LLW notes

Volume 32 Number 6 November/December 2017

U.S. Department of Energy (DOE)

DOE Submits Report to Congress re Alternatives for the Disposal of GTCC and GTCC-Like Waste

On November 14, 2017, the U.S. Department of Energy (DOE or the Department) submitted a Report to Congress titled, *Alternatives for the Disposal of Greater-than-Class C Low-Level Radioactive Waste and Greater-than-Class C-Like Waste.*

The report satisfies a statutory requirement in the Energy Policy Act of 2005 which requires that, prior to making a final decision on the disposal alternative or alternatives to be implemented regarding GTCC low-level radioactive waste, the Secretary of Energy shall submit a report to Congress that describes the alternatives under consideration and await action by Congress. The report must also include all the information required by the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA) for inclusion in a comprehensive report—submitted by the Secretary of Energy to Congress in February 1987—on ensuring the safe disposal of GTCC low-level radioactive waste.

The report has been posted to the DOE's Greater-than-Class C (GTCC) low-level radioactive waste website at http://www.gtcceis.anl.gov/.

Overview

GTCC low-level radioactive waste, which is generated by NRC or Agreement State licensees, has radionuclide concentrations exceeding the limits for Class C low-level radioactive waste established by the U.S. Nuclear Regulatory Commission (NRC). The federal government is responsible for the disposal of GTCC low-level radioactive waste. At this time, there is no disposal facility for GTCC low-level radioactive waste.

In February 2016, DOE issued a *Final Environmental Impact Statement for the Disposal of Greater-Than-Class* C *(GTCC) Low-Level Radioactive Waste and GTCC-Like Waste* (DOE/EIS-0375). The Final Environmental Impact Statement (EIS) did not constitute a final decision, however, as the Energy Policy Act of 2005 requires the Department to submit a Report to

(Continued on page 23)

In This Issue

LLW Forum, Inc. • 2657 Bayview Drive • Ft. Lauderdale, FL 33306
(754) 779-7551 • FAX (754) 223-7452 • EMAIL llwforuminc@aol.com WEBSITE www.llwforum.org

COPYRIGHT POLICY

The Low-Level Radioactive Waste Forum, Inc. is dedicated to the goals of educating policy makers and the public about the management and disposal of low-level radioactive wastes, and fostering information sharing and the exchange of views between state and compact policy makers and other interested parties.

As part of that mission, the LLW Forum publishes a newsletter, news flashes, and other publications on topics of interest and pertinent developments and activities in the states and compacts, federal agencies, the courts and waste management companies. These publications are available to members and to those who pay a subscription fee.

Current members are allowed to distribute these written materials to a limited number of persons within their particular organization (e.g., compact commissioners, state employees, staff within a federal agency, employees in a commercial enterprise.) It has become clear, however, that there will be instances where members and subscribers wish to share LLW Forum materials with a broader audience of non-members.

This Copyright Policy is designed to provide a framework that balances the benefits of a broad sharing of information with the need to maintain control of published material.

1. LLW Forum, Inc., publications will include a statement that the material is copyrighted and may not be used without advance permission in writing from the LLW Forum.

2. When LLW Forum material is used with permission it must carry an attribution that says that the quoted material is from an LLW Forum publication referenced by name and date or issue number.

3. Persons may briefly summarize information reported in LLW Forum publications with general attribution (e.g., the LLW Forum reports that . . .) for distribution to other members of their organization or the public.

4. Persons may use brief quotations (e.g., 50 words or less) from LLW Forum publications with complete attribution (e.g., *LLW Forum Notes,* May/June 2002, p. 3) for distribution to other members of their organization or the public.

5. Members and subscribers may with written approval from the LLW Forum's officers reproduce LLW Forum materials one time per year with complete attribution without incurring a fee.

6. If persons wish to reproduce LLW Forum materials, a fee will be assessed commensurate with the volume of material being reproduced and the number of recipients. The fee will be negotiated between the LLW Forum's Executive Director and the member and approved by the LLW Forum's officers.

Low-Level Radioactive Waste Forum, Inc.

LLW Notes
Volume 32, Number 6 November/December 2017
Editor and Writer: Todd D. Lovinger
Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

LLW Notes is published several times a year and is distributed to the Board of Directors of the Low-Level Radioactive Waste Forum, Inc. — an independent, non-profit corporation. Anyone — including compacts, states, federal agencies, private associations, companies, and others — may support and participate in the LLW Forum, Inc. by purchasing memberships and/or by contributing grants or gifts. For information on becoming a member or supporter, please go to our website at www.llwforum.org or contact Todd D. Lovinger — the LLW Forum, Inc.'s Executive Director — at (754) 779-7551.

Directors that serve on the Board of the Low-Level Radioactive Waste Forum, Inc. are appointed by governors and compact commissions. The LLW Forum, Inc. was established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Amendments Act of 1985 and to promote the objectives of low-level radioactive waste regional compacts. The LLW Forum, Inc. provides an opportunity for state and compact officials to share information with each another and to exchange views with officials of federal agencies and other interested parties.

Table of Contents

LLW FORUM, INC.

Low-Level Radioactive Waste Forum, Inc.
2657 Bayview Drive
Ft. Lauderdale, FL 33306
(754) 779-7551
FAX (754) 223-7452
EMAIL llwforuminc@aol.com
INTERNET www.llwforum.org

Key to Abbreviations

U.S. Department of Energy	DOE
U.S. Department of Transportation	DOT
U.S. Environmental Protection Agency	EPA
U.S. Government Accountability Office	GAO
U.S. Nuclear Regulatory Commission	NRC
Naturally-occurring and accelerator-produced radioactive material	NARM
Naturally-occurring radioactive material	NORM
Code of Federal Regulations	CFR

Low-Level Radioactive Waste Forum, Inc. (LLW Forum)

Registration Open for Spring 2018 LLW Forum Meeting

Hyatt Regency Airport Hotel in San Francisco, California
April 16-17, 2018

The Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce that registration is now open for our spring 2018 meeting, which will be held at the Hyatt Regency Airport Hotel in San Francisco, California on April 16-17, 2018. Please mark your calendars accordingly and save the date!

In terms of planning and making travel arrangements, please note that the Executive Committee will meet during the lunch break on Monday afternoon, April 16. There will be a meeting for designated state and compact members (Directors and Alternates only) of the LLW Forum Board of Directors from 2:00 – 5:00 pm on Tuesday afternoon, April 17. The Disused Sources Working Group (DSWG) will meet from 9:00 am – 5:00 pm on Wednesday, April 18.

Interested stakeholders are encouraged to register and make hotel reservations for the meeting at your earliest convenience, as there is limited space available in our discount room block.

The Southwestern Low-Level Radioactive Waste Compact Commission is co-sponsoring the meeting.

The meeting documents—including a meeting bulletin and registration form—have been posted to the LLW Forum Meeting page of the organization's web site at http://llwforum.org/llw-forum-meeting/.

As a new option for interested stakeholders, a registration form may be completed and submitted online.

Attendance

Officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/ processors, industry, and other interested parties are encouraged to attend the spring 2017 LLW Forum meeting.

LLW Forum meetings are an excellent opportunity to stay up-to-date on the most recent and significant developments in the area of low-level radioactive waste management and disposal. They also offer an important opportunity to network with other government and industry officials and to participate in decision-making on future actions and endeavors affecting low-level radioactive waste management and disposal.

Location and Dates

The spring 2018 LLW Forum meeting will be held on Monday, April 16 (9:00 am – 5:00 pm) and Tuesday, April 17 (9:00 am – 1:00 pm) at:

Hyatt Regency San Francisco Airport
1333 Bayshore Highway
Burlingame, California 94010

The Hyatt Regency San Francisco Airport is conveniently located in Burlingame, situated between downtown San Francisco and near many Silicon Valley industries. Designed for the business and leisure traveler, this San Francisco airport hotel is designed to accommodate both vacationers that want to explore the Bay Area and business executives on the go. The hotel boasts 789 guest rooms including 26 suites, Business Plan rooms and Regency Club level. It features over 69,000 square feet of flexible event

space and is located minutes from San Francisco Airport with a 24-hour shuttle service to the hotel and Hertz rentals car service desk on-site. The hotel has a 24-hour fitness center, heated outdoor pool and several restaurants.

Registration

All persons must pre-register for the meeting and pay any associated registration fees in order to be allowed entry. Registration forms are needed in order to ensure that you receive a meeting packet and name badge. Accordingly, interested attendees are asked to please take a moment to complete the registration form at your earliest convenience and return it to the LLW Forum at the mailing or e-mail address listed at the bottom of the form.

The meeting is free for up to two individuals representing members of the LLW Forum. Additional and non-member registration is $500, payable by check only to the "LLW Forum, Inc." (Credit card payments are not accepted.)

Reservations

Persons who plan to attend the meeting are strongly encouraged to make their hotel reservations and send in their registration forms as soon as possible, as we have exceeded our block at the last few meetings.

A block of rooms have been reserved for Sunday (April 15) and Monday (April 16) for meeting attendees at the special, discounted rate of $155.00 (single/double rate) plus tax. A limited number of rooms are available at this rate for Saturday (April 14), Tuesday (April 17) and Wednesday (April 18).

To make a reservation, please go to

https://aws.passkey.com/go/LLWFORUM18

You may also make a reservation by calling (888) 421-1442 and ask for a reservation using Group Code LLWF. *Please note that you must ask for a room in the LLW Forum block using Group Code LLWF in order to get the special, discounted rate.*

The deadline for reserving a room at the discounted rate is March 30, 2018.

Transportation and Directions

The Hyatt Regency is located just minutes from the San Francisco International Airport on Interstate 101. Complimentary shuttle service is available through the hotel 24 hours a day. In addition, the Bay Area Rapid Transit (BART) commuter train station with direct service to downtown San Francisco will also be available by shuttle service from the Hyatt Regency.

If you have questions or require additional information, please contact Todd D. Lovinger, Esq. — Executive Director of the LLW Forum and Project Director of the Disused Sources and Part 61 Working Groups (DSWG/P61WG) — at (754) 779-7551 or at LLWForumInc@aol.com.

LLW Forum/Disused Sources Working Group

DSWG Releases Report re Source Disposition Options and Costs

The Disused Sources Working Group (DSWG) of the Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce the release of its report titled, "Disposition Options and Costs for Certain Radioactive Sealed Sources and Devices."

The report is intended to serve as a companion document to educational materials released by the DSWG earlier this year including educational brochures for current and prospective licensees of radioactive sealed sources and devices.

The new report can be accessed via a link on the Resources Page of the DSWG website at http://www.disusedsources.org/resources/#disposition.

Overview

The DSWG report is intended to assist stakeholders in understanding the likely options and estimated costs related to the disposition of common radioactive sealed sources and devices. These include industrial radiography devices, fixed industrial gauges, well logging and brachytherapy sources, portable gauges, teletherapy devices, and both self-contained and panoramic irradiators. Common characteristics of these devices are summarized in Table 1 at the end of the document.

Readers are cautioned that the information contained in the report is intended as a guide only, providing general information about the most common types of sources and devices. The identified costs are provided as estimates only based on current information and guidance and should not be relied upon as determinative of actual future disposal costs.

Companion Documents

The new DSWG report on disposition options and costs is intended to serve as a companion document to educational brochures for current and prospective licensees of radioactive sealed sources and devices that were developed and released earlier this year by the DSWG in conjunction with the E-34 Committee of the Conference of Radiation Control Program Directors (CRCPD). The brochures provide information regarding the ownership and use of radioactive sealed sources and devices including:

- understanding the life-cycle costs including initial purchase price, regulatory license fees, financial assurance, operating expenses, security and end-of-life disposition;
- consideration of the use of alternative technologies;
- potential liabilities of using radioactive sealed sources or devices;
- proper management and disposition of disused sources including information about the Source Collection & Threat Reduction (SCATR) Program — including a chart documenting the diminishing cost share — and the Off-Site Source Recovery Project (OSRP); and,
- potential liabilities of storing disused sources.

Generic versions of the educational materials—which include fillable fields to incorporate individual office logos and contact information—are now available on the DSWG website to federal, state and industry stakeholders to modify and distribute as each deems appropriate.

Background

The LLW Forum is a non-profit organization of representatives appointed by Governors and compact commissions that seeks to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments, as well as to promote the objectives of regional low-level radioactive waste disposal compacts.

In September 2011, the LLW Forum formed the DSWG to develop recommendations from the states and compacts for improving the management and disposition of disused sources.

For additional information about the LLW Forum and DSWG, please contact LLW Forum Executive Director and DSWG Project Director Todd D. Lovinger, Esq at (754) 779-7551 or at LLWForumInc@aol.com.

Central Interstate Compact

Central Interstate Compact Commission Holds November 2017 Meeting

On November 21, 2017, the Central Interstate Low-Level Radioactive Waste Commission held a special meeting. The meeting—which was held via teleconference—began at 10:00 a.m. CT.

The purpose of the meeting was for the approval of minutes of the June 20, 2017 Annual Meeting; approval of the FY 2016-2017 audit done by Cochran, Head, Vick & Co.; approval of Amendment to Memorandum of Agreement between Oklahoma Department of Environmental Quality and the Commission; and, all other business to come before the Commission.

The following items were on the draft agenda for the meeting:

1. Call to Order and Roll Call (Chair)

2. Identify Members of Public on Conference Line

3. Approval of Minutes of June 20, 2017 Annual Meeting

   A. Questions/Discussion by Commissioners

   B. Questions/Discussion by Public

   C. Roll Call Vote

4. Approval of Cochran, Head, Vick & Company Audit for Fiscal Years 2016-2017

   A. Questions/Discussion by Commissioners

   B. Questions/Discussion by Public

   C. Roll Call Vote

5. Adjourn

Pursuant to Article IX(H)(3) of the Commission's Bylaws, this Public Forum was an opportunity for members of the public to address the Commission on any matter under the Commission's jurisdiction.

For additional information, please contact Kristie Valtierra, Administrator of the Central Interstate Low-Level Radioactive Waste Compact Commission, at (402) 702-5220 or at admin@cillrwcc.org or visit their web site at www.cillrwcc.org.

Central Interstate Compact Commission Holds December 2017 Meeting

On December 20, 2017, the Central Interstate Low-Level Radioactive Waste Commission held a special meeting. The meeting—which was held by teleconference—began at 10:00 a.m. CT.

The following items were on the draft agenda for the meeting:

1. Call to Order and Roll Call (Chair)

2. Identify Members of the Public on Conference Line

3. Review and Approval of Minutes of the November 21, 2017 Special Meeting

4. Oklahoma Department of Environmental Quality (DEQ) and Central Interstate Low-Level Radioactive Waste Compact Commission (CILLRWCC or Commission) Statement of Intent to Terminate and Service Agreement: Oklahoma DEQ and the Commission wish to replace the current Memorandum of Agreement with a Professional Service Agreement that will establish a flat, per-fiscal-year reimbursement the Commission will pay to DEQ for administrative services DEQ provides to the Commission.

   A. Questions/Discussion by Commissioners

   B. Questions/Discussion by Public

   C. Roll Call Vote

Adjourn

Pursuant to Article IX(H)(3) of the Commission's Bylaws, this Public Forum was an opportunity for members of the public to address the Commission on any matter under the Commission's jurisdiction.

For additional information, please contact Kristie Valtierra, Administrator of the Central Interstate Low-Level Radioactive Waste Compact Commission, at (402) 702-5220 or at admin@cillrwcc.org or visit their web site at www.cillrwcc.org.

Northwest Compact/State of Utah

Utah Waste Management and Radiation Control Board Meets

On November 9, 2017, the Utah Waste Management and Radiation Control Board held a regularly scheduled meeting beginning at 1:30 p.m. MT in Salt Lake City, Utah.

The meeting, which was open to the public, was held in Conference Room 3132, Department of Environmental Quality (DEQ) Board Room, in the Multi Agency State Office Building that is located at 195 North 1950 West in Salt Lake City, Utah.

Agenda

The following items, among others, were on the agenda for the November 2017 Board meeting:

I. Call to Order

II. Approval of Meeting Minutes for the October 12, 2017 Board Meeting *(Board Action Item)*

III. Underground Storage Tanks Update

IV. Low-Level Radioactive Waste Section

A. Energy*Solutions,* LLC request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to treat by stabilization waste containing High-Subcategory Mercury. *(Board Action Item)*

B. Energy*Solutions,* LLC request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to receive Cemented Uranium Extraction Process Residues for disposal. *(Board Action Item)*

C. Energy*Solutions,* LLC request for a site-specific treatment variance from the Hazardous Waste Management Rules. Energy*Solutions* seeks authorization to dispose of waste containing hazardous constituents and PCBs as Underlying Hazardous Constituent. *(Board Action Item)*

V. Other Business

A. Miscellaneous Information Item

B. Scheduling of Next Board Meeting

VI. Adjourn

Background

The Board—which is appointed by the Utah Governor with the consent of the Utah Senate—guides development of Radiation Control policy and rules in the state.

The Board holds open meetings ten times per year at locations throughout the state. A public comment session is held at the end of each meeting.

Copies of the Utah Waste Management and Radiation Control Board meeting agendas and packet information can be found at http://www.deq.utah.gov/boards/waste/meetings.htm.

For additional information, please contact Rusty Lundberg, Deputy Director of the Division of Waste Management and Radiation Control at the Utah Department of Environmental Quality, at (801) 536-4257 or at rlundberg@utah.gov.

Utah DWMRC Notifies Stakeholders of Rulemaking Actions

On November 3, 2017, the Utah Division of Waste Management and Radiation Control (DWMRC) notified interested stakeholders of the following rulemaking actions that were taken by the Waste Management and Radiation Control Board at its meeting on October 12, 2017:

1. Final adoption of rule changes to incorporate the following in to Title 313 of the Utah Administrative Code and set an effective date of October 13, 2017:

   - U.S. Nuclear Regulatory Commission (NRC) final rule published in the May 29, 2013 *Federal Register* (78 *Federal Register* 32310) under the title of Distribution of Source Material to Exempt Persons and to General Licensees and Revision of General License and Exemptions.

   - Selected corrections and clarifications not associated with the above final rule.

2. Approval to proceed with formal rulemaking and public comment with the following proposed changes to R313-25, *License*

Requirements for Land Disposal of Radioactive Waste – General Provisions, of the Utah Administrative Code:

- Proposed amendments to R313-25 to incorporate the rule changes required by S.B. 79 (2017 General Session) to the financial assurance requirements for a radioactive waste disposal facility. Additional changes to the financial assurance requirements are being made for added detail to the Director's review of and action on the financial assurance cost estimate submitted by a licensee of a radioactive waste disposal facility.

Additional information on the proposed changes to the radiation control rules can be found on the Division website or via the Office of Administrative Rules website for the November 1, 2017 issue (Vol. 2017, No. 21) of the Utah State Bulletin.

For additional information, please contact Otis Willoughby of the Utah DWMRC at (801) 536-0200.

Modifications Issued re Energy*Solutions'* Clive Facility License

On November 2, 2017, Energy*Solutions* provided notification of the approval of modifications to the Part B Permit issued by the State of Utah for the company's Clive facility in Tooele County, Utah. The modifications involved the following changes:

- 2017-006477: Approval of a Class 1 modification to Revisions to Attachment II-7-1, *Overall Facility Closure Cost Summary*
- 2017-006478: Approval of a Class 1 modification to Revisions to Attachment II-7-2, *Closure Cost Estimate*
- 2017-006479: Approval of a Class 1 modification to Revisions to Module II, *General Facility Conditions, Revision Date List*

The above modifications are all related to the 2016 Annual Surety Review modification that was initially submitted on May 23, 2017.

On October 20, 2017, Energy*Solutions* provided notification of the approval of a modification to the Part B Permit issued by the State of Utah for the company's Clive facility in Tooele County, Utah. The modification involved the following changes:

- 2017-007164: Approval of a Class 1 modification to Revisions to Attachment II-7-1, *Overall Facility Closure Cost Summary*

Questions regarding these modifications or requests for review of the modification applications and related documents may be directed to Energy*Solutions* or the Utah Division of Waste Management and Radiation Control (DWMRC).

For additional information, please contact Otis Willoughby of the Utah DWMRC at (801) 536-0200 or Tim Orton of EnergySolutions at (801) 649-2000.

Texas Low-Level Radioactive Waste Disposal Compact Commission

Texas Compact Commission Publishes Proposed Waste Management Rule

On November 3, 2017, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) published a proposed rule regarding the management of low-level radioactive waste within the Texas Compact in the *Texas Register*.

Comments on the proposed rule were due no later than the close of business on December 8, 2017.

Copies of the proposed rule can be obtained from the Texas Compact Commission's website at http://www.tllrwdcc.org/rules/.

Purpose

The Texas Compact Commission is proposing a new §675.24 relating to a requirement to report on the importation of certain low-level radioactive waste for management or disposal that is not required to be disposed in the Texas Compact Facility.

In order to fulfill its responsibilities with respect to 42 United States Code, §§2021(b) - 2021(j) and §3.04(9) and §3.05(6) of the Texas Compact as set out in Texas Health and Safety Code (THSC) §403.006, the Texas Compact Commission has determined that it is in the public interest that it gather information regarding low-level radioactive waste that enters the host state irrespective of whether it requires an agreement for importation for disposal at the Texas Compact facility.

Proposed new §675.24 seeks to facilitate the gathering of that information by the way of reporting requirements after the entry of the low-level radioactive waste into the state rather than requiring approval for the importation of certain categories of low-level radioactive waste into the host state.

Proposed Rule Language

The proposed rule language is as follows:

§675.24. Requirement to Report on the Importation of Certain Low- Level Radioactive Waste for Management or Disposal that is not Required to be Disposed of in the Compact Facility.

(a) This section is applicable only in the host state.

(b) This section is designed to gather information on the importation into the host state for disposal or management of certain low- level waste that:

(1) is required when shipped to be listed on Nuclear Regulatory Commission (NRC) Forms 540 or 541 (Uniform Low-Level Waste Manifest Shipping Forms);

(2) is included within the definition of low-level radioactive waste found in 30 TAC §336.2(89) (relating to Definitions) as the definition is in effect on the date this section becomes effective or as 30 TAC §336.2(89) may be amended or renumbered in the future, but is not intended for disposal in the Compact Waste Facility;

(3) is not low-level radioactive waste described by 42 United States Code, §2021c(b)(1); and

(4) for the purposes of this section, the material described in this subsection will be referred to as Non-Compact-Facility Low-Level Radioactive Waste ("NCFW").

(c) Any entity in the host state that imports NCFW must enter into an agreement with the Commission that contains a requirement that it will report to the Commission on a quarterly basis the following information with respect to each shipment of NCFW that it has received in the previous quarter:

(1) the name of the generator;

(2) the name of the state and the name of the low-level waste compact (if any) where the waste originated;

(3) the activity of the waste in curies;

(4) the volume or weight of the waste; the date of receipt; whether the waste is being stored, processed, or otherwise managed;

(5) location of management; and

(6) the date of and location of disposal of that waste.

(d) Quarterly reports must be submitted electronically on forms provided by the Commission and must be submitted before the 31st day after the end of each quarter of the Commission's fiscal year.

(e) An entity that imports low-level radioactive waste into the host state as described in subsection (c) of this section shall have entered into an agreement with the Commission within 90 days after the effective date of this section or within such time extensions thereafter as the Commission may allow. To the maximum extent possible, each agreement entered into under this section will contain provisions identical to those in each other agreement entered into under this section.

(f) An entity that imports waste into the host state as described in subsection (c) of this section shall submit an application for entry into an agreement with the Commission electronically or on paper on a form provided by the Commission.

(g) Failure on the part of an entity that imports waste into the host state as described in subsection (c) of this section to comply with any provision of this section or the agreement entered into pursuant to subsection (d) of this section may result in the Commission reporting such failures to the host state agency that has licensed, permitted, or otherwise authorized the operation of such entities.

(h) The Commission may revoke or amend an agreement on its own motion or in response to an application by the agreement holder. When the Commission amends an NCFW agreement on its on motion, it may provide a reasonable time to allow the agreement holder to make the changes necessary to comply with any additional requirements imposed by the Commission. No importation of NCFW shall be allowed under any amended agreement for the importation of NCFW until:

(1) the amendment to the NCFW agreement has been executed by both the Commission and the agreement holder; and

(2) the agreement holder has made any changes necessary to comply with additional requirements.

Benefits and Costs

According to the *Texas Register* notice, the changes in the proposed rule are expected to increase the knowledge available to the Texas Compact Commission and the public with respect to the presence of low-level radioactive waste in the host state.

The notice states, "By requiring a quarterly report of certain information about low-level [radioactive] waste that enters the host state for a purpose other than disposal at the compact facility, the proposed [Texas Compact] Commission rule benefits the host state and the public by allowing more complete tracking of low-level radioactive waste that enters the host state."

The Texas Compact Commission anticipates that businesses and individuals will have no significant additional economic costs as a result of their compliance with the proposed rule, as the new reporting requirements would require the reporting of minimal information that is already maintained by the entities required to report under the proposed new §675.24.

For additional information, please contact Texas Compact Commission Executive Director Leigh Ing at (512) 217-8045 or at

Texas Compact Commission Holds Low-Level Waste Disposal Workshop

On November 15, 2017, the Texas Low-Level Radioactive Waste Disposal Compact Commission (TLLRWDCC) hosted a workshop in Austin, Texas. The workshop, which was held at the Legislative Conference Center at the Texas State Capitol, was a full-day event.

Workshop presentations focused on disposal options for in-compact waste generators, specifically on topics that are important to Texas generators. The meeting agenda included the following:

- 9:00 - 9:30: Welcome and Program Introduction — *TLLRWDCC*
- 9:30 - 10:00: Why is Source Disposal So Important? — *National Nuclear Security Administration (NNSA)*
- 10:00 - 10:30: Superfund! No One is Immune — *Texas Commission on Environmental Quality (TCEQ)*
- 10:45 - 11:45: Source Storage and the 2-Year Rule — *Texas Department of State Health Services (TDSHS)*
- 1:15 - 1:45: How Can I Dispose of My Source? The Source Collection and Threat Reduction (SCATR) Program — *Conference of Radiation Control Program Directors (CRCPD)*
- 1:45 - 2:15: What is a Low-Level Waste Compact? How does a Compact Affect Me? — *TLLRWDCC*
- 2:30 - 3:15: Does Texas Have a Compact Facility? And Why Do I Care? — *Waste Control Specialists (WCS)*
- 3:15 - 3:45: The Role of the TCEQ — *TCEQ*
- 3:45 - 4:00: Closing Remarks — *TLLRWDCC*

Attendance for the workshop, for which there were 70 slots available, was free.

For additional information, please contact Texas Compact Commission Executive Director Leigh Ing at (512) 305-8941 or at leigh.ing@tllrwdcc.org.

Texas Compact Commission Holds November 2017 Meeting

On November 16, 2017, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting in Austin, Texas. It was held in Room E1.028 at the Texas Capitol in Austin, Texas.

The meeting, which began at 9:30 a.m. CDT, followed the conclusion of a one-day workshop focused on disposal options for in-compact waste generators, specifically on topics that are important to Texas generators. (See related story, this issue.)

The formal meeting agenda is available on the Texas Compact Commission's web site at www.tllrwdcc.org.

Agenda

The following is an abbreviated overview of the agenda for the Texas Compact Commission meeting. Persons interested in additional detail are directed to the formal agenda themselves.

- call to order;
- roll call and determination of quorum;
- introduction of Commissioners, elected officials and press;
- public comment;
- consideration of and possible action on applications for importation of low-level radioactive waste from Arizona Public Service Palo Verde; Qal-Tek (as broker); Qal-Tek (as generator); Southern Nuclear Company Hatch; and, Southern Nuclear Company Hatch Irradiated Hardware;
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations;
- receive report from Chair on Texas Compact Commission activities including an update on the to-be-formed committee as a result of recent legislation;
- report from Leigh Ing, Executive Director of the Texas Compact Commission, on her activities relating to workshops and Texas Compact Commission operations;
- discussion and possible changes of dates and locations of future Texas Compact Commission meetings in 2018; and,
- adjourn.

Background

The Texas Compact Commission may meet in closed session as authorized by the Texas Open Meetings Act, Chapter 551, Texas Government Code. Texas Compact Commission meetings are open to the public.

For additional information, please contact Texas Compact Commission Executive Director Leigh Ing at (512) 305-8941 or at leigh.ing@tllrwdcc.org.

State of New York

NYSERDA Seeks Project Manager for WVDP

The New York State Energy Research and Development Authority (NYSERDA) West Valley Site Management Program (WVSMP) is seeking an experienced technical professional to join NYSERDA's team at the Western New York Nuclear Service Center in northern Cattaraugus County, New York.

This individual will be responsible for supporting NYSERDA's participation in the U.S.

Department of Energy (DOE) West Valley Demonstration Project (WVDP), a joint federal-state decommissioning and radioactive waste cleanup project. This position reports to NYSERDA's WVDP and End-State Planning Program Manager and will involve on-site observation, monitoring, inspection and oversight of WVDP work activities.

Responsibilities

The Project Manager's primary responsibilities will be to:

- provide direct observation, inspection, monitoring, oversight and reporting of WVDP work activities, including (but limited to) facility demolition activities, soil excavation and waste packaging;
- provide subject matter expert reviews of plans, procedures, work packages and radiological and chemical safety work control documents for decommissioning, deactivation and demolition activities;
- prepare written reports and otherwise keep management fully apprised of WVDP activities, including contractor performance related to safety, regulatory compliance, cost and schedule;
- prepare MS-Project or Primavera P6 schedules and assist other staff in the preparation of integrated project schedules;
- represent NYSERDA at meetings with DOE, the site contractor, regulatory agencies, members of the public and other stakeholders;
- contribute to a positive team environment, a culture of excellence and creative problem solving; and,
- perform other responsibilities as assigned.

Qualifications

Required minimum qualifications an individual must possess include:

- a Bachelor's or Master's degree in engineering, health physics or industrial safety plus 5 years of relevant experience (i.e., work at the WVDP or a similar nuclear facility, including decommissioning experience, radioactive material management or radioactive waste management) or an unrelated Bachelor's or Master's degree plus 7 years relevant experience (work at the WVDP or a similar nuclear facility, including decommissioning experience, radioactive material management or radioactive waste management);
- strong analytical skills including a demonstrated ability to effectively organize and evaluate quantitative information, draw conclusions and make recommendations or decisions;
- strong organizational, planning and scheduling abilities with demonstrated proficiency in MS-Project or Primavera P6;
- strong work ethic and resolute integrity;
- strong written and verbal communication abilities and interpersonal skills;
- knowledge of U.S. Nuclear Regulatory Commission (NRC) regulations or DOE Orders and policies; and,
- ability to work effectively outdoors in inclement weather conditions and safely negotiate unpaved walking surfaces, moderately steep slopes and uneven terrain.

Salary

Candidates will be considered for Project Manager through Senior Project Manager based on qualifications and experience. An excellent benefits package is also offered.

Application

In order to apply for the open position, please submit a cover letter and resume to recruiter@nyserda.ny.gov. When applying,

please include Project Manager, WVDP and Job Code 473 in the Subject Line.

Pursuant to Executive Order 161, no State entity, as defined by the Executive Order, is permitted to ask, or mandate, in any form, that an applicant for employment provide his or her current compensation, or any prior compensation history, until such time as the applicant is extended a conditional offer of employment with compensation. If such information has been requested from you before such time, please contact the Governor's Office of Employee Relations at (518) 474-6988 or via email at info@goer.ny.gov.

For additional information, please contact Alyse Peterson, Senior Project Manager for Radiactive Waste Policy & Nuclear Coordination, NYSERDA, at (518) 862-1090 ext. 3274 or at alp@nyserda.ny.gov.

Health Physics Society (HPS)

Health Physics Society Revises Low-Level Radioactive Waste Position Statement

In July 2017, the Health Physics Society (HPS) issued a revised position statement titled, " Low-Level Radioactive Waste Management." In so doing, HPS notes that the document should be considered an adjunct to its previous position statement and is not a stand-alone document.

Background

In October 1993, the HPS initially issued a low-level radioactive waste position statement. In that statement, the HPS expressed concern over the way in which the Low-Level Radioactive Waste Policy Act (LLRWPA) of 1980 and the Low-Level Radioactive Waste Policy Amendments Act of 1985 (LLRWPAA) were being implemented.

The position statement was then revised in May 1995 to focus on the issue that disposal facilities were not being developed, resulting in waste being stored at the sites where it was generated. This revision established the HPS position that disposal, not temporary storage, is the safest approach.

In July 1998, the position statement was updated to reflect obstacles encountered in California and Texas in trying to site a disposal facility.

One year later, the HPS revised the position statement again. In that revision, the HPS took the position that the LLRWPA unnecessarily restricted access to available disposal sites and impeded open commercial development of additional facilities.

The HPS significantly revised the position statement in 2005, giving it a different title, "Low-Level Radioactive Waste Management Needs a Complete and Coordinated Overhaul."

Rationale

The HPS identified the following events that have occurred related to accessible waste management disposal options and waste minimization, as well as waste-classification practices, that have necessitated revisions to the 2005 position statement:

- the opening of a new regional disposal facility in Texas at which Class B and C low-level radioactive waste that had been stranded in 36 states since July 1, 2008 may be safely disposed;

- volume reduction and blending services provided by waste processors that have significantly reduced the volumes of Class B and C low-level radioactive waste generated;

- revisions to the 1995 Branch Technical Position on Concentration Averaging and Encapsulation (CA BTP) as issued by the U.S. Nuclear Regulatory Commission (NRC); and,

- regulatory flexibility that further authorizes the disposal of waste with very low levels of radioactivity in a disposal facility controlled by the Resource Conservation and Recovery Act (RCRA).

Challenges

While many innovative solutions have emerged since 2005 that provide safe and cost-effective disposal options for Class A, B, and C low-level radioactive waste, the HPS recognizes that other challenges remain in providing disposal pathways for waste streams that are currently orphaned. In particular, HPS notes that significant strides have been made to provide a disposal pathway for GTCC and commercially generated transuranic (TRU) waste.

Policy makers, regulatory agencies, and other stakeholders have encouraged establishing a framework to better classify and dispose of radioactive wastes based on the risk posed to public health and safety and not on its origins and statutory definitions. While some progress has been made , additional work will be required to accomplish this goal, especially for Greater-than-Class C (GTCC) low-level radioactive waste and commercial and nondefense-related waste containing TRU radionuclides with concentrations exceeding 3,700 becquerels per gram (Bq g -1). HPS notes, however, that such efforts require rulemaking(s) by the federal agencies.

Positions

The revision that the HPS issued in July 2017 includes the following positions:

- Position 1: The goal of managing low-level radioactive waste is to ensure the safety of workers and the public and to protect the environment. To achieve this goal, disposal, not long-term storage, is the best and safest long-term approach.

- Position 2: The HPS believes that accessible disposal options should be available to waste generators nationwide.

- Position 3: Risk-informed waste disposal requirements for radioactive materials should be based on sound science and consistent with the risk posed to public health; requirements should not be based on waste origins and statutory definitions.

Recommendations

The revision that the HPS issued in July 2017 includes the following recommendations:

- Recommendation 1: The HPS recommends and endorses the establishment of radioactive-waste-disposal practices based on a site-specific analysis to demonstrate protection of public health for compliance periods consistent with the regulations established by the NRC pursuant to 10 CFR 61. Such constraints should also include defense-in-depth measures, such as site features and engineered barriers, to further protect public health and safety.

- Recommendation 2: The HPS encourages policy makers and federal and state regulatory agencies to establish or enhance regulatory processes, waste-processing treatment requirements, and disposal criteria that support making risk-informed decisions to disposition high-level radioactive waste, transuranic waste, and low-level radioactive waste based on the degree of isolation that would be required to protect public health.

- Recommendation 3: The HPS strongly encourages the NRC to proceed with actions

necessary to establish disposal criteria for GTCC low-level radioactive waste.

- Recommendation 4: The HPS encourages the NRC to proceed with revisions to Title 10, Code of Federal Regulations, Part 61 (10 CFR 61), to:

  a. remove the TRU exclusionary language from the definition of waste in 10 CFR 61.2, consistent with the LLWPAA; and,

  b. establish disposal criteria for waste containing TRU radionuclides with half-lives longer than five years and concentrations greater than 3,700 Bq g -1 based on the degree of waste isolation that is required to protect public health.

For additional information, please see the HPS website at www.hps.org.

Waste Management Symposium Scheduled for HPS Mid-Year Meeting

LLW Forum Past-Chair to be a Plenory Speaker

The Health Physics Society (HPS) will be holding its mid-year meeting from February 4-7, 2018 in Denver, Colorado.

The meeting is scheduled to include special sessions on low-level radioactive wastes, Y-90 use in medicine and more. In addition, Low-Level Radioactive Waste Forum (LLW Forum) Past-Chair Leonard Slosky is scheduled as one of the plenary speakers.

Plenary Presentations

The Plenary Session will focus on two important issues to the HPS including the 2018 Fiscal Year 2018 HPS priorities and radioactive waste.

In line with the HPS Priority for advocating for increased academic program funding, the morning session kicks off with a presentation entitled, "Radiation Protection Research Needs—HPS Task Force Takes the Reins," by HPS President Eric Abelquist. During the presentation, Abelquist will discuss the importance of this topic on the vitality of health physics academic programs and the preservation of radiation program expertise. He will also provide an update on the progress made since the Radiation Protection Research Needs Workshop held in Oak Ridge, Tennessee in June 2017. Additionally, Mike Boyd will be presenting a talk titled, "Meeting the U.S. EPA's Need for Radiation Professionals." Boyd's presentation discusses the importance of health physicists to state and federal agencies, as well as the role they serve in carrying out radiation protection programs.

The focus of the second half of the Plenary will be on radioactive waste. Leonard Slosky, Past-Chair of the LLW Forum and Executive Director of the Rocky Mountain Low-Level Waste Board, will provide insightful commentary on the current issues facing the low-level radioactive waste compacts including the low-level radioactive waste disposal landscape, improved management of disused sources and more. Scott Kirk will be presenting the talk titled, "Innovative Solutions to Better Risk-Inform the Disposition of Low-Level Radioactive Waste." This presentation will address solutions that have emerged to provide a disposal pathway for low-level radioactive waste. It will also address recent actions that more closely align with dispositioning waste based on the risk posed to public health as opposed to the origins of the waste and the way they are defined in federal legislation.

The last half of the Plenary serves as a great segue to the rest of the technical program that will include talks on environmental, medical/ dosimetry, homeland security and operational health physics. In addition, the Power Reactor Section developed a special session for this meeting. Held on Wednesday morning, the session features information on the Delivering the Nuclear Promise initiative, a status update on new nuclear power plant construction and discussion on instruments, surveys and more. In all, approximately 70 talks and posters make up this year's technical program. Pre-registration is open until January 16, 2018.

Special Symposium re Emerging Issues in Radioactive Waste Management

As part of the HPS mid-year meeting, the National Council on Radiation Protection and Measurements (NCRP) will convene a special symposium on *Emerging Issues in Radioactive Waste Management*. The symposium will be held on Monday afternoon and Tuesday morning of the meeting and features a full lineup of talks covering a broad range of radioactive waste topics including NORM/TENORM, Fukushima, 10 CFR Part 61 and discussion on current events from industry.

This is the third year of the NCRP collaboration with the HPS mid-year meeting, consistent with the NCRP mission to support radiation protection by providing independent scientific analysis, information and recommendations that represent the consensus of leading scientists. The NCRP Program Area Committee (PAC) 5 – Environmental Radiation and Radioactive Waste is organizing the special symposium. PAC 5 membership includes representatives from government agencies, higher education and private industry.

Additional information and the full technical program for the HPS mid-year meeting can be found on the organization's website at http:// hpschapters.org/2018midyear/program/.

Nuclear Power Plants and Other NRC Licensees

News Briefs for Nuclear Power Plants Across the Country

The following news briefs provide updates on recent activities, enforcement actions and general events at nuclear power plants and other licensees around the country. The briefs are organized by compact and state.

For additional information, please contact the referenced facility or licensee.

Appalachian Compact/Commonwealth of Pennsylvania

Peach Bottom Atomic Power Station On November 17, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency had approved a request by Exelon Generation Co. LLC to increase the generating capacity of Peach Bottom Atomic Power Station, Units 2 and 3, by an estimated 1.66 percent. The Peach Bottom Atomic Power Station is located in Delta, Pennsylvania. The NRC staff determined that Exelon could safely increase the reactors' output primarily through more accurate means of measuring feedwater flow after reviewing Exelon's evaluations showing the plant's design can handle the increased power level. The NRC's safety evaluation of the plant's proposed power uprate focused on several areas including the nuclear steam supply systems; instrumentation and control systems; electrical systems; accident evaluations; radiological consequences; operations and training; testing; and, technical specification changes. For added confidence in the analysis, the NRC staff also conducted independent confirmatory calculations of selected areas. The power uprate for Peach Bottom, Units 2 and 3, authorizes an increase of each reactor's maximum power level from 3951 to 4016 megawatts thermal. In terms of gross output, the

power uprate represents an increase of approximately 20 megawatts electric over the current gross output for each unit. Exelon plans to implement the power uprate for both units within 90 days of the NRC approval. The NRC published a notice about the power uprate application in the *Federal Register* on May 2, 2017. The agency's evaluation of the Peach Bottom uprate is available on the NRC's website at www.nrc.gov. *For additional information, please contact David McIntyre at (301) 415-8200.*

Atlantic Compact/State of Connecticut

Millstone Nuclear Power Plant On November 21, 2017, the NRC issued a confirmatory order to Dominion Energy Nuclear Connecticut Inc. following an Alternative Dispute Resolution (ADR) mediation session regarding security-related violations at the Millstone nuclear power plant. Dominion Energy has agreed to carry out a series of corrective actions, which are spelled out in the order and which the NRC will confirm in upcoming inspections. The actions are intended to address two violations and related performance aspects identified during an NRC investigation at the Waterford, Connecticut plant. NRC has determined that a now-former contracted security officer working as an armorer at the plant deliberately failed to properly perform required maintenance of weapons at the plant and conduct monthly inventories of weapons not in use, including the deliberate falsification of records related to both issues. The mediation session was conducted on September 20, 2017. Under the ADR process, a neutral third party who has no decision-making authority assists the NRC and a licensee in reaching an agreement when differences exist regarding an enforcement action. A number of actions agreed to by Dominion include an evaluation of security contractor oversight and related training; independent reviews of the safety culture and organizational effectiveness within the site's security organization; and, communication about the issue to industry peers. A copy of the confirmatory order will be made available in the NRC's electronic documents system, ADAMS. *For additional information, please contact Diane Screnci at (610) 337-5330 or (610) 337-5331.*

Northwest Compact/State of Idaho

Qal-Tek Associates On November 9, 2017, NRC staff met with officials of Qal-Tek Associates of Idaho Falls, Idaho to discuss preliminary inspection findings regarding the shipment of radioactive materials. The 8:00 a.m. meeting, which was open to the public, was held at the NRC Region IV office in Arlington, Texas. During the pre-decisional enforcement conference, company officials did not contest the violations, but provided information about long-term corrective actions. NRC officials also answered questions following the business portion of the meeting. No decision on the safety significance of the finding or any additional NRC actions were made at the conference. Subsequently, on December 14, 2017, NRC proposed a $22,400 civil penalty against Qal-Tek Associates for violations regarding the shipment of radioactive materials. The company has 30 days in which to dispute the fine or request involvement of a neutral third-party mediator to resolve the issue. The violations were identified in an NRC inspection report that was prepared following an incident in April 2017 when a package containing several radioactive sources was shipped from a temporary jobsite to the company's headquarters. Upon receipt, workers scanned the package and found radiation levels in excess of regulatory limits because the radioactive sources had not been properly packaged. A commercial shipping service was used, but based on interviews of licensee and shipper employees, no member of the public is expected to have received a radiation exposure in excess of regulatory limits. *For additional information, please contact Victor Dricks at (817) 200-1128.*

Southeast Compact/State of Florida

Turkey Point New Nuclear Reactor On December 12, 2017, the NRC conducted a

mandatory hearing on an application for Combined Licenses to build and operate Units 6 and 7 at the Turkey Point site in Florida. This hearing marks the final step in the agency's Part 52 reactor licensing process. The Commission's hearing included testimony and exhibits from applicant Florida Power and Light, as well as NRC staff, on the question of whether the staff's review adequately supports the findings necessary to issue the licenses. The hearing, which began at 9:00 a.m. in the Commission Hearing Room at NRC Headquarters, was open to public observation and was webcast. A detailed agenda and presentation slides were made available in advance on the Commission's meeting transcript page. FPL is applying for permission to build and operate two AP1000 reactors adjacent to the existing Turkey Point reactors, which are located approximately 40 miles south of Miami, Florida. FPL submitted the application on June 30, 2009. The NRC certified the 1,100-megawatt AP1000 design in 2011. The NRC's Advisory Committee on Reactor Safeguards (ACRS) independently reviewed the safety aspects of the application, as well as the staff's final safety evaluation report. The committee provided the results of its review to the Commission in September 2016. The NRC completed its environmental review and issued the final impact statement for the proposed Turkey Point reactors in October 2016. *Additional information on the certification process is available on the NRC website at www.nrc.gov. For additional information, please contact Scott Burnell at (301) 415-8200.*

Turkey Point Nuclear Power Plant On November 9, 2017, the NRC announced that the agency had cited a former control room operator at the Turkey Point nuclear power plant for a 2015 violation of NRC regulations. The Turkey Point plant is operated by Florida Power & Light near Homestead, Florida—approximately 20 miles south of Miami. The violation, issued to Devin Caraza, was in response to his actions that compromised the integrity of his written requalification examination required by NRC-licensed operators every two years. The NRC has not issued an order prohibiting Caraza from NRC-licensed activities because he was not permitted to work his shift after the exam. FPL removed his access to the facility and his operator license was terminated at FPL's request. However, the NRC's letter notifying him of the violation also stated that any additional deliberate actions while engaged in NRC-licensed activities in the future could result in more significant enforcement or criminal action. *For additional information, please contact Roger Hannah at (404) 997-4417 or Joey Ledford at (404) 997-4416.*

State of North Carolina

Global Nuclear Fuel-Americas Manufacturing Facility On December 15, 2017, the NRC announced that the agency had issued a confirmatory order to the Global Nuclear Fuel-Americas manufacturing facility in Wilmington, North Carolina. The order was issued per an agreement reached during an Alternative Dispute Resolution (ADR) mediation session completed on October 25, 2017. An NRC inspection report issued in July 2017 documented a September 2016 incident where GNF-A contracted with a company to ship scrap metal piping to a local recycling facility. When the shipment arrived at the facility, the material caused the radiation portal monitor to alarm and the shipment was returned to the GNF-A facility. The NRC inspection report identified several apparent violations including the failure to properly survey the material before release; failure to comply with U.S. Department of Transportation (DOT) regulations for the material; and, failure to notify the NRC when radiation limits on the shipment exceeded regulations. GNF-A officials advised the NRC that the company would participate in the agency's ADR program to resolve the enforcement issues. A neutral third party with no decision-making authority, who assists the NRC and the company in reaching an agreement when there are differences regarding an enforcement action, facilitates the ADR process. The ADR session held in October 2017 resulted in GNF-A agreeing with several of the violations and

agreeing on corrective actions to preclude recurrence of the violations. Those actions include both steps already taken and planned including the revision of procedures related to the release of material; additional training; improvements in recordkeeping; and, the initiation of a safety culture assessment. In addition, the company has agreed to install a vehicle portal monitor to detect surface radiation levels on future shipments. The NRC will not issue violations or civil penalties because of the detailed corrective actions and enhancements contained in the confirmatory order. The company has one year to complete some of the actions in the order and GNF-A is required to provide the NRC with a letter discussing its basis for concluding that the order has been satisfied within three months of their completion. *For additional information, please contact Roger Hannah at (404) 997-4417 or Joey Ledford at (404) 997-4416.*

State of Nebraska

Crow Butte In Situ Uranium Recovery Facility On December 18, 2017, the NRC announced that the agency is seeking public comments on a draft Environmental Assessment with a "Finding of No Significant Impact" for a license amendment request to authorize construction and operation of the proposed Marsland Expansion Area of the Crow Butte in situ uranium recovery facility near Crawford, Nebraska. The Marsland Expansion Area stretches over 4,622 acres, of which 1,754 acres could be disturbed by the proposed action. The area is located approximately 11 miles south-southeast of the existing Crow Butte facility. The draft Environmental Assessment concludes that overall impacts from the expansion would be small for most resource areas, with potential moderate impacts in the short-term for specific aspects of three resource areas. If finalized, the Environmental Assessment and findings would complete the NRC staff's environmental review of the Crow Butte Marsland license amendment request. On December 15, 2017, notice of the draft document was published in the *Federal Register*. Public comments will be accepted through January 29, 2018. *The draft Environmental Assessment, along with more information about the Marsland Expansion Area, is available on the NRC website at www.nrc.gov. For additional information, please contact David McIntyre at (301) 415-8200.*

Fort Calhoun Nuclear Plant On December 14, 2017, the NRC announced that the agency had granted the Omaha Public Power District's (OPPD's) request to alter the emergency preparedness plan for the Fort Calhoun Station nuclear power plant in Washington County, Nebraska to reflect the plant's decommissioning status. The changes come in the form of exemptions from certain NRC requirements that may not be appropriate for a plant that has permanently ceased operations. Once the licensee implements the exemptions, state and local governments may rely on comprehensive emergency management ("all hazard") planning for off-site emergency response to events at Fort Calhoun, rather than having a dedicated offsite radiological emergency response plan. As a result, there will not be a 10-mile emergency planning zone identified in Fort Calhoun's license. The plant will maintain an onsite emergency plan and response capabilities, including the continued notification of state government officials of an emergency declaration. OPPD provided analyses to show the exemptions are warranted because when compared to an operating power reactor, the risk of an offsite radiological release is significantly lower and the types of possible accidents significantly fewer at a nuclear power reactor that has permanently ceased operations and removed fuel from the reactor vessel. The NRC staff evaluated and confirmed these analyses and, based on the NRC staff's evaluation and recommendation, the Commission approved the exemptions on October 25, 2017. The exemptions were granted and a safety evaluation issued December 11, 2017. License amendments reflecting the exemptions were issued the following day. Under the exemptions, OPPD may not implement the changes to its

emergency preparedness plans until April 7, 2018, based on the company's evaluation of applicable accidents. Fort Calhoun, a single pressurized-water reactor, began operations in 1973. It ceased operations on October 24, 2016. All spent fuel has been permanently moved from the reactor vessel into the spent fuel pool for storage. The exemptions from certain emergency preparedness requirements are part of several changes to the plant's licensing basis and technical specifications the licensee requested to reflect Fort Calhoun's decommissioning status. *For additional information, please contact David McIntyre at (301) 415-8200.*

Advisory Committee on Reactor Safeguards (ACRS)

NRC Appoints Vesna Dimitrijevic to Four-Year ACRS Term

On November 30, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has appointed Vesna Dimitrijevic to the Advisory Committee on Reactor Safeguards (ACRS) for a four-year term—effective November 12, 2017.

The ACRS, a group of highly experienced technical experts, advises the Commission, independently from the NRC staff, on safety issues related to the licensing and operation of nuclear power plants, health physics and radiation protection.

Prior to joining the ACRS, Dimitrijevic worked as a Technical Consultant for AREVA, Inc., serving in a variety of technical leadership positions. In this role, she performed Probabilistic Risk Assessment (PRA) studies for new reactor designs and certifications, including the AREVA U.S. evolutionary pressurized-water reactor and very-high temperature reactor. She has also provided leadership for more than 30 risk-informed PRA applications for various nuclear plants. Her work included the development of diverse PRA approaches, including risk-informed applications for Generation 3 nuclear power plants, Electric Power Research Institute (EPRI) Risk Informed Inservice Inspection methodology, and EPRI Internal Flooding and Early Fire PRA methods.

Dimitrijevic has authored or co-authored more than 20 journal publications and conference papers, including topics on applying probabilistic risk assessment, risk-informed inservice inspection methodology and risk-informed decision making processes.

Dimitrijevic 's full bio, along with a complete list of ACRS members, is available on the NRC website at www.nrc.gov. For additional information, please contact Ivonne Couret at (301) 415-8200.

(Continued from page 1)

Congress on disposal alternatives for GTCC low-level radioactive waste and await action by Congress. (See *LLW Notes*, January/February 2016, pp. 1, 24-25.)

Accordingly, the November 2016 Report to Congress evaluates the potential environmental impacts associated with the proposed development, operation and long-term management of a disposal facility or facilities for GTCC low-level radioactive waste and GTCC-like waste in DOE's inventory as shown in the Final EIS.

Wastes and Volumes

GTCC-like waste is radioactive waste that is owned or generated by DOE (including low-level radioactive waste and non-defense-generated transuranic waste), has no identified path to

disposal and has characteristics similar to those of GTCC low-level radioactive waste suggesting that a common disposal approach may be appropriate.

GTCC low-level radioactive waste and GTCC-like waste include:

- activated metals from the decommissioning of nuclear utilities;
- sealed sources used for diagnostics and treatment of cancer and other illnesses and other industrial uses; and,
- other wastes, which include waste from the production of molybdenum-99 (used in medical diagnostics), waste from radioisotope power systems (used in support of space exploration) and waste from environmental cleanup at DOE sites (i.e., West Valley Demonstration Project in New York).

The total estimated volume of GTCC low-level radioactive waste and GTCC-like waste that was in storage as of 2008 and projected (anticipated through 2083) is approximately 12,000 cubic meters or 420,000 cubic feet, and contains about 160 million curies of radioactivity. About 75 percent of the total inventory in the Final EIS is made up of GTCC low-level radioactive waste, with the remaining amount made up of GTCC-like waste.

Alternatives Considered

The Final EIS evaluated five alternatives, including a no action alternative. Of the four action alternatives considered, one involves disposal of GTCC low-level radioactive waste and GTCC-like waste in a geologic repository at the Waste Isolation Pilot Plant (WIPP) that is located near Carlsbad, New Mexico. The other three action alternatives involve the use of land disposal methods at six federally owned sites—including the Hanford Site, Idaho National Laboratory, Los Alamos National Laboratory, Nevada National Security Site, Savannah River Site, and the WIPP vicinity—and at generic commercial sites.

The land disposal alternatives consider the use of intermediate-depth borehole, enhanced near-surface trench and above-grade vault facilities. The land disposal alternatives cover a spectrum of concepts that could be implemented to dispose of these wastes in order to enable an appropriate site and disposal technology to be selected.

The Final EIS evaluated each alternative with regard to the transportation and disposal of the entire inventory, but the evaluation of human health and transportation impacts is done on a waste-type basis, so decisions can be made on this basis in the future, as appropriate.

Preferred Alternative

The preferred alternative for the disposal of GTCC low-level radioactive waste and GTCC-like waste identified in the Final EIS is land disposal at generic commercial facilities and/or disposal in the WIPP geologic repository. Full waste emplacement operations at WIPP are not expected until the 2021 timeframe. Therefore, the Department is primarily considering disposal at generic commercial facilities at this time. The preferred alternative does not include disposal at any DOE sites other than WIPP.

The November 2016 Report to Congress states that the analysis in the Final EIS has provided the Department with the information needed to identify a preferred alternative with the potential for disposal of the entire waste inventory analyzed in the Final EIS.

DOE has determined that the preferred alternative would satisfy the needs of the Department for the disposal of GTCC low-level radioactive waste and GTCC-like waste. As described in Section VIII of the report, legislation and regulatory actions would be required for DOE to implement its preferred disposal alternative.

Construction and Operation Costs

The Final EIS found that the total estimated costs (facility construction and operation) for disposal of GTCC low-level radioactive waste and GTCC-like waste at an intermediate-depth borehole facility, enhanced near-surface trench facility or above-grade vault facility range from $300 million to $620 million in 2016 dollars. For the WIPP geologic repository, the estimated cost for GTCC low-level radioactive waste and GTCC-like waste disposal would be approximately $690 million. The cost to operate the WIPP geologic repository is estimated to be higher than the other alternatives because, in general, staffing/labor, waste handling, safety, equipment, infrastructure, maintenance, utilities, oversight and regulatory requirements for a geologic repository are far more complex than for near-surface land disposal options.

The November 2016 Report to Congress notes that the cost estimates provided in the Final EIS are conceptual in nature; hence the accuracy range, in accordance with DOE Guide 413.3-21, *Cost Estimating Guide*, is expected to be -20 percent to +50 percent. All costs are based on the total Final EIS inventory volume. The report notes that the cost estimates do not include waste facility permits, licenses, packaging, transportation and post-closure activities. Once a final decision is made on the disposal alternative, a site-specific estimate of total costs related to disposal of GTCC low-level radioactive waste and GTCC-like waste will be developed.

The report also states that the actual start date for operations is uncertain at this time and will depend upon the alternative or alternatives selected, the preparation of additional National Environmental Policy Act (NEPA) analyses (if necessary), characterization studies and other actions necessary to initiate and complete construction and operation of a GTCC low-level radioactive waste and GTCC-like waste disposal facility.

Disposal Fee Options

Section 3(b)(3)(E) of the LLRWPAA requires DOE to identify "options for ensuring that the beneficiaries of the activities resulting in the generation of such radioactive wastes bear all reasonable costs of disposing of such wastes."

In the 1987 GTCC Report to Congress, DOE identified two funding options that could be established to allocate costs of waste disposal to the generators. Both funding mechanisms are based upon estimates of waste volumes, types and costs associated with each waste type. Legislation would be required for either of these funding options to be implemented. The funding options include:

- Advanced Fee Assessment and Collection upon Waste Generation Option: This fee, similar to that for the Nuclear Waste Fund under the Nuclear Waste Policy Act (NWPA), could be established to collect fees to cover the total costs of disposal of some GTCC low-level radioactive waste. Under this funding option, generators would be required to pay into the fund when the waste is generated.
- Charge Upon Waste Receipt Option: A fee could be assessed to the generator at the time the waste is delivered for disposal. This approach is similar to that used at commercial disposal sites for Class A, B and C low-level radioactive waste. The generator would cover the costs for characterization, packaging, transportation and disposal. DOE recommends this option because it is based on the relatively greater certainty in determining costs and charges for specific waste streams.

Statutory and Regulatory Considerations

Legislation and regulatory actions would be required for DOE to implement the preferred alternative for GTCC low-level radioactive waste and GTCC-like waste disposal identified in the

Final EIS. The required statutory actions would include:

- Legislation to Establish a Cost Recovery Mechanism for GTCC Low-Level Radioactive Waste Disposal: Section 3(b)(3)(E) of the LLRWPAA requires DOE to identify options for ensuring that the generators of GTCC low-level radioactive waste bear all reasonable costs of its disposal. To implement cost recovery for GTCC low-level radioactive waste disposal, DOE would need authority to set and collect disposal fees from generators of GTCC low-level radioactive waste.

- Appropriations from the Nuclear Waste Fund to Provide for the Disposal of GTCC Low-Level Radioactive Waste from Decommissioning of Commercial Nuclear Reactors that is Considered High-Level Radioactive Waste under the Standard Contract: The Final EIS includes in its inventory activated metals from the decommissioning of commercial nuclear reactors that have been determined to be covered by a *Standard Contract for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste.* For purposes of determining damages in the spent nuclear fuel litigation, GTCC low-level radioactive waste from the decommissioning of commercial nuclear reactors has been determined to be high-level radioactive waste covered under the terms of DOE's Standard Contract for high-level radioactive waste. Since commercial utilities have paid fees under the Standard Contract for disposal of high-level radioactive waste, Congress could appropriate funds from the Nuclear Waste Fund to pay for disposal of activated metals that are covered under the Standard Contract.

- Clarification re Section 3(b)(2) of the LLRWPAA: Section 3(b)(1)(D) of the LLRWPAA specifies that the federal government is responsible for GTCC low-level radioactive waste disposal. Section 3(b)(2) specifies that GTCC low-level radioactive waste designated a federal responsibility under section 3(b)(1)(D) that results from activities licensed by the NRC is to be disposed of in a facility licensed by the NRC that the NRC determines is adequate to protect the public health and safety. However, unless specifically provided by law, NRC does not have authority to license and regulate facilities operated by or on behalf of DOE. If the Department selects the WIPP component of the preferred alternative for disposal of GTCC low-level radioactive waste for which DOE is responsible under section 3(b)(1)(D), clarification from Congress would be needed to address the requirement that GTCC low-level radioactive waste be disposed of in a facility licensed by the NRC. In addition, if DOE selects the generic commercial component of the preferred alternative for disposal of GTCC low-level radioactive waste for which it is responsible under section 3(b)(1)(D) and the commercial disposal facility is licensed by an Agreement State rather than by NRC, clarification from Congress may be needed to address the requirement that GTCC low-level radioactive waste be disposed of in a facility licensed by the NRC.

- Legislation to Authorize Disposal of GTCC Low-Level Radioactive Waste and GTCC-Like Waste at WIPP: Modifications to the WIPP Land Withdrawal Act or new legislation would be required to authorize disposal of waste other than transuranic waste generated by atomic energy defense activities at WIPP. (GTCC low-level radioactive waste and GTCC-like waste are not generated by atomic energy defense activities.) In addition, a modification to the WIPP Land Withdrawal Act may be required to increase the disposal capacity limit for the remote-handled volume and total curies at WIPP. These changes to the WIPP Land Withdrawal Act would be necessary only if it was determined that GTCC low-level radioactive waste and

GTCC-like waste would be disposed of at WIPP.

The following regulatory actions would be required for DOE to implement the preferred alternative for GTCC low-level radioactive waste and GTCC-like waste disposal identified in the Final EIS:

- Implementation of the preferred alternative would require development of technical criteria for GTCC low-level radioactive waste and GTCC-like waste disposal—i.e., technical criteria for GTCC low-level radioactive waste from NRC would be needed for disposal at generic commercial facilities.

- If it is decided to dispose of the entire inventory of GTCC low-level radioactive waste and GTCC-like waste considered in the Final EIS inventory at WIPP, limits for remote-handled volume and remote-handled total activity may be exceeded. The majority of the GTCC low-level radioactive waste and GTCC-like remote-handled *volume* is from the "Other Waste" category (i.e., GTCC-like non-defense transuranic waste), while the activated metals waste category comprises most of the remote-handled *activity*. It would be necessary to revise the Agreement for Consultation and Cooperation between DOE and the State of New Mexico for WIPP to authorize an increase in the total volume of remote-handled transuranic waste. In addition, a corresponding modification of the facility's Resource Conservation and Recovery Act (RCRA) permit with the New Mexico Environment Department and a compliance recertification with the U.S. Environmental Protection Agency would be required.

Conclusions and Next Steps

Prior to making a final decision on which disposal alternative to implement, Section 631(b)(1)(B)(i) of the Energy Policy Act of 2005 requires DOE to submit a Report to Congress and await action thereon. DOE has fulfilled the first step by submitting the November 2016 Report to Congress. DOE must now wait for Congress to take appropriate action in accordance with the Energy Policy Act of 2005 before the Department can issue a Record of Decision.

In this regard, the November 2016 Report to Congress states as follows:

> Implementation of DOE's preferred alternative would result in cost-effective, safe, and secure disposal of GTCC [low-level radioactive waste] and GTCC-like waste inventory outlined in the Final EIS. The preferred alternative is land disposal at generic commercial facilities and/or disposal at the WIPP geologic repository. Full waste emplacement operations at WIPP are not expected until the 2021 timeframe, and therefore the Department is primarily considering disposal in generic commercial sites. Congressional action is required before DOE can make a final decision and issue a record of decision on the disposal of GTCC [low-level radioactive waste] and GTCC-like waste.
>
> DOE will work with Congress to determine the best path forward for disposal of GTCC [low-level radioactive waste] and GTCC-like waste.

Background

The Low-Level Radioactive Waste Policy Amendments Act of 1985 assigned the responsibility for the disposal of GTCC low-level radioactive waste to the federal government. DOE's Office of Environmental Management was designated as the specific office responsible for GTCC low-level radioactive waste disposal.

On May 11, 2005, DOE issued an Advance Notice of Intent (ANOI) in the *Federal Register*

that invited the public to provide preliminary comments on the potential scope of the EIS. DOE then issued a Notice of Intent (NOI) to prepare an EIS on July 23, 2007. (A printing correction was issued on July 31, 2007.) The NOI provided responses to the major issues identified by commenters on the ANOI, identified the preliminary scope of the EIS and announced nine public scoping meetings and a formal scoping comment period lasting from July 23 through September 21, 2007. DOE used all input received during the scoping process to prepare the Draft EIS.

A 120-day public comment period on the Draft EIS began with the publication of the EPA Notice of Availability in the *Federal Register* on February 25, 2011 and closed on June 27, 2011. DOE conducted public hearings at nine locations during April and May of 2011. All comments received on the Draft EIS were considered in the preparation of the Final EIS.

In February 2016, DOE issued the Final EIS that evaluated five alternatives for the disposal of GTCC low-level radioactive waste and GTCC-like waste. The final EIS identified land disposal at generic commercial facilities and/or disposal in the WIPP geologic repository as the preferred alternative.

For additional information, please contact Theresa J. Kliczewski, GTCC EIS Document Manager for DOE, at (202) 586-3301 or at Theresa.Kliczewski@em.doe.gov.

U.S. Nuclear Regulatory Commission (NRC)

NRC Issues Regulatory Basis for New Decommissioning Regulations

On November 27, 2017, the U.S. Nuclear Regulatory Commission (NRC) published in the *Federal Register* the regulatory basis for proposed new regulations on the decommissioning of commercial nuclear power reactors. (See 82 *Federal Register* 55,954 dated November 27, 2017.)

The regulatory basis supports a proposed rule, which the agency expects to publish for public comment next year.

The regulatory basis titled, "Regulatory Improvements for Power Reactors Transitioning to Decommissioning," has been assigned NRC Docket ID 2015-0070 and can be found at https://www.nrc.gov/docs/ML1721/ML17215AO1O.pdf.

Overview

In the regulatory basis, the NRC staff concludes that there is sufficient justification to proceed with new regulations in the following areas:

- emergency preparedness;
- physical security;
- cyber security;
- drug and alcohol testing;
- training requirements for certified fuel handlers;
- decommissioning trust funds;

- financial protection requirements and indemnity agreements; and,

- application of the backfit rule.

In many cases, these new regulations would formalize steps to transition power reactors from operating status to decommissioning, without the use of exemptions and license amendments.

The NRC staff also recommends clarifying requirements regarding topics such as spent fuel management and environmental reporting requirements.

The NRC staff recommends addressing some topics via updated guidance or inspection procedures in lieu of rulemaking. These topics include:

- the role of state and local governments in the decommissioning process;

- certain staffing requirements; and,

- aging management of certain plant systems, structures and components.

In addition to the regulatory basis, NRC staff plans to publish a revised preliminary draft of the regulatory analysis, which will update and refine the analysis of costs and benefits.

Background

The NRC published an Advance Notice of Proposed Rulemaking (ANPR) on the draft regulatory basis for a future power reactor decommission rule in November 2015, seeking public comment on a number of areas to be considered during the rulemaking process. (See *LLW Notes*, November/December 2017, pp. 37-38.) In March 2017, the agency issued a draft regulatory basis in the *Federal Register*. (See *LLW Notes*, March/April 2107, pp. 23-24.) The NRC staff considered public comments received during both stages in preparing this regulatory basis.

The NRC began a similar rulemaking process in 2000-2001, but stopped after a stronger focus on security was prompted by the terrorist attacks of September 11, 2001. However, five reactors have permanently shut down since the beginning of 2013, and three more are expected to cease operations by 2019.

The five reactors now undergoing decommissioning required several exemptions from NRC's regulations for operating reactors to reflect their decommissioning status. By incorporating changes into regulation, the NRC believes the transition from operation to decommissioning can become more efficient and effective for the agency and the licensee, as well as more open and transparent for the public.

The regulatory basis is publicly available in the NRC's ADAMS online document database at accession number ML17215A010. For additional information, please contact David McIntyre of the NRC at (301) 415-8200.

NRC Hosts Webinar re Guidance for Alternative Disposal Requests

On November 16, 2017, the U.S. Nuclear Regulatory Commission (NRC) hosted a webinar to discuss the draft revision to its guidance document for alternative disposal requests entitled, "Guidance for the Reviews of Proposed Disposal Procedures and Transfers of Radioactive Material Under 10 CFR 20.2002 and 10 CFR 40.13(a)." (See 82 *Federal Register* 48,727 dated October 19, 2017.)

NRC originally published a notice in the *Federal Register* requesting comment on the draft revision to its guidance document for alternative disposal requests on October 19, 2017. (See *LLW Notes*, September/October 2017, pp. 26-29.) Comments were due by December 18, 2017.

The Federal Register notice regarding the draft revision to the NRC guidance document for alternative disposal requests is available at https://www.gpo.gov/fdsys/pkg/FR-2017-10-19/pdf/2017-22694.pdf.

Purpose

The purpose of the draft document and associated procedure is to provide guidance for NRC staff and describe the process for documenting, reviewing, and approving (on a case-by-case basis) requests received from licensees, license applicants and other entities for alternative disposal of licensed material. The staff may authorize these requests under the provisions of Title 10 of the Code of Federal Regulations (10 CFR) 20.2002 and 10 CFR 40.13(a).

Scope

The procedure covers the steps that NRC staff need to take in order to review, document, and approve a request for alternative disposal of licensed material, including:

- entering documents into the NRC public document system, which is known as the Agency-Wide Documents Access and Management System (ADAMS);
- establishing an Enterprise Project Identifier (EPID) and/or Cost Activity Code (CAC) for monitoring time charged to the project;
- conducting a technical review of the disposal request, including performing dose assessments;
- preparing a Safety Evaluation Report (SER) or Technical Evaluation Report (TER);
- preparing an Environmental Assessment (EA);
- coordinating with state regulatory agencies and disposal site operators;
- implementing a Communications Plan, where applicable, including conducting public meetings; and,
- implementing the approaches included within the All Agreement States Letter.

The NRC's Office of Federal and State Materials and Environmental Management Programs (FSME) Division of Waste Management and Environmental Protection (DWMEP) staff prepared the original version of the guidance document (ADAMS Accession No. ML092460058, dated August 31, 2009) for use. Following the merger of FSME and the Office of Nuclear Material Safety and Safeguards (NMSS), the corresponding division is the NMSS Division of Decommissioning, Uranium Recovery and Waste Programs (DUWP).

This document is being revised in order to update the guidance as well as provide more clarity, consistency, and transparency to the process. Within the NRC, the NMSS Performance Assessment Branch staff within NMSS DUWP is often requested to perform these technical reviews. Accordingly, the guidance has been prepared for use primarily by NMSS DUWP staff. However, since disposal requests are also received by the Regions, the Office of Nuclear Reactor Regulation (NRR) and Agreement States, the procedure has been developed to support those reviews as well.

Although § 20.2002 and § 40.13(a) reviews are similar in most respects, there are a few differences that are described in the document. Where there are differences between the procedures for handling the different types of requests, a sub-section for each type of request is provided.

Otherwise, they will be referred to collectively as ADRs.

The procedure does not cover all releases of solid materials from a licensee's control, only those that are submitted for NRC approval under 10 CFR 20.2002 and 10 CFR 40.13(a). The NRC's procedures for release of solid materials are described in NUREG-1757, Volume 1, Rev. 2, Section 15.11.

Obtaining Information

Interested stakeholders 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-2017-0198.

- NRC's Agencywide Documents Access and Management System (ADAMS): Publicly-available documents may be obtained online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html.

- NRC's Public Documents Room (PDR): Copies of public documents may be obtained and purchased at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

Background

In 2007, following developments in the national program for low-level radioactive waste disposal, as well as changes in the regulatory environment, the NRC conducted a Strategic Assessment of the NRC's regulatory program for low-level radioactive waste. 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 goal of the 2007 assessment was to identify and prioritize staff activities that: (1) ensure safe and secure low-level radioactive waste disposal; (2) improve the effectiveness, efficiency, and adaptability of the NRC's low-level radioactive waste regulatory program; and, (3) ensure regulatory stability and predictability, while allowing flexibility in disposal options.

One high priority task (Task 2) in the Strategic Assessment was to address the challenge of alternative disposal of very low-level radioactive waste, in accordance with 10 CFR § 20.2002 in non-traditional low-level radioactive waste facilities such as Resource Conservation and Recovery Act (RCRA) facilities, as well as the regulatory review and approval needed for such disposal. In response to stakeholder input regarding the 2007 assessment, the NRC determined that the process for authorizing these disposals needed more consistency and clarity. The NRC committed to addressing these concerns through the development of new regulatory guidance.

On August 31, 2009, the NRC issued interim staff procedure, "Review, Approval, and Documentation of Low-Activity Waste Disposals in Accordance with 10 CFR 20.2002 and 10 CFR 40.13(a)" (ADAMS Accession No. ML092460058). Prior to its issuance, there had been no single procedure covering safety and security reviews, the preparation of an environmental assessment, and coordination with internal and external stakeholders for alternative disposal requests. Accordingly, this document was developed and issued to provide consistency and guidance for NRC staff's review of alternative disposal requests received from licensees, applicants and other entities for alternative disposal of licensed material. In addition, the NRC determined that this guidance would be finalized after it had been implemented and used for more alternative disposal requests.

In order to set the direction for the NRC's low-level radioactive waste regulatory program in the next several years, including the alternative

disposal request review process, the NRC decided to conduct a new evaluation of the NRC's low-level radioactive waste program (referred to as a Programmatic Assessment). 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 objectives of the 2016 assessment were similar to the objectives of the 2007 Strategic Assessment. Both assessments also have considered future needs and changes that may occur in the nation's commercial low-level radioactive waste management system. One of the high priority tasks (Task 5) included within Enclosure 1 (ADAMS Accession No. ML15243A205) of the Programmatic Assessment was to address the challenge of alternative disposal of very low-level radioactive waste by finalizing the draft guidance document. Per the Programmatic Assessment, this final draft would be published for public comment and then issued as a final document.

Accordingly, the purpose of this draft revision to the guidance is to improve the alternative disposal process by providing more clarity, consistency and transparency to the process. In addition, this draft revision to the guidance also clarifies the meaning of disposal relative to 10 CFR 20.2002 authorizations to include recycling and reuse of materials. The draft revision to the guidance is available for public comment as ADAMS Accession No. ML16326A063. The NRC is interested in receiving comments related to the draft revision to the guidance from stakeholders, including professional organizations, licensees, Agreement States and members of the public. Comments will be considered to determine if additional changes to the draft revision to the guidance and the alternative disposal request process are needed.

During the comment period, the NRC will conduct a public meeting at the NRC's headquarters that will explain the draft revision to the guidance and address questions. Information regarding the public meeting will be posted on the NRC's public meeting website at least ten (10) calendar days before the meeting. The NRC's public meeting website is located at https://www.nrc.gov/public-involve.html.

The NRC will also post the meeting notice on the federal rulemaking website at http://www.regulations.gov under Docket ID NRC-2017-0198. The NRC may post additional materials related to this document, including public comments, on the federal rulemaking website. The federal rulemaking website allows interested stakeholders to receive alerts when changes or additions occur in a docket folder.

For additional information, please contact Robert Lee Gladney, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, at (301) 415-1022 or Robert.Gladney@nrc.gov.

NRC Extends Comment Period re Part 61 Draft Regulatory Analysis

On November 24, 2017, the U.S. Nuclear Regulatory Commission (NRC) published a *Federal Register* notice reopening and extending the public comment period on the draft regulatory analysis, "Draft Regulatory Analysis for Final Rule: Low-Level Radioactive Waste Disposal." Among other things, the draft regulatory analysis seeks specific cost and benefit information to better inform the updated draft regulatory analysis. (See 82 *Federal Register* 48,283 dated October 17, 2017.)

The comment period originally closed on November 16, 2017. In order to allow more time for members of the public to develop and submit their comments, however, the NRC decided to reopen and extend the public comment period until December 18, 2017.

The Part 61 Working Group (P61WG) of the Low-Level Radioactive Waste Forum (LLW Forum), the South Carolina Department of Health and Environmental Control (SC DHEC) and the Utah Department of Environmental Quality's Division of Waste Management and Radiation Control (Utah DEQ DWMRC) previously submitted comments on the draft regulatory analysis.

The Federal Register notice requesting public comment on the draft regulatory analysis is available at https://www.federalregister.gov/documents/2017/10/17/2017-22459/low-level-radioactive-waste-disposal.

Comment letters from the P61WG, South Carolina and Utah regarding the draft regulatory analysis are available on the Resources Page of the Part 61 Working Group (P61WG) website at http://part-61.org/resources/.

Overview

On October 17, 2017, NRC published a *Federal Register* notice requesting comment on the draft regulatory analysis and seeking specific cost and benefit information to better inform the updated draft regulatory analysis. (See 82 *Federal Register* 48,283 dated October 17, 2017.)

Interested stakeholders may obtain publicly available information related to this action by any of the following methods:

- Federal Rulemaking Website: Go to http://www.regulations.gov and search for Docket ID NRC-2011-0012.
- NRC's Agencywide Documents Access and Management System (ADAMS): Publicly-available documents may be obtained online in the ADAMS Public Documents collection at http://www.nrc.gov/reading-rm/adams.html.
- NRC's Public Documents Room (PDR): Copies of public documents may be obtained and purchased at the NRC's PDR, Room O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

Discussion

In addition to specified rule language changes, in SRM-SECY-16-0106 the Commission also directed the NRC staff to "be informed by broader and more fully integrated, but reasonably foreseeable costs and benefits to the U.S. waste disposal system resulting from the proposed rule changes, including pass-through costs to waste generators and processors." To support development of the new supplemental proposed rule as directed by the Commission in SRM-SECY-16-0106, the NRC staff is seeking comment on how to improve the approach/methodology and actual cost data currently used in the draft final rule regulatory analysis to provide more accurate cost and benefit data in the final regulatory analysis. In particular, the NRC is seeking information on any cost changes that should be incorporated into the regulatory analysis in light of the Commission's changes to the draft final rule.

All comments provided will be considered in improving the regulatory analysis to ensure that it is sufficiently informed by broader and more fully integrated, but reasonably foreseeable, costs and benefits to the U.S. waste disposal system; however, the NRC staff does not plan to provide responses to these comments. In addition, the NRC staff is requesting that comments be limited to focus on the regulatory analysis itself—the NRC plans to issue a separate notice and comment period on the changes being proposed in the supplemental proposed rule in 2018. At that

time, members of the public will also be provided another opportunity to provide comments on the revised regulatory analysis, which will be updated based on comments from this action.

During the comment period for this action, the NRC conducted a public meeting at the NRC's headquarters to explain the cost and benefit information it is seeking in the notice and to address questions. Information regarding the public meeting was posted on the NRC's public meeting website. The NRC's public meeting website is located at https://www.nrc.gov/public-involve.html.

The NRC has also posted the meeting notice on the Federal rulemaking website at http://www.regulations.gov under Docket ID NRC-2011-0012. The NRC will post additional materials related to this document, including any public comments received, on the Federal rulemaking website. The federal rulemaking website allows interested stakeholders to receive alerts when changes or additions occur in a docket folder.

Requested Information

NRC is providing the below specific questions associated with the draft regulatory analysis (ADAMS Accession No. ML16189A050). The questions were also discussed at the public meeting. The NRC staff will consider the responses to the questions as it revises the regulatory analysis.

- Question 1: Is the NRC considering appropriate alternatives for the regulatory action described in the draft regulatory analysis?

- Question 2: Are there additional factors that the NRC should consider in the regulatory action? What are these factors?

- Question 3: Is there additional information concerning regulatory impacts that the NRC should include in its regulatory analysis for this rulemaking?

- Question 4: Are all costs and benefits properly addressed to determine the economic impact of the rulemaking alternatives? What cost differences would be expected from moving from the discussed 1,000 year and 10,000 year compliance periods to a single 1,000 year compliance period? Are there any unintended consequences of making this revision?

- Question 5: Are there any costs that should be assigned to those sites not planning to accept large quantities of depleted uranium for disposal in the future?

- Question 6: Is NRC's assumption that only two existing low-level radioactive waste sites (i.e., Energy*Solutions'* Clive Utah disposal facility and Waste Control Specialists' Texas disposal facility) plan to accept large quantities of depleted uranium for disposal in the future reasonable?

- Question 7: What additional costs or cost savings, not already considered in the draft regulatory analysis, will the supplemental proposed rulemaking or alternatives cause to society, industry, and government? What are the potential transfer ("pass-through") costs to the waste generators and processors?

Background

The NRC's licensing requirements for the disposal of commercial low-level radioactive waste in near-surface disposal facilities can be found in Part 61 of Title 10 of the *Code of Federal Regulations* (10 CFR), "Licensing Requirements for Land Disposal of Radioactive Waste." The NRC originally adopted 10 CFR Part 61 on December 27, 1982 (47 *Federal Register* 57,446). The existing low-level radioactive waste disposal facilities are located in and licensed by Agreement States, and those

Agreement States have incorporated many of the requirements in 10 CFR Part 61 into their corresponding regulations and as license conditions for their licensees.

On March 26, 2015, the NRC published a proposed rule, "Low-level Radioactive Waste Disposal," for an initial 120-day comment period in the *Federal Register* (80 *Federal Register* 16,082). The 2015 proposed rule would have implemented changes to require new and revised site specific technical analyses and other requirements that would have permitted the development of site-specific waste acceptance criteria (WAC) based on the results of these analyses. In the 2015 proposed rule, the NRC explained that the changes would better align the requirements with current health and safety standards (i.e., 10 CFR Part 20) and identify any additional measures that would be prudent to implement for continued disposal of radioactive low-level radioactive waste at a particular land disposal facility. In summary, the 2015 proposed rule would have specified requirements for:

- technical analyses for demonstrating compliance with the public dose limits;
- technical analyses for demonstrating compliance with dose limits for protection of inadvertent intruders;
- identification and description of defense-in-depth protections that, taken together with the technical analyses, constitute the safety case;
- development of site-specific WAC; and,
- implementation of current dosimetry in the technical analyses.

As a result of the comments received on the proposed rule, the NRC staff drafted a final rule package for Commission review, "SECY-16-0106, FINAL RULE: Low-Level Radioactive Waste Disposal (10 CFR Part 61) (RIN 3150-AI92)," dated September 15, 2016. The draft final rule package is available for review under ADAMS Accession No. ML16188A290 and includes a draft *Federal Register* notice (ADAMS Accession No. ML16188A371) and a draft final regulatory analysis (ADAMS Accession No. ML16189A050).

In response to SECY-16-0106, the Commission issued a Staff Requirements Memorandum (SRM), SRM-SECY-16-0106 (ADAMS Accession No. ML17251B147), dated September 8, 2017, which directed the NRC staff to publish a supplemental proposed rule for public comment that is revised to include Commission-directed rule changes. The Commission directed the following changes that are pertinent to this public comment request:

- compliance period of 1,000 years, independent of radionuclide content;
- new requirements applicable to all future low-level radioactive waste disposal facilities; and,
- the regulator may use a case-by-case basis (i.e., "grandfather provision") for applying new requirements to only those sites that plan to accept large quantities of depleted uranium for disposal.

For additional information, please contact Gregory Trussell, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, at (301) 415-6445 or at Gregory.Trussell@nrc.gov.

NRC Issues Information Notices and Regulatory Issue Summaries

Throughout calendar year 2017, the U.S. Nuclear Regulatory Commission (NRC) has released Information Notice (IN) documents and

Regulatory Issue Summaries (RIS) on a variety of topics.

Information Notices

NRC released the following IN documents during calendar year 2017:

- IN 2017-06, *Battery and Battery Charger Short-Circuit Current Contributions to a Fault on the Direct Current Distribution System,* was issued on September 26, 2017 to inform addressees of the results of a recent NRC-led battery testing program. The testing program evaluated the magnitude of direct current (DC) fault current contributions from batteries and battery chargers to a downstream short-circuit fault on the DC distribution system. The detailed test results, conclusions and recommendations are provided in NUREG/CR-7229, "Testing to Evaluate Battery and Battery Charger Short-Circuit Current Contributions to a Fault on the DC Distribution System" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17039A869). The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, for potential impacts on DC fault studies and other related calculations.

- IN 2017-05, *Potential Binding of Schneider Electric/Square-D Masterpact NT and NW 480-VAC Circuit Breaker Anti-Pump Feature,* was issued on September 1, 2017 to inform addressees about recent issues related to the operation of Schneider Electric/Square-D Masterpact 480-volt NT and NW circuit breakers. The design of the breaker results in a susceptibility to internal binding in certain circumstances that can prevent the breaker from closing on demand. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems.

- IN 2017-04, *High Energy Arcing Faults in Electrical Equipment Containing Aluminum Components,* was issued on August 21, 2017 to inform addressees of operating experience and recent NRC testing results pertaining to the magnitude of arc fault hazards in electrical equipment containing aluminum components. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate.

- IN 2017-03, *Anchor/Darling Double Disc Gate Valve Wedge Pin and Stem-Disc Separation Failures,* was issued on June 15, 2017 to inform addressees of operating experience regarding Anchor/Darling (a subsidiary of Flowserve) double disc gate valve (DDGV) failures. IN 2017-03 provides a discussion of the recent LaSalle County Station Unit 2 Anchor/Darling DDGV failure, events at Browns Ferry that led to Part 21 reporting, and other operating experience that resulted in stem-disc separations. The document contains information available to NRC staff as of May 2017.

- IN 2017-02, *Best Practice Concepts for Patient Release,* was issued on May 17, 2017 to provide addressees with best practices to consider for patients treated with Sodium Iodine-131 (NaI-131) and released in accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 35.75, "Release of Individuals Containing Unsealed Byproduct Material or Implants Containing Byproduct Material." The included best practice concepts are intended to provide information to licensees to consider and individualize for their patients in regards to maximizing radiation safety and minimizing unnecessary radiation exposure.

- IN 2017-01, *Reactor Coolant System Leakage from a Control Rod Drive Threaded Connection,* was issued on May 3, 2017 to inform addressees of operating experience regarding reactor coolant system (RCS)

leakage through a control rod drive threaded connection. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems.

Suggestions contained in these IN's are not NRC requirements; therefore, no specific action or written response is required.

Regulatory Issue Summaries

NRC released the following RIS documents during calendar year 2017:

- RIS 2017-06, *NRC Policy on Use of Combination Dosimetry Devices During Industrial Radiographic Operations,* was issued on September 19, 2017 to provide a clarification of the regulation on the use of combined dosimetry devices during industrial radiographic operations under Title 10 of the Code of Federal Regulations (10 CFR) Part 34, "Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations." Specifically, RIS 2017-06 provides clarification on the use of combination dosimetry devices to simultaneously satisfy multiple functions required by 10 CFR 34.47, "Personnel monitoring."
- RIS 2017-05, *Administration of 10 CFR Part 72 Certificate of Compliance Corrections and Revisions,* was issued on September 13, 2017 to inform addressees of the processes used to revise initial Certificates of Compliance (CoC) and subsequent amendments (hereafter referred to as CoC's, whether initial CoC's or subsequent amendments) to make administrative corrections and technical changes using the existing regulatory framework in 10 CFR Part 72. RIS 2017-05 does not address or propose any changes to 10 CFR Part 72.
- RIS 2017-04, *Clarification on the Implementation of Compensatory Measures for Protective Strategy Deficiencies or Degraded or Inoperable Security Systems, Equipment or Components,* was issued on August 30, 2017 to remind addressees of the requirements for implementation of compensatory measures to ensure their physical protection program maintains, at all times, the capability to detect, assess, interdict and neutralize threats up to and including the design basis threat of radiological sabotage, as identified in 10 CFR 73.55(b)(3)(i), "General performance objective and requirements." Additionally, RIS 2017-04 reminds licensees that protective strategy deficiencies identified during performance evaluation exercises and drills should be assessed to determine if these deficiencies meet the criteria identified in 10 CFR 73.55(o) for implementation of compensatory measures.
- RIS 2017-03, *Preparation and Scheduling of Operator Licensing Examinations,* was issued on April 5, 2017 to inform addressees of the NRC staff's need for updated information on projected site-specific operator licensing examination schedules, as well as on the estimated number of applicants planning to take operator licensing examinations.
- RIS 2017-02, *Applicability of Title 10 CFR Part 37 to Non-Manufacturing and Distribution Service Provider Licensees,* was issued on February 8, 2017 to inform licensees of the applicability of Title 10 of the Code of Federal Regulations (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," to non-manufacturing and distribution (non-M&D) service provider licensees.
- RIS 2017-01, *Human Reliability and Human Performance Database,* was issued on February 2, 2017 to inform addressees about the Scenario, Authoring, Characterization and Debriefing Application (SACADA) system.

The above-referenced RIS documents do not require specific action or written responses on the part of addressees.

Additional information can be found on the NRC's website at www.nrc.gov.

NRC Publishes Agency Financial Report for FY 2017

On November 16, 2017, the U.S. Nuclear Regulatory Commission (NRC) released its Fiscal Year 2017 Agency Financial Report, providing audited financial statements of the agency 's management of resources from October 1, 2016 through September 30, 2017.

The NRC has reduced the cost of operations over the past few years by reducing staff and increasing efficiency through its Project Aim initiative, savings reflected in the report and passed on to licensees through reduced fees. The FY 2017 report details substantial improvements in data collection and classification in the NRC's information systems, which helped improve communications with licensees and other stakeholders. The NRC also successfully implemented the Digital Accountability and Transparency Act, a new electronic vendor billing system, the Invoice Processing Platform through the Department of Treasury and moved its core financial system onto the cloud.

The Agency Financial Report replaces the NRC's Performance and Accountability Report. The NRC will publish a separate Agency Performance Report each year with the NRC Congressional Budget Justification.

The financial report is available on the NRC website at www.nrc.gov. For additional information, please contact David McIntyre at (301) 415-8200.

NRC Executive Receives Presidential Rank Award

Scott Moore, Deputy Director of the Office of Nuclear Material Safety and Safeguards (NMSS) at the U.S. Nuclear Regulatory Commission (NRC), has been selected as a 2017 Presidential Rank Award recipient. The award is one of the highest given to government employees. It recognizes and celebrates sustained extraordinary accomplishments of career public servants.

"This is an extraordinary achievement and we are proud that Scott Moore's dedication to this agency's mission and his talent in helping us achieve that mission are being recognized with this prestigious award," said Executive Director for Operations Victor McCree.

Moore joined the NRC in 1988 as a Health Physicist and has spent almost 30 years in a series of increasingly responsible positions. Among other assignments, he worked as a Technical Expert on Radiological Materials for former NRC Chair Shirley Jackson. He also worked in a variety of positions supporting the safe and secure domestic uses of radioactive material and at an international level as Deputy Director of the Office of International Programs. He became a member of the Senior Executive Service in 2004.

In his current position, Moore leads nearly 300 technical and corporate staff in activities related to the licensing and regulatory oversight of industrial, academic, and medical uses of radioactive sources; nuclear fuel fabrication and processing; spent fuel storage; low-level waste storage and disposal facilities; and, decommissioning reactor and materials sites.

For additional information, please contact Holly Harrington of the NRC at (301) 415-8200.

To Obtain Federal Government Information

by telephone

- DOE Public Affairs/Press Office ..... (202) 586-5806
- DOE Distribution Center ..... (202) 586-9642
- EPA Information Resources Center ..... (202) 260-5922
- GAO Document Room ..... (202) 512-6000
- Government Printing Office (to order entire *Federal Register* notices) ..... (202) 512-1800
- NRC Public Document Room ..... (202) 634-3273
- Legislative Resource Center (to order U.S. House of Representatives documents) ..... (202) 226-5200
- U.S. Senate Document Room ..... (202) 224-7860

by internet

- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides). ..... **www.nrc.gov**

- EPA Listserve Network • Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message). ..... **listserver@unixmail.rtpnc.epa.gov**

- EPA • (for program information, publications, laws and regulations) ..... **www.epa.gov**

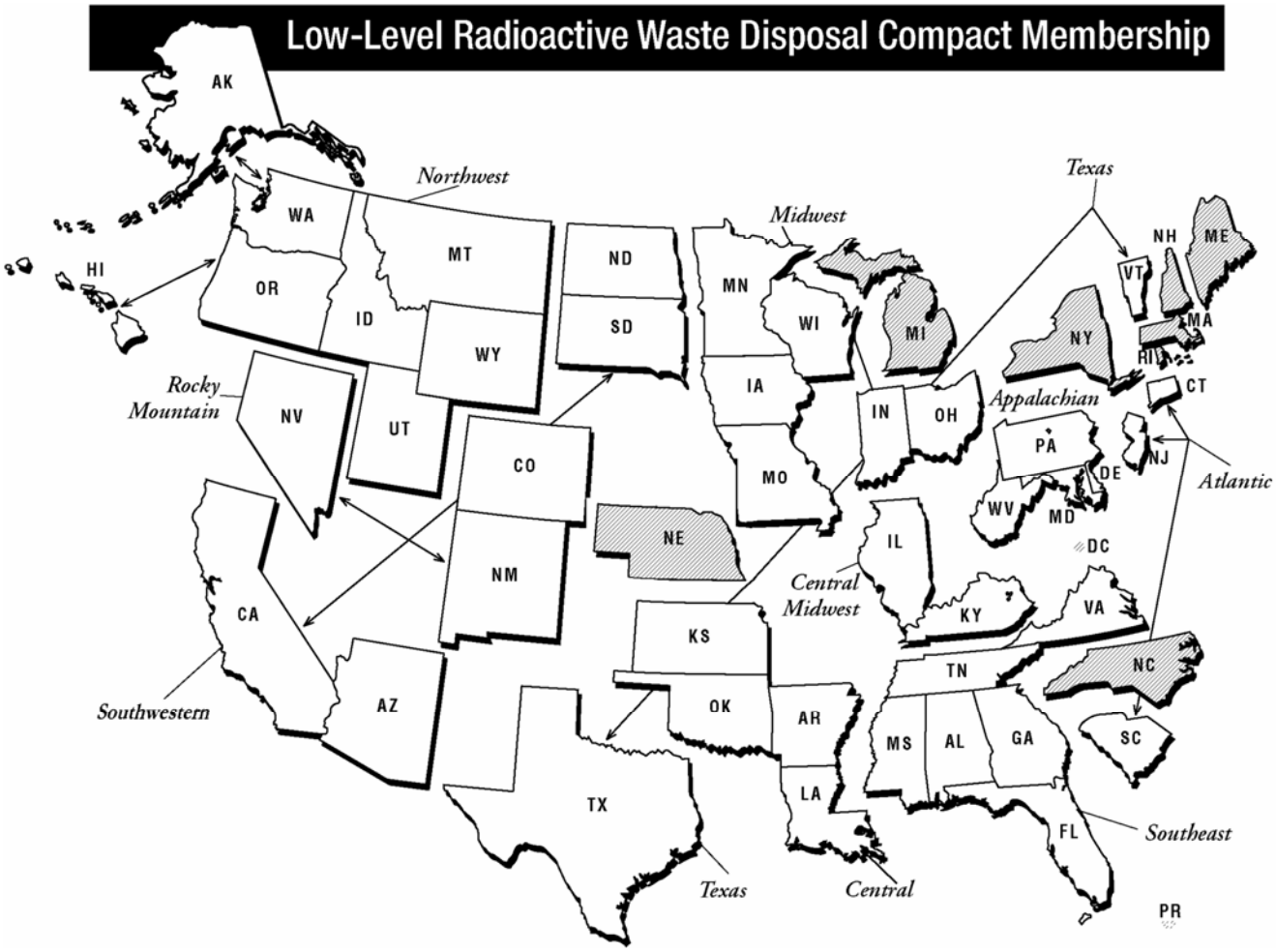
- U.S. Government Printing Office (GPO) (for the Congressional Record, *Federal Register*, congressional bills and other documents, and access to more than 70 government databases). ..... **www.access.gpo.gov**

- GAO homepage (access to reports and testimony) ..... **www.gao.gov**

To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at www.llwforum.org

Acknowledgement and Disclaimer

Acknowledgement: This material is based upon work supported in part by the U.S. Department of Energy under Award Numbers DE-EM0001364 and DE-em0003153.



Appalachian Compact
Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact
Connecticut
New Jersey
South Carolina

Central Compact
Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact
Illinois
Kentucky

Northwest Compact
Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact
Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

Texas Compact
Texas
Vermont

Unaffiliated States
District of Columbia
Maine
Massachusetts
Michigan
Nebraska
New Hampshire
New York
North Carolina
Puerto Rico
Rhode Island