LLW notes

Volume 33 Number 5 September/October 2018

U.S. Department of Energy (DOE)

DOE Seeks Public Comment re Interpretation of High-Level Radioactive Waste

On October 10, 2018, the U.S. Department of Energy (DOE or Department) issued a *Federal Register* notice seeking public comment on the Department's interpretation of the definition of the statutory term "high-level radioactive waste" (HLW) as set forth in the Atomic Energy Act of 1954 and the Nuclear Waste Policy Act of 1982.

"This statutory term indicates that not all wastes from the reprocessing of spent nuclear fuel ("reprocessing wastes") are HLW," states DOE in the *Federal Register* notice, "and DOE interprets the statutory term such that some reprocessing wastes may be classified as not HLW (non-HLW) and may be disposed of in accordance with their radiological characteristics."

For additional information, see 83 Federal Register 50,909 (October 10, 2018).

High-Level Radioactive Waste Interpretation

DOE interprets the term "high-level radioactive waste," as stated in the Atomic Energy Act of 1954 as amended (AEA) and the Nuclear Waste Policy Act of 1982 as amended (NWPA), in a manner that defines DOE reprocessing wastes to be classified as either HLW or non-HLW based on the radiological characteristics of the waste and their ability to meet appropriate disposal facility requirements. The basis for DOE's interpretation comes from the AEA and NWPA definition of HLW:

A. the highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and,

B. other highly radioactive material that the Commission, consistent with existing law,

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In This Issue

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.

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LLW Notes
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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.

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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 2019 LLW Forum Meeting

Hilton Old Town Hotel in Alexandria, Virginia
April 17-18, 2019

The Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce that registration is now open for our spring 2019 meeting, which will be held at the Old Town Hotel in Alexandria, Virginia on April 17-18, 2019. This will be a one and one-half day meeting beginning at 9:00 a.m. on Wednesday and concluding at 1:00 p.m. on Thursday. Please mark your calendars accordingly and save the date!

The Executive Committee will meet from 7:30 – 9:00 a.m. on Wednesday morning (April 17). The Disused Sources Working Group (DSWG) will meet on Thursday afternoon and Friday morning (April 18-19).

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 meeting documents — including a meeting bulletin and registration form — are attached and have also 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 2019 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.

LLW Forum Meeting Location and Dates

The spring 2019 LLW Forum meeting will be held on Wednesday, April 17 (9:00 a.m. – 5:00 p.m.) and Thursday, April 18 (9:00 a.m. – 1:00 p.m.) at:

Hilton Old Town Hotel
1767 King Street
Alexandria, Virginia

Located in the historic, vibrant King Street neighborhood, the Hilton Old Town Hotel is one of the most convenient hotels in Alexandria, Virginia for business and leisure travelers visiting the Washington, DC metropolitan area. The hotel is just steps away from the King Street metro station and close to Reagan National Airport. Downtown DC attractions and government buildings are minutes away by metro.

Registration

All persons must pre-register for the LLW Forum 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 meeting 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 $600, 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 dedicated block of hotel rooms has been reserved for Tuesday (April 16) through Thursday (April 18) for meeting attendees at the special, discounted rate of $251.00 (single rate) plus tax per night. The same rate has been extended to three days prior to and three days post the meeting dates, subject to availability.

To make a reservation, please go to http://www.hilton.com/en/hi/groups/personalized/D/DCAOTHF-AWE-20190416/index.jhtml — this booking link can also be found on the attached meeting bulletin — or call (703) 647-2014 and request a room using Group Discount Rate Code AWE. *Please note that you must provide the code in order to get the special, discounted rate.*

The deadline for reserving a room at the discounted rate is March 16, 2019.

Transportation and Directions

From Reagan National Airport via the metro, the hotel is located next to the King Street Metro Station, accessible by the Blue and Yellow lines and only two stops from Reagan National Airport. Directions from other metro area airports can be found on the Hilton website at https://www3.hilton.com/en/hotels/virginia/hilton-alexandria-old-town-DCAOTHF/index.html. Taxi fares are typically around $20.00 each way.

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 Holds Fall 2018 Meeting and Hanford B Reactor Site Tour

The Low-Level Radioactive Waste Forum (LLW Forum) held its fall 2018 meeting at the Red Lion Hotel in Richland, Washington on October 3-4, 2018. As part of the meeting, there was an optional tour of Hanford's Historic B Reactor for interested stakeholders from 1:00 – 5:00 p.m. on October 2, 2018.

The LLW Forum's Executive Committee met from 7:30 – 9:00 a.m. on Wednesday morning (October 3, 2018). The Disused Sources Working Group (DSWG) met from 1:00 p.m. – 5:00 p.m. on Thursday (October 4, 2018).

The Northwest Interstate Compact on Low-Level Radioactive Waste Management sponsored the meeting.

Agenda Topics

The meeting agenda covered a range of significant yet diverse topics including, but not limited, to:

- a detailed analysis and discussion led by James Conca of UFA Ventures on the impact of radiation limits on radioactive waste disposal programs in the United States;

- a presentation by Todd Shrader, the Carlsbad Field Office Manager, on recent developments and future plans at the Waste Isolation Pilot Plant (WIPP);

- a report from Morgan Munera, leader of the Part S Working Group of the Conference of Radiation Control Program Directors (CRCPD), on the soon-to-be-released suggested state regulations for financial assurance;

- an extended panel discussion about the U.S. Nuclear Regulatory Commission (NRC) Very Low-Level Waste (VLLW) scoping study that will include representatives from the states/ compacts, disposal facility operators and industry organizations that is intended to stimulate some important policy discussion that will include efforts to identify both points of agreement and disagreement;

- an overview by Kathy Pryor of the soon-to-be -released report from the National Council on Radiation Protection and Measurements (NCRP) on source management and disposition issues;

- a report from the Nuclear Energy Institute (NEI) on the future of nuclear power in the United States and the associated impact on the capacity needs and continued viability of existing waste disposal facilities;

- a presentation and discussion regarding NRC activities and initiatives addressing a variety of topics including the Part 61 rule and associated draft regulatory analysis, 20.2002 alternate disposal guidance, very low-level radioactive waste, uniform waste manifest, Greater-than-Class C (GTCC) technical analysis, and decommissioning regulations;

- a detailed review of the successful completion of the design, testing and certification of two new Type-B transportation casks to alleviate a shortage of containers that significantly limit the recovery and disposal of commercially licensed sealed sources and provision of the certified designs to qualified private sector entities to use or modify them to develop containers for commercial use, thereby encouraging and facilitating the development of additional commercial capacity; and,

- an update on activities and projects at the Richland site including planning for a new cell, license renewal, pilot disposal of a large source and so forth.

Attendance

Officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/ processors, industry and other interested parties attended the fall 2018 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.

LLW Forum Meeting Location and Dates

The fall 2018 LLW Forum meeting was held on Wednesday, October 3 (9:00 a.m. – 5:00 p.m.) and Thursday, October 4 (9:00 a.m. – 1:00 p.m.) at:

Red Lion Richland Hanford House Hotel
802 George Washington Way
Richland, Washington 99354

Located in the heart of historic Richland, the Red Lion Hanford House is centrally located for

business and leisure travelers visiting the Hanford Reservation. The hotel, overlooking the Columbia River, is within easy walking distance of several restaurants and government buildings.

Optional Hanford B Reactor Site Tour Logistics

The Washington State Department of Health sponsored an optional tour of Hanford's Historic B Reactor on Tuesday afternoon (October 2, 2018) from 1:00 – 5:00 p.m. The B Reactor is the world's first full-scale plutonium production reactor.

The tour originated from the B Reactor offices located about 7 minutes from the Hanford House.

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.

Atlantic Compact/State of New Jersey

Changes Approved to Oyster Creek Emergency Planning Requirements

On October 18, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has granted Exelon Generation Company's request to modify the emergency preparedness plan for the Oyster Creek Nuclear Generating Station in Lacey Township, New Jersey to reflect the plant's decommissioning status.

Overview

The changes include exemptions from specific NRC requirements that may not be applicable to 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 Oyster Creek, rather than a dedicated offsite radiological emergency response plan.

As a result, there will not be a 10-mile emergency planning zone identified in Oyster Creek'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.

Analysis and Review

Exelon provided analyses to justify the exemptions showing that the risk of an offsite radiological release is significantly lower than an operating power reactor. Also, the types of possible accidents are 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 agency staff's evaluation and recommendation, the Commission approved the exemptions on July 17, 2018. The exemptions were granted and a safety evaluation was issued on October 16, 2018. License amendments reflecting the exemptions were issued on October 17, 2018. The exemptions will be published in the *Federal Register* on October 22, 2018. Pursuant to the exemptions, Exelon may not implement the changes to its emergency preparedness plans until September 17, 2019, based on the company's evaluation of applicable accidents.

Background

Oyster Creek, a single boiling-water reactor, began operations in 1969. It ceased operations on September 17, 2018.

All spent fuel has been permanently moved from the reactor vessel to the spent fuel pool for storage. The exemptions from specific emergency preparedness requirements are part of several changes to the plant's licensing basis and technical specifications the licensee requested to reflect Oyster Creek's decommissioning status.

For additional information, please contact David McIntyre of the U.S. Nuclear Regulatory Commission at (301) 415-8200.

Central Midwest Compact

Central Midwest Compact Commission Holds Annual Meeting

On September 18, 2018, the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission (CMCC) held its annual meeting beginning at 9:30 a.m. EDT (Kentucky) / 8:30 a.m. CDT (Illinois).

Location and Logistics

The meeting was held at the:

Kentucky Radiation Health Branch
275 E. Main Street
State Health Operations Center (SHOC)
Frankfort, KY

Interested parties were able to participate in the meeting via conference call at 1-888-494-4032 using access code 350 716 0253.

Draft Agenda

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

- Call to Order
- Adoption or Modification of the Agenda
- Election of Officers
  - Chair
  - Secretary/Treasurer
- Adoption of Minutes from the Previous Meeting
  - April 23, 2018
- Executive Session
- First Public Comment Period
- Reports
  - Chairman & Host State Report
  - Kentucky Commissioner Report
  - Executive Assistant Report
- Acceptance of Auditor's Report
- Adoption of Fiscal Year Budget
- Review of Fiscal Year 18 Annual Report
- Investment Review
- Other Business
  - Unfinished Business – review costs associated with hosting the LLW Forum 2019 fall meeting
  - New Business

- Second Public Comment Period
- Next Scheduled Meeting or Announcement of Special Meeting
- Adjournment

Interested stakeholders were able to participate via videoconference at locations in both Kentucky and Illinois, as well as by teleconference.

For additional information, please contact Joseph Klinger, Chairman of the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission, at (217) 836-3018 or go to http://www.cmcompact.org.

Northwest Compact/State of Utah

Utah Considers Request for Mass and Concentration Limitations Exemption

On October 25, 2018, the Utah Waste Management and Radiation Control Board held a meeting beginning at 11:00 a.m. MT in Salt Lake City, Utah. The purpose of the meeting was to address a request from Energy*Solutions* for an exemption from R313-25-9(5) of the Utah Administrative Code regarding mass and concentration limits.

The meeting, which was open to the public, was held in Conference Room 1015, 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.

The materials for a special Board meeting on this topic that was held on August 30, 2018, including the EnergySolutions' letter, which contains detailed background information and an explanation of the basis for the requested exemption, can be viewed online at https://www.utah.gov/pmn/files/423003.pdf#page=2.

Agenda

The following items, among others, were on the agenda for the October 25, 2018 Board meeting:

I. Call to Order

II. Public Comments

III. Declarations of Conflict of Interest

IV. Low-Level Radioactive Waste: Energy*Solutions'* request for an exemption from R313-25-9(5) of the Utah Administrative Code

  A. Division Response to Public Comments *(Information Item Only)*

  B. Division Response to Energy*Solutions'* September 13, 2018 presentation *(Information Item Only)*

Break

  C. Division Response to Energy*Solutions'* request for an exemption *(Information Item Only)*

V. Energy*Solutions'* comments

VI. Public Comments

VII. Board Action on Energy*Solutions'* request for an exemption from R313-25-9(5) of the Utah Administrative Code *(Board Action Item)*

VIII. Other Business

  A. Miscellaneous Information Items

B. Scheduling of Next Board Meeting

XI. Adjourn

Overview

By letter dated August 24, 2018, Energy*Solutions* petitioned the Board for an exemption from the mass and concentration limitations of UAC R313-25-9(5)(a) and (c) in connection with the disposal of Class A depleted uranium solid metal penetrators (DU Penetrators).

UAC R313-12-55(1) allows the Board to "grant exemptions or exceptions from the requirements of the rules as it determines are authorized by law and will not result in undue hazard to public health and safety or the environment," according to the Energy*Solutions'* letter. "Solid metal depleted uranium penetrators are less hazardous and less plentiful than the depleted uranium oxides which are the basis of the UAC R313-25-9 (5) restriction and an exemption is warranted in accordance with the justification herein provided," states Energy*Solutions* in its letter.

As further explanation, the Energy*Solutions'* letter states as follows:

> The U.S. Army Joint Munitions Command (JMC), working under the direction of the Product Director for Demilitarization, is responsible for the safe and compliant disposition of munitions waste. The JMC seeks to transport and dispose of 30 mm munitions containing solid depleted uranium metal. The DU Penetrators will be disassembled to remove the depleted uranium metal prior to packaging for transport and disposal. The JMC plans to disassemble between 3.5 to 7 million penetrators each year, currently in storage at the Tooele Army Depot (Tooele, Utah) and Crane Army Ammunition Activity (Crane, Indiana). The JMC expects to transport and dispose of approximately 667 yd3 of DU Penetrator Class A waste per year for up to 4 years (a projected DU Penetrator disposal volume of 2,668 yd3). Disposal of this volume of class A depleted uranium metal will exceed the limitations promulgated in UAC R313-25-9(a).

On August 30, 2018, the Board held an emergency meeting to review Energy*Solutions'* request for an exemption from R313-25-9(5) of the Utah Administrative Code regarding mass and concentration limits. (See *LLW Notes,* July/August 2018, pp. 8-9.)

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/utah-waste-management-radiation-control-board-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 Issues Notice of Rulemaking Actions

On September 21, 2018, Utah Division of Waste Management and Radiation Control sent a notification to interested stakeholders of various actions taken by the Utah Waste Management and Radiation Control Board at its meeting on September 13, 2018.

Formal notice of the actions taken were subsequently published in the Utah State Bulletin.

Proposed Rule Amendments Open for Public Comment

Solid Waste Rules The Board approved the proceeding with formal rulemaking and public comment to add a new section to R315-301 to establish the requirements for conducting a self-inspection of a solid waste management facility.

During the 2018 General Session of the Legislature, H.B. 373, *Waste Management Amendments,* was enacted and subsequently signed by the governor. H.B. 373 amended Section 19-6-109 of the Solid and Hazardous Waste Act to allow an owner or operator of a solid waste management facility the option of performing self-inspections of the owner or operator's facility. The proposed rule changes set the requirements associated with an owner or operator performing a self-inspection. The proposed rule changes also incorporate the use of electronic information management, as envisioned by H.B. 373.

The comment period will run from October 1-31, 2018. Interested stakeholders may submit comments to dwmrcpublic@utah.gov and include Proposed Changes for Self-Inspection Requirements in the subject field. Comments may also be submitted via standard mail to:

Scott Anderson
Director
Division of Waste Management and Radiation Control
P.O. Box 144880
Salt Lake City, UT 84114-4880

Final Adoption of Rule Changes

Used Oil Rules The Board approved final adoption of changes to the Used Oil Rules R315-15-16, *Grants,* to provide additional clarity and more detailed direction to the grant application, issuance, implementation and reimbursement processes. The effective date of the rule change was September 14, 2018.

Hazardous Waste Rules The Board approved final adoption of changes to the Hazardous Waste Rules R315-260, *Hazardous Waste Management System,* and R315-261, *General Requirements – Identification and Listing of Hazardous Waste,* to incorporate federal regulatory changes promulgated by the U.S. Environmental Protection Agency (EPA) and published at 83 *Federal Register* 24,664 on May 30, 2018. The effective date of the rule change was September 14, 2018.

For additional information on the above rulemaking actions, please visit the Division website at www.deq.utah.gov or the Office of Administrative Rules website at www.rules.utah.gov for the October 1, 2018 issue of the Utah State Bulletin.

For additional information, please contact Don Verbica at (801) 536-0206 or at dverbica@utah.gov or Rusty Lundberg at (801) 536-4257 or at rlundberg@utah.gov.

Utah Waste Management and Radiation Control Board Meets

In September and October 2018, the Utah Waste Management and Radiation Control Board (Board) held two regularly scheduled meetings in Salt Lake City, Utah.

The meetings, which were open to the public, were held in Conference Room 1015 of the Department of Environmental Quality (DEQ) Board Room on the first floor of the Multi Agency State Office Building in Salt Lake City, Utah.

September 2018 Meeting

The following items, among others, were on the agenda for the September 13, 2018 Board meeting:

I. Call to Order

II. Approval of Meeting Minutes for the July 12, 2018 Board Meeting *(Board Action Item)*

III. Approval of Meeting Minutes for the August 30, 2018 special Board Meeting *(Board Action Item)*

IV. Presentation by Attorney General's Office on Conflict of Interest

V. Underground Storage Tanks Update

VI. Administrative Rules

A. Approval of final adoption of proposed changes to the Used Oil Rules R315-15-16, *Grants,* to provide additional clarity and more detailed direction regarding the grant application, grant issuance, implementation and reimbursement processes *(Board Action Item)*

B. Approval of final adoption of proposed changes to the Hazardous Waste Rules R315-260, *Hazardous Waste Management System,* and R315-261, *General Requirements – Identification and Listing of Hazardous Waste,* to incorporate federal regulatory changes promulgated by the Environmental Protection Agency (EPA) and published in the *Federal Register* on May 30, 2018 at 83 *Federal Register* 24,664 *(Board Action Item)*

C. Approval to proceed with formal rulemaking and public comment on proposed changes to Solid Waste Rules R315-301 to add a new sub-section (R315-301-7) to establish self-inspection requirements in accordance with Section 19-6-109 of the Solid and Hazardous Waste Act *(Board Action Item)*

VII. Hazardous Waste Section

A. Approval of proposed Stipulation and Consent Order between the Board and Jordan Valley Water Conservancy District *(Board Action Item)*

VIII. Low-Level Radioactive Waste Section

A. EnergySolutions request for a site-specific treatment variance from the Hazardous Waste Management Rules – EnergySolutions seeks authorization to treat waste contaminated with dioxins and furans by macroencapsulation rather than by chemical means *(Board Action Item)*

IX. Energy*Solutions* request for an exemption from R313-25-9(5) of the Utah Administrative Code *(Information Item Only)*

A. Energy*Solutions* presentation

B. Heal Utah presentation in response to Energy*Solutions'* request for an exemption from R313-25-9(5) of the Utah Administrative Code

X. Other Business

A. Miscellaneous Information Items

B. Scheduling of Next Board Meeting

XI. Adjourn

October 2018 Meeting

The following items, among others, were on the agenda for the October 11, 2018 Board meeting:

I. Approval of Meeting Minutes for the September 13, 2018 Board Meeting *(Board Action Item)*

II. Procedures for Public Comment

III. Conflict of Interest

IV. Underground Storage Tanks Update

V. 2018 PST Trust Fund Actuarial Report

VI. Administrative Rules

D. Approval to proceed with formal rulemaking and public comment on proposed changes to Hazardous Waste Rules UAC R315-273, *Standards for Universal Waste Management (Board Action Item)*

E. Approval to proceed with formal rulemaking and public comment on proposed changes to Radiation Control Rules UAC R313-28, *Use of X-Rays in the Healing Arts (Board Action Item)*

VII. Break

VIII. Low-Level Radioactive Waste Section

B. Presentation on R313-25-9(5)(a) *(Informational Item Only)*

IX. Public Comment

X. Other Business

C. Miscellaneous Information Items

D. Scheduling of Next Board Meeting

XI. 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.

Northwest Compact/State of Wyoming

Wyoming Becomes NRC's 38th Agreement State

On September 25, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has entered into an agreement with the State of Wyoming to transfer regulatory authority to the state over certain radioactive materials.

With this action, Wyoming becomes the 38th state to sign such an agreement with the NRC. Wyoming Governor Matthew Mead and NRC Chair Kristine Svinicki signed the agreement in Cheyenne.

Overview

With the agreement, the NRC transfers to Wyoming the responsibility for licensing, rulemaking, inspection and enforcement activities necessary to regulate source material involved in uranium or thorium milling and the management and disposal of milling waste, or mill tailings. Fourteen uranium recovery licenses will be transferred to Wyoming's jurisdiction.

The NRC retains jurisdiction over any commercial nuclear power plants (there currently are none in Wyoming), federal agencies using certain radioactive materials in the state and uses of radioactive material other than uranium and thorium milling activities.

Before entering into the agreement, the NRC determined that Wyoming's radiation control program is adequate to protect public health and safety and is compatible with NRC regulations.

Publication and Comment

The proposed agreement between the NRC and Wyoming, as well as the NRC staff's draft assessment of the Wyoming program, was published for public comment in the *Federal Register* on June 26, 2018. The publication was repeated weekly for four weeks.

Comments were accepted through July 26, 2018. The NRC staff considered the comments received in the development and approval of the final agreement.

Background

Thirty-seven other states have signed similar agreements with the NRC. They include Alabama, Arizona, Arkansas, California, Colorado, Florida, Georgia, Illinois, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Minnesota, Mississippi, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Utah, Virginia, Washington and Wisconsin.

Copies of the agreement, the Governor's request/ supporting documents, public comments and the NRC staff assessment are available on the NRC website at www.nrc.gov. For additional information, please contact David McIntyre at (301) 415-8200.

Southeast Compact Commission

Southeast Compact Commission's Administrative Committee Meets

At 1:00 p.m. EDT on September 12, 2018, the Administrative Committee of the Southeast Compact Commission for Low-Level Radioactive Waste Management held a special called meeting via teleconference.

Overview

During the teleconference, the Committee discussed administrative matters related to the continued operations and staffing of the Commission, including, but not limited to, Commission bylaws; staffing requirements; staff salaries and benefits; personnel policies; internal controls for accounting; and, transition planning.

Agenda

The following is the agenda for the committee meeting:

- Introduction and Remarks (Donna Hodges, Chair)
- Public Comment Pertaining to Agenda Items Only (Public)
- Approval of Minutes from June 25, 2018 (Committee Members)
- Discussion of Administrative Matters Related to the Continued Operations and Staffing of the Commission (Committee Members)
- Other Business (Committee Members)
- Public Comment (Public)
- Adjourn

Teleconference Locations

Interested stakeholders were provided an opportunity to participate in the call at offices in states located within the Southeast Compact Commission including Alabama, Florida, Georgia, Mississippi, Tennessee and Virginia.

All Southeast Compact Commission and committee meetings are open to the public.

For additional information, please contact Southeast Compact Commission Executive Director Ted Buckner at (919) 380-7780 or at secc@secompact.org.

Southwestern Compact

Southwestern Compact Commission Hosts 79th Meeting

On October 5, 2018, the Southwestern Low-Level Radioactive Waste Commission hosted its 79th meeting beginning at 9:00 a.m. PDT at the Hyatt Regency in Sacramento, California.

The following topics, among others, were on the meeting agenda:

- call to order — moment of silence in honor of former Chair Aubrey Godwin;
- roll call;
- welcome and introductions;
- statement regarding due notice of meeting;

- reports, status and/or activity;
  - Commission Chair;
  - Executive Director;
  - licensing agency;
  - license designee; and,
  - party states;
- updates of decommissioning — San Onofre Nuclear Generating Station (SONGS);
- exportation actions and reports;
  - ratification of approved petitions E18-104-135 and WCS18-044-085;
  - amend "Policy of the Southwestern Low-Level Radioactive Waste Commission Regarding Exportation of Various Low-Level Radioactive Waste Streams" to extend effective date;
  - amend "Requirements for Exportation Petitions for Low-Level Radioactive Waste Disposal" to extend effective date; and,
  - approve new petitions forms and dates;
- update and action on Low-Level Radioactive Waste Forum (LLW Forum)/Commissioners report on activities;
- review, discuss and action regarding transition of legal counsel, bylaws, current forms, resolutions and agreements;
- legal review, action for Commissioner appointments;
- financial audit report by Miers & Miers;
- Executive Session pursuant to CA Gov. Code §11126(a)(1) to discuss staff performance evaluations;
- review and approve Counsel's contracts;
- Annual Governor's Report review and approve;
- discuss and amend potential changes to fiscal year 2018-19 budget;
- approve fiscal year 2019-20 budget;
- adopt fee schedule – discussion/action;
- public comment;
- election of officers;
- future agenda items;
  - next meeting – potential tour of Waste Control Specialists (WCS); and,
- adjournment.

Members of the public were invited to attend the meeting and comment on specific agenda items as the Commission considered them. The total public comment time on each agenda item was limited to 15 minutes. Written material was also accepted. A 15-minute public comment period was provided near the end of the meeting at which time members of the public were invited to bring before the Commission issues relating to low-level radioactive waste but which were not on the agenda.

For additional information, please contact Kathy Davis, Executive Director of the Southwestern Compact Commission, at (916) 448-2390 or at swllrwcc@swllrwcc.org.

Texas Low-Level Radioactive Waste Disposal Compact Commission

Texas Compact Commission Holds October 2018 Meeting

On October 11, 2018, the Texas Low-Level Radioactive Waste Disposal Compact Commission (Texas Compact Commission) held a regularly scheduled meeting in Manchester, Vermont.

The meeting began at 9:30 a.m. EDT. It was held in the Rockwell Conference Room at the Equinox Hotel, which is located at 3567 Main Street in Manchester Village, Vermont.

Interested stakeholders were able to participate on the campus of the Texas Commission on Environmental Quality (TCEQ) in Room 1206, Building F, at 12100 Park 35 Circle in Austin, Texas 78753 beginning at 8:30 am Central Daylight Savings Time. No member of the Commission was present at this location.

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 Duke Brunswick, Dale Brunswick IH, Exelon, Southern Nuclear Company – Vogtle, Arizona Public Service, Tennessee Valley Authority and Tennessee Valley Authority IH;
- consideration of and possible action on an application for exportation of low-level radioactive waste from UT HSC – Ameriphysics;
- consideration of and possible action on amendments to an existing agreement with Entergy Grand Gulf;
- receive reports from Waste Control Specialists LLC (WCS) about recent site operations and any other matter WCS wishes to bring to the attention of the Compact Commission;
- report from Commissioner Morris, Chair on 31 TAC §675.24 relating to 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;
- discussion and possible action on the adoption of an amendment or amendments to the Commission's Bylaws authorizing the reimbursement of members of the Commission and staff for reasonable and appropriate gratuities with limitations and guidelines for such reimbursements;
- discussion and possible action relating to long term planning and actions of the Commission relating to fiscal matters, staff roles, public reporting concerning low-level radioactive waste imported in to the compact states and methods and requirements for such data collection;
- discussion of a Contingency Plan for the Compact Facility;

- receive report from Chair on Texas Compact Commission activities including an update on fiscal matters to be taken by the compact, H.B. 2662 Legislative Committee meeting and addressing personnel matters;

- report from Leigh Ing, Executive Director of the Texas Compact Commission, on her activities relating to Texas Compact Commission operations including change in office location, industry conferences and Texas Compact Commission Annual Report;

- discussion and possible changes of dates and locations of future Texas Compact Commission meetings in 2018 and 2019; 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.

Texas Compact/State of Texas

Comment Period Extended re Proposed Texas Interim Storage Facility

On October 19, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has extended the public comment period on the scope of its environmental review of an application by Interim Storage Partners to construct and operate a Consolidated Interim Storage Facility (CISF) for spent nuclear fuel in Andrews County, Texas.

The new deadline for comment is November 19, 2018.

The extension was announced at 83 Federal Register 53,115 (October 19, 2018).

Project History

Waste Control Specialists (WCS) initially filed the application in April 2016. (See *LLW Notes,* May/June 2016, pp. 16-17.) However, in April 2017, WCS requested that the NRC suspend its review pending the anticipated sale of the company. (See *LLW Notes,* March/April 2017, pp. 15-16.) In January 2018, WCS was sold to J.F. Lehman & Co. (See *LLW Notes,* January/ February 2018, pp. 1, 13-15.) In March 2018, WCS and international nuclear supplier Orano formed Interim Storage Partners as a joint venture to take over the spent fuel storage project. The new company submitted a revised application to the NRC in June 2018.

When NRC's review was suspended last year, the staff was in the process of receiving public comment on the scope of its environmental review and had issued a notice of opportunity for an adjudicatory hearing. (See *LLW Notes,* January/February 2017, pp. 18-19.) According to

NRC's press release, those processes will now resume. The staff will consider all comments previously received on the scope of the environmental review.

Review Process

The NRC completed its administrative review of the revised application and informed Interim Storage Partners of its decision to resume the review in a letter dated August 21, 2018. The staff expects to complete its safety, security and environmental reviews in the summer of 2020.

On September 4, 2018, the NRC published a notice in the *Federal Register* requesting additional public comment on environmental issues to be considered in its environmental impact statement. (See 83 *Federal Register* 44, 922.) Comments will be accepted through October 19, 2018.

In a separate notice that was published in the *Federal Register* on August 29, 2018 – and then subsequently corrected in a *Federal Register* notice that was published on August 31, 2019 – the NRC announced an opportunity to request a hearing through October 29, 2018. The notices include detailed instructions on how to file a hearing request or submit public comment.

Background

On April 28, 2016, WCS filed an application seeking a 40-year license for a CISF to receive spent fuel from nuclear reactors for storage, pending final disposal. (See *LLW Notes*, May/June 2016, pp. 16-17.) Specifically, WCS requested authorization to construct and operate a CISF at the company's 60.3 square kilometer (14,900 acre) site in western Andrews County, Texas. On this site, WCS currently operates facilities that process and store certain types of radioactive material—mainly low-level radioactive waste and mixed waste. The facility also disposes of hazardous and toxic waste.

According to the application, WCS plans to construct the CISF in eight phases. Phase one of the CISF would be designed to provide storage for up to 5,000 metric tons uranium (MTU) of spent nuclear fuel received from commercial nuclear power reactors across the United States. WCS proposes that small amounts of mixed oxide spent fuels and Greater-Than-Class C (GTCC) low-level radioactive wastes also be stored at the CISF. WCS stated that it would design each subsequent phase of the CISF to store up to an additional 5,000 MTU. A total of up to 40,000 MTU would be stored at the site by the completion of the final phase. Each phase would require NRC review and approval.

WCS would receive canisters containing spent nuclear fuel from the reactor sites. Once accepted at the site, WCS would transfer them into onsite dry cask storage systems. WCS plans to employ dry cask storage system technology that has been licensed by the NRC pursuant to 10 CFR Part 72 at various commercial nuclear reactors across the country. According to WCS, the dry cask storage systems proposed for use at the CISF would be passive systems (i.e., not relying on any moving parts) and would provide physical protection, containment, nuclear criticality controls and radiation shielding required for the safe storage of the spent nuclear fuel. WCS also states that the dry cask storage systems would be located on top of the concrete pads constructed at the CISF.

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

Texas Compact/State of Vermont

NRC Approves License Transfer for Vermont Yankee

On October 12, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has issued an Order approving the transfer of the operating license for the Vermont Yankee nuclear power plant from Entergy Nuclear Operations, Inc. (Entergy) to NorthStar Nuclear Decommissioning Company, LLC (NorthStar NDC).

Entergy requested the transfer to NorthStar NDC to decommission the plant, which ceased operations in December 2014.

Overview

Based on its review, the NRC confirmed that NorthStar NDC met the regulatory, legal, technical and financial requirements necessary to qualify them as a licensee. The NRC also determined that the transfer is consistent with law and NRC regulations, as well as that the transfer can be conducted without endangering the health and safety of the public and will not be inimical to the common defense and security.

The NRC Order approving the transfer was issued on October 11, 2018. The Order and other documents related to the license transfer review are available in the NRC's ADAMS online database at ML18242A638.

Conditions

Based on the staff's review, NRC approved the application for transfer of the licenses for the Vermont Yankee nuclear power plant subject to the following conditions:

- prior to the closing of the license transfer, NorthStar NDC and NorthStar Vermont Yankee, LLC (NorthStar VY) shall provide the Directors of NRC's Office of Nuclear Material Safety and Safeguards (NMSS) and Office of Nuclear Reactor Regulation (NRR) satisfactory documentary evidence that they have obtained the appropriate amount of insurance required of a licensee under 10 CFR 140.11(a)(4) and 10 CFR 50.54(w) of the Commission's regulations, consistent with the exemptions issued to Vermont Yankee on April 15, 2016;

- NorthStar VY and NorthStar NDC shall take no action to cause NorthStar Group Services, Inc. to void, cancel or modify the $140 million support agreement to provide funding for Vermont Yankee as represented in the application without prior written consent of the NRR Director; and,

- NorthStar VY shall obtain a performance bond if a settlement agreement with the U.S. Department of Energy (DOE) on federal reimbursements for spent fuel management expenses is not entered into by January 1, 2022.

The performance bond will be effective January 1, 2022 initially in the amount of $4.3 million and it will be renewed annually. This amount covers the annual amount of Independent Spent Fuel Storage Installation (ISFSI) operation and maintenance costs projected for 2022-2024. If a settlement is not reached by January 1, 2024, this amount will be increased to $9.3 million, which covers the annual amount of ISFSI operation and maintenance costs projected for years after 2024.

Background

The plant is currently owned by Entergy Nuclear Vermont Yankee (Entergy VY) and operated by Entergy Nuclear Operations (Entergy NO), both of which are listed on the license. Entergy and NorthStar NDC requested the license transfer by letter dated February 9, 2017. According to the request, the new owner will be NorthStar VY and

the operator in charge of dismantling the plant will be NorthStar NDC. The transfer includes the plant's dry cask spent nuclear fuel storage facility.

In particular, the applicants requested the NRC consent to the direct transfer of Entergy NO's currently licensed authority (licensed operator for decommissioning) to NorthStar NDC. In addition, the applicants requested the indirect transfer of control (ownership) of Entergy VY's facility licenses to NorthStar Decommissioning Holdings, LLC (NorthStar DH) and its parents NorthStar Group Services, Inc. (NorthStar GS), LVI Parent Corp. (LVI) and NorthStar Group Holdings, LLC (NorthStar GH).

The applicants also requested that the NRC consent to the transfer of the licensed possession, maintenance and decommissioning authorities to NorthStar NDC in order to implement expedited decommissioning at Vermont Yankee. In addition, the applicants requested approval of a conforming amendment to the license pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50.80, "Transfer of licenses," and 10 CFR 50.90, "Application for amendment of license, construction permit, or early site permit."

Notice of the application was published at 82 *Federal Register* 23,845 as dated on May 24, 2017. The supplemental information letters contained clarifying information, did not expand the application beyond the scope of the original notice and did not affect the applicability of the NRC's no significant hazards consideration determination.

For additional information, please contact David McIntyre of the U.S. Nuclear Regulatory Commission at (301) 415-8200.

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 Nuclear Power Plant On September 25, 2018, staff from the U.S. Nuclear Regulatory Commission (NRC) met in Delta, Pennsylvania to hear the public's views on environmental issues the agency should consider in review of the Exelon Generation application for an additional 20 years of operation for Peach Bottom Atomic Power Station Units 2 and 3. During the meeting, NRC staff presentations described the environmental review process and the proposed review schedule. A formal public comment session followed the presentations. The meetings also included an NRC open house to provide the public an opportunity to speak informally with agency staff. NRC staff will also consider written comments on environmental issues that were submitted prior to the deadline of October 10, 2018. Exelon submitted the Peach Bottom subsequent license renewal application on July 10, 2018. The subsequent license renewal process determines whether an operating reactor can extend its license for an additional 20 years. *The Peach Bottom license renewal application, less proprietary details, is available on the NRC*

website at www.nrc.gov. For additional information, please contact Scott Burnell at (301) 415-8200.

Atlantic Compact/States of New Jersey and South Carolina

Oyster Creek Nuclear Power Plant On October 18, 2018, NRC announced that the agency has granted Exelon Generation Company's request to modify the emergency preparedness plan for the Oyster Creek Nuclear Generating Station in Lacey Township, New Jersey to reflect the plant's decommissioning status. The changes include exemptions from specific NRC requirements that may not be applicable to 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 Oyster Creek, rather than a dedicated offsite radiological emergency response plan. As a result, there will not be a 10-mile emergency planning zone identified in Oyster Creek'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. Exelon provided analyses to justify the exemptions showing that the risk of an offsite radiological release is significantly lower than an operating power reactor. Also, the types of possible accidents are 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 July 17, 2018. The exemptions were granted and a safety evaluation was issued on October 16, 2018. The following day, license amendments were issued reflecting the exemptions, which were then published in the *Federal Register* on October 22, 2018. Under the exemptions, Exelon may not implement the changes to its emergency preparedness plans until September 17, 2019, based on the company's evaluation of applicable accidents. Oyster Creek, a single boiling-water reactor, began operations in 1969. It ceased operations on September 17, 2018. All spent fuel has been permanently moved from the reactor vessel to the spent fuel pool for storage. The exemptions from specific emergency preparedness requirements are part of several changes to the plant's licensing basis and technical specifications the licensee requested to reflect Oyster Creek's decommissioning status. *For additional information, please contact David McIntyre of the NRC at (301) 415-8200.*

V.C. Summer Nuclear Generating Station On September 7, 2018, the NRC announced that the agency has approved an indirect transfer of the South Carolina Electric and Gas Company two-thirds interest in the Virgil C. Summer Nuclear Station Units 1, 2, 3 — along with the associated Independent Spent Fuel Storage Installation (ISFI) — from SCANA (SCE&G's parent company) to Dominion Energy. On January 25, 2018, SCE&G and Dominion requested this indirect transfer following the Dominion and SCANA announced proposed merger. While the corporate ownership will change, SCE&G will remain the licensed two-thirds co-owner and operator of Units 1, 2, and 3 and the ISFSI. The South Carolina Public Service Authority (Santee Cooper) will retain its one-third ownership of the units and ISFSI. The proposed indirect transfer does not involve Santee Cooper's ownership interest in the Summer site. Summer Unit 1 is a pressurized-water reactor located near Jenkinsville, South Carolina – approximately 26 miles northwest of Columbia. It is licensed to operate through August 6, 2042. Units 2 and 3 had been under construction since the NRC issued combined construction and operating licenses in March 2012. SCE&G formally ended the Unit 2 and 3 constructions on August 17, 2017. The NRC staff review of the license transfer application concluded that the merger between Dominion and SCANA would not affect the financial and technical qualifications of SCE&G to conduct the activities authorized by the

licenses. The NRC staff also concluded that SCE&G has satisfied the NRC decommissioning funding assurance requirements and that the facility is not owned, controlled or dominated by a foreign entity. *For additional information, please contact Scott Burnell at (301) 415-8200.*

Westinghouse Fuel Facility On November 8, 2018, the NRC will hold a rescheduled public meeting to discuss its licensing and oversight activities, license renewal and the associated environmental review, and recent leaks at the Westinghouse Columbia nuclear fuel fabrication facility. The meeting was originally scheduled for October 11, 2018. However, it was postponed due to forecasts of inclement weather from Tropical Storm Michael. The meeting will be held from 7:00 – 9:00 p.m. at The Medallion Conference Center, which is located at 7309 Garners Ferry Road in Columbia, South Carolina. NRC will host an open house 30 minutes prior to the meeting for informal discussion. During the meeting, NRC staff will explain the agency's role and responsibilities related to licensing and oversight programs at the Westinghouse Columbia nuclear fuel fabrication facility. The NRC staff will discuss the license renewal process — including the environmental review, which staff re-opened after being informed of relevant new information. The NRC staff will also provide information regarding the NRC's response to the leaks at the facility. *The license renewal application and other information about the Westinghouse plant can be found on the NRC web site at www.nrc.gov. For additional information, please contact David McIntyre of the NRC at (301) 415-8200.*

Southeast Compact/States of Tennessee and Virginia

Watts Bar Nuclear Plant On October 18, 2018, NRC held a public meeting with Tennessee Valley Authority (TVA) officials to be briefed on the current status and progress of actions to improve the safety conscious work environment at the Watts Bar nuclear plant. The meeting was held at the Comfort Inn in Athens, Tennessee. The plant is located near Spring City, approximately 60 miles southwest of Knoxville. On March 23, 2016, the NRC staff issued a letter to TVA expressing concern that some operations employees may not have felt comfortable raising safety concerns at the plant. After a mediation session in June 2017, the NRC issued a Confirmatory Order to TVA, which agreed to an extensive list of corrective actions to address the safety conscious work environment issues. Although the issues were identified at the Watts Bar plant, TVA also agreed to implement actions at its Browns Ferry and Sequoyah nuclear plants, as well as at its corporate offices. During the meeting, TVA provided an update on those corrective actions and NRC officials asked questions and discussed the agency's continuing oversight regarding the issue. NRC staff was also available after the business portion of the meeting to answer questions from members of the public and the media. *For additional information, please contact Roger Hannah at (404) 997-4417 or Joey Ledford at (404) 997-4416.*

Surry Power Station On October 26, 2018, NRC announced that the agency has received a subsequent license renewal application from Virginia Electric and Power Co. (Dominion), which requested an additional 20 years for the already-renewed operating licenses of Surry Power Station Units 1 and 2. Dominion filed the application on October 16, 2018. It seeks to renew the licenses for a second time. The Surry units are pressurized-water reactors located approximately 17 miles northwest of Newport News, Virginia. The NRC approved the initial license renewal in March 2003, with Unit 1 currently licensed to operate through May 25, 2032 and Unit 2 through January 29, 2033. The NRC staff is reviewing the application to determine if it has sufficient information to complete the agency's extensive safety and environmental reviews. If the application is determined to be complete, the staff will docket it and publish a notice of opportunity to request an adjudicatory hearing before the NRC's Atomic

Safety and Licensing Board. *Information regarding the license renewal process, as well as the Surry renewal application, are available for public review on the NRC website at www.nrc.gov. For additional information, please contact Scott Burnell at (301) 415-8200.*

Southwestern Compact/State of California

Harman International Industries Inc. On October 24, 2018, NRC announced that the agency has reached a settlement with Harman International Industries Inc. of Northridge, California in which Harman agrees to implement multiple corrective actions and program enhancements after it imported and distributed products containing radioactive material without proper licenses. In June 2018, the NRC cited Harman for three violations of agency regulations for importing, possessing and distributing lamps containing krypton-85 without the proper licenses to possess and distribute radioactive materials. Before June 2018, Harman was located in Elkhart, Indiana – a place where the NRC has licensing authority. As a result of the NRC's investigation, which began in 2016, the company halted the import and distribution of lamps and spare bulbs containing krypton-85. On December 15, 2017, California issued a license to the company to possess radioactive material. The NRC issued a separate license to the company to distribute lamps containing krypton-85. The agreement, reached through the NRC's alternative dispute resolution process, was announced in the *Federal Register* on October 2, 2018. In it, Harman agrees to appoint a Compliance Officer to ensure that the company complies with NRC regulations. The Compliance Officer will oversee the company's new process to ensure that NRC requirements are met when any new products are imported and distributed within the United States. The company will also conduct training in NRC requirements for senior officials and those involved in the compliance process, conduct program audits and will inform its foreign suppliers of NRC requirements for exporting radioactive material to U.S. entities. *Information about the NRC's alternative dispute resolution process is available on the agency's web site at www.nrc.gov.*

State of Michigan

VHS Harper-Hutzel Hospital On September 12, 2018, NRC announced that the agency has proposed a $7,250 fine to VHS Harper-Hutzel Hospital, Inc. for violations of the agency's security requirements. In particular, NRC inspectors identified apparent security violations at the company's facility in Detroit during a routine inspection in March of this year. The NRC determined that the problem constitutes a Severity Level III violation. Although the details of the violations are not publicly available due to their security- related nature, NRC inspectors verified before leaving the facility that the company has taken immediate steps to address the issue. The NRC will conduct a follow-up inspection to verify independently that additional actions proposed by the company to address the reasons for the violations are sufficient to prevent recurrence. *The NRC's letter to the company will be available on the NRC web site at www.nrc.gov under accession number ML18250A214. For additional information, please contact Viktoria Mitlyng at (630) 829-9662 or Prema Chandrathil at (630) 829-9663.*

State of New York

Indian Point Nuclear Power Plant On September 17, 2018, NRC announced that the ageny has renewed the operating licenses for the Indian Point nuclear power plant, Unit 2 and Unit 3, which are located in Buchanan, New York. The renewed licenses enable the licensee to operate the reactors through April 30, 2024 for Unit 2 and through April 30, 2025 for Unit 3. Entergy Nuclear Operations Inc. applied for renewal of the licenses in April 2007, seeking an additional 20 years of operation beyond the original expiration dates of 2013 and 2015. The units were authorized to continue operating under timely renewal because Entergy submitted its

application more than five years prior to the expiration of the original licenses. On January 8, 2017, Entergy, the State of New York and the environmental group Riverkeeper announced an agreement under which Entergy would permanently close the plants no later than 2024 and 2025, respectively. As part of the agreement, Entergy amended its application to seek a shorter renewal term. The NRC's Atomic Safety and Licensing Board issued an Order on March 13, 2017 dismissing remaining contentions and closing the adjudicatory hearing on the renewal. *Additional information on Indian Point's license renewal application, including the NRC staff's safety and environmental reviews, is available on the NRC web site at www.nrc.gov. For additional information, please contact Scott Burnell at (301) 415-8200.*

Radiation Source Protection and Security Task Force

The 2018 Radiation Source Protection and Security Task Force Report

In October 2018, *The 2018 Radiation Source Protection and Security Task Force Report* (2018 Task Force Report) was submitted to the President and the U.S. Congress by the Chair of the U.S. Nuclear Regulatory Commission (NRC) as required under Public Law 109-58, *The Energy Policy Act of 2005* (Energy Policy Act).

Overview

Like the reports that precede it, the 2018 Task Force Report includes a discussion of accomplishments of the Interagency Task Force on Radiation Source Protection and Security (Task Force) and its member agencies over the past four years, as well as the status of actions underway by the Task Force to provide further assurance of the security of sources in all stages of their life cycle.

In preparation for this report, the Task Force evaluated the specific topics identified in the Energy Policy Act, including the list of radioactive sources that warrant enhanced protection; mechanisms for the safe storage and ultimate disposal of radioactive sources; transportation security; source tracking; import and export; and, ways to facilitate the use of alternative technologies to replace radioactive sources, as appropriate. Based on its evaluation, the Task Force concluded that there are no significant gaps in the area of radioactive source protection and security that are not already being addressed through continued attention by appropriate Task Force agencies. Nonetheless, the Task Force remains engaged in activities to address ongoing challenges involving end-of-life management of risk-significant sources.

During this report cycle, the Task Force completed four recommendations from previous reports, which leaves only seven ongoing recommendations from the 2006, 2010, and 2014 reports. In addition, the Task Force stated that it has completed several important accomplishments over the course of the past 4 years. These include:

- The U.S. Department of Energy (DOE) completed the "Final Environmental Impact Statement for the Disposal of Greater-Than-Class-C Low-Level Radioactive Waste and GTCC-Like Waste" (Final EIS) and submitted the Report to Congress identifying and describing the alternatives under consideration for the disposal of Greater-than-Class-C (GTCC) low-level radioactive waste, as required by Section 631 of the Energy Policy Act. Although the Final EIS and Report to Congress do not constitute a final decision on disposal of GTCC low-level radioactive waste, their completion represents a major accomplishment in progress toward

establishing a disposal pathway for certain risk-significant radioactive sources.

- The NRC issued certificates of compliance to DOE's National Nuclear Security Administration (NNSA) for two new transportation packages — the Model 435-B container in 2014 and the Model 380-B container in 2017. Together, the new containers will help to enable shipment of nearly all commercially used devices containing high-activity cobalt-60 and cesium-137 radioactive sealed sources.

- The National Science and Technology Council (NSTC) Interagency Working Group on Alternatives to High-Activity Radioactive Sources completed its best practices guide for federal agencies. The guide provides measures that federal agencies can consider to facilitate the transition to alternative technologies in their long-term strategic planning in a way that meets technical, operational and cost requirements.

- The United States continued to elevate the international radioactive source safety and security framework. For example, the U.S. continues to support International Atomic Energy Agency (IAEA) efforts to encourage member states to make a political commitment to act in accordance with the IAEA "Guidance on the Import and Export of Radioactive Sources" that was issued in March 2005 and updated in May 2012. In addition, the U.S. was instrumental in finalizing supplementary guidance to the IAEA Code of Conduct on the Safety and Security of Radioactive Sources, "Guidance on the Management of Disused Radioactive Sources," which was issued in April 2018.

The Task Force continues to focus on actions to advance end-of-life management for risk-significant radioactive sources through efforts to establish expanded disposal capability and to identify opportunities to leverage best practices for the management of sources once they become disused. The Task Force also continues to focus on efforts to advance the research, development and use of alternative technologies to replace radioactive sources, as appropriate, as well as to coordinate strategies to enhance the protection of radioactive sources from potential cyber security threats. These actions will provide an enhanced level of protection and security for risk-significant sources, beyond the regulations currently in place.

Conclusion

During this report cycle, the 2018 Task Force completed four of the 11 recommendations and actions that remained in process at the start of this reporting period and concluded that there are no significant gaps in radioactive source protection and security that are not already being addressed. However, the Task Force continues to focus on end-of-life management of risk-significant sources. The Task Force will continue to advance its efforts to complete the remaining seven recommendations and actions and will coordinate routinely to identify and mitigate any gaps in source protection and security that may emerge in the future.

Consistent with the Energy Policy Act, the Task Force has continued its efforts to evaluate the security of radioactive sources and make related recommendations to the President and Congress. The 2018 Task Force Report states that the Task Force has made substantial progress since the events of September 11, 2001 to enhance the protection of radioactive sources from terrorist threats and concludes that the United States is well positioned to continue to protect public health and safety and promote the common defense and security through the existing missions and activities of Task Force member agencies.

Background

The Energy Policy Act of 2005 established the Task Force to evaluate and provide recommendations to the President and Congress relating to the security of radioactive sources in the United States from potential terrorist threats. These threats include acts of sabotage, theft or use of a radioactive source in a radiological dispersal device or radiation exposure device. The Task Force presented its initial report to the President and Congress in 2006 and has continued to provide reports every four years consistent with the Energy Policy Act of 2005.

Fourteen federal agencies and one industry organization participate on the Task Force. Members of the Task Force as mandated by the Energy Policy Act include the NRC Chair, Secretary of Homeland Security, Secretary of Defense, Secretary of Energy, Secretary of Transportation, Attorney General, Secretary of State, Director of National Intelligence, Director of the Central Intelligence Agency, Administrator of the Federal Emergency Management Agency (FEMA), Director of the Federal Bureau of Investigations (FBI) and Administrator of the U.S. Environmental Protection Agency (EPA). Other invited departments, offices and organizations include the U.S. Department of Health and Human Services, Office of Science and Technology Policy and Organization of Agreement States (OAS) — the latter of which is a non-voting member.

The 2018 Task Force report is divided into three chapters that detail advances in the security and control of radioactive sources; the status of the recovery and disposition of radioactive sealed sources; and, progress in the area of alternative technologies. The 2018 Task Force Report states that, collectively, these chapters substantiate the Task Force's conclusion that substantial progress has been made since the events of September 11, 2001 to enhance the protection of radioactive sources from terrorist threats, as well as that there are no significant gaps in the area of radioactive source protection and security that are not already being addressed through continued attention by the appropriate Task Force agencies.

In September 2011, at the request of the NNSA/GTRI, the Low-Level Radioactive Waste Forum (LLW Forum) Forum formed the Disused Sources Working Group (DSWG). The working group, which was comprised of eight Directors of the LLW Forum, solicited input from a broad range of stakeholders at 19 meetings over a 30-month period. In March 2014, the DSWG released its report identifying findings and recommendations related to the management and disposition of disused sealed sources that pose a threat to national security.

A PDF copy of the Low-Level Radioactive Waste Forum's Disused Sources Working Group report may be downloaded and printed from the organization's web site at www.llwforum.org or the National Directory of Brokers and Processors web site at www.bpdirectory.com.

Background information on the Radiation Source Protection and Security Task Force report, as well as links to the 2006 and 2010 reports, can be found on the NRC's web site at http://www.nrc.gov/security/byproduct/task-force.html.

(Continued from page 1)

> determines by rule requires permanent isolation.

In paragraph A, according to the *Federal* Register notice, Congress limited HLW to those materials that are both "highly radioactive" and "resulting from the reprocessing of spent nuclear fuel." Reprocessing generates liquid wastes, with the first cycle of reprocessing operations containing the majority of the fission products and transuranic elements removed from the spent nuclear fuel (SNF). Thus, in paragraph A, Congress distinguished HLW with regard to its form as both "liquid waste produced directly in reprocessing" and "any solid material derived from such liquid waste that contains fission products in sufficient concentrations," states the *Federal* Register notice.

In paragraph B, Congress defined HLW also to include "other highly radioactive material" that the U.S. Nuclear Regulatory Commission (NRC) determines by rule "requires permanent isolation," continues the *Federal* Register notice. HLW under paragraph B includes highly radioactive material regardless of whether the waste is from reprocessing or some other activity. Further, under paragraph B, classification of material as HLW is based on its radiological characteristics and whether the material requires permanent isolation, states the *Federal* Register notice.

According to the *Federal* Register notice, the common element of these statutory paragraphs defining HLW is the requirement and recognition that the waste be "highly radioactive." Additionally, both paragraphs reflect a primary purpose of the NWPA, which is to define those materials for which disposal in a deep geologic repository is the only method that would provide reasonable assurance that the public and the environment will be adequately protected from the radiological hazards the materials pose.

The terms "highly radioactive" and "sufficient concentrations" are not defined in the AEA or the NWPA. By providing in paragraph A that liquid reprocessing waste is HLW only if it is "highly radioactive" and that solid waste derived from liquid reprocessing waste is HLW only if it is "highly radioactive" and contains fission products in "sufficient concentrations" without further defining these standards, the *Federal Register* notice asserts that Congress left it to DOE to determine when these standards are met. Given Congress' intent that not all reprocessing waste is HLW, the *Federal Register* notice states that it is appropriate for DOE to use its expertise to interpret the definition of HLW, consistent with proper statutory construction, to distinguish waste that is non-HLW from waste that is HLW.

The DOE interpretation is informed by the radiological characteristics of reprocessing waste and whether the waste can be disposed of safely in a facility other than a deep geologic repository. The *Federal Register* notice explains that this interpretation is based upon the principles of the NRC's regulatory structure for the disposal of low-level radioactive wastes.

In its regulations, NRC has identified four classes of low-level radioactive waste (LLW) — Class A, B or C — for which near-surface disposal is safe for public health and the environment, as well as Greater-than-Class C (GTCC) low-level radioactive waste for which near-surface disposal may be safe for public health and the environment. This waste classification regime is based on the concentration levels of a combination of specified short-lived and long-lived radionuclides in a waste stream, with Class C LLW having the highest concentration levels. Waste that exceeds the Class C levels is evaluated on a case-specific basis to determine whether it requires disposal in a deep geologic repository or whether an alternative disposal facility can be demonstrated to provide safe disposal. According to the *Federal Register* notice, the need for disposal in a deep geologic repository results from a combination of two radiological characteristics

of the waste: (1) high activity radionuclides, including fission products, which generate high levels of radiation; and, (2) long-lived radionuclides which, if not properly disposed of, would present a risk to human health and the environment for hundreds of thousands of years.

Because the NRC has long-standing regulations that set concentration limits for radionuclides in waste that is acceptable for near-surface disposal, the *Federal Register* notice contends that it is reasonable to interpret "highly radioactive" to mean, at a minimum, radionuclide concentrations greater than the Class C limits. Reprocessing waste that does not exceed the Class C limits is non-HLW.

DOE interprets "sufficient concentrations" in the statutory context in which the definition was enacted, which is focused on protecting the public and the environment from the hazards posed by nuclear waste. In addition to the characteristics of the waste itself, the risk that reprocessing waste poses to human health and the environment depends on the physical characteristics of the disposal facility and that facility's ability to safely isolate the waste from the human environment. Relevant characteristics of a disposal facility may include the depth of disposal; use of engineered barriers; and, geologic, hydrologic and geochemical features of the site. Taking these considerations into account, the *Federal Register* notice states that it is reasonable to interpret "sufficient concentrations" to mean concentrations of fission products in combination with long-lived radionuclides that would require disposal in a deep geologic repository.

Accordingly, under DOE's interpretation, solid waste that exceeds the NRC's Class C limits would be subject to detailed characterization and technical analysis of the radiological characteristics of the waste. This, combined with the physical characteristics of a specific disposal facility and the method of disposal, would determine whether the facility could meet its performance objectives and if the waste can be disposed of safely. The waste characterization and analysis process would govern this approach, as well as the performance objectives for the disposal facility established by the applicable regulator, to ensure that it is protective of human health and the environment.

The DOE interpretation does not require the removal of key radionuclides to the maximum extent that is technically and economically practical before DOE can define waste as non-HLW. According to the *Federal Register* notice, nothing in the statutory text of the AEA or the NWPA requires that radionuclides be removed to the maximum extent technically and economically practical prior to determining whether waste is HLW. DOE has determined that the removal of radionuclides from waste that already meets existing legal and technical requirements for safe transportation and disposal is unnecessary and inefficient, as well as does not benefit human health or the environment. To the contrary, the *Federal Register* notice states that it potentially presents a greater risk to human health and the environment because it prolongs the temporary storage of waste.

Therefore, under DOE's interpretation, waste resulting from the reprocessing of SNF is non-HLW if the waste:

I. does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, *Code of Federal Regulations*; or,

II. does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Reprocessing waste meeting either I or II of the above is non-HLW. Therefore, according to the *Federal Register* notice, such waste may be

classified and disposed in accordance with its radiological characteristics in an appropriate facility provided all applicable requirements of the disposal facility are met.

Request for Comments

The Department is specifically requesting comments on its interpretation that reprocessing waste meeting either of the two criterion stated above is non-HLW. The *Federal Register* notice is intended to solicit public feedback on the DOE interpretation to better understand stakeholder perspectives prior to appropriate input and consultation with affected state and local regulators and any waste disposal classification decisions. According to the *Federal Register* notice, the Department will consider all comments received during the public comment period, and modify its proposed approach, as appropriate, based on public comment.

Per the *Federal Register* notice, DOE invites stakeholders to submit written comments on its interpretation. The 60-day public comment period began on October 10, 2018 and ends on December 10, 2018.

Interested stakeholders may submit comments via:

- e-mail by sending comments to HLWnotice@em.doe.gov in MicrosoftTM Word, or PDF file format, and avoid the use of encryption; or,

- mail by sending comments to: Theresa Kliczewski, U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM– 4.2), 1000 Independence Avenue SW, Washington, DC 20585.

DOE will consider all comments received or postmarked by December 10, 2018.

Background

DOE manages large inventories of legacy waste resulting from SNF reprocessing activities from atomic energy defense programs – i.e., nuclear weapons production. DOE also manages a small quantity of vitrified waste from a demonstration of commercial SNF reprocessing. Reprocessing generally refers to the dissolution of irradiated SNF in acid, generating liquid or viscous wastes and the chemical processing to separate the fission products or transuranic elements of the SNF from the desired elements of plutonium and uranium, which are recovered for reuse. Liquid reprocessing wastes have been or are currently stored in large underground tanks at three DOE sites: the Savannah River Site (SRS) in South Carolina; the Idaho National Laboratory (INL) in Idaho; and, the Office of River Protection at the Hanford Site in Washington. Solid reprocessing wastes are liquid wastes that have been immobilized in solid form and are currently stored at SRS, INL and the West Valley Demonstration Project in New York.

DOE's interpretation of HLW is that reprocessing waste is non-HLW if the waste:

I. does not exceed concentration limits for Class C low-level radioactive waste as set out in section 61.55 of title 10, *Code of Federal Regulations*; or,

II. does not require disposal in a deep geologic repository and meets the performance objectives of a disposal facility as demonstrated through a performance assessment conducted in accordance with applicable regulatory requirements.

Under DOE's interpretation, waste meeting either of these criteria is non-HLW and may be classified and disposed of in accordance with its radiological characteristics.

The *Federal Register* notice states that, at this time, DOE is not making (and has not made) any

decisions on the disposal of any particular waste stream. Disposal decisions, when made, will be based on the consideration of public comments in response to the *Federal Register* notice and prior input and consultation with appropriate state and local regulators and stakeholders. DOE will continue its current practice of managing all its reprocessing wastes as if they were HLW unless and until a specific waste is determined to be another category of waste based on detailed technical assessments of its characteristics and an evaluation of potential disposal pathways, according to the *Federal Register* notice.

For additional information, please contact Theresa Kliczewski at HLWnotice@em.doe.gov or at U.S. Department of Energy, Office of Environmental Management, Office of Waste and Materials Management (EM–4.2), 1000 Independence Avenue SW, Washington, DC 20585 or at (202) 586-3301.

EM Assistant Secretary Discusses Contracting and Regulatory Reform

On September 4, 2018, U.S. Department of Energy (DOE) Environmental Management (EM) Assistant Secretary Anne Marie White delivered remarks regarding contracting and regulatory reform during her keynote address at the Rad Waste Summit.

Remarks

The following are the prepared remarks that were delivered by EM Assistant Secretary White during the Rad Waste Summit conference:

> *It's great to be here with you all. I see a lot of friends in the audience. Kicking off the Radwaste Summit is especially fun for me because of my history with the conference serving on the steering committee several times and also as a speaker in previous years, and yes, it was on one of my favorite topics, definition of high level waste. Well, all I can say is what a trip it's been so far. The support I've gotten from many of the people in this room has truly touched me and I am so grateful to have it.*
>
> *As I discuss priorities today, implicit in our chat is my ask for your continued support and constructive input over the next months and into what I hope will be a number of years of service in this role. The Department, and particularly the EM program, is fortunate to have a supportive and dynamic senior leadership team. Secretary Perry has great vision and a tremendous spirit to get work done at our sites. As EM-1, I hope to capitalize on their leadership to make some real cleanup progress during my tenure as Assistant Secretary.*
>
> *When I became EM-1 I took a long, hard look at the program. Now, for those of you who don't know, this wasn't all new to me. I've spent most of my career on the contractor side of the house within the EM program. While I hold a master's degree in nuclear engineering, I began my career performing field work, before forming my own small business in 1995. I could have gone straight to a desk, into research, or government service but I choose to go to the field as a contractor. I figured the best way to learn a business is by doing the work. OK, there was that little thing they called travel and per diem and that sounded like a perfect adventure to me.*
>
> *There hadn't been an order for a new commercial nuke plant in decades so I figured I'd go into this "new field" called environmental restoration. It was exciting.*

It was new, people hadn't quite figured out just what it was or how to do it and there was room for creativity and problem solving…two of my favorite things. So, this experience base and perspective is what brings me to some priorities I see for EM and, maybe more importantly, some philosophies.

People have asked me what some of the most surprising things I've found since becoming EM-1. One for sure is the fact there have been 7 EM-1s since 2010. Of those, only 3 have been confirmed, including me. That approximates to only a handful of years of confirmed EM-1 time at the helm. No wonder it sometimes seems the program is inconsistent.

Also surprising to me is even given that turnover rate, folks have urged me to come up with "my" 3 or 4 things and focus on those. I want to be clear … the program priorities need to be owned by all of us, me, our federal workforce, the contractors and our stakeholders. EM comprises a major portion of the third biggest liability to the American taxpayer. We owe it to them to use the funding we are generously given to run this program efficiently and effectively while always keeping in mind our legal, moral and ethical obligations to the host communities of our sites. We have an obligation to the American people to see to it that the trajectory of our liabilities goes downward while ensuring the safety of the public and our workers.

I know from my time in the field, the contractors at the workforce day in and day out are the people who deliver progress and they deserve our utmost respect and support. Our work must always be performed with attention to worker safety and environmental compliance. From my office on down to the subcontractors, we must find ways to overcome barriers and "get to yes" safely. If we cannot provide a safe worksite then we will not be able to carry out the rest of our mission. Incidents on the worksite too often lead to over-corrections that are expensive, time-consuming, and distract from environmental cleanup. No shortcuts guys!

EM has accomplished a large part of the mission and we continue to make progress on a daily basis. However the hardest work is still to be done. The analogy that comes to mind is losing weight. It comes off fast in the beginning then you reach a plateau and it can be frustrating to get past that and sometimes aggressive measures are needed to break through. That's where we are today in this program.

So, in the interest of creating stable mission focus, a completion mindset and a clarity of purpose, EM, over the coming months, will be developing an Enterprise Wide EM Strategic Plan supported by a set of consistent, site-specific 10-year strategic plans focused on completion and closure. The plans will be developed in collaboration with headquarters, the sites, our contractors and other stakeholders.

Secretary Perry and DOE leadership have tasked me with the responsibility to see that EM produces results and I intend to see to it they are not disappointed. DOE leadership has given me their support to head EM in the right direction moving forward while we continue our success at places like K-basin, River Corridor, ETTP and West Valley. Our job is to fix environmental problems created, in some cases, almost 75 years ago using a structure for prioritization and decision-making that's more than a decade old. That doesn't work in business and, in my mind, it's not a sound basis for addressing

the environmental liabilities it is our job to remediate. We know what we can do, and we know what's needed and we know what's not. I want us all to remember this because the obligation we all share animates my thoughts every day as EM-1. So how do we move forward?

My answer is: Collectively, we have to think bigger and smarter about how to get to completion. We need to think about how to reinvigorate the completion mindset that used to exist in the program. And we need to work together with our industry partners, while holding ourselves, on both the contractor and federal side, accountable to meet our commitments. We all need to bring our A-game and our A-teams.

We also need some big step changes in how we carry out mission. Several big step changes I think can most quickly invigorate and transform EM are new approaches to contracting, regulatory reform and choices regarding allocation of funds. It's no secret we have billions of dollars' worth of contracting opportunities coming up that will shape our work for decades. We want EM contracts to reflect workscopes with accelerated end-states that get sites closer to their future land-use mission faster. To get there faster, we need to know there is an end in sight and what that end is.

To support this step change we have begun our end state contracting initiative. We had an industry day out at Hanford recently and the input we've received from our contractor community has been very helpful in shaping our shared path forward. We are looking forward to working with our federal staff, contractors and stakeholders as we implement this procurement approach. We want to take lessons from our past big successful completions, like Rocky Flats, Fernald, Mound and Oak Ridge K-25 and incorporate those into our procurement strategies. We need to make sure we are incentivizing behaviors that support efficient cleanup, done cost effectively, safely and compliantly. Going forward these are the factors we will hold ourselves and our contractors accountable for through our contracting structure, including fee.

Not only do we need to work with industry on how we collectively approach contracts and contracting, we need to commit to improving our relationships and performance among our federal and contractor partners, both at the site and the corporate level. I know you've heard this before, but I want to focus on a "manage the contract/not the contractor" approach. To do this, we have to have contracts that make that possible, while ensuring appropriate federal oversight is effective, right-sized and cost-conscious. With the right procurement approach and contracting strategy, with truly incentivized end states, I expect the natural outcome will be strong performance and accountability with safety and compliance a cornerstone of our work execution.

Make no mistake, I will expect superior performance and there will be generous fee associated with that performance. I will expect you will bring your "A Teams" to our sites for the long term and to engage with our communities. And I will expect you will work to identify and remedy issues early and keep us fully engaged so there are no cost and schedule surprises. You can expect from us improvements in the procurement process and the way we manage contracts. If we expect strong performance from you, we must create an environment in which

that's possible. Your feedback in this area is of the utmost importance to me.

In the area of regulatory reform we have been and will continue to be very forward leaning, consistent with the initiatives out of the Deputy Secretary's office. That said, regulatory reform is hollow without full implementation. When we achieve regulatory reforms, which is a big part of what I expect to do, we must make sure those reforms are fully implemented in the field. I can remember from my years in the field hearing something on high had changed and we all thought something would change. Then it didn't…because it wasn't fully incorporated into our day-to-day work. We need to work together to ensure what we get accomplished at headquarters in this area has meaningful impact through full implementation. I'm counting on industry's help on this.

Areas we are actively working now include:

- *·Interpretation of the definition of high level waste to be based on the content of the waste rather than source…an admitted semi-obsession for me.*
- *Reforming 10 CFR 830 and the associated implementation standards and directives.*
- *Re-looking at how we implement DOE order 413.3 for D&D and other remedial actions.*
- *Freezing the code of record…we did that one! Now it's onto implementation.*

Another area we are looking hard at is hotel load or minsafe. I think it may be safe to say we are sometimes our own worst enemy in this area. As I've begun looking closely at this issue it seems to me there are significant areas where we can mine money our of this bucket, still maintain our sites, focus a right sized federal oversight approach in our ownership role but move some of this money into meaningful progress. I've challenged my site folks to dive into this and, as I'm working through hiring actions, developing the analytical capability at headquarters to fully leverage these opportunities has been a high priority for me.

In early October we will be putting together an approach to evaluate these opportunities and we will be looking for industry input as we move out in this area.

So, I'd be remiss if I didn't mention the work we have been doing with EFCOG. We've had a number of meetings that have been very productive and I intend to fully leverage their support. We've created a set of actionable items that EFCOG went to work on quickly. I've already received meaningful input back from industry and we will be working to action that input to create some real change in the program. Stay tuned over the next 30 days or so.

The EM mission is pretty clear…reduce taxpayer liabilities by closing sites. We have a legal, moral and ethical responsibility to the communities that host these sites to complete our cleanup mission. We must be good stewards of tax dollars, create meaningful partnerships between the federal workforce and our contractors, highly respect our talented workers who are in the field every day delivering our mission, work closely with our stakeholders and ensure our work is conducted safely and compliantly.

As we look to the future, we need to work together to safely achieve meaningful, discrete and tangible progress through action in accomplishing our mission. Congress and the country look to us to

reduce the nation's environmental liability. It is my hope to provide the program with a clarity of purpose, re-invigorate the completion mindset, and move sites toward definable end states leading to ultimate closure.

Background

White was sworn in as EM Assistant Secretary on March 29, 2018. (See *LLW Notes*, March/April 2018, p. 30.

White is the founder of Bastet Technical Services, LLC — a consulting firm that has been engaged in providing strategic solutions to solve complex environmental challenges across the DOE complex. She has more than 25 years of experience across a broad range of activities within the nuclear field, mainly focused on project and program management projects with complex technical, regulatory, and stakeholder challenges.

"She has industry-recognized credentials in technical skills that lead to sound, technically underpinned, cost effective solutions," stated an earlier announcement. "She has extensive hands on in the field experience at many of the Environmental Management sites for which she will have responsibility."

White, who has supported a number of emerging nuclear power nations to develop legal and regulatory structures and national policies, received a Master's Degree of Science in Nuclear Engineering from the University of Missouri-Columbia.

For additional information, please go to www.energy.gov.

U.S. Nuclear Regulatory Commission (NRC)

GTCC Draft Regulatory Basis Decoupled from Part 61 Rulemaking

On October 23, 2018, a Staff Requirements Memorandum (SRM) was issued that directs U.S. Nuclear Regulatory Commission (NRC) staff to "decouple to the extent practicable the issuance of the draft Regulatory Basis directed in SRM-SECY-15-0094, 'Historical and Current Issues Related to Disposal of Greater-than-Class C Low-Level Radioactive Waste,' from Commission action on Part 61."

The SRM states, "This decoupling would allow for earlier public engagement on staff's analysis of any potential regulatory barriers to the disposal of Greater-than-Class C waste."

The SRM was issued following a staff briefing for the Commission on topics associated with the decommissioning and low-level radioactive waste, as well as spent fuel storage and transportation business lines.

Overview

In SRM–SECY–15–0094, which was issued on December 22, 2015, the Commission directed the NRC staff to develop a regulatory basis for disposal of Greater-than-Class C (GTCC) and transuranic waste through means other than a deep geologic disposal (including near surface disposal) within six months of the completion of the final rule for Part 61 of title 10 of the *Code of Federal Regulations*, "Low-Level Radioactive Waste Disposal." (See *LLW Notes*, January/February 2017, p. 26.) The Commission also directed the staff to conduct a public workshop during the development of the regulatory basis to receive input from stakeholders. On September 8,

2017, in SRM–SECY–16–0106, "Final Rule: Low- Level Radioactive Waste Disposal," the Commission revised its earlier directions regarding the development of the GTCC and transuranic waste regulatory basis. (See *LLW Notes*, September/October 2017, pp. 1, 21-23.) Specifically, the Commission directed the staff to develop the regulatory basis six months after the publication of the supplemental proposed rule for the 10 CFR Part 61 rulemaking.

The NRC staff is in the initial phase of implementing the Commission's directions in SRM–SECY–15–0094 and SRM–SECY–16–0106. Accordingly, on February 14, 2018, NRC issued a *Federal Register* notice announcing that the agency is seeking stakeholder participation and involvement in identifying the various technical issues that should be considered in the development of a regulatory basis for the disposal of GTCC and transuranic radioactive waste through means other than a deep geologic disposal, including near surface disposal. (See 83 *Federal Register* 6,475 dated February 14, 2018.)

According to the NRC, "[t]he process of potentially amending the NRC's regulations is very thoughtful and deliberative because it can have significant impacts on members of the public, [s]tates, licensees and other stakeholders." The regulatory basis describes the various scientific, technical and legal issues associated with a potential rulemaking. Therefore, as a part of the initial steps in implementing the Commission's directions, the staff held a public meeting with stakeholders on February 22, 2018 to identify the various technical issues that should be considered in the development of a regulatory basis for the disposal of GTCC and transuranic waste. The staff also requested that stakeholders respond to specific listed questions contained in the *Federal Register* notice that was issued on February 14, 2018. Stakeholder comments were accepted through April 16, 2018. (See *LLW Notes*, January/February 2018, pp. 29-33.)

When this initial phase is completed, staff plans to develop a regulatory basis, which will be provided for public review. Staff plans to hold public meetings on the draft regulatory basis as well. Once all of the foregoing is completed, the staff will develop a final regulatory basis.

Background

The NRC's "Licensing Requirements for Land Disposal of Radioactive Waste" are provided in 10 CFR Part 61. Section 10 CFR 61.2, "*Definitions,*" provides that waste as used in Part 61 means those low-level radioactive wastes containing source, special nuclear or byproduct material that are acceptable for disposal in a land disposal facility. The definition also indicates that low- level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of byproduct material in § 20.1003.

The Statements of Consideration (SOC) for the 10 CFR Part 61 proposed rule explained that not all waste may be suitable for disposal in the near surface. Specifically, Section IV, "*Purpose and Scope,*" of the SOC indicates that, while 10 CFR Part 61 was intended to deal with the disposal of most low-level radioactive waste defined by the Low-Level Radioactive Waste Policy Act, the 10 CFR Part 61 waste classification system identified some low-level radioactive wastes that are not suitable for disposal under its regulatory framework, and alternative methods would have to be used.

In § 61.55, "*Waste classification,*" the NRC developed a classification system for waste for near surface disposal, which categorizes waste as Class A, B or C. This provision also describes waste that is not generally acceptable for near-surface disposal, whose disposal methods must be more stringent than those specified for Class C waste. This waste is referred to as GTCC waste.

Nuclear power reactors, facilities supporting the

nuclear fuel cycle and other facilities and licensees outside of the nuclear fuel cycle generate the GTCC waste. This class of wastes include:

- plutonium- contaminated nuclear fuel cycle wastes;
- activated metals;
- sealed sources; and,
- radioisotope product manufacturing wastes – i.e., wastes "occasionally generated as part of manufacture of sealed sources, radiopharmaceutical products and other materials used for industrial, education, and medical applications."

Transuranic waste is not included in the § 61.2 definition of low-level radioactive waste. In a 1988 amendment to the Atomic Energy Act of 1954, as amended, a definition for transuranic was added. Transuranic waste is defined as "material contaminated with elements that have an atomic number greater than 92, including neptunium, plutonium, americium, and curium, and that are in concentrations greater than 10 nanocuries per gram [(nCi/g)], or in such other concentrations as the [U.S.] Nuclear Regulatory Commission may prescribe to protect the public health and safety." Transuranic waste is a byproduct of nuclear research and power production and is primarily produced from spent fuel recycling, medical isotope production or nuclear weapons fabrication. The waste may consist of rags, tools and laboratory equipment contaminated with organic and inorganic residues.

The identification and evaluation of regulatory concerns associated with land disposal of GTCC and transuranic waste will largely depend on the characteristics of the wastes – i.e., isotopes; concentrations and volumes of waste; and, physical and chemical properties. The variable characteristics of the waste can influence the decision regarding the appropriate regulatory approach to use for management and disposal of these wastes. Overly conservative assumptions for the inventory and characteristics could significantly limit disposal options, whereas, overly optimistic assumptions with respect to characteristics could lead to a disposal facility that may not provide adequate protection of public health and safety and security.

For additional information, please contact Cardelia Maupin of the NRC's Office of Nuclear Material Safety and Safeguards (NMSS) at (301) 415–4127 or at Cardelia.Maupin@nrc.gov.

APR1400 Reactor Receives Final SER and Standard Design Approval

On October 5, 2018, the U.S. Nuclear Regulatory Commission issued a final safety evaluation report and standard design approval for Korea Electric Power Corporation and Korea Hydro & Nuclear Power's Advanced Power Reactor 1400 (APR1400).

The approval, which indicates the NRC finds the design technically acceptable but does not fully certify the design, is valid for 15 years. Separately, the NRC is preparing a rulemaking to fully certify the design for use in the United States.

Background

On December 23, 2014, both companies submitted an application to certify the APR1400 for use in the United States. The design, as approved, would produce approximately 1,400 megawatts of electricity. The APR1400 features enhanced systems to safely shut down the reactor or mitigate the effects of an accident.

Next Steps

Neither a standard design approval nor design certification grant permission to build or operate a reactor. Full certification, if granted by the Commission following the staff's recommendation, is valid for 15 years and allows a utility to reference the design when applying for a Combined License to build and operate a nuclear power plant.

Other Reactor Designs

The NRC has certified five other designs: the Advanced Boiling Water Reactor, System 80+, AP600, AP1000 and the Economic Simplified Boiling Water Reactor. The staff is reviewing applications to certify two other designs: the U.S. Advanced Pressurized Water Reactor and the NuScale small modular reactor. The staff is also reviewing an application to renew the ABWR certification.

Additional information about the APR1400 design review is available on the NRC's web site at www.nrc.gov. For additional information, please contact Scott Burnell of the NRC at (301) 415-8200.

NRC Issues Information Notices and Regulatory Issue Summaries

From August through October 2018, the U.S. Nuclear Regulatory Commission (NRC) released two new Regulatory Issue Summary (RIS) documents, as well as the two new Information Notice (IN) documents for calendar year 2018.

Regulatory Issue Summaries

NRC released the following RIS documents in September and October 2018:

- RIS 2018-04, *Notice of Issuance of Enforcement Guidance Memorandum — Interim Guidance for Dispositioning Apparent Violations of 10 CFR Parts 34, 36 and 39 Requirements Resulting from the Usage of Direct Ion Storage Dosimetry During Licensed Activities,* was issued on September 11, 2018 in regard to the dispositioning of inspection findings related to use of direct ion storage (DIS) dosimetry during NRC-licensed activities.

- RIS 2018-05, *Supplier Oversight Issues Identified During Recent NRC Vendor Inspections,* was issued on October 5, 2018 to inform addressees of the applicable regulatory requirements for procuring basic components for NRC-licensed facilities and for providing oversight of their suppliers, including the implementation by suppliers of quality assurance (QA) programs based on specified standards, as well as to inform the addressees of common violations and non-conformances that the NRC has identified during recent vendor inspections.

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

Information Notices

NRC released the following IN documents in August and September 2018:

- IN 2018-10, *Thermal Sleeve Flange Wear Leads to Stuck Control Rod at Foreign Nuclear Plant,* was issued on August 29, 2018 to inform addressees about recent operating experience (OE) related to Westinghouse (WEC) nuclear steam supply system plants that have thermal sleeves in the control rod

drive mechanism (CRDM) penetration tubes. The available OE demonstrates the potential for these components to experience wear of the thermal sleeve flange from contact against the CRDM penetration tube. The resulting wear can have significant consequences, which were not previously considered for WEC designed pressurized water reactors (PWRs). IN 2018-10 is intended to raise industry awareness regarding this issue for similar designed PWRs. The NRC expects that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems.

- IN 2018-11, *Kobe Steel Quality Assurance Record Falsification,* was issued on September 24, 2018 to alert addressees to a widespread quality assurance (QA) record falsification at Kobe Steel Limited (Kobe Steel) that took place over five decades, from the 1970's until recently.

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

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- 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**

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

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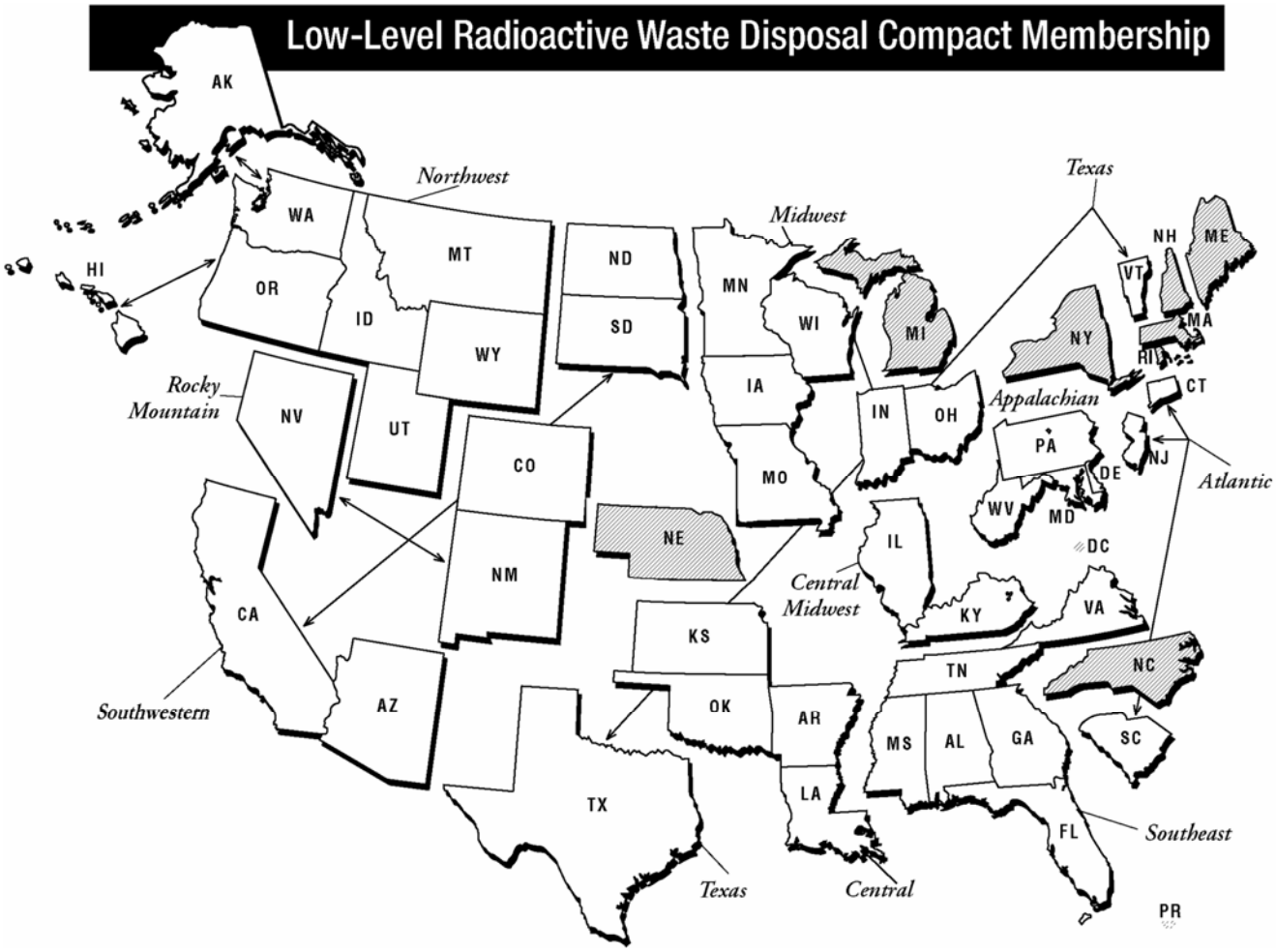

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