LLW notes

Volume 34 Number 1 January/February 2019

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

DOE Assistant Secretary Anne White to Give Plenary Presentation at Spring 2019 LLW Forum Meeting

Anne White, Assistant Secretary for Environmental Management at the U.S. Department of Energy (DOE), will give the plenary presentation for the upcoming Low-Level Radioactive Waste Forum (LLW Forum) meeting on the morning of Wednesday - April 17, 2019.

As a reminder, the hotel block for the spring 2019 LLW Forum meeting will be closing on March 16, 2019. Stakeholders are therefore encouraged to register and make hotel reservations at your earliest convenience, as there is limited space available in our discount room block.

The meeting 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. 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).

The meeting documents — including a meeting bulletin and registration form — have been posted to the LLW Forum Meeting page of the organization's web site at http://llwforum.org/llw-forum-meeting/. As a new option for interested stakeholders, a registration form may be completed and submitted online.

Program

The following topics and speakers are scheduled for the spring 2019 LLW Forum meeting:

- Radiation Source Protection and Security Task Force Report – Margaret Cervera, U.S. Nuclear Regulatory Commission (NRC)

- Reactor Decommissioning Rule – Bruce Watson, NRC

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

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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.

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Editor and Writer: Todd D. Lovinger
Layout and Design: Rita Houskie, Central Interstate Low-Level Radioactive Waste Compact

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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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LLW FORUM, INC.

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

Key to Abbreviations

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

(Continued from page 1)

- National Terrorism Advisory System – Duane White, NRC

- interpretation of the statutory term "high-level radioactive waste" and impacts thereof – Theresa Kliczewski, DOE

- depleted uranium inventory program including volumes, safe management, storage locations and conversion/de-conversion program – Jaffet Ferrer-Torres, DOE

- U.S. Environmental Protection Agency (EPA) current activities and items of relevant interest – *to be determined,* EPA

- panel re issues and differences regarding waste classifications systems in the United States and internationally – Larry Camper, consultant (discussion leader); Tom Peake, EPA; Lisa Edwards, Electric Power Research Institute (EPRI); Boby Abu-Eid, NRC; Justin Marble, DOE, Tom Magette, Talisman

- Nuclear Energy Institute (NEI) presentation on current market trends, Hill activities, operating plant status, new reactors fuel work or anything of a broad industry nature – *to be determined*, NEI

- federal licensee's experience in moving an irradiator – Catherine Ribaudo, National Institute of Health (NIH)

- updates and activities re the Clive low-level radioactive waste disposal facility in Tooele County, Utah including Utah regulatory program and the Energy*Solutions'* Clive facility including depleted uranium performance assessment; consideration of allowing further disposal of Class A sealed sources; request for exemption from mass and concentration limits; modifications to Part B permit; requests to modify certain contingency plans; license and permit updates; and, legislative updates – Don Verbica, Utah, and Vern Rogers, Energy*Solutions*

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-Organized Panel at Waste Management Conference

Monday (March 4, 2019) in Room 102BC at Phoenix Convention Center

The Low-Level Radioactive Waste Forum (LLW Forum) has organized a panel for the 2019 Waste Management (WM) conference titled, *Hot Topics and Emerging Issues in U.S. Commercial Low-Level Radioactive Waste Management and Disposal.*

The WM conference will be held at the Convention Center in Phoenix, Arizona from March 3-7, 2019. The LLW Forum-organized Panel 016 is scheduled for Monday (March 4, 2019) from 1:50 – 3:10 p.m. in Room 102BC.

Interested stakeholders may register and obtain additional information at www.wmsym.org.

Overview

The 2019 WM conference theme is "Encouraging Young Men & Women to Achieve Their Goals in Radwaste Management." The conference focus is promoting the next generation of radwaste management professionals so that young professionals are strongly encouraged to get involved. The 2019 WM conference plans to have several special programs to encourage and support their participation.

LLW Forum-Organized Panel

The LLW Forum typically organizes a panel for the WM conference titled, *Hot Topics and Emerging Issues in U.S. Commercial Low-Level Radioactive Waste Management.* The LLW Forum-organized panel focuses on emerging issues in U.S. commercial low-level radioactive waste management from the perspective of active members of the LLW Forum. During the panel, state, compact, federal and industry officials share their views on a variety of timely and significant topics related to low-level radioactive waste management, disposal and related issues.

The LLW Forum-organized Panel 016 is scheduled for Monday (March 4, 2019) from 1:50 – 3:10 p.m. in Room 102BC. The panel will include the following speakers and topics:

- John Tappert
  Director
  Division of Decommissioning, Uranium Recovery and Waste Programs
  Office of Nuclear Material Safety and Safeguards
  U.S. Nuclear Regulatory Commission

  topic description: updates regarding current and planned agency activities, initiatives and rulemakings such including the 10 CFR Part 61 rulemaking including the October 2018 SRM that directs agency staff to decouple the Greater-than-Class C (GTCC) draft regulatory basis; the Very Low-Level Waste (VLLW) scoping study; the alternative disposal request guidance revision; the uniform manifest guidance revision; the Greater-than-Class C waste regulatory basis; and, the issuance of new regulations on the decommissioning of nuclear power plants

- Eddie Selig
  General Manager
  Advocates for Responsible Disposal in Texas

  topic description: provide an overview of recent, ongoing and planned activities in the State of Texas related to low-level radioactive waste management and disposal including ARDT's efforts to support waste management and disposal activities in Texas; a brief overview Waste Control Specialists (WCS) operations since the change in ownership and management and the company's stated future vision; the Texas Commission on Environmental Quality (TCEQ) requested reduction in rates and the anticipated impact on waste volumes; and, the recently released Joint Compact Facility Legislative Oversight Committee report

- Joe Weismann
  Vice-President of Radiological Programs
  US Ecology, Inc.

  topic description: provide an overview of ongoing and planned company activities, as well as perspectives on select hot topic issues in the field of low-level radioactive waste management and disposal

- Temeka Taplin
  Physical Scientist
  Office of Radiological Security
  National Nuclear Security Administration

  topic description: discuss how the lack of disposal access for foreign origin americium affects security; the cesium irradiator replacement program; and, recently issued supplemental guidance on disused source

management via the Code of Conduct of the International Atomic Energy Agency (IAEA)

Background

The annual WM conference, presented by WM Symposia (WMS), is an international symposium concerning the safe and secure management of radioactive wastes arising from nuclear operations, facility decommissioning and environmental remediation, as well as storage, transportation and disposal and associated activities. WMS was founded to provide a forum for discussing and seeking cost-effective and environmentally responsible solutions for the safe management and disposition of radioactive waste and radioactive materials.

The WM 2019 conference marks the 45th annual Waste Management Symposium. The conference provides an opportunity for stakeholders to connect with the worldwide nuclear community in a forum for discussing and seeking safe and cost-effective solutions to managing and dispositioning radioactive waste and decommissioning nuclear facilities. The WM 2019 conference will feature more than 500 papers and over 40 panel discussions in 130 plus technical sessions complemented by the industry's largest annual exhibition of nearly 200 companies.

Supporting Organizations

Supporting organizations include the American Nuclear Society (ANS), the International Atomic Energy Agency (IAEA), the International Framework for Nuclear Energy Cooperation (IFNEC) and the Organization for Economic Co-operation and Development/Nuclear Energy Agency (OECD/NEA).

The conference is also organized in cooperation with the U.S. Department of Energy (DOE), the U.S. Nuclear Regulatory Commission (NRC), the U.S. Environmental Protection Agency (EPA) and the U.S. Department of Defense (DoD).

For additional information on the Waste Management Conference, please call (480) 557-0263 or email to shelley@wmarizona.org. For technical program questions, please contact WM Deputy Managing Director and Program Advisory Committee (PAC) Chair Gary Benda at (803) 317-1116 or at gbenda@wmarizona.org.

Altantic Compact/State of New Jersey

Salem Nuclear Reactor Shut Down Due to Freezing Temperatures

On January 31, 2019, a reactor at the Salem Nuclear Power Plant in New Jersey was shut down due to below-freezing temperatures.

Overview

According to a spokesperson for the U.S. Nuclear Regulatory Commission (NRC), control-room operators shut down the Salem Unit 2 reactor at 3:00 a.m. ET after ice accumulated on screens that are used to filter out debris before water from the Delaware River is pumped into the plants. A PSEG spokesperson confirmed that the reactor was still offline later in the afternoon.

In 2010, the plant experienced a similar shutdown as a result of ice blocking the filter screens, which are 70-feet tall. Each reactor has six pumps that move water in and out of the river. The pumps trip when water is not pushed through the filters.

According to the PSEG spokesperson, Unit 2 lost four circulating pumps within five minutes on Thursday due to the extreme weather. However, an NRC resident inspector that responded to the incident did not identify any safety concerns.

“There were no complications during the shutdown, with all plant systems responding normally,” stated the PSEG spokesperson. “Our inspectors at the plant will continue to follow up on the event.”

In response to the shutdown, Salem Unit 1 reduced power to 88 percent.

Background

Salem Unit 2 is one of three nuclear plants operated by PSEG Nuclear at the Artificial Island generating site in the Lower Alloways Creek Township of New Jersey.

PSEG is seeking $300 million in ratepayer subsidies to keep the Salem plants open in the face of competition from cheaper natural gas. The New Jersey Rate Counsel, an independent state agency representing consumers, disputes PSEG’s position.

Atlantic Compact/State of South Carolina

Dominion Energy and SCANA Complete Merger

On January 2, 2019, Dominion Energy, Inc. and SCANA Corporation announced that they have completed their proposed merger, which will impact customers and communities in Georgia, North Carolina and South Carolina.

"Dominion Energy is pleased to add SCANA's fast-growing, high-performing Southeastern businesses to our 18-state footprint,” said Dominion Energy Chair, President and Chief Executive Officer Thomas Farrell, II. “Together, we are committed to providing safe, dependable, affordable and clean energy to the communities served by SCANA and to maintaining its excellent record of reliability and customer service."

"Today marks a significant milestone in the history of Dominion Energy and SCANA,” stated SCANA Chief Executive Officer Jimmy Addison. “Employees at our respective companies have been working hard for months on integration planning, and I am confident that will

lead to a smooth transition. These two companies share common values, and this combination provides SCANA's businesses with the scale and stability to meet customers' growing energy needs in the years to come. I am particularly proud that despite the intense efforts that went into planning for the integration and attaining approval of the combination of the companies over the past year, employees across our three-state region maintained their focus on providing energy to our customers safely and reliably. We will now hit the ground running with Dominion Energy and embrace change."

Dominion Energy's Operations

The merger expands Dominion Energy's operations in Georgia and the Carolinas, where the company was already operating an electric utility serving 120,000 customer accounts in northeastern North Carolina; a 1,500-mile interstate pipeline principally in South Carolina; and, nearly 1,000 megawatts of gas, hydro and solar generating capacity in all three states.

Following the merger, Dominion Energy now serves:

- 3.3 million electric utility customer accounts in North Carolina, South Carolina and Virginia;
- 3.3 million natural gas utility customer accounts in Idaho, North Carolina, Ohio, South Carolina, Utah, West Virginia and Wyoming; and,
- 800,000 competitive and regulated, last-resort natural gas customer accounts in states with competitive markets.

Dominion's operations now include:

- 93,600 miles of electric transmission and distribution lines;
- 106,400 miles of natural gas gathering, storage, transmission and distribution pipeline;
- approximately 31,000 megawatts of diverse electric generation capacity in 10 states; and,
- more than a trillion cubic feet of natural gas storage.

Southeast Energy Group

"The addition of SCANA makes geographic sense and aligns well with our core, regulated energy businesses," stated Farrell. "These are well-run regulated operations that we expect will help improve Dominion Energy's risk profile and growth outlook."

SCANA Corporation will be a first-tier, wholly owned subsidiary of Dominion Energy. A new operating segment, the Southeast Energy Group, will manage its operating companies – including South Carolina Electric & Gas Company (SCE&G), Public Service Company of North Carolina, Incorporated (PSNC Energy), and SCANA ENERGY MARKETING, INC. (SEMI) – and its services company.

The Southeast Energy Group will be Dominion Energy's fourth operating segment. The other three segments include the Power Delivery, Power Generation and Gas Infrastructure Groups. The Southeast Energy Group will maintain a significant local presence with a local management structure. The President and Chief Executive Officer will report directly to Farrell.

Benefits and Commitments

On July 31, 2017, SCE&G abandoned the construction of two new nuclear units at V.C. Summer Nuclear Station in Jenkinsville, South Carolina. (See *LLW Notes,* July/August 2017, pp. 7-8.) According to Dominion Energy's press release, the typical monthly bill for an SCE&G electric customer using 1,000 kilowatt-hours had

risen to more than $147 by the time the reactors' construction was halted.

After announcement of the merger, SCE&G, which is a principal subsidiary of SCANA, filed a petition with the Public Service Commission of South Carolina (PSC) seeking approval of its abandonment plan. (See *LLW Notes,* January/ February 2018, pp. 6-9.) During the summer of 2018, South Carolina's legislature passed a law that the PSC implemented, temporarily reducing the bills for an SCE&G electric customer using 1,000 kilowatt-hours to $125.34 per month.

Under a new plan approved by the South Carolina PSC, the typical SCE&G residential electric customer will pay approximately $125 per month. (See LLW Forum News Flash titled, "South Carolina Regulators Approve Dominion's Buyout of SCANA," dated December 18, 2018.) According to Dominion Energy, the new bill level was made possible by the company's proposal – which was approved by the PSC – to provide customer refunds in the form of monthly bill relief of more than $2 billion, amortized over 20 years, and the write-downs and absorption of about $2.5 billion in financing obligations, regulatory assets and a natural gas-fired power station. Dominion Energy will also provide bill credits of $3.75 million over three years to PSNC Energy's 564,000 gas utility customers and $2.45 million over three years to SCE&G's 370,000 gas utility customers.

Dominion Energy has also committed to the following:

- maintaining compensation levels for employees of SCANA and its subsidiaries until at least January 1, 2020 and extending the base pay continuation or severance for all non-executive employees to at least July 1, 2020;

- maintaining SCANA's customer service levels at or above current levels;

- increasing SCANA's corporate and charitable giving by $1 million per year for at least five years in SCANA's communities, including increasing PSNC Energy's charitable contributions by $150,000 in 2019;

- implementing an EnergyShare-like program in South Carolina to assist low-income, elderly, disabled and veteran customers;

- agreeing to a freeze in base rates for SCE&G's electric customers at current levels until January 1, 2021;

- agreeing to a freeze in base rates for PSNC Energy's customers at current levels until at least November 1, 2021; and,

- appointing a member of the SCANA Board of Directors or its Executive Management Team to Dominion Energy's Board of Directors.

Background

Following the bankruptcy filing of Westinghouse Electric Company, LLC (WEC), SCE&G and Santee Cooper each began a comprehensive process of evaluating the most prudent path forward for the new V.C. Summer nuclear reactors. The project owners worked with WEC and Fluor Corporation, as well as other technical and industry experts, to evaluate the project costs and schedules.

Based on this evaluation and analysis, SCE&G concluded that completion of both new nuclear reactors would be prohibitively expensive. According to SCE&G's analysis, the additional cost to complete both reactors beyond the amounts payable in connection with the engineering, procurement, and construction contract would materially exceed prior WEC estimates, as well as the anticipated guaranty settlement payments from Toshiba. Moreover, in order to qualify for production tax credits under current tax rules, the new reactors would need to be online before January 1, 2021. SCE&G's

analysis concluded that the new reactors could not be brought online until after this date.

SCE&G also considered the feasibility of completing the construction of Unit 2 and abandoning Unit 3 under the existing ownership structure and using natural gas generation to fulfill any remaining generation needs. This option provided a potentially achievable path forward that may have delivered SCE&G a similar megawatt capacity as its 55% interest in the two reactors and provided a long-term hedge against carbon legislation/regulation and against gas price volatility. SCE&G had not reached a final decision regarding this alternative when Santee Cooper determined that it would be unwilling to proceed with continued construction. Consequently, SCE&G determined that it is not in the best interest of customers and other stakeholders for it to continue construction of one reactor.

Based on the evaluation and analysis, and Santee Cooper's decision, SCE&G has concluded that the only remaining prudent course of action would be to abandon the construction of both Unit 2 and Unit 3 under the terms of the Base Load Review Act (BLRA). Accordingly, normal construction activities at the site were immediately ceased and efforts were shifted toward an orderly transition of winding down and securing the project property. SCE&G planned to use the anticipated payments resulting from the settlement of Toshiba's guaranty to mitigate cost impacts to SCE&G electric customers.

Dominion Energy is one of the largest energy utility companies in the United States, with 16,200 employees and operations in 18 states. It delivers electricity and natural gas to nearly 5 million homes and businesses, and its operations include 25,600 megawatts of electric generating capacity; 66,300 miles of natural gas gathering, transmission, distribution and storage pipelines; 64,200 miles of electric transmission and distribution lines; and, one of the nation's largest natural gas storage systems.

SCANA Corporation — which is headquartered in Cayce, South Carolina — is an energy-based holding company principally engaged, through subsidiaries, in electric and natural gas utility operations and other energy-related businesses.

For additional information, please contact Ryan Frazier of Dominion at (804) 819-2521 or at C.Ryan.Frazier@dominionenergy.com or Grant Neely of Dominion at (804) 771-4370 or at Grant.Neely@dominionenergy.com or go to www.dominionenergy.com or www.scana.com.

Central Interstate Compact

Central Interstate Compact Commission Holds Teleconference Meeting

On February 12, 2019, the Central Interstate Low-Level Radioactive Waste Commission held a special meeting. The meeting — which was held by teleconference — began at 10:00 a.m. CDT.

The purpose of the meeting was for the approval of minutes of the June 19, 2018 annual meeting; approval of the fiscal year 2017-2018 audit done by Cochran, Head, Vick & Company; vote regarding the Low-Level Radioactive Waste Forum (LLW Forum) hosting the Commission's web page; and, all other business to come before the Commission.

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

1. Call to Order and Roll Call (Chair)

2. Identify Members of the Public on Conference Line

3. Introduce New Commissioner from Oklahoma, Kelly Dixon

4. Approval of Minutes of the June 19, 2018 Annual Meeting
   A. Questions/Discussion by Commissioners
   B. Questions/Discussion by Public
   C. Roll Call Vote

5. Approval of Cochran, Head, Vick & Company Audit for Fiscal Years 2017-2018
   A. Questions/Discussion by Commissioners
   B. Questions/Discussion by Public
   C. Roll Call Vote

6. Vote Regarding LLW Forum Hosting Commission's Web Page
   At the June 2018 Annual Meeting, Cecilia Snyder of the LLW Forum presented information about the LLW Forum's proposal to develop and host the Commission's website.
   A. Questions/Discussion by Commissioners
   B. Questions/Discussion by Public
   C. Roll Call Vote

7. Adjourn

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

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

Northwest Compact/State of Idaho

Limited Operations Authorized at US Ecology Waste Site Following Explosion

On February 7, 2019, the Idaho Department of Environmental Quality (DEQ) authorized US Ecology to restart some operations at a waste facility following a November 2018 explosion that killed one worker and injured eight others.

The following day, US Ecology Idaho received a number of shipments. According to the company, additional shipments are expected shortly. In addition, some FUSRAP waste remains in rail cars awaiting disposal, while other waste is currently onsite that meets the disposal criteria, according to US Ecology officials.

US Ecology plans to resume drum processing, waste treatment and other waste management services in the future, although the dates therefore remain unspecified.

Incident

The incident originally occurred at US Ecology's 328-acre hazardous waste disposal operation near the city of Grand View, Idaho on November 17, 2018. The resultant blast blew holes in the roof of the facility that is used for processing waste barrels. An equipment operator was killed and eight employees suffered non-life-threatening injuries. The Idaho landfill, however, was not damaged in the incident.

US Ecology, Idaho DEQ, the U.S. Environmental Protection Agency (EPA) and the federal Occupational Safety and Health Administration (OSHA) all continue to investigate the cause of the explosion. According to a press release, US Ecology has made significant progress in understanding the event and is analyzing samples

and other data collected in the wake of the explosion.

Authorization

The Idaho DEQ authorization was issued in response to a request from US Ecology Idaho that was submitted on January 25 2019. According to an Idaho DEQ press release, the state agency issued the authorization after "certification that the landfill cells are ready to receive waste and a subsequent letter certifying that necessary equipment is in place and can support the safe disposal of waste."

Specifically, the authorization was issued after a professional engineer certified the state of the landfill cells and US Ecology demonstrated it had support equipment available. The Idaho DEQ also performed several site visits and inspections, as well as reviewed the company's temporary authorization request for operations. The Idaho DEQ then determined that US Ecology could resume limited landfill disposal in a compliant and environmentally protective manner.

The Idaho DEQ approval will enable US Ecology Idaho to begin receiving off-site waste for direct disposal – i.e., the waste may go to the landfill without stopping for storage or treatment. Idaho DEQ is allowing US Ecology to conduct acceptance and disposal of select bulk wastes, but has not yet authorized the company to resume waste treatment operations. US Ecology was required to meet several safety requirements before issuance of the authorization.

Background

Boise-based US Ecology operates facilities throughout the United States for disposal and treatment of radioactive and other waste types. The US Ecology Idaho site is used for disposal and treatment of hazardous and nonhazardous wastes.

US Ecology sites may accept material designated as very low-activity radioactive waste by the U.S. Nuclear Regulatory Commission (NRC) and waste from U.S. Army Corps of Engineers Formerly Utilized Sites Remedial Action Program (FUSRAP) cleanup sites. US Ecology Idaho can also take in naturally occurring radioactive material (NORM) and technologically enhanced naturally occurring radioactive material (TENORM).

For additional information, please contact Joe Weismann of US Ecology at (208) 319-1634 or at joe.weismann@usecology.com.

Northwest Compact/State of Utah

Utah Waste Management and Radiation Control Board Meets

The Utah Waste Management and Radiation Control Board held meetings in January and February 2019 in Salt Lake City, Utah.

The meetings, which were open to the public, were 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.

January 2019 Board Meeting

The following items, among others, were on the agenda for the January 10, 2019 Board meeting:

I. Call to Order

II. Recognition of Scott T. Anderson

III. Public Comment

IV. Declarations of Conflict of Interest

V. Approval of Meeting Minutes for the November 8, 2018 Board Meeting *(Board Action Item)*

VI. Underground Storage Tanks Update

VII. Administrative Rules

A. Approval of final adoption to Hazardous Waste Rules UAC R315-273, *Standards for Universal Waste Management (Board Action Item)*

B. Approval of final adoption to Radiation Control Rules UAC R313-28-31, *Use of X-Rays in the Healing Arts, General and Administrative Requirements (Board Action Item)*

VIII. Approval of Mammography Imaging Medical Physicists (MIMP) in accordance with UCA 19-6-104(2)(b) *(Board Action Item)*

IX. Low-Level Radioactive Waste Section

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

X. Other Business

A. Miscellaneous Information Items

B. Scheduling of Next Board Meeting

XI. Adjourn

February 2019 Board Meeting

The following items, among others, were on the agenda for the February 14, 2019 Board meeting:

I. Call to Order

II. Public Comments on Agenda Items

III. Declarations of Conflict of Interest

IV. Approval of Meeting Minutes for the January 10, 2019 Board Meeting *(Board Action Item)*

V. Underground Storage Tanks Update

VI. Administrative Rules

A. Approval to proceed with formal rulemaking and 30-day public comment period for proposed rule changes to Used Oil Rules R315-15-14 to revise the reimbursement rate for DIYer used oil collection centers *(Board Action Item)*

B. Approval to proceed with formal rulemaking and 30-day public comment period for proposed rule changes to X-Ray Rules R313-28 to allow the use of whole body x-ray units for security purposes *(Board Action Item)*

C. Approval to proceed with formal rulemaking and 30-day public comment period for proposed rule changes to R315-260, R315-261 and R315-262 for recalled Takata airbag inflators *(Board Action Item)*

VII. Radioactive Materials

A. Approval for the move of Radioactive Action Materials from the Multi-Agency

State Office Building to the Technical Services Center. Radioactive Materials License Number UT 1800133 exemption from the requirements in 10 CFR 71.5(b) which are equivalent to the requirements found in R313-19-100(5)(b) *(Board Action Item)*

VIII. Directors Report

IX. 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/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.

Energy*Solutions'* Part B Permit Modifications Approved

in re Contingency and Closure Plans

On January 16, 2019, a notice was published to announce the approval of a modification to Energy*Solutions* LLC state-issued Part B permit.

Overview

The modifications involved the following changes:

- 2018-007676: Approval of a Class 2 modification for Revisions to Attachment II-6, *Contingency Plan:* Changes include updates to exhibit drawings showing equipment locations and an additional exhibit to include propane and fuel tank locations throughout the site.

- 2018-001895: Approval of a Class 1 modification for Revisions to Attachment II-7, *Closure Plan;* Attachment II-7-1, *Overall Facility Closure Cost Summary;* Attachment II-7-2, *Closure Cost Estimate-Mixed Waste Details;* and, Attachment II-7-3, *Reserve Capacity Calculations.*

Documents

Questions regarding the modification or requests for review of the modification applications and related documents should be directed to Energy*Solutions* or the Utah Division of Waste Management and Radiation Control (DWMRC). The documents are also available for review at the offices of Energy*Solutions*, which is located at 299 South Main Street, Suite 1700, in Salt Lake City, Utah.

The permittee's compliance history during the life of the permit being modified is available from the Division contact person.

Background

Energy*Solutions* operates a low-level radioactive waste management and disposal facility in Clive (Tooele County), Utah. The facility is authorized to accept Class A low-level radioactive waste, but may not accept Class B or C waste pursuant to state law.

Energy*Solutions* offers customers a full range of integrated services and solutions, including nuclear operations, characterization, decommissioning, decontamination, site closure, transportation, nuclear materials management, processing, recycling, and disposition of nuclear waste, and research and engineering services across the nuclear fuel cycle.

For additional information, please contact Otis Willoughby of the Utah DWMRC at (801) 536-0200 or at owilloughby@utah.gov or Timothy Orton of EnergySolutions at (801) 649-2000 or at torton@energysolutions.com.

Rocky Mountain Compact/New Mexico

Oral Arguments Held re Holtec Spent Fuel Storage Application

On January 23, 2019, a U.S. Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board (ASLB) heard oral arguments in Albuquerque, New Mexico on petitions to hold an adjudicatory hearing concerning an application by Holtec International to construct and operate a consolidated interim spent fuel storage facility in the state.

The arguments were held at the State Bar of New Mexico, which is located at 5121 Masthead St. NE in Albuquerque.

Hearing and Oral Arguments

The arguments addressed the standing of petitioners and the admissibility of their proposed contentions. The three administrative judges on the Board heard arguments from counsel for the following eight groups:

- Beyond Nuclear;
- Sierra Club;
- Alliance for Environmental Strategies;
- a coalition of Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, San Luis Obispo Mothers for Peace, and Nuclear Issues Study Group;
- NAC International;
- Fasken Land and Minerals and Permian Basin Land and Royalty Owners;
- Holtec International; and,
- the NRC staff.

The Board also reserved time for comments from a single representative from each of five interested local government petitioners including:

- the Eddy-Lea Energy Alliance;
- the city of Carlsbad;
- Lea County;
- Eddy County; and,
- the city of Hobbs.

The hearings were open to the public. Signs, banners, posters, demonstrations and displays were not permitted in accordance with NRC policy.

The Board is composed of three administrative judges from the NRC's ASLB Panel. Boards may conduct adjudicative hearings on major licensing actions by the NRC and are independent of the NRC staff. A Board's rulings may be appealed to the Commission, the five-member body that sets NRC policy.

Project Overview

According to the license application, Holtec is seeking to store up to 8,680 metric tons of uranium in commercial spent fuel in the Holtec International Storage Module Underground "MAXimum" Capacity (HI-STORM UMAX) Storage System for a 40-year license term. The subterranean used nuclear fuel storage system has a maximum storage capacity of 10,000 canisters. The initial license application is for 500 storage cavities. The NRC previously certified HI-STORM UMAX in Docket number 72-1040.

"Engineered over a decade ago and licensed by the NRC in 2015, HI-STORM UMAX is physically sized to store all of the used nuclear fuel produced in the U.S. and all canisters currently licensed in dry storage in the country making it a truly universal used fuel storage facility," states Holtec. "Already deployed at multiple nuclear power plants around the U.S. … the HI-STORM UMAX stores the stainless steel canister containing the spent fuel or high-level waste entirely below-ground to serve as a 'security-friendly' storage facility, providing a clear, unobstructed view of the entire CISF from any location. HI-STORE CIS is envisioned to unify the storage of all different storage canisters (both vertically and horizontally stored) in one standardized HI-STORM UMAX cavity system simplifying operations and aging management activities."

"Storing the Nation's used nuclear fuel in the HI-STORM UMAX system is a temporary measure, as the stainless-steel canisters are easily retrievable and ready for transport pending the determination of a safe permanent solution for managing used nuclear materials," continues Holtec. "The canisters are designed, qualified, and tested to survive and prevent the release of radioactive material under the most adverse accident scenarios postulated by NRC regulations for both storage and transportation."

Holtec is using its own funds to support the licensing action. According to Holtec, the project has "the enthusiastic support of nuclear-savvy communities in southeastern New Mexico incorporated as the Eddy Lea Energy Alliance (ELEA), LLC." If the initial application is approved, Holtec plans to make supplemental submittals to incorporate the various canister types being used in the industry.

The Holtec application and other documents related to the NRC's review are available on the NRC website at www.nrc.gov.

Background

Holtec submitted its application on March 30, 2017. The NRC formally docketed the application on February 28, 2018. On March 30, 2018, NRC published a *Federal Register* notice requesting public comments on the scope of its environmental review. (See 83 *Federal Register* 13,802 dated March 30, 2018.) Comments were accepted through May 29, 2018. (See *LLW Notes*, March/April 2018, pp. 16-18.)

On April 6, 2018, NRC published a separate notice about the public meetings. (See 83 *Federal Register* 14,897 dated April 6, 2018.) On July 18, 2017, NRC issued a press release announcing the opportunity for the public to request an adjudicatory hearing on Holtec International's application for a license to construct and operate a consolidated interim spent fuel storage facility in Lea County, New Mexico. (See *LLW Notes*, July/August 2018, pp. 16-18.) A few days earlier, an announcement was published in the *Federal Register* that describes the requirements and procedures for filing a request for a hearing and petition to intervene. (See 83 *Federal Register* 32,919 dated July 16, 2018.) The deadline for submitting a request to the NRC was September 14, 2018.

The Federal Register notice announcing the opportunity to request a hearing on Holtec's

application is available online at https://www.gpo.gov/fdsys/pkg/FR-2018-07-16/pdf/2018-15079.pdf.

For additional information, please contact, please contact Erika Grandrimo of Holtec at (856) 797-0090 ext. 3920 or at e.grandrimo@holtec.com or David McIntyre of the NRC at (301) 415-8200.

Environmental Review of Proposed Church Rock Mine Cleanup

On February 14, 2019, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency is seeking public comment on the scope of its environmental review of United Nuclear Corporation's proposed cleanup of the closed Northeast Church Rock Mine in northwestern New Mexico.

Overview

United Nuclear Corporation is seeking an amendment to its NRC license that would authorize the transfer of about one million cubic yards of contaminated soil, known as "mine spoils," from the North East Church Rock mine to the nearby Church Rock uranium mill site for disposal at the mill's waste facility, called a "tailings impoundment." United Nuclear Corporation is a subsidiary of General Electric. The mill is located approximately 17 miles northeast of Church Rock, New Mexico – adjacent to the Navajo Reservation.

On February 8, 2019, NRC published a *Federal Register* notice announcing the agency's intention to prepare an environmental impact statement on the proposed waste transfer. The agency staff is seeking public comments to help define the scope of the environmental review. The *Federal Register* notice gives detailed instructions for submitting comments, which will be accepted through April 19, 2019.

In mid-March 2019, the NRC staff intends to conduct public meetings in the Gallup, New Mexico area to present details on the proposed waste disposal and explain the NRC review process.

Interested stakeholders may review the Federal Register notice at https://www.federalregister.gov/documents/2019/02/08/2019-01642/united-nuclear-corporation-unc-church-rock-project.

Details of the NRC public meetings will be announced on the agency website Public Meetings page at https://www.nrc.gov/pmns/mtg.

Background

The Church Rock uranium mill operated from 1977 to 1982, processing uranium ore from the Northeast Church Rock Mine under a State of New Mexico license. Since 1988, the mill has been under dual regulatory oversight of the NRC and the U.S. Environmental Protection Agency (EPA), pursuant to a Memorandum of Understanding between the two agencies. The NRC is the lead agency regulating surface reclamation and closure activities at the site under an NRC license and the Uranium Mill Tailings Radiation Control Act of 1978. The EPA is the lead agency that is regulating cleanup of the mine.

United Nuclear Corporation's proposal to dispose of the mine spoils at the mill site is part of a broader cleanup action approved by the EPA under the Comprehensive Environmental Response, Compensation and Liability process. Other stakeholders are involved in this action including the NRC, EPA, the Navajo Nation, the U.S. Environmental Protection Agency, the U.S. Department of Energy (DOE) and the New Mexico Environment Department.

For additional information, please contact David McIntyre of the NRC at (301) 415-8206.

Southwestern Compact/State of California

San Onofre Special Inspection Pre-Decisional Enforcement Conference

On January 24, 2019, the U.S. Nuclear Regulatory Commission (NRC) met with representatives of Southern California Edison Company to discuss preliminary findings of a Special Inspection it conducted at the San Onofre Nuclear Generating Station following a fuel-loading incident on August 3, 2018.

The meeting was held from 2:00 – 5:00 p.m. Central Time at the NRC's Region IV office, which is located at 1600 E. Lamar Boulevard in Arlington, Texas. It was open to public observation and was broadcast via webinar. NRC officials answered questions submitted via the Internet from the public following the business portion of the meeting.

No decision on the final safety significance of the findings identified in a November 2019 inspection report or any additional NRC actions were made at the conference. That decision will be announced at a later date.

Overview of Issues and Inspection

On September 10-14, 2018, NRC officials conducted a Special Inspection at the San Onofre facility in San Clemente, California. The inspection was conducted in response to the misalignment of a loaded spent fuel storage canister as it was being downloaded into the storage vault at the San Onofre Nuclear Generating Station (SONGS).

Based on the results of the Special Inspection, two apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The apparent violations involved the failure to:

- ensure important-to-safety equipment was available to provide redundant drop protection features for a spent fuel canister during downloading operations; and,

- make a timely notification to the NRC Headquarters Operations Center for the disabling of important-to-safety equipment on August 3, 2018.

The circumstances surrounding these apparent violations, the significance of the associated issues, and the need for corrective actions were discussed with San Onofre officials at the conclusion of the onsite inspection and during the final telephonic exit briefing.

Inspection Report

In a December 2018 letter transmitting the inspection findings to San Onofre officials, NRC stated as follows:

> The NRC is concerned about apparent weaknesses in management oversight of the dry cask storage operations. Your staff did not perform adequate direct observational oversight of downloading activities performed by your contractor, ensure adequate training of individuals responsible for performing downloading operations, provide adequate procedures for downloading operations, or ensure that conditions adverse to quality were entered into the corrective action program. The NRC identified that a causal factor for the misalignment incident involved management weakness in the oversight of dry cask storage operations.

According to NRC's letter, agency officials determined that three Severity Level IV violations

of NRC requirements occurred. The violations involved failures to:

- identify conditions potentially adverse to quality for placement into San Onofre's corrective actions program;
- assure that operations of importance to safety equipment were limited to trained and certified personnel or under direct supervision; and,
- provide adequate procedures for dry cask storage operations involving downloading operations.

The NRC determined the issuance of a Notice of Violation is appropriate because the actions to restore compliance have not been fully developed and implemented and the actions must be effective prior to beginning fuel-handling activities.

Background

Southern California Edison owns the San Onofre Nuclear Generating Station. The plant is located in San Clemente, California. It permanently shut down in 2013.

A copy of the November 2018 San Onofre Nuclear Generating Station inspection report is available online at https://www.nrc.gov/docs/ML1834/ML18341A172.pdf.

For additional information, please contact Victor Dricks at (817) 200-1128.

Texas Compact/State of Vermont

Vermont Yankee Sale from Entergy to NorthStar Completed

On January 11, 2019, Entergy Corporation completed the sale of Entergy Nuclear Vermont Yankee to subsidiaries of NorthStar Group Services, which will decommission the Vermont Yankee Nuclear Power Station site. The sale is a first-of-its-kind in the nuclear power industry – a permanent ownership and license transfer to a company that is slated to perform timely and efficient decommissioning and site restoration.

"The sale completion is a major step toward the safe, timely and efficient decommissioning of Vermont Yankee … and is a positive outcome for the Town of Vernon, Windham County, the State of Vermont and other stakeholders," states the associated press release from Entergy. "In addition, Entergy is making progress on its corporate strategy of exiting the merchant nuclear power business."

The NorthStar decommissioning team includes Orano USA (reactor vessel segmentation and used fuel management support); Waste Control Specialists (waste management, packaging, transport and disposal); and, Burns & McDonnell (engineering and regulatory support).

Overview

In November 2016, Entergy and NorthStar announced the sale agreement. On October 11, 2018, the U.S. Nuclear Regulatory Commission (NRC) 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. (See *LLW Notes*, October/November 2018, pp. 20-21.) The Order and other documents related to the license transfer review are available in the NRC's ADAMS online database at ML18242A638.

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) would 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 would 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 would 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 would become effective January 1, 2022 initially in the amount of $4.3 million and it will be renewed annually. This amount would cover 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 would be increased to $9.3 million, which covers the annual amount of ISFSI operation and maintenance costs projected for years after 2024.

On December 6, 2018, the Vermont Public Utility Commission issued an order approving the sale of Entergy Nuclear Vermont Yankee and an amended Certificate of Public Good that authorizes NorthStar to own, possess the licenses for and decommission Vermont Yankee. The transaction closed on terms consistent with the companies' previously disclosed financial commitments and assurances. No contribution to the nuclear decommissioning trust was required.

History

Prior to completion of the sale, the plant was owned by Entergy Nuclear Vermont Yankee (Entergy VY) and operated by Entergy Nuclear Operations (Entergy NO), both of which were 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 would be NorthStar VY and the operator in charge of dismantling the plant would be NorthStar NDC. The transfer would include 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.

Background

Vermont Yankee Nuclear Power Station is a single unit boiling water reactor located in Vernon, Vermont. It began commercial operation in 1972. Entergy acquired the plant from Vermont Yankee Nuclear Power Corporation in 2002. The plant permanently ceased operations on December 29, 2014.

Entergy Corporation is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including nearly 9,000 megawatts of nuclear power. Entergy delivers electricity to 2.9 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of approximately $11 billion and more than 13,000 employees.

NorthStar Group Services, based in New York, is a comprehensive facility and environmental solutions company with more than $600 million in annual sales and licenses in all 50 states throughout the country. NorthStar owns and maintains a large, nationwide inventory of specialized dismantling equipment and employs more than 3,000 people.

For additional information, interested stakeholders are directed to www.entergy.com, www.vy-decommissioning.com and www.northstar.com.

Commonwealth of Massachusetts

Public Meeting re Pilgrim Decommissioning Activities Report

On January 15, 2019, U.S. Nuclear Regulatory Commission (NRC) staff held a public meeting in Plymouth, Massachusetts to discuss a decommissioning roadmap report for the Pilgrim nuclear power plant. Attendees were able to provide comments at the meeting.

Entergy, which owns the single-reactor Plymouth facility, submitted its Pilgrim Post-Shutdown Decommissioning Activities Report (PSDAR) to the NRC on November 16, 2018. Among other details, it describes the company's plans to put the plant into SAFSTOR, or long-term storage, prior to beginning dismantlement work.

Holtec, which plans to acquire Pilgrim and decommission it in an expedited manner, has submitted its own PSDAR for the plant. Since an application to transfer the plant's NRC license from Entergy to Holtec remains under review, the report is currently being handled as a supplement to the application.

Pilgrim is scheduled to permanently cease operations by June 1, 2019.

Submitting Comments

The deadline for submitting comments on the Pilgrim PSDAR is March 21, 2019. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only for comments received before this date.

Interested stakeholders may submit comments via any of the following methods:

- *Federal Rulemaking Website:* Go to http://www.regulations.gov and search for Docket ID: NRC–2018–0286.
- *Mail comments to:* May Ma, Office of Administration, Mail Stop: TWFN–7– A60M, U.S. Nuclear Regulatory Commission, Washington, DC 20555– 0001.

Interested stakeholders are advised to please include Docket ID NRC–2018–0286 in any comment submissions.

Overview

On November 16, 2018, Entergy Corporation and Holtec International, through their affiliates, asked the NRC to approve the sale of the Pilgrim Nuclear Power Station to Holtec after shutdown. According to the associated press release, doing so would allow Holtec to complete decommissioning and site restoration decades sooner than if Entergy completed decommissioning.

The companies jointly filed a License Transfer Application, requesting approval for the transfer of the Pilgrim Nuclear Power Station, as well as its Nuclear Decommissioning Trust Fund, to Holtec after the plant permanently shuts down by June 1, 2019. They also made detailed separate filings that lay out the process each company would use to decommission the facility.

In order to facilitate a timely transaction closing by the end of 2019, the companies have asked the NRC to approve the application by May 31, 2019. According to the press release, doing so will benefit the community, employees and other interested constituents.

Holtec's filings describe the plan of its subsidiary, Holtec Decommissioning International, to complete the dismantling, decontamination and remediation of Pilgrim to NRC standards within eight years of license transfer (i.e., by the end of 2027) assuming timely regulatory approvals. According to the press release, Holtec's process will achieve site restoration decades sooner than if Entergy retained the plant while meeting all applicable local, state and federal regulations.

Holtec estimates total costs for decommissioning Pilgrim at $1.13 billion. As of October 31, 2018, the balance in Pilgrim's Decommissioning Trust Fund was $1.05 billion.

"Holtec's technical expertise, innovations and industry-leading experience in spent fuel management and decommissioning enable it to do the work in a more cost-effective manner, with uncompromised safety and under rigorous NRC oversight," states the press release. "Over 100 nuclear plants rely on Holtec's nuclear fuel storage technology, and the company is the world leader in spent nuclear fuel storage technology design and implementation."

Holtec has contracted with Comprehensive Decommissioning International, LLC (CDI) to perform the decommissioning, including demolition and site cleanup. CDI is a joint venture company of Holtec International and SNC-Lavalin. According to the press release, "The decommissioning experience held by Holtec and SNC-Lavalin gives CDI more than half a century of managing complex projects in both the commercial and government nuclear sectors worldwide."

Project Highlights

The completion of decommissioning will result in the release of all portions of the site from the current NRC license, with the exception of the Independent Spent Fuel Storage Installation (ISFSI) – the area where spent nuclear fuel is stored in dry casks until the U.S. Department of Energy (DOE) transfers the spent fuel offsite.

As part of its plan, Holtec expects to move all spent nuclear fuel into dry casks within three years following plant shutdown. Additionally, Holtec has a pending application with the NRC for a Consolidated Interim Storage Facility (CISF) in New Mexico, which could eventually store spent nuclear fuel from Pilgrim and other U.S. nuclear power plants. (See *LLW Notes*, July/August 2018, pp. 16-18.)

In addition to the License Transfer Application, Entergy and Holtec submitted filings with the NRC that outline the following areas:

- Post-Shutdown Decommissioning Activities Report: A description, schedule and cost estimate of planned decommissioning activities.
- Decommissioning Cost Estimate: A study estimating the costs to decommission the nuclear plant — including labor, fuel and disposal fees (included as an attachment to the PSDAR).
- Commingled Fund Exemption Request: A request to allow the Nuclear Decommissioning Trust Fund to be used for spent fuel management and site restoration (Holtec's exemption request is included with the License Transfer Application).
- Updated Spent Fuel Management Plan: Entergy also submitted an Updated Spent Fuel Management Plan, which describes how Pilgrim intends to fund and manage all spent nuclear fuel until it is transferred to the DOE for ultimate disposal.

The Entergy submittals will govern Pilgrim's decommissioning if Entergy remains the plant owner and operator. If the sale, which was originally announced on August 1, 2018, does not take place and the Entergy affiliate (Entergy Nuclear Generation Company) continues to own Pilgrim, then the plant would be placed in "SAFSTOR." (See *LLW Notes*, July/August 2018, pp. 19-21.)

SAFTSTOR is an NRC-approved option that allows the Nuclear Decommissioning Trust Fund to grow over several decades before decommissioning and site restoration is completed by 2080. Entergy estimates total costs for decommissioning Pilgrim using the SAFSTOR method to be $1.66 billion. The Holtec submittals provide its plan for decommissioning the plant promptly.

Background

The Pilgrim Nuclear Power Station employs about 600 nuclear professionals and generates 680 megawatts of virtually carbon-free electricity, enough to power more than 600,000 homes. Pilgrim began generating electricity in 1972. Entergy purchased the plant in 1999 from Boston Edison.

Entergy Corporation is an integrated energy company engaged primarily in electric power production and retail distribution operations. Entergy owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including nearly 9,000 megawatts of nuclear power. Entergy delivers electricity to 2.9 million utility customers in Arkansas, Louisiana, Mississippi and Texas. Entergy has annual revenues of approximately $11 billion and more than 13,000 employees.

Holtec International is a privately held energy technology company with operation centers in Florida, New Jersey, Ohio and Pennsylvania in the United States. Globally, Holtec International has operation centers in Brazil, Dubai, India,

South Africa, Spain, the United Kingdom and Ukraine. Holtec's principal business concentration is in the nuclear power industry. Since the 1980s, Holtec has been densifying wet storage in nuclear plants' spent fuel pools, which defers the need for and expense of alternative measures by as much as two decades. Holtec has done this at over 110 reactor units in the United States and abroad. Holtec also offers services regarding dry storage and transport of nuclear fuel. Holtec is working to develop the world's first below-ground CISF in New Mexico and a 160-Megawatt *walk away safe* small modular reactor, SMR-160. The SMR-160 is developed to bring cost competitive carbon-free energy to all corners of the earth including water-challenged regions. Holtec is also a major supplier of special-purpose pressure vessels and critical-service heat exchange equipment such as air-cooled condensers, steam generators, feedwater heaters and water-cooled condensers. Virtually all products produced by Holtec are built in its three large manufacturing plants in the United States and one in India.

For additional information about the Pilgrim plant, please go to www.pilgrimpower.com. Additional information about Entergy is available at www.entergy.com. To learn more about Holtec International, please visit www.holtecinternational.com.

The Pilgrim PSDAR that was submitted by Entergy is available on the NRC website at https://www.nrc.gov/docs/ML1832/ML18320A034.pdf. The PSDAR that was submitted by Holtec is also available at https://www.nrc.gov/docs/ML1832/ML18320A040.pdf. The Federal Register notice regarding the submittal of public comments on the Pilgrim PDSAR is available at https://www.govinfo.gov/content/pkg/FR-2018-12-21/pdf/2018-27724.pdf.

For additional information, please contact Diane Screnci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.

National Council on Radiation Protection and Measurements (NCRP)

NCRP Releases Guidance for Radiation Protection in the United States

On February 4, 2019, the National Council on Radiation Protection and Measurements (NCRP) announced the newest guidance for radiation protection in the United States with the publication of Report No. 180 titled, *Management of Exposure to Ionizing Radiation: Radiation Protection Guidance for the United States (2018).*

The report is intended to serve as a tool for those responsible for implementing radiation protection programs and developing regulations in the United States.

Interested stakeholders can purchase a copy of NCRP Report No. 180 at https://ncrponline.org/shop/reports/report-no-180-management-of-exposure-to-ionizing-radiation-radiation-protection-guidance-for-the-united-states-2018-2018/.

Overview

NCRP Report No. 180 contains NCRP's recommendations to guide active decision-making for radiation protection. Key points for radiation protection in the NCRP guidance include:

- the best protection guidelines are flexible and reflect current circumstances;
- new topics are addressed that have emerged in the last 25 years; and,
- medical use, stakeholder engagement, ethical values and safety culture are included and emphasized.

NCRP recommendations are intended to provide a basis for radiation protection programs in the United States. Report No. 180 is primarily for federal and state agencies responsible for the well being of individuals exposed to ionizing radiation and those agencies with responsibility for protecting non-human biota from such sources. The report also provides useful information for health physicists, medical physicists, physicians and other medical professionals, radiation safety officers, managers, workers, members of the public and the media.

Some of the categories of radiation protection that are discussed in NCRP Report No. 180 include: medicine; worker safety and naturally occurring radioactive materials; public safety, including sensitive populations; environmental protection; emergency response; and, research and industry.

Issues and Analysis

NCRP Report No. 180 gives an integrated and coherent approach for radiation protection in all exposure situations. The report states that optimization of protection universally applies, ensuring benefits from radiation taking into consideration societal, economic, and environmental aspects; addressing all hazards; and, striving for continuous improvement when it is reasonable to do so.

The report includes numeric criteria for individual dose management that provide an adequate basis for protection. The recommended criteria are influenced by the type and knowledge of the source; the existence of an appropriate radiation control program; and, whether that program can be established in advance of introducing the source.

NCRP Report No. 180 also includes new topics that have emerged in the last 25 years and builds on the many NCRP recommendations issued since the previous recommendations in Report No. 116, which was issued in 1993. The treatment of medical exposure is significantly expanded, including optimization for patients; coverage of comforters and caregivers; and, biomedical research participants. Emergency workers are defined as a new category of exposure and NCRP recommends that they be handled separately from occupational exposure or public protection. Protection of the environment, including non-human biota, is covered with recommendations to support decision-making under the National Environmental Policy Act (NEPA).

Ethical values, stakeholder engagement and safety culture are emphasized as contributing to radiation protection decisions and practice in addition to the knowledge of human biological effects of ionizing radiation. Ethical values support decision-making in complex situations. Stakeholders are key in making decisions concerning the management of their radiation exposure and the achievement of sustainable and suitable decisions. A strong safety culture is intrinsic to effective radiation protection programs.

Background

NCRP is a Congressionally chartered body that seeks to formulate and widely disseminate information, guidance and recommendations on radiation protection and measurements which represent the consensus of leading scientific thinking.

For additional information about NCRP, interested stakeholders may contact Laura Atwell, Director of Operations, at (301) 657-2652 (ext. 18) or at atwell@ncrponline.org or go to http://ncrponline.org.

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.

Southeast Compact/States of Alabama and Virginia

Farley Nuclear Power Plant On January 30, 2019, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency had issued a confirmatory order to Southern Nuclear Operating Company's Farley nuclear power plant near Columbia, Alabama. The plant is located approximately 18 miles south of Dothan. The order is the result of an agreement reached during an Alternative Dispute Resolution (ADR) mediation session completed on September 22, 2018 involving the handling of safeguards documents containing restricted plant security information. Southern Nuclear officials chose to participate in the agency's ADR program to resolve the enforcement issues. A neutral third party with no decision-making authority, who assists the NRC and the company in reaching an agreement, facilitates the NRC ADR process. The ADR session resulted in two agreements: (1) that deliberate misconduct of a former employee represented a violation of NRC requirements, and (2) on corrective actions to preclude recurrence of the violation. The actions outlined in the confirmatory order apply to the Farley site as well as all other Southern Nuclear sites. The NRC will not issue violations or civil penalties because of the corrective actions and improvements contained in the confirmatory order. Southern Nuclear is required to provide the NRC with a letter discussing its basis for concluding that the terms of the order have been satisfied. *For additional information, please contact Roger Hannah at (404) 997-4417 or Joey Ledford at (404) 997-4416.*

Surry Nuclear Power Plant On January 8, 2019, NRC staff met in Surry, Virginia for public comment on environmental issues the agency should consider in reviewing Virginia Electric and Power Company's (Dominion Energy Virginia) application for an additional 20 years of operation for Surry Units 1 and 2. The NRC held the meeting at the Surry Administrator's Office at the Surry Government Center. Staff presentations described the environmental and safety review processes and the proposed review schedule. The presentations were followed by a formal public comment session. There was also an NRC open house from 5:00 – 6:00 p.m. to provide members of the public the opportunity to speak informally with agency staff. Dominion submitted the Surry subsequent license renewal application on October 15, 2018. The subsequent license renewal process determines whether an operating reactor can extend its license for an additional 20 years. The application, less the proprietary details, is available on the NRC website at www.nrc.gov via Docket ID NRC-2018-0280. *For additional information, please contact Scott Burnell at (301) 415-8200.*

Commonwealth of Massachusetts

Pilgrim Nuclear Power Plant On January 15, 2019, NRC staff held a public meeting in Plymouth, Massachusetts to discuss a decommissioning roadmap report for the Pilgrim nuclear power plant. Attendees were able to provide comments at the meeting, which was held at Hotel 1620 beginning at 6:00 p.m. On November 16, 2018, Entergy – which owns the single-reactor Plymouth facility – submitted its Pilgrim Post-Shutdown Decommissioning Activities Report (PSDAR) to the NRC. Among other details, it describes the company's plans to put the plant into SAFSTOR, or long-term

storage, prior to beginning dismantlement work. Holtec, which plans to acquire Pilgrim and decommission it in an expedited manner, has submitted its own PSDAR for the plant. Since an application to transfer the plant's NRC license from Entergy to Holtec remains under review, the report is currently being handled as a supplement to the application. Public comments on the Pilgrim PSDAR will be taken until March 21, 2019. Pilgrim is scheduled to permanently cease operations by June 1, 2019. *For information on how to submit comments, interested stakeholders should review the associated Federal Register notice at https://www.govinfo.gov/content/pkg/FR-2018-12-21/pdf/2018-27724.pdf. For additional information, please contact Diane Scenci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.*

State of New Hampshire

Seabrook Nuclear Power Plant On February 13, 2019, NRC staff met with the public in Hampton, New Hampshire to provide information on licensing actions involving the Seabrook nuclear power plant. The meeting began at 6:00 p.m. at the Best Western Plus – The Inn at Hampton. NextEra is the owner and operator of the Seabrook, New Hampshire plant. In June 2010, NextEra applied to the NRC for a 20-year license extension for the facility. In notifications issued on January 11, 2019, the NRC staff indicated that it intended to issue a license amendment on concrete degradation at the plant on or about January 22, 2019 and to issue a renewed license for Seabrook on or about January 30, 2019. In response to significant public interest, the staff issued new notifications on January 22, 2019 stating that the issuance of the licensing actions was being delayed and that staff intended to meet with the public to discuss the planned actions. During the public meeting on February 13, 2019, NRC staff discussed its reviews and activities performed in these areas to support the agency's decision making and gave an opportunity for the public to provide feedback and ask questions regarding the NRC's activities and plans. The meeting will be transcribed and the information provided will be reviewed. *For additional information, please contact Diane Scenci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.*

U.S. Geological Survey (USGS)

USGS Research Reactor On February 5, 2019, NRC announced that the agency had proposed a civil penalty of $7,250 to the U.S. Geological Survey (USGS) for violations associated with staffing and training requirements at its research reactor facility in Denver, Colorado. The violations stem from two separate NRC investigations. One determined that a USGS reactor supervisor deliberately falsified documentation showing that reactor operators had completed required training, when in fact the training never took place. The supervisor then presented the false documentation to an NRC inspector. The second investigation determined that the same supervisor violated staffing requirements by performing certain reactor tests without a second qualified person present, as required by NRC regulations. The civil penalty was proposed in relation to the falsified documentation, reflecting the NRC's concern that licensees provide complete and accurate information, the agency said in its letter to USGS notifying it of the penalty. The USGS implemented corrective actions, including new training procedures that require employees to sign a record indicating their presence at training sessions; re-assigning the reactor supervisor and revoking his access to the reactor facility; and, pausing reactor operations to allow for an assessment of the violations and the operational culture of the reactor organization. The USGS can dispute the violation and penalty, or could agree to third-party mediation through the NRC's alternative dispute program. Separately, the NRC issued a Notice of Violation to the reactor supervisor for his deliberate falsification of operator training records. *For additional information, please contact Scott Burnell at (301) 415-8200.*

White House / Congress

Trump Signs Bill to Streamline Nuclear Energy Regulation

On January 14, 2019, President Donald Trump signed the Nuclear Energy Innovation and Modernization Act (NEIMA) into law. Both the public and private nuclear energy sector supported the bill, which is intended to streamline regulatory processes for commercial nuclear power plants.

In particular, the bill directs the U.S. Nuclear Regulatory Commission (NRC) to modernize its licensing rules. NRC is an independent federal agency that regulates nuclear energy operations.

Overview

The Nuclear Energy Innovation and Modernization Act establishes new NRC budget and fees structures and a revised licensing framework for advanced next generation nuclear reactors.

"This legislation establishes a more equitable and transparent funding structure which will benefit all operating reactors and future licenses," said Nuclear Energy Institute (NEI) President and Chief Executive Officer (CEO) Maria Korsnick.

In addition, the bill directs the NRC to improve the efficiency of uranium regulation and disposal.

Impact

The new regulations are expected to increase the speed and affordability at which nuclear research at the Idaho National Laboratory can move from the lab to the commercial market. According to a U.S. Senate news release, the legislation is also anticipated to make nuclear technology development and commercialization cheaper, enabling more of INL's research to reach the market.

"This bipartisan measure is important for Idaho because it will help ensure that the work being done at the Idaho National Lab will have a path through to the commercial market," said Senator Mike Crapo of Idaho. "NEIMA pushes the NRC to modernize so that it has the ability to license advanced reactors in a safe, timely and transparent manner."

The new regulations will not impact reactors that are currently in the licensing process, such as NuScale, which is an Oregon-based company that has designed and is developing a new modular light water reactor. However, the legislation is expected to help speed up and decrease the cost of the 42-month licensing process for a nuclear reactor. It is also expected to provide additional clarity for reactors to complete the application.

The Nuclear Energy and Modernization Act, Public Law 115-439, can be found at https://www.congress.gov/bill/115th-congress/senate-bill/512.

Advisory Committee on Reactor Safeguards (ACRS)

Advisory Committee on Reactor Safeguards Elects 2019 Leadership

Confirms Meeting Schedule

The U.S. Nuclear Regulatory Commission (NRC) Advisory Committee on Reactor Safeguards (ACRS) has elected Peter Riccardella as Chair, Matthew Sunseri as Vice-Chair and Joy Rempe as Member-at-Large.

In addition, the ACRS has confirmed its full meeting schedule for calendar year 2019.

Leadership

The following is an overview of the newly elected ACRS leadership:

- Peter Riccardella, Chair: Dr. Peter Riccardella has more than 45 years' experience working on the structural integrity of nuclear power plant components. He is an authority in the application of fracture mechanics to nuclear pressure vessels and piping and has made significant contributions to the diagnosis and correction of materials degradation concerns at operating plants. He has been a principal investigator on a number of Electric Power Research Institute (EPRI) projects and served more than 20 years as a member of the American Society of Mechanical Engineers (ASME) Subcommittee on Nuclear Power Plant Inservice Inspection. Riccardella earned his Bachelor's, Master's and Doctorate degrees in Mechanical Engineering from Carnegie Mellon University. He is a Fellow and Life Member of the ASME.

- Matthew Sunseri, Vice-Chair: Matthew Sunseri is an independent nuclear industry consultant with over thirty-five years of experience in the safe operation of large commercial reactors. Prior to starting his own executive consulting practice, he was President and Chief Executive Officer (CEO) of Wolf Creek Nuclear Operating Corporation. Sunseri has a wide-range of experience in the operation, maintenance, engineering, oversight and security of the nation's commercial nuclear power fleet. He started his career as a nuclear engineer assigned to the construction, licensing, startup and operation of the Comanche Peak nuclear power plant. Throughout his career, he has supervised, managed or provided oversight for activities at several commercial power stations. Sunseri has served on philanthropic and corporate boards of directors and has been a member of the American Nuclear Society (ANS) since 1979. Sunseri earned his Bachelor of Science degree in Nuclear Engineering from Texas A&M University and is a graduate of the Advanced General Management Program at Northwestern University and the Directors Institute at Emory University. Sunseri is a registered professional Engineer in the State of Texas.

- Joy L. Rempe, Member-at-Large: Dr. Joy Rempe holds a M.S. and a Ph.D. in Nuclear Engineering from the Massachusetts Institute of Technology (MIT) and a B.S. in Nuclear Engineering from the University of Missouri – Rolla. She has nearly 30 years of experience in the areas of reactor safety and irradiation testing. Prior to retiring as a Laboratory Fellow at the Idaho National Laboratory (INL), Rempe founded an instrumentation development and deployment laboratory to support a wide range of applications, including irradiation testing at American and international material test reactors. During her tenure at INL, she also led numerous severe accident research efforts for the NRC,

DOE and several international organizations — including inspection and analysis efforts to support post-accident Three Mile Island Unit 2 evaluations and experimental and analytical efforts to investigate in-vessel retention issues in light water reactors. As Principal of Rempe and Associates, LLC, Rempe provides consulting assistance to U.S. and international organizations on reactor safety and instrumentation issues. Rempe has authored or co-authored over 50 archival peer-reviewed journal publications and 100 peer-reviewed conference papers on reactor safety, severe accident phenomena, high temperature testing and in-pile instrumentation. She is an inventor/co-inventor on two patents with three patents pending. Rempe has received NRC and Organization for Economic Cooperation and Development (OECD) recognition awards for achievements accomplished in the TMI-2 Vessel Investigation Project. In 2011, she was awarded a DOE Secretarial Honors Award for her contributions in the U.S. response to the events at Fukushima. In 2005, Rempe was elected an ANS Fellow. In 2009, she was elected to the ANS Board of Directors. In 2013, Rempe was appointed to the Nuclear Energy Advisory Committee.

The complete listing of the ACRS membership and their biographies is available on the ACRS webpage at https://www.nrc.gov/about-nrc/regulatory/advisory/acrs/membership.html.

Meeting Schedule

The following is an overview of the scheduled ACRS full meeting dates for the remainder of calendar year 2019:

- March 7-9, 2019;
- April 4-6, 2019;
- May 2-4, 2019;
- June 5-7, 2019;
- July 10-12, 2019;
- September 5-7, 2019;
- October 3-5, 2019;
- November 7-9, 2019; and
- December 5-7, 2019.

The confirmed ACRS 2019 full-committee meeting schedule is available on the NRC website at https://www.nrc.gov/reading-rm/doc-collections/acrs/agenda/2019/#full.

Background

The ACRS is composed of individuals with a wide variety of engineering expertise, working independently from the NRC staff on safety issues related to the licensing and operation of nuclear power plants as well as issues of health physics and radiation protection.

For additional information on the ACRS, please contact Ivonne Couret of the NRC at (301) 415-8200.

U.S. Environmental Protection Agency (EPA)

Andrew Wheeler Nominated to Serve as EPA Administrator

On January 9, 2019, President Donald Trump formally nominated Andrew Wheeler to serve as Administrator of the U.S. Environmental Protection Agency (EPA). Wheeler, who is a former energy lobbyist, has led the EPA for the past six months in an acting capacity following the departure of former EPA Administrator Scott Pruitt.

"I am honored and grateful that President Trump has nominated me to lead the Environmental Protection Agency," said Wheeler in a statement. "For me, there is no greater responsibility than protecting human health and the environment, and I look forward to carrying out this essential task on behalf of the American people."

The White House has sent Wheeler's nomination to the U.S. Senate. EPA is one of the agency's that is affected by the partial government shutdown. (See *LLW Notes,* November/ December 2018, pp. 29-30.)

Overview

Wheeler is a former lobbyist for coal mining giant Murray Energy Corporation and other companies. He has been serving as the acting EPA Administrator since July 2018, following the resignation of then-EPA Administrator Scott Pruitt. If the Senate confirms Wheeler, his responsibilities and duties would remain the same. Without confirmation, however, his ability to serve in an acting capacity may be limited to a maximum of 210 days under current law.

Wheeler, who was confirmed by the U.S. Senate as Deputy Administrator in April 2018, has overseen significant action on some of the most consequential deregulatory proposals by the EPA. During his tenure as Acting Administrator, the EPA has proposed to replace limits on carbon dioxide pollution from power plants; to cease plans to strengthen auto emissions and efficiency rules; and, to limit restrictions on wetlands and streams.

"Acing Administrator Wheeler has done an outstanding job leading EPA and is well qualified to run the agency on a permanent basis," said Senator John Barrasso (R-WY). "I will work with committee members to get him confirmed." Senator Barraso serves as Chair of the Environment and Public Works Committee, which is responsible for reviewing the nomination.

"The only thing Wheeler is going to protect at the EPA is the profits of polluters," said Brett Hartl in a prepared statement. "I'm sure corporate board rooms will celebrate this nomination," continued Hartl, who serves as Government Affairs Director at the Center for Biological Diversity. "But for anyone who drinks water, breathes air or cares about wildlife, this will be nothing but awful."

Background

Wheeler began his career at the EPA in the early 1990's, working on toxic substance policy. He later worked on Capitol Hill as a top aide to Senator James Inhofe (R-OK), a former Chair of the Environment and Public Works Committee and a vocal skeptic of climate change science.

Wheeler also worked at the law and lobbying firm of Faegre Baker Daniels. During his time at the law firm, Wheeler served as a lobbyist for energy and coal companies.

U.S. Nuclear Regulatory Commission (NRC)

NRC To Issue Final Rule for Mitigating Severe Events at U.S. Reactors

On January 24, 2019, the U.S. Nuclear Regulatory Commission (NR) announced that agency staff has been directed to publish a rule based on lessons learned from the March 2011 accident at Japan's Fukushima Daiichi plant. The rule builds on Orders that the NRC issued in March 2012.

Overview

The Mitigation of Beyond-Design-Basis Events rule, which will be published in the *Federal Register* in spring 2019, applies to operating commercial nuclear power plants and power reactor license applicants. The rule's primary impact lies in requiring U.S. commercial reactors to:

- maintain resources and procedures to cool a reactor's core and spent fuel pool, as well as preserve the reactor's containment, following an event that disables all of a site's normal and emergency a/c electrical power sources, as well as the site's ability to safely transfer heat to the environment;

- maintain equipment that can reliably measure spent fuel pool water levels following a severe event; and,

- preserve the resources needed to protect the core, containment and spent fuel pool from external hazards.

Applicability

Most U.S. nuclear power plants must comply with the rule's requirements within two years and 30 days of the rule's publication in the *Federal Register*. Those plants subject to the NRC's Containment Venting Order of March 2013 must comply with the rule within three years and 30 days of the rule's publication.

The rule applies more broadly than either the venting or Mitigation Strategies Order (issued in 2012) or conditions included in new reactor licenses issued since 2012. The rule therefore includes language that ends the Orders and license conditions once the rule's requirements are in place. The rule also lays out the process for ending the requirements for a plant that has permanently shut down.

Background

The NRC staff responded to public comments on the draft rule by removing, reorganizing, clarifying and enhancing several sections. The rule also resolves five petitions for rulemaking that were submitted in July 2011. The rule also partially resolves a sixth petition submitted in May 2011.

The NRC and its nuclear power plant licensees will continue post-Fukushima efforts outside of the rulemaking context, including analyses of whether additional safety improvements are necessary in response to updated site-specific seismic and flooding risk assessments.

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

NRC to Hold 2019 Regulatory Information Conference

On January 15, 2019, the U.S. Nuclear Regulatory Commission announced the opening of online registration for the agency's 31st annual Regulatory Information Conference (RIC). The conference will be held in North Bethesda, Maryland from March 12-14, 2019.

Several thousand people are expected to attend the 31st annual RIC, which is NRC's largest public technical meeting. The conference will be held at the Bethesda North Marriott, which is located at 5701 Marinelli Road in North Bethesda, Maryland.

Overview

The NRC offices of Nuclear Reactor Regulation and Nuclear Regulatory Research jointly host the annual RIC, which is open to the public. No-fee registration is required to attend.

The conference usually draws approximately 3,000 attendees including industry executives, representatives from state governments, non-governmental organizations, individual community members and representatives from foreign countries. The conference is an opportunity for attendees to discuss issues related to the safety and security of commercial nuclear facilities and current regulatory activities.

This year's conference will focus primarily on innovation and transformation.

The conference agenda and online registration links are available on the NRC website at https://www.nrc.gov/public-involve/conference-symposia/ric/.

Program

The RIC program will open with remarks from NRC Chair Kristine Svinicki and Executive Director for Operations Margaret Doane, both of whom will open the conference with an "armchair conversation" moderated by the Office of Nuclear Reactor Regulation Director Ho K. Nieh, Jr. and the Office of Nuclear Regulatory Research Director Ray Furstenau. The conversation will focus on key topics facing the agency.

This year's keynote speaker will be inventor and visionary Nathan Myhrvold, founder and Chief Executive Officer (CEO) of Intellectual Ventures, who is experienced in innovative and transformative technologies. Myhrvold will compare his experiences to NRC's innovation and transformation initiatives as the agency adapts to the evolving nuclear industry and the future regulatory environment.

Additional program highlights will include remarks from NRC Commissioners Jeff Baran, Stephen Burns, Annie Caputo and David Wright – all of whom will each provide plenary remarks. Separately, Chair Svinicki and Commissioners Baran, Wright and Caputo will chair individual technical sessions, a change to the previous panel format.

Technical sessions will focus on significant domestic and international issues, such as cyber-security, risk-informed analysis, advanced and small modular reactors, spent fuel research activities, recent reactor material issues and the reactor oversight process.

Logistics

Attendees will notice changes to the standard conference format, including the introduction of a mobile application for live polling and real-time feedback. The app for RIC 2019 also will allow

participants to create a customized agenda, as well as view and download conference materials.

For additional information regarding RIC registration hours, badge protocol, security and new parking garage guidance, please visit the NRC website at https://www.nrc.gov/public-involve/conference-symposia/ric/general-info.html.

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

NRC Commissioner Burns Announces Departure

Plans to Leave When Term Ends on June 30, 2019

On January 28, 2019, Commissioner Stephen Burns told U.S. Nuclear Regulatory Commission (NRC) staff that he will leave the Commission when his term expires on June 30, 2019.

Burns announcement came during the annual NRC all-employee meeting.

Overview

The NRC Commission operates as a collegial body to formulate policies, develop regulations governing nuclear reactor and nuclear material safety, issue orders to licensees and adjudicate legal matters.

The five NRC Commissioners are appointed by the President and confirmed by the U.S. Senate for five-year terms to head the agency. One of them is designated by the President to be the Chair and official spokesperson of the Commission.

The Chair is the Principal Executive Officer of and the Official Spokesperson for the NRC. As Principal Executive Officer, the Chair is responsible for conducting the administrative, organizational, long-range planning, budgetary and certain personnel functions of the agency. The Chair has ultimate authority for all NRC functions pertaining to an emergency involving an NRC license. The Chair's actions are governed by the general policies of the Commission.

All five NRC Commissioner slots are currently filled. In addition to Burns, the remaining other Commissioners include:

- Kristine Svinicki, a nuclear engineer and policy advisor, is currently the NRC Chair. She is serving her third term on the Commission, which is set to expire on June 30, 2022.

- Jeff Baran, an attorney and member of the Commission since 2014 who's current term is scheduled to expire on June 30, 2017.

- Annie Caputo, a nuclear policy adviser to Senate Environment and Public Works Committee Chairman John Barrasso (R-WY), is serving a term that is set to expire on June 30, 2021.

- David Wright, an energy consultant and former president of the National Association of Regulatory Utility Commissioners, who's term is scheduled to expire on June 30, 2020.

The agency can have no more than three Commissioners who are members of the same party. Burns departure will leave three Republican Commissioners and one Democrat.

Background

Burns, an Independent, became an NRC Commissioner in November 2014. He served as the agency's Chair from January 2015 to January 2017, when President Trump replaced him with current Chair Kristine Svinicki, who is a Republican.

Burns joined NRC in 1978 as an attorney. He worked his way up to the post of General Counsel, which he held from 2009 to 2012.

At that time, Burns joined the Organisation for Economic Co-operation and Development's Nuclear Energy Agency in Paris as the Head of Legal Affairs before returning to become an NRC Commissioner about two years later.

The week before announcing his departure, Burns dissented from a majority vote by Commissioners to change the agency's safety requirements established in the wake of the Fukushima nuclear power plant accident in Japan in 2011.

For additional information related to Commission business, please contact Annette Vietti-Cook, Secretary of the Commission, at (301) 415-1969 or at NRCExecSec@nrc.gov.

NRC Proposes to Amend Annual Fees Regulations

On February 5, 2019, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency is seeking public comment on proposed changes to its regulations for the licensing, inspection, special project and annual fees it would charge applicants and licensees for fiscal year (FY) 2019.

The proposed rule, which was published in the *Federal Register* on January 31, 2019, includes fees required by law to recover approximately 90 percent of the agency's annual budget. The total budget enacted for the NRC in FY 2019 is approximately $911 million.

After accounting for fee-recovery exclusions, fee-relief activities, and net billing adjustments, the NRC must bill approximately $781.9 million in fees in FY 2019. Approximately $246.7 million will be recovered through fees for service under 10 CFR Part 170, as well as approximately $535.2 million through annual fees under 10 CFR Part 171.

Proposed annual fees for FY 2019 increased for operating reactors, some materials users and U.S. Department of Energy (DOE) transportation activities. Proposed annual fees for FY 2019 decreased for spent fuel storage/reactor decommissioning, research and test reactors, fuel facilities and the DOE Uranium Mill Tailings Radiation Control Act Program. Proposed annual fees for non-DOE uranium recovery licensees remained unchanged.

The proposed rule also includes several other changes affecting licensees and applicants. First, the NRC proposes to increase the hourly rate from $275 in FY 2018 to $278 for FY 2019. Second, the NRC proposes to revise the flat rate license application fees in 10 CFR 170.21 and 170.31 to reflect the new hourly rate. Finally, the proposed rule includes two proposed fee-policy changes and one administrative change.

The *Federal Register* notice includes detailed instructions on how to submit written comments on the proposed fee rule and the petition for rulemaking. Comments will be accepted through March 4, 2019.

The Federal Register notice is available at https://www.federalregister.gov/documents/2019/01/31/2019-00219/revision-of-fee-schedules-fee-recovery-for-fiscal-year-2019.

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

To Obtain Federal Government Information

by telephone

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

by internet

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

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

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

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

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

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

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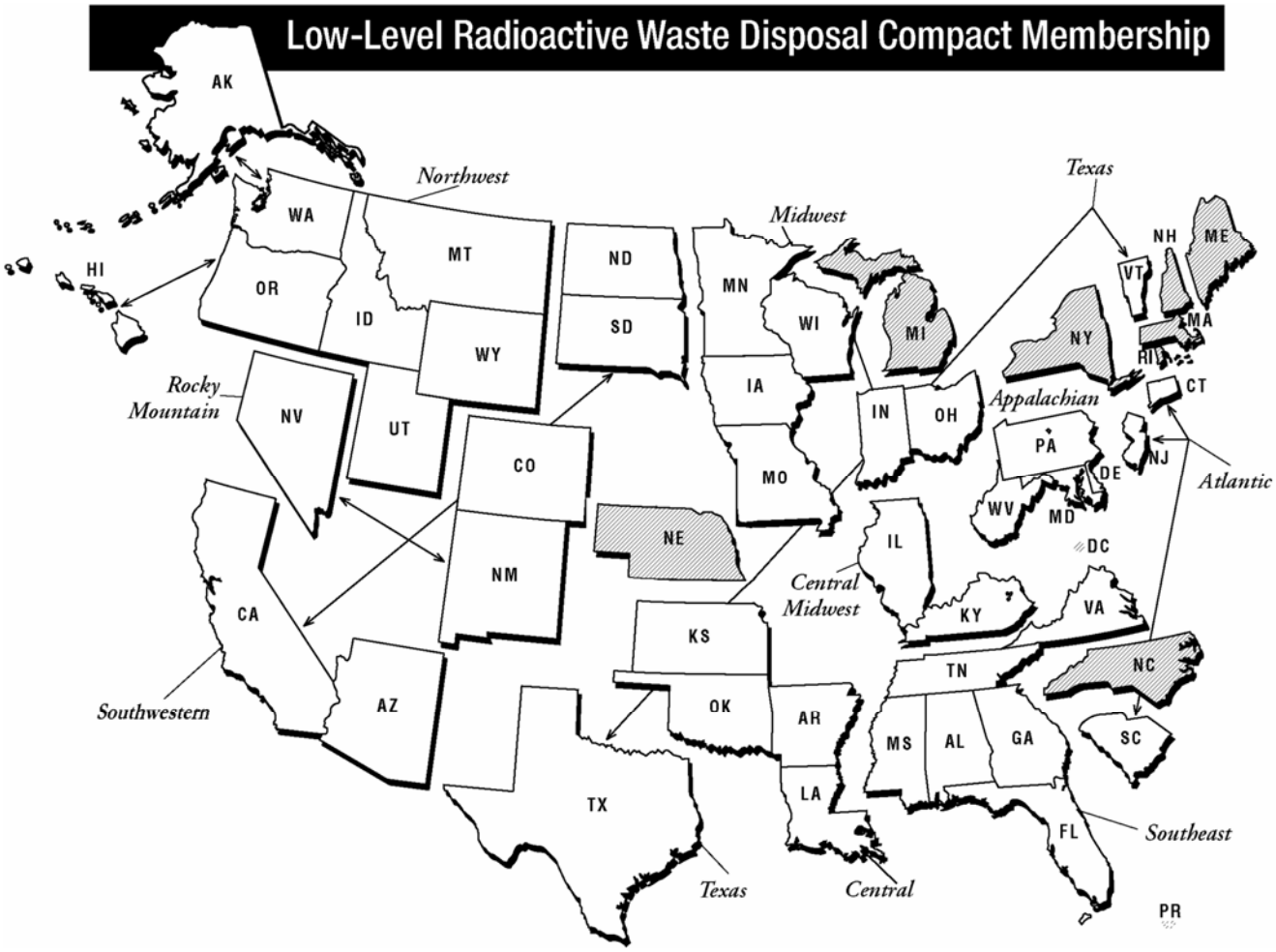

Appalachian Compact
Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact
Connecticut
New Jersey
South Carolina

Central Compact
Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact
Illinois
Kentucky

Northwest Compact
Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact
Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

Texas Compact
Texas
Vermont

Unaffiliated States
District of Columbia
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