to this document, which the NRC possesses and are publicly available, by searching on <http://www.regulations.gov> under Docket ID **NRC-2011-0012**. You 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-2011-0012**. Address questions about NRC dockets to Carol Gallagher; telephone: (301) 492-3668; e-mail: Carol.Gallagher@nrc.gov.

- **Mail comments to:** Cindy Bladey, Chief, Rules, Announcements, and Directives Branch (RADB), Office of Administration, Mail Stop: TWB-05-B01M, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

- **Fax comments to:** RADB at 301-492-3446.

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

FOR FURTHER INFORMATION CONTACT: Donald Lowman, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-5452; e-mail: Donald.Lowman@nrc.gov; or Tarsha Moon, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-415-6745; e-mail: Tarsha.Moon@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Accessing Information and Submitting Comments

A. Accessing Information

Please refer to Docket ID **NRC-2011-0012** when contacting the NRC about the availability of information regarding this document. You may access information related to this document, which the NRC possesses and are publicly-available, by the following methods:

- **Federal Rulemaking Web Site:** Go to <http://www.regulations.gov> and search for Docket ID **NRC-2011-0012**.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may access publicly-available documents online in the NRC Library 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 pdr.resource@nrc.gov. The ADAMS accession number for each document referenced in this document is provided the first time that a document is referenced.

- **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 include Docket ID **NRC-2011-0012** in the subject line of your comment submission, in order to ensure that the NRC is able to make your comment submission available to the public in this docket.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at <http://www.regulations.gov> as well as enter the comment submissions into ADAMS, and 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

The Commission's licensing requirements for the disposal of LLW in near-surface [approximately the uppermost 30 meters (100 feet)] facilities reside in 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste." These regulations were published in the *Federal Register* on December 27, 1982 (47 FR 57446). The rule applies to any near-surface LLW disposal technology. The regulations emphasize an integrated systems approach to the disposal of commercial LLW, including site selection, disposal facility design

and operation, minimum waste form requirements, and disposal facility closure. To reduce the burden on society over the long periods of time contemplated for the control of the radioactive material, and thus lessen reliance on institutional controls, 10 CFR Part 61 emphasizes passive rather than active systems to limit and retard releases to the environment.

Development of 10 CFR Part 61 was based on several assumptions as to the types of wastes likely to go into a commercial LLW disposal facility. To better understand what the likely inventory of wastes available for disposal might be, the NRC conducted a survey of existing LLW generators. The survey, documented in Chapter 3 of NUREG-0782, Draft 10 CFR Part 61 Environmental Impact Statement (DEIS), "Licensing Requirements for Land Disposal of Radioactive Waste" (ADAMS Accession No. ML052590347) – revealed that there were about 37 distinct commercial waste streams consisting of about 25 radionuclides of potential regulatory interest. The specific waste streams in question were representative of the types of commercial LLW being generated at the time. In the Final 10 CFR Part 61 Environmental Impact Statement (FEIS), "Final Environmental Impact Statement on 10 CFR Part 61 'Licensing Requirements for Land Disposal of Radioactive Waste'," (ADAMS Accession No. ML052590184) and NUREG-0945, it was reported that about half of the isotopes examined were bounding for the purposes of dose and those isotopes formed the basis for the 10 CFR Part 61 LLW waste classification system, described in Tables 1 and 2 of § 61.55. (See Volume 1 of NUREG-0945, pages 5-37 – 5-39). Waste streams associated with the U.S. Department of Energy's (DOE's) nuclear defense complex were not considered as part of the survey, since disposal of those wastes, at that time, was to be conducted at DOE-operated sites.

Over the last several years there have been a number of developments that have called into question some of the key assumptions made in connection with the earlier 10 CFR Part 61 DEIS, including:

- The emergence of potential LLW streams that were not considered in the original 10 CFR Part 61 rulemaking, including large quantities of depleted uranium (DU), and possibly incidental wastes associated with the commercial reprocessing of spent nuclear fuel;
- The DOE's increasing use of commercial facilities for the disposal of defense-related LLW streams; and
- Extensive international operational experience in the management of LLW and intermediate-level radioactive wastes that did not exist at the time 10 CFR Part 61 was promulgated.

These developments will need to be considered if the staff undertakes a revision of 10 CFR Part 61.

III. Recent Commission Direction to the NRC Staff

In a March 18, 2009, staff requirements memorandum (SRM), SRM-SECY-08-0147¹, the Commission directed the NRC staff to proceed with a 10 CFR Part 61 rulemaking to specify a requirement for a site-specific analysis for the disposal of large quantities of DU—including the technical requirements for such an analysis—and to develop a guidance document for public comment that outlines the parameters and assumptions to be used in conducting such site-specific analyses. In a second SRM, SRM-SECY-10-0043², the staff was directed to include blended LLW streams as part of this rulemaking initiative. Following the solicitation of early public input in 2009 (74 FR 30175; Docket ID NRC-2009-0257), the NRC staff subsequently developed a technical basis document for the rulemaking amendment (ADAMS Accession No. ML111040419), shared it with the NRC Agreement States, and proceeded to develop a proposed rulemaking package. In connection with the rulemaking effort, the NRC staff also

¹ See <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2008/2008-0147srm.pdf>.

² See <http://www.nrc.gov/reading-rm/doc-collections/commission/srm/2010/2010-0043srm.pdf>.

proposed a two-tier approach for evaluating compliance with 10 CFR Part 61's overall system performance objectives: a quantitative assessment that extends to 20,000 years as well as a qualitative analysis that extends beyond 20,000 years to the time of peak dose. In May 2011, the NRC staff sought public feedback (76 FR 24831) on the preliminary proposed rulemaking language (ADAMS Accession No. ML111150205) and the technical basis for the time of compliance recommendation (ADAMS Accession No. ML111030586). (See

<http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams.html>.)

Later in 2011, the staff briefed the Advisory Committee on Reactor Safeguards (ACRS) on the preliminary proposed rulemaking language for which a Committee Letter Report dated September 22, 2011 (ADAMS Accession No. ML11256A191) was issued to the Commission.

More recently, in an SRM, dated January 19, 2012³, the Commission provided additional direction to the NRC staff concerning this rulemaking. Specifically, the NRC staff was directed to amend the existing draft rulemaking to include the following:

- Allowing licensees the flexibility to use International Commission on Radiological Protection dose methodologies in a site-specific performance assessment for the disposal of all radioactive waste.
- A two-tiered approach that establishes a compliance period that covers the reasonably foreseeable future and a longer period of performance that is not *a priori* and is established to evaluate the performance of the site over longer timeframes. The period of performance is developed based on the candidate site characteristics (waste package, waste form, disposal technology, cover technology and geo-hydrology) and the peak dose to a designated receptor.
- Flexibility for disposal facilities to establish site-specific waste acceptance criteria based on the results of the site's performance assessment and intruder assessment.

³ See <http://www.nrc.gov/reading-rm/doc-collections/commission/comm-secy/2011/2011-0002comgeawdm-srm.pdf>.

- A compatibility category for the elements of the revised rule that establish the requirements for site-specific performance assessments and the development of the site-specific waste acceptance criteria that ensures alignment between the States and Federal government on safety fundamentals, while providing the States with the flexibility to determine how to implement these safety requirements.

In the January 2012 SRM, the Commission also directed the NRC staff to engage stakeholders to discuss and finalize the NRC's approach to address the matters raised by the Commission. The Commission also noted that it would reserve judgment on the regulatory form these elements should take in any final rule following NRC staff evaluation of stakeholder input. Accordingly, the NRC staff planned to hold three public meetings in March, May, and July 2012 on the proposed revisions to 10 CFR Part 61. The first meeting was held in Phoenix, Arizona, on March 2, 2012 (77 FR 10401) and the second meeting was held in Dallas, Texas on May 15, 2012 (77 FR 26991). After the NRC completes public outreach, the staff will prepare an amended technical basis document and start the formal rulemaking process. Changes will also need to be made to any 10 CFR Part 61 performance assessment guidance document to address the recent June 2012 direction. The completion date for submittal of a revised rulemaking package is July 19, 2013.

The Commission also directed the staff to gather information on the options presented in SECY-10-0165, dated December 27, 2010⁴, concerning the staff's approach to risk-informing 10 CFR Part 61. Previously, the NRC staff sponsored an earlier workshop on SECY-10-0165, on March 4, 2011 (76 FR 10810). The staff intends to seek the public's views on various proposals for a risk-informed revision of 10 CFR Part 61.

⁴ See <http://www.nrc.gov/reading-rm/doc-collections/commission/secys/2010/secy2010-0165/2010-0165scy.pdf>.

IV. Emerging Issues Concerning 10 CFR Part 61

The NRC staff has also conducted other activities related to 10 CFR Part 61. These include revisions to the Commission's "Policy Statement on Volume Reduction and Low-Level Radioactive Waste Management" (76 FR 50500; August 15, 2011); and the "Branch Technical Position on Concentration Averaging" (76 FR 4739; January 26, 2011). Through the course of those stakeholder interactions, the staff received comments and suggestions relevant to the more comprehensive revision of 10 CFR Part 61. For example, stakeholders have recommended changes that would lengthen the period of institutional controls and allow a site-specific intruder assessment. Some stakeholders have questioned basic fundamental tenets of 10 CFR Part 61 including the need to protect the inadvertent intruder. The staff intends to seek the public's views on these and other stakeholder comments.

In addition, during the March 2, 2012, public meeting in Phoenix, Arizona, several stakeholders expressed an interest in expanding the scope of the ongoing 10 CFR Part 61 rulemaking beyond the Commission's current January 2012 direction. For example, the following specific suggestions were proposed in connection with any potentially expanded 10 CFR Part 61 rulemaking.

- Update the § 61.55 tables to include the latest dose conversion factors and dose methodologies.
- Expand the current duration of institutional controls in 10 CFR Part 61 from 100 to 300 years.
- Address the issue of the over-reporting of certain isotopes that are required to be identified by the 10 CFR Part 20 LLW manifest shipping report (60 FR 15649).
- Develop specific licensing criteria for the disposal of greater-than-Class C LLW.
- Develop screening criteria pertaining to the disposal of low-activity radioactive wastes.

V. NRC Public Meeting

The purpose of this public meeting is to gather information from stakeholders and other interested members of the public concerning the rulemaking proposals identified by the Commission in its January 2012 SRM. This overall approach is consistent with the NRC's openness policy and is consistent with the type of public outreach initiative originally used by the NRC staff to develop 10 CFR Part 61. The July 19, 2012, public meeting will be organized into three sessions. In the first session, the NRC staff will seek public feedback on the concerns associated with specifying a regulatory time of compliance (TOC) for a commercial LLW disposal facility. To promote stakeholder feedback, a panel of invited subject matter experts will be asked to speak to the following topics related to the specification of any TOC:

- Limits or methods to manage long term uncertainties;
- Use of tiered approaches including how to define the tiers;
- Requirements for long-term performance;
- Site-specific requirements; and
- Protection of future generations.

In the second session, the staff will seek public feedback on the issues allowing licensees the flexibility to implement waste acceptance criteria as an alternative to the current Section 61.55 waste classification system. To promote stakeholder feedback, a second panel of invited subject matter experts will be asked to speak to the following topics:

- Regulatory approaches to allow site-specific waste acceptance criteria;
- Metrics to determine site-specific waste acceptance criteria;
- Specification of specific requirements; and
- Longevity of institutional controls for site-specific waste acceptance criteria.

The third session is intended to focus generally on policy issues associated with revising 10 CFR Part 61. In the third session there will be a third panel that will consist of representatives of the NRC, Agreement States, and other stakeholder organizations who have historically demonstrated an interest in the NRC's LLW programs.

Following presentations of prepared remarks by the invited panelists, stakeholders and other interested members of the public will have an opportunity to pose questions directly to panels in each of the three sessions.

The public meeting will be held on July 19, 2012, from 8:00 a.m. to 5:00 p.m. (registration begins at 7:30 a.m.) at the Bethesda North Marriott Hotel & Conference Center, 5701 Marinelli Road; Salons G & H, Rockville, Maryland 20852. Pre-registration for this meeting is not necessary. Members of the public choosing to participate in this meeting remotely can do so in one of two ways – online, or via a telephone (audio) connection. Instructions for remote participation in this meeting follow.

Interested members of the public can also participate in this meeting via Webinar. The Webinar meeting registration link can be found at: <https://www1.gotomeeting.com/register/634692312>. The Webinar ID is 634-692-312. After registering, instructions for joining the Webinar (including a teleconference number and pass code) will be provided via email. All participants will be in "listen-only" mode during the presentation. Participants will have a chance to pose questions either orally after the presentation or in writing during the Webinar.

To receive a call back, provide your phone number when you join the meeting, or call the following number and enter the access code:

Call-in toll-free number (US/Canada): 1-888-469-0566. The Webinar access code is 6441887.

The agenda for the public meeting will be noticed no fewer than ten (10) days prior to the meeting on the NRC's Public Meeting Schedule Web site at <http://www.nrc.gov/public-involve/public-meetings/index.cfm>.

Questions about participation in the public meetings should be directed to the points of contact listed in the FOR FURTHER INFORMATION CONTACT section of this document.

Dated at Rockville, Maryland this 29th day of June 2012.

For the Nuclear Regulatory Commission.

/RA/

Gregory Suber, Acting Deputy Director
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and Performance Assessment Directorate
Division of Waste Management
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