

July 16, 2013

MEMORANDUM TO: Aby Mohseni, Deputy Director  
Environmental Protection and Performance  
Assessment Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

FROM: Don Lowman, Project Manager /RA/  
Environmental Protection and Performance  
Assessment Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

SUBJECT: SUMMARY OF JUNE 26, 2013, PUBLIC WEBINAR ON POTENTIAL  
REVISIONS TO NUREG/BR-0204

On June 26, 2013, staff from the Office of Federal and State Materials and Environmental Management Programs conducted a public webinar for the purpose of gathering Agreement State views and comments concerning potential revisions to NUREG/BR-0204, Rev. 2 (July 1998), "Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest."

**BACKGROUND INFORMATION:**

Title 10 CFR Part 20, Appendix G, "Requirements for Transfers of Low-Level Radioactive Waste (LLRW) Intended for Disposal at Licensed Land Disposal Facilities and Manifests" requires that the U.S. Nuclear Regulatory Commission (NRC) Uniform Waste Manifest be prepared for LLRW intended for ultimate disposal at a licensed LLRW land disposal facility. The waste generator, collector, or processor who transports, or offers for transportation, LLRW must prepare the manifest reflecting information requested on applicable NRC Forms 540 (Uniform Low-Level Radioactive Waste Manifest (Shipping Paper)), and 541 (Uniform Low-Level Radioactive Waste Manifest (Container and Waste Description)) and if necessary, on an applicable NRC Form 542 (Uniform Low-Level Radioactive Waste Manifest (Manifest Index and Regional Compact Tabulation)). NRC Forms 540 and 540A must be completed, and must physically accompany the pertinent LLRW shipment. Per Appendix G of 10 CFR Part 20, the shipper of the waste must include, on the uniform manifest for the waste shipment, "[t]he activity of each of the radionuclides Tritium (H-3), Carbon-14 (C-14), Technetium-99 (Tc-99), and Iodine-129 (I-129) contained in the shipment." These isotopes are of concern because they were found to be especially important to safety from groundwater migration in the 10 CFR Part 61 Draft Environmental Impact Statement.

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Unfortunately, the activities of H-3, C-14, Tc-99, and I-129 are Difficult-To-Measure (DTM) in the radioactive waste that is generated. At a March 8, 2012, public meeting on proposed revisions to Part 61, stakeholders suggested that H-3, C-14, Tc-99, and I-129 are being over-estimated in current site inventory dose assessments because of a reliance on a default value when the amount of the physical isotope in question is below some Lower Limit of Detection (LLD) threshold for these isotopes. If true, the cumulative effect of this over reporting results in an over-estimation of the site inventory. Thus, if reporting requirements are not updated, to account for a more accurate estimate of these DTM isotopes, some sites may have to close prematurely due to over-estimation in site inventory dose assessments.

In SECY-13-0001, "Staff Recommendations for Improving the Integration of the Ongoing 10 CFR Part 61 Rulemaking Initiatives", staff noted that stakeholders have recommended that the earlier assumptions concerning the above isotopes cited in the 10 CFR Part 20, Appendix G should be revisited. Stakeholders would like the NRC to address the manifesting of these isotopes, potentially by revising NUREG/BR-0204, Rev. 2 to provide improved reporting guidance for the DTM radionuclides. NRC committed to facilitating public discussion of the issues involving H-3, C-14, Tc-99, and I-129.

#### **MARCH 1, 2013 PUBLIC WORKSHOP:**

The March 1, 2013, Public Meeting Notice and meeting agenda are publicly available and can be found in the Agencywide Documents Access and Management System (ADAMS) (ML13016A269). Approximately 56 individuals participated in this public meeting, either in person or remotely via webinar/telephone. Attendees included representatives from the Electric Power Research Institute (EPRI), the U.S. Department of Energy, Agreement State representatives, current LLW disposal facility operators, utilities, and members of non-governmental organizations. The Meeting Summary can be found in ADAMS (ML13081A237).

#### **JUNE 26, 2013 PUBLIC WEBINAR:**

The June 26, 2013, Public Meeting Notice and meeting agenda were made publicly available prior to the meeting and can be found in ADAMS (ML13137A449). More than 40 individuals participated in this public webinar (enclosure).

Below is a summary of key comments and observations from the webinar:

- The ongoing Part 61 rulemaking (<http://www.nrc.gov/about-nrc/regulatory/rulemaking/potential-rulemaking/uw-streams.html>) will require revisions to the uniform waste manifest. Rather than making revisions to the NUREG and manifests twice, NRC will merge the NUREG revisions with the Part 61 rulemaking. However, if the rulemaking does not progress as scheduled, NRC will move forward with this project and the NUREG changes.
- The magnitude of the over-estimation at current disposal site of the DTM isotopes needs to be assessed.
- The current disposal data available for the DTM isotopes dates to the origin of Part 61 so it will be difficult to get data on the older disposal facilities (Hanford and Barnwell).

- The revised NUREG should allow more flexibility and options on how to determine and report the activity of the DTM isotopes. The options should include a cost benefit for each activity and a list of pros and cons.
- An EPRI study suggests that Tc-99 is overestimated on a 2-3 order of magnitude and I-129 overestimated at least 2-3 orders of magnitude.
- Shipping manifest reporting needs are different than the needs of the disposal site performance assessment (PA). PAs are being performed probabilistically and are using manifest data that is not sufficient.
- EPRI has an ongoing project to study different analytical methods (mass spectrometry, longer count times, more samples, none of the above) which will be completed, hopefully, by the end of this year.

### **PATH FORWARD:**

As stated above, this NUREG project will be merged with the Part 61 rulemaking. Subject to resource availability, below are current NRC plans for moving forward with revisions to NUREG/BR-0204 (dates subject to change):

- Draft Part 61 rule text and guidance document due to Commission July 2013
- If the Commission approves of the rulemaking package, then the staff plans to:
  - Publish the Part 61 Final Rulemaking in the Federal Register later in the calendar year for public comment (Fall/Winter 2013)
  - Conduct public meetings in 2014 (locations and dates yet to be determined)
  - Deliver final rulemaking package to Commission in late calendar year 2014

### **DOCUMENTATION:**

All project documentation (meeting agenda, presentation slides, meeting summary, and other related documents) can be found on the following NRC webpage: <http://www.nrc.gov/waste/llw-disposal/llw-pa/llw-uwm.html>

Enclosure:  
Attendance List

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Enclosure:  
Attendance List

#### **ML13192A182**

<b>OFC</b>	DWMEP	DWMEP	DWMEP	DWMEP
<b>NAME</b>	DLowman	TMoon	JJessie	DLowman
<b>DATE</b>	7/16/13	7/16/13	7/16/13	7/16/13

**OFFICIAL RECORD COPY**

WEBINAR ATTENDEES (Public):

NAME	AFFILIATION
Jimmy Alldredge	
Patrick Anderson	Missouri Dept. of Natural Resources
Mike Aplin	TX Commission on Env. Quality
Paul Black	Neptune and Company, Inc.
Jeffrey Cady	Dresden NPS
Kurt Colborn	WCS
Roger Dockery	TX Commission on Env. Quality
William Dornsife	WCS
Kayla Evens	TX Commission on Env. Quality
Christine Gelles	US DOE - EM
Phil Goble	
Karen Hadden	SEED Coalition
Thomas Kalinowski	DW James Consulting
Ashok Kapoor	Office of Packaging and Transportation
Casey Kelley	Exelon
Scott Kirk	Waste Control Specialists LLC
William Lipton	Retired
Brian Livingston	USUHS/AFRRI
Thomas Magette	PricewaterhouseCoopers
Sean McCandless	EnergySolutions
Pat McCloskey	Oak Ridge Associated Universities
Debra McCroskey	EnergySolutions
Brad Melton	EnergySolutions
Michael Mobley	Southeast LLW Compact Commission
Michael Plemmons	SCDHEC
Eric Pulley	Department of Public Health
John Salladay	
Kristen Schwab	
William Sellers	
Sarah Stewart	
John Tauxe	Neptune and Company, Inc.
Bruce Thomadsen	University of Wisconsin
Glen Vickers	Exelon Generation
Dana Willaford	DOE
Perry Williams	Studsvik

**NOTE: There may have been additional attendees via the bridge line that did not login to the webinar. Staff has no means to track bridge line callers.**

NRC ATTENDEES:

NAME	TITLE
Andrew Carrera	Health Physicist
Steve Garry	Senior Health Physicist
Chris Grossman	Systems Performance Analyst
Maurice Heath	Project Manager
Janelle Jessie	Branch Chief – Low-Level Waste Branch
Jim Kennedy	Senior Project Manager
Don Lowman	Project Manager
Jim Shaffner	Project Manager