

FINAL

Low-Level Radioactive Waste Management and Disposition: A Workshop

October 24–25, 2016
Keck Center
500 5th Street, NW
Washington, DC 20001

Monday, October 24

*Times listed below are US Eastern Time Zone (UTC – 05:00)

Keck Center
Room 100

Connect remotely via Webcast Link: <https://livestream.com/accounts/7036396/events/6450610>

- 9:00 am* Welcome – 15 minutes
*John Applegate, organizing committee chair
Executive Vice President for University Academic Affairs, Indiana University*
- Jenny Heimberg, study director
Nuclear and Radiation Studies Board, the National Academies*
- Opening Remarks
*Douglas Tonkay
Director, Office of Waste Disposal, Office of Environmental Management, Department of
Energy (DOE)*
- 9:15 am Workshop Background and Objective –20 minute presentation, 10 minutes for questions
John Applegate, organizing committee chair

Session 1: The Scope of the LLW Challenge

- 9:45 am Categories and Characteristics of Low-Level Waste (LLW) – panel discussion, 75 minutes
Moderator:
*Nina Rosenberg, organizing committee member
Program Director, Nuclear Nonproliferation and Security, Los Alamos National Laboratory*
10 minute overview
- Each of three panelists will be given 10 minutes to outline the variety of LLWs, followed by a 35-minute moderated, full-panelist discussion.
- Miklos (Mike) Garamszeghy, confirmed
Design Authority and
Manager, Technology Assessment & Planning Nuclear Waste Management Organization
(NWMO), Canada*

Lisa Edwards, confirmed
Electric Power Research Institute (EPRI)

Daniel B. Shrum, confirmed
Senior Vice President Regulatory Affairs, EnergySolutions

Questions for panelists:

What are the greatest challenges that have you observed in the management of LLW?
What key technical criteria and/or waste characteristics are most important to consider?

11:00 am BREAK – 15 minutes

11:15 am Regulations, standards, orders, and guidance criteria – 75 minute panel discussion

Moderator:

Larry Camper, organizing committee member
Nuclear Safety Consultant, Talisman International LLC; USNRC, retired
10 minute overview

Each of three panelists will be given 10 minutes to answer a set of questions, followed by a 35-minute moderated discussion.

Andrew Orrell, confirmed
Section Head for Waste and Environmental Safety, International Atomic Energy Agency (IAEA)

Thomas Magette, confirmed
Managing Director, PricewaterhouseCoopers Advisory Services, LLC

Mark A. Yeager, confirmed
Environmental Health Manager, South Carolina Department of Health and Environmental Control

Questions for the panelists:

What are the health, environmental safety, and security bases that led to the generally applicable standards and regulations in you line of work?
What are the strengths and weaknesses of the respective approaches?

12:30 pm LUNCH available for purchase in the cafeteria – 60 minutes

Session 2: Lessons Learned in Establishing LLW Disposition Pathways

1:30 pm Case Studies of Successful LLW Disposal Solutions – 60 minutes

Moderator: *Rebecca Robbins, organizing committee member*
Predisposal Unit Head, IAEA

United States case studies – 30 minutes each:

Case Study 1:

Separations Process Research Unit (SPRU) tank waste sludge case study
Melanie Pearson-Hurley, DOE-EM Headquarters Site Liaison for the SPRU project

Low-Level Radioactive Waste Management and Disposition: A Workshop

Page 3

Case Study 2:

Low-level Radioactive Waste Streams Reviewed for Disposal at Nevada National Security Site – Key Criteria, Variation, and Management

Greg Lovato, confirmed

Deputy Administrator, Nevada Division of Environmental Protection

What were the key characteristics of the waste stream that affected management decisions for waste processing, transportation, storage and disposal?

Why did it work? Lessons learned for management from each example.

- waste characteristics (technical)
- management practices (process)
- regulatory structure (manageable, predictable, consistent)

Were there instances in which it almost did not work? What were the obstacles to successful waste management and disposal?

- waste characteristics
- management practices
- regulatory structure

2:30 pm

BREAK – 15 minutes

2:45 pm

Case Studies of Successful LLW Disposal Solutions (continued) – 60 minutes

Moderator: *Rebecca Robbins, organizing committee member (see above questions)*

International case studies – 30 minutes each:

Case Study 3:

Canada, licensing a Low-Level Waste facility

Case Study 4:

Deep Geologic Repository for Low- and Intermediate-Level Waste Repository

Mike Garamszeghy, NWMO, confirmed

Case Study 5:

France, Very-Low-Level and Intermediate-Low-Level Waste facilities

Gérald Ouzounian, confirmed

Director, International Division, ANDRA-Agence nationale pour la gestion des déchets radioactifs

3:45 pm

Full workshop discussion – 60 minutes

Key characteristics of LLW and challenging LLW streams: Initial discussions

John Applegate, organizing committee chair

4:45 pm

Wrap-up

John Applegate, organizing committee chair

5:00 pm

ADJOURN

Tuesday, October 25

**Keck Center
Room 100**

Connect remotely via Webcast Link: <https://livestream.com/accounts/7036396/events/6450610>

- 9:00 am Welcome – 10 minutes
John Applegate, organizing committee chair, and Jenny Heimberg, study director
- 9:10 am Common themes from Day One (characteristics and methodologies) – 60 minutes
30 minutes committee presentation followed by 30 minutes for discussion
- 10:10 am BREAK – 15 minutes

Session 3: Applying Common Themes to Problem Cases

- 10:25 am Moderator: *John Applegate, organizing committee chair*
- Description of the problem case studies by experts, 5 minutes each
1. Greater than Class C (GTCC) and transuranic (TRU); commercial, > 100 nCi/gm
Lawrence R. Jacobi, Jr., confirmed
Principal Consultant, Jacobi Consulting
 2. Sealed sources
Temeka Taplin, confirmed
(NNSA)
 3. Clearance or exempt waste & Low activity waste (e.g., lowest 10% Class A waste)
Lisa Edwards, confirmed
Senior Program Manager, Electric Power Research Institute (EPRI)
 4. Incident waste
Will Nichols, confirmed
Principal Engineer and Group Manager, INTERA
 5. Depleted uranium (DU)
Scott Kirk, confirmed
Director of Regulatory Affairs, BWXT
- 10:50 am BREAK-OUT session – ~70 minutes
Evaluating the Usefulness of Common Themes Applied to Problem Cases
Organizing committee members and study director to each lead a breakout group, each group with an expert in a particular “waste without a pathway” (WWP) category.
- Each group will be encouraged to think about the challenges of one particular waste stream in light of previous remarks.
- What are the characteristics of the wastes?
 - What are the challenges to disposal?
 - How might the proposed methodology or approaches be applied to this WWP category?

Low-Level Radioactive Waste Management and Disposition: A Workshop

Page 5

- 12:00 pm LUNCH available for purchase in the cafeteria – 60 minutes
- 1:00 pm Summary of morning session by each group lead – 75 minutes
15 minutes each
- 2:15 pm BREAK 15 minutes

Session 4: Concluding Discussion

- 2:30 pm Full workshop discussion – 90 minutes
Moderator: John Applegate, organizing committee chair
- What have we learned? Do we have the pieces here for an integrated solution/system for for LLW without a disposition pathway?
- Is there information missing that keeps us from developing an integrated solution?
- 4:00 pm Concluding remarks/reactions from agencies –
Douglas Tonkay; others TBD
- 4:15 pm Wrap-up
John Applegate, organizing committee chair
- 4:30 pm ADJOURN