LLW notes

Volume 33 Number 4 July/August 2018

U.S. Department of Energy (DOE)

High Profile Letter Sent to DOE Secretary Rick Perry re National Security Attributes of U.S. Nuclear Power Plants

By letter dated June 26, 2018, a broad coalition of 75 former government officials, lawmakers and industry leaders — a quarter of whom are retired admirals or vice admirals — expressed concern to U.S. Department of Energy (DOE or Department) Secretary Rick Perry regarding the impact of the premature shutdown of nuclear power plants.

"We urge you to continue to take concrete steps to ensure the national security attributes of U.S. nuclear power plants are properly recognized by policymakers and are valued in U.S. electricity markets," states the letter.

Overview

On June 1, 2018, President Donald Trump requested that DOE take measures to prevent further closures of nuclear power plants due to a national security interest in securing the national power grid's resilience. The recent letter appears to support that request, underscoring the key role of nuclear power toward the national security of the United States, particularly as an essential component of electric grid resilience and the largest source of emission-free generation.

Although the letter acknowledges that discussions concerning the general importance of nuclear energy are underway at the Federal Energy Regulatory Commission (FERC), grid operator and state regulator levels, the letter asserts that only DOE has the power to integrate nuclear power into the broader national security imperatives. While recognizing that such integration will take time to consider, the letter requests that Secretary Perry take steps to ensure that no additional nuclear power plants are closed in the meantime.

In addition to admirals and vice admirals, signatories to the letter include former U.S. Secretary of State George Shultz; former U.S. Senators Byron Dorgan (D-ND), Judd Gregg

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In This Issue

COPYRIGHT POLICY

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

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

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

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Low-Level Radioactive Waste Forum, Inc.

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

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

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

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LLW FORUM, INC.

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Key to Abbreviations

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

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

LLW Forum Fall 2018 Meeting and Hanford B Reactor Site Tour

Red Lion Richland Hanford House Hotel in Richland, Washington
October 2-4, 2018

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

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

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

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

The meeting documents — including the meeting and site tour bulletins, registration forms and draft agenda — are available on the LLW Forum Meeting page of the organization's web site at http://llwforum.org/llw-forum-meeting/.

Agenda Topics

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

- detailed analysis and discussion led by James Conca of UFA Ventures on the impact of radiation limits on radioactive waste disposal programs in the United States;
- a presentation by Todd Shrader, the Carlsbad Field Office Manager, on recent developments and future plans at the Waste Isolation Pilot Plant (WIPP);
- report from Morgan Munera, leader of the Part S Working Group of the Conference of Radiation Control Program Directors (CRCPD), on the soon-to-be-released suggested state regulations for financial assurance;
- extended panel discussion about the U.S. Nuclear Regulatory Commission (NRC) Very Low-Level Waste (VLLW) scoping study that will include representatives from the states/ compacts, disposal facility operators and industry organizations that is intended to stimulate some important policy discussion that will include efforts to identify both points of agreement and disagreement;
- overview by Kathy Pryor of the soon-to-be-released report from the National Council on Radiation Protection and Measurements (NCRP) on source management and disposition issues;
- report from the Nuclear Energy Institute (NEI) on the future of nuclear power in the United States and the associated impact on the capacity needs and continued viability of existing waste disposal facilities;
- presentation and discussion regarding NRC activities and initiatives addressing a variety of topics including the Part 61 rule and associated draft regulatory analysis, 20.2002 alternate disposal guidance, very low-level radioactive waste, uniform waste manifest,

Greater-than-Class C (GTCC) technical analysis, and decommissioning regulations;

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

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

Attendance

Officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/ processors, industry and other interested parties are encouraged to attend the fall 2018 LLW Forum meeting.

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

LLW Forum Meeting Location and Dates

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

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

Located in the heart of historic Richland, the Red Lion Hanford House is centrally located for business and leisure travelers visiting the Hanford Reservation. The hotel, overlooking the Columbia River, is within easy walking distance of several restaurants and government buildings.

Optional Hanford B Reactor Site Tour Logistics

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

Interested parties need to check the box on the LLW Forum meeting registration form, as well as complete and submit the separate Hanford B Reactor optional site tour registration form. The tour originates from the B Reactor offices located about 7 minutes from the Hanford House.

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.

Attendees that are planning to participate in the optional Hanford B Reactor site tour must also pre-register. *Please note that there is a separate registration form with differential submittal directions for the optional site tour.*

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 block of rooms have been reserved for Monday through Thursday (October 1-4, 2018) for meeting attendees at the special, discounted rate of $96.00 (single/double rate) plus tax. To make a reservation, please go to the booking link on the attached meeting bulletin or call (509) 946-7611, press zero for the operator and ask for a reservation under the discount group code WSDO1001. *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 September 10, 2018.

Transportation and Directions

The Red Lion Richland Hanford House Hotel is located 10-12 minutes from the Pasco Airport, which is the nearest commercial travel connection.

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

Atlantic Compact/State of New Jersey

Holtec International to Purchase Oyster Creek Generating Station

Plans to Decommission Nuclear Plant Within Eight Years

On July 31, 2018, an agreement was announced for Holtec International to purchase the Oyster Creek Generating Station from Exelon Generation Company. Holtec is a global company that provides services related to used nuclear fuel management technologies. Exelon Generation is the owner of the nation's largest fleet of nuclear energy facilities.

Pending the U.S. Nuclear Regulatory Commission (NRC) and other regulatory approval, the transaction is expected to close in the third quarter of 2019. It is not expected to impact the scheduled shutdown of Oyster Creek, as previously announced. Indeed, according to the announcement, Holtec plans to accelerate Oyster Creek's decommissioning timeline.

Under the terms of the agreement, Holtec will assume ownership of the site, real property and used nuclear fuel. As the site's owner, Holtec will manage all site decommissioning and restoration activities.

Overview

As the new owner of the plant, Holtec will contract with Comprehensive Decommissioning International, LLC (CDI) to perform the decontamination and decommissioning of the Oyster Creek plant. CDI is a joint venture company of Holtec and SNC-Lavalin. It is headquartered in Camden, New Jersey.

"CDI will bring the expertise of both companies together to ensure safe, rapid and economic

nuclear plant decommissioning," states the press release. "With its experience and state-of-the-art technologies, CDI is well equipped to decommission Oyster Creek within eight years, more than 50 years ahead of the industry-allowed 60-year timeline."

As part of the sale agreement, CDI will offer employment to Oyster Creek decommissioning employees, effective upon the transaction closing. Holtec will submit a new Oyster Creek decommissioning plan, which must be reviewed and approved by the NRC. The process provides opportunities for public review and comment on the plan during the NRC evaluation period.

The funds from the site's decommissioning trust will be transferred to Holtec upon closing and will be used by Holtec to cover the cost of the decommissioning. The trust fund was established decades ago to pay for decommissioning. According to the press release, no additional funds from utility customers will be required.

Interim Storage

On March 30, 2017, Holtec submitted an application for a license to construct and operate a Consolidated Interim Spent Fuel (CISF) storage facility in Lea County, New Mexico. 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. (See *LLW Notes,* March/April 2018, pp. 16-18.)

According to the press release, the CISF is designed to accept spent nuclear fuel from all nuclear plants in the United States, including from Oyster Creek. "Once licensed, fuel could be sent to the New Mexico CISF based upon the established use of interim storage locations by the federal government which would allow Holtec to return the full site to unrestricted use once the fuel has been transported off-site," states the release.

Company Statements

"This landmark agreement is good news for Oyster Creek employees, the Lacey community and the [S]tate of New Jersey," said Bryan Hanson, Chief Nuclear Officer at Exelon Generation. "Holtec's commitment to the nuclear industry and its presence in New Jersey will allow many of our employees previously facing relocation to continue living and working in the Garden State. Further, with three decades of experience in nuclear fuel technologies and a partnership with global decommissioning leader SNC-Lavalin, Holtec is ideally positioned to complete the decommissioning of Oyster Creek safely and swiftly."

"It is with wistful pride that we, a New Jersey-born company … [that] has spread around the globe, will take over the State's oldest nuclear plant and decommission it with the latest technologies that will preserve the pristine New Jersey shore and accrete minimal dose to the workers," stated Kris Singh, President & CEO at Holtec. "We hope to offer job opportunities to the many Oyster Creek-based Exelon employees who may wish to pursue exciting career opportunities with our company."

Background

Oyster Creek is located about 60 miles east of Philadelphia in Ocean County, New Jersey. The plant produces 636 net megawatts of zero-emission electricity at full power, enough electricity to supply 600,000 typical homes, which is the equivalent to all homes in Monmouth and Ocean counties combined.

In February 2018, Exelon Generation announced Oyster Creek would permanently shut down this

fall at the end of its current operating cycle. As part of an agreement with the State of New Jersey, Exelon Generation is required to close Oyster Creek no later than December 2019.

Holtec International Holtec International is a privately held energy technology company with a principal business concentration in the nuclear power industry. In the United States, the company has operation centers in Florida, New Jersey, Ohio and Pennsylvania. Globally, it has operation centers in Brazil, Dubai, India, South Africa, Spain, United Kingdom and Ukraine.

Holtec's service offerings include densifying wet storage in nuclear plants' spent fuel pools to defer the need for and expense of alternative measures by as much as two decades; dry storage and transport of nuclear fuel; and, the supply of special-purpose pressure vessels and critical-service heat exchange equipment such as air-cooled condensers, steam generators, feedwater heaters and water-cooled condensers.

Comprehensive Decommissioning International (CDI) CDI provides comprehensive project solutions for the accelerated retirement of nuclear power plants. According to the press release, "CDI's global operations provide expertise and technological innovation to protect the public in an environmentally responsible, safe and ethical manner."

For additional information about Holtec International, please see www.holtecinternational.com. For additional information about CDI, please see www.cdi-decom.com.

For additional information about the Oyster Creek project, please contact Erika Grandrimo at (856) 797-0900, ext. 3920 or at e.grandrimo@holtec.com.

Northwest Compact/State of Utah

Energy*Solutions* Requests Exemption from Mass and Concentration Limitations

On August 30, 2018, the Utah Waste Management and Radiation Control Board held an emergency meeting beginning at 10:00 a.m. MT in Salt Lake City, Utah.

The meeting, which was open to the public, was held in the Department of Environmental Quality (DEQ) Red Rocks Conference Room No. 3132, in the Multi Agency State Office Building that is located at 195 North 1950 West in Salt Lake City, Utah.

The purpose of the meeting was to review a request from Energy*Solutions* for an exemption from R313-25-9(5) of the Utah Administrative Code regarding mass and concentration limits.

The materials for the emergency Board meeting, including the EnergySolutions' letter, which contains detailed background information and an explanation of the basis for the requested exemption, can be viewed online at https://www.utah.gov/pmn/files/423003.pdf#page=2.

Agenda

The following items, among others, were on the agenda for the August 2018 emergency Board meeting:

I. Call to Order

II. Request from Energy*Solutions* for an Exemption from R313-25-9(5) of the Utah Administrative Code *(Board Action Item)*

III. Adjourn

Overview

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

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

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

> The U.S. Army Joint Munitions Command (JMC), working under the direction of the Product Director for Demilitarization, is responsible for the safe and compliant disposition of munitions waste. The JMC seeks to transport and dispose of 30 mm munitions containing solid depleted uranium metal. The DU Penetrators will be disassembled to remove the depleted uranium metal prior to packaging for transport and disposal. The JMC plans to disassemble between 3.5 to 7 million penetrators each year, currently in storage at the Tooele Army Depot (Tooele, Utah) and Crane Army Ammunition Activity (Crane, Indiana). The JMC expects to transport and dispose of approximately 667 yd^3 of DU Penetrator Class A waste per year for up to 4 years (a projected DU Penetrator disposal volume of 2,668 yd^3). Disposal of this volume of class A depleted uranium metal will exceed the limitations promulgated in UAC R313-25-9(a).

Background

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

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

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

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

Energy*Solutions'* Part B Permit Modified re Stored Waste

On July 23, 2018, 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:

> 2018-003623: Approval of a Class 1 Modification for Revisions to Attachment II-7-1, *Overall Facility Closure Cost Summary*.

The purpose of the modification is to increase the amount of stored waste at the low-level radioactive waste facility as per Attachment II-7-1, *Overall Facility Closure Cost Summary* of the state-issued Part B Permit.

Documents

Questions regarding the modification or requests for review of the Modification Applications and related documents should be directed to 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) 536-0220 or at owilloughby@utah.gov or Timothy Orton of EnergySolutions at (801) 649-2000 or at torton@energysolutions.com.

Energy*Solutions* Requests to Modify Certain Contingency Plans

On August 3, 2018, a notice was published announcing that Energy*Solutions* LLC has requested a Class 2 modification revising the Contingency Plan in Attachment II-6 of its state-issued Part B Permit.

Overview

The requested modification updates emergency equipment and building details around the facility.

On September 12, 2018, a public information meeting will be held for the Modification Request. The meeting is scheduled to begin at 6:00 p.m. in the auditorium at the Tooele County Courthouse, which is located at 47 South Main Street in Tooele, Utah.

Comments

The comment period on the formal Modification Request will run until October 7, 2018. Interested statekeholders may mail comments to:

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

Documents

The Modification Request and supporting documents are available to be copied and for public review at 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) 536-0220 or at owilloughby@utah.gov or Timothy Orton of EnergySolutions at (801) 649-2000 or at torton@energysolutions.com.

Utah Issues Notice of Rulemaking Actions

On August 1, 2018, the Utah Division of Waste Management and Radiation Control published a notification to interested stakeholders in the Utah State Bulletin of various actions taken by the Utah Waste Management and Radiation Control Board at its meeting on July 12, 2018.

Radiation Control Rules

The Board approved the final adoption of rule changes to revise the incorporation-by-reference date to 2017 in Section 3 of R313-37, *Physical Protection of Category 1 and Category 2 Quantities of Radioactive Materials*, in order to incorporate federal regulatory changes promulgated by the U.S. Nuclear Regulatory Commission (NRC) and published in the *Federal Register* on September 30, 2014 (79 *Federal Register* 58,664) and August 3, 2015 (80 *Federal Register* 45,841).

On September 30, 2014, the NRC amended the federal radioactive materials regulations to address security-related information requirements for large irradiators and manufacturers, distributors and transporters of Category 1 and 2 quantities of radioactive materials. On August 3, 2015, the NRC made various technical corrections to the federal radioactive materials regulations, including a correction to a reference in the federal regulations for the physical protection of Category 1 and 2 quantities of radioactive materials.

Because R313-37 incorporates by reference 10 CFR Part 37, updating the date of the incorporation by reference to 2017 results in incorporating the changes published by the NRC on September 30, 2014 and August 3, 2015.

The effective date of this rule change is July 13, 2018.

For additional information, please go to https://rules.utah.gov/publicat/bull_pdf/2018/b20180801.pdf#page=115.

Used Oil Rules

The Board approved a plan to proceed with formal rulemaking and public comment on proposed changes to the Used Oil Rules at R315-15-16, *Grants,* to provide additional clarity and more detailed direction to the grant application, issuance, implementation and reimbursement processes.

Additionally, the Division previously provided the legislature's Administrative Rules Review Committee with a draft of the proposed changes in response to the Committee's action that rulemaking be undertaken to fully address the used oil grant application and reimbursement processes for DIYer used oil collection centers.

The comment period on this formal rulemaking will run from August 1-31, 2018. Interested statekeholders may email comments to dwmrcpublic@utah.gov. Comments may also be submitted via standard mail to:

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

For additional information, please go to https://rules.utah.gov/publicat/bull_pdf/2018/b20180801.pdf#page=61.

Hazardous Waste Rules

The Board also approved a plan to proceed with formal rulemaking and public comment on proposed changes to the Hazardous Waste Rules R315-260, *Hazardous Waste Management System,* and R315-261, *General Requirements – Identification and Listing of Hazardous Waste,* to incorporate federal regulatory changes promulgated by the U.S. Environmental Protection Agency (EPA) that were published in the *Federal Register* on May 30, 2018 (83 *Federal Register* 24,664).

The comment period on this formal rulemaking will run from August 1-31, 2018. Interested statekeholders may email comments to dwmrcpublic@utah.gov. Comments may also be submitted via standard mail to:

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

For additional information, please go to https://rules.utah.gov/publicat/bull_pdf/2018/b20180801.pdf#page=65.

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

Utah Waste Management and Radiation Control Board Meets

On July 12, 2018, the Utah Waste Management and Radiation Control Board held a regularly scheduled meeting beginning at 1:30 p.m. MT in Salt Lake City, Utah.

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

Agenda

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

I. Call to Order

II. Approval of Meeting Minutes for the May 10, 2018 Board Meeting *(Board Action Item)*

III. Underground Storage Tanks Update

IV. Administrative Rules

A. Approval of final adoption of rule changes to Radiation Control Rules R313-37, *Physical Protection of Category 1 and Category 2 Radioactive Materials*, to incorporate federal regulatory changes promulgated by the U.S. Nuclear Regulatory Commission. *(Board Action Item)*

B. Approval to proceed with formal rulemaking and public comment on proposed changes to the Used Oil Rules R315-15-16, *Grants*, to provide additional clarity and more detailed direction to the grant application, issuance, implementation and reimbursement process *(Board Action Item)*

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

V. Radioactive Materials

A. Approval of the University of Utah (Radioactive Materials License Number UT 1800001) 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)*

VI. Low-Level Radioactive Waste

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

VII. Director's Report

VIII. Other Business

A. Miscellaneous Information Item

B. Scheduling of Next Board Meeting

IX. Adjourn

Background

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

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

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

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

Northwest Compact/State of Washington

Washington State Seeks Radioactive Materials Supervisor

The Washington State Department of Health (DOH), Office of Radiation Protection, is seeking to hire a new Radioactive Materials Supervisor.

Position

This Radioactive Materials Supervisor manages the Radioactive Materials Licensing and Compliance (Materials) Section within the Office of Radiation Protection (ORP) including the supervision of professional and administrative staff to ensure the objectives of the section are met. The Materials Section works to protect the people, property, and the environment of Washington State by licensing, registering, investigating and performing compliance inspections of all radioactive materials licensees.

This is a permanent full-time Radiation Health Physicist 4 (RHP 4).

Duties

According to the job posting, the duties of the Radioactive Materials Supervisor will include:

- supervise section staff to develop and maintain a cohesive licensing and inspection team through a continuous process of listening, soliciting and expressing common health physics practices;
- facilitate staff meetings and other gatherings to ensure the section's work time is productive, as well as that such meetings promote consistency, improve and expand program knowledge, review performance and seek ways to effectively meet program objectives;
- oversee the Materials Section budget and recommend rulemaking when deficits indicate a need to increase fees;
- direct the activities of staff to ensure that all facilities possessing radioactive materials in the state are licensed and inspected to minimize unnecessary radiation exposure and that enforcement actions are taken, if necessary; and,
- approve development and implementation of specific technical and administrative procedures necessary to ensure section work is carried out uniformly and consistently with regulation, guidance and agency policies.

Requirements

According to the job posting, the ideal candidate will be a team player that works well with their peers, can effectively lead a group of professionals, is open and approachable to new ideas and accepts and solves challenges in a changing regulatory environment.

Required qualifications include:

- either a Bachelor's degree or higher in a physical or biological science, engineering or closely allied field and five (5) or more years of experience in an official radiation control program or closely related field or a Master's degree or higher in a physical or biological science, engineering or closely allied field and three (3) or more years of experience in an official radiation control program or closely related field; and,

- one (1) or more years of experience equivalent to a Radiation Health Physicist 3 (i.e., leading a radioactive materials licensing and inspection program).

An official radiation control program is a radiation control program that is large enough to devote full-time staff to the review and control of the use of radiation with the intent of limiting and reducing human exposure to radiation.

Preferred/desired qualifications include:

- a Master's degree or higher in radiological health, radiation safety, health physics, or a closely allied field;

- three (3) or more years of experience managing/leading people with responsibility for daily operations including assigning work, approving leave and evaluating performance both face-to-face and in writing; and,

- demonstrated knowledge of the principles and practices of radiation safety as it applies to radioactive materials or machine generated radiation, investigating incidents or accidents and interpretation of regulations and policies governing the use of radiation.

Application Process

Interested applicants should submit a detailed application profile along with the following:

- a letter of interest that describes how the applicant meets the specific required and desired qualifications for this position;

- a current resume; and,

- three (3) or more professional references including at least one supervisor, peer and (if applicable) a subordinate.

Interested applicants are asked to not attach transcripts or other documents that are not requested in the Application Process or that are password protected. These type of documents cause errors when downloading application materials and will not be forwarded to the hiring supervisor.

Application materials should be submitted to https://www.governmentjobs.com/careers/washington/jobs/2108041/radioactive-materials-supervisor-rhp-4-doh4100/apply.

Background

The Washington State DOH works with federal, state, tribal and local partners to help people in Washington stay healthy and safe. The programs and services help prevent illness and injury, promote healthy places to live and work, provide education to help people make good health decisions and ensure that the state is prepared for emergencies.

The Washington State DOH is an equal opportunity employer, which strives to create a working environment that is inclusive and respectful. It is DOH's policy to prohibit discrimination on the basis of race, sex, color, national origin, religion, sexual orientation, gender identity, age, veteran status, political affiliation, genetics or disability in the

recruitment, selection, and hiring of its workforce.

For additional information, please contact Cher Williams at (360) 236-4545 or at Cher.Williams@doh.wa.gov or go to http://www.careers.wa.gov.

Rocky Mountain Compact/State of New Mexico

Proposed New Mexico Spent Fuel Storage Facility Hearing Opportunity

On July 18, 2017, the U.S. Nuclear Regulatory Commission (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.

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 is 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.

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.

Hearing Opportunity

Within 60 days after the date of publication of the *Federal Register* notice, any person (petitioner) whose interest may be affected by the proposed action may file a request for a hearing and petition for leave to intervene (petition) with respect to the action. Petitions shall be filed in accordance with the Commission's "Agency Rules of Practice and Procedure" in 10 CFR Part 2. Petitions and motions for leave to file new or amended contentions that are filed after the deadline will not be entertained absent a determination by the presiding officer that the filing demonstrates good cause by satisfying the three factors in 10 CFR 2.309(c)(1)(i) through (iii).

A state, local governmental body, federally-recognized Indian tribe or agency thereof may also submit a petition to the Commission to participate as a party under 10 CFR 2.309(h)(1). The petition should state the nature and extent of the petitioner's interest in the proceeding. Alternatively, a state, local governmental body, federally-recognized Indian Tribe or agency thereof may participate as a non-party under 10 CFR 2.315(c).

General Requirements for Standing As required by 10 CFR 2.309(d), the petition should specifically explain the reasons why intervention should be permitted with particular reference to the following general requirements for standing:

- the name, address and telephone number of the petitioner;
- the nature of the petitioner's right under the Act to be made a party to the proceeding;
- the nature and extent of the petitioner's property, financial or other interest in the proceeding; and,
- the possible effect of any decision or order which may be entered in the proceeding on the petitioner's interest.

Specific Contentions In accordance with 10 CFR 2.309(f), the petition must also set forth the specific contentions which the petitioner seeks to have litigated in the proceeding. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner must provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue. The petition must include sufficient information to show that a genuine dispute exists with the applicant or licensee on a material issue of law or fact. Contentions must be limited to matters within the scope of the proceeding. The contention must be one that, if proven, would entitle the petitioner to relief. A petitioner who fails to satisfy the requirements at 10 CFR 2.309(f) with respect to at least one contention will not be permitted to participate as a party.

Intervening Parties vs. Limited Appearance Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene. Parties have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that party's admitted contentions including the opportunity to present evidence, consistent with the NRC's regulations, policies and procedures.

If a petition is filed, the Commission or a presiding officer will rule on the petition and, if

appropriate, a notice of a hearing will be issued. If a hearing is granted, any person who is not a party to the proceeding and is not affiliated with or represented by a party may, at the discretion of the presiding officer, be permitted to make a limited appearance pursuant to the provisions of 10 CFR 2.315(a). A person making a limited appearance may make an oral or written statement of his or her position on the issues but may not otherwise participate in the proceeding. A limited appearance may be made at any session of the hearing or at any prehearing conference, subject to the limits and conditions as may be imposed by the presiding officer. The presiding officer will provide details regarding the opportunity to make a limited appearance if such sessions are scheduled.

The NRC's regulations regarding procedures for filing a petition requesting an adjudicatory hearing are accessible electronically from the NRC Library on the NRC's website at http:// www.nrc.gov/reading-rm/doc- collections/cfr/.

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.

On April 6, 2018, NRC published a separate notice about the public meetings. (See 83 *Federal Register* 14,897 dated April 6, 2018.)

For additional information, please contact Erika Grandrimo of Holtec at (856) 797-0090 ext. 3920 or at e.grandrimo@holtec.com or Jose Cuadrado of the NRC's Office of Nuclear Material Safety and Safeguards (NMSS) at (301) 415-0606 or at Jose.Cuadrado@nrc.gov.

Texas Low-Level Radioactive Waste Disposal Compact Commission

Governor Appoints Salsman and Edwards To Texas Compact Commission

On August 24, 2018, it was announced that Texas Governor Greg Abbott has reappointed John Salsman and appointed Lisa Edwards to the Texas Low-Level Radioactive Waste Disposal Compact Commission for terms to expire on September 1, 2023.

The Texas Compact Commission manages the disposition of low-level radioactive waste, while maintaining the health, safety and welfare of citizens.

Appointments

John Salsman is the Director of the Environmental Health and Safety Department at the University of Texas at Austin. He is a member of the Health Physics Society (HPS) and the American Academy of Health Physics. Salsman received a Bachelor of Science in radiation protection engineering and a Master of Science in Nuclear Engineering from Texas A&M University. He lives in of Driftwood, Texas.

Lisa Edwards is a Senior Program Manager of Chemistry, Radiation Safety and High-Level Radioactive Waste at the Electric Power Research Institute (EPRI). Edwards received a Bachelor of Arts in Chemistry from Cornell College. She lives in Granbury, Texas.

Background

The Texas Compact Commission meets several times per year in both Texas and Vermont. The Texas Compact Commission may meet in closed session as authorized by the Texas Open Meetings

Act, Chapter 551, Texas Government Code. Texas Compact Commission meetings are open to the public.

The Texas Compact Commission is next scheduled to meet in Manchester, Vermont on October 11, 2018.

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

Texas Compact/State of Vermont

Vermont Yankee's Used Fuel Placed in Dry Storage

On August 2, 2018, Holtec International announced the successful completion of the largest defueling project of a Boiling Water Reactor (BWR) in the United States.

Entergy Nuclear signed a contract with Holtec to expeditiously defuel the Vermont Yankee spent fuel pool. The overall project scope included construction of a second ISFSI pad, security expansion, engineering, licensing, manufacturing, delivering and loading of 45 HI-STORM cask systems, all on a turnkey basis.

According to Holtec, the project was completed in record time.

For additional information, please contact Erika Grandrimo at (856) 797-0900, ext. 3920 or at e.grandrimo@holtec.com.

Commonwealth of Massachusetts and State of Michigan

Proto-Prompt Decommissioning Planned for Pilgrim and Palisades Sites

On August 1, 2018, an agreement was announced for Entergy Corporation to sell the subsidiaries that own the Pilgrim Nuclear Power Station in Plymouth, Massachusetts and the Palisades Power Plant in Covert, Michigan after their shutdowns and reactor defuelings to a Holtec International subsidiary for accelerated decommissioning.

The sales include the transfer of the licenses, spent fuel and Nuclear Decommissioning Trusts (NDTs), as well as the site of the decommissioned Big Rock Point Nuclear Power Plant near Charlevoix, Michigan where only the Independent Spent Fuel Storage Installation (ISFSI) remains. The transactions are subject to conditions to closing, including approvals from the U.S. Nuclear Regulatory Commission (NRC) of the license transfers.

The agreement with Entergy increases Holtec's decommissioning fleet to four nuclear units/sites including Oyster Creek, Pilgrim, Palisades and Big Rock Point.

Overview

Assuming timely regulatory approvals, Holtec expects to initiate *proto-prompt decommissioning* of Pilgrim in 2020, with the expectation that all major decommissioning work will be completed in approximately eight years. A timeline for the decommissioning of Palisades will be developed closer to its shutdown.

For both Pilgrim and Palisades, Holtec expects to move all of the spent nuclear fuel out of their spent fuel pools and into dry cask storage within

approximately three years after the plants' respective shutdowns.

In previous announcements, Entergy has stated that it remains committed to the safe and reliable operation of Pilgrim and Palisades until their permanent shutdowns. By selling these plants for decommissioning, Entergy continues to execute its strategy to exit Entergy Wholesale Commodities and move to a pure play utility. Entergy is seeking regulatory approvals to sell its subsidiary that owns the shutdown Vermont Yankee site by the end of 2018.

Next Steps

Holtec and Entergy expect to file a license transfer request with the NRC in the fourth quarter of this year for Pilgrim, with transaction closing targeted by the end of 2019. For Palisades, the license transfer request would take place closer to its planned shutdown in the spring of 2022, with transaction closing expected by the end of that year.

Holtec will utilize Comprehensive Decommissioning International, LLC (CDI), which is a newly-formed U.S.-based joint venture company between Holtec International and SNC-Lavalin to perform the decommissioning, including all required demolition and cleanup.

"Holtec will draw on its own and its partners' safety commitment and decades of experience and expertise in decommissioning and site remediation to carry out decommissioning, which could benefit the local communities by returning these plant sites (excluding each site's used fuel storage facility) to productive use at an early date," states the press release. "Holtec will transfer all of the used nuclear fuel to its cask systems to be stored at the respective sites which will remain under guard at the sites, monitored during shutdown and decommissioning and subject to the NRC's oversight, until the U.S. Department of Energy (DOE) removes it in accordance with its legal obligations."

Company Statements

"Transferring our Pilgrim and Palisades plants to Holtec, with its vast experience and innovative use of technology, will lead to their decommissioning faster than if they were to remain under Entergy's ownership," said Entergy Chair and Chief Executive Officer (CEO) Leo Denault. "Earlier decommissioning benefits the surrounding communities," he added.

"We look forward to engaging with representatives of the Pilgrim and Palisades communities and with the appropriate state and local government officials in Massachusetts and Michigan about site restoration standards and effective coordination during the decommissioning process," said Holtec President and CEO Dr. Kris Singh. "We intend to deploy cutting-edge technologies to carry out the deconstruction of the plant structures with minimal impact on the environment and maximum personnel safety … [that] are our core competencies. As a growing company, we look forward to exploring employment opportunities for Entergy employees dislocated by the plant's decommissioning,"

Background

Pilgrim Nuclear Power Station The Pilgrim Nuclear Power Station is the only nuclear power plant operating in Massachusetts. It is located in the Manomet section of Plymouth on Cape Cod Bay, south of the tip of Rocky Point and north of Priscilla Beach. Like many similar plants, it was constructed by Bechtel, and is powered by a General Electric BWR 3 boiling water reactor inside of a Mark 1 pressure suppression type containment and generator. It has a 690 MW production capacity. Pilgrim Station produces about 14% of the electricity generated in Massachusetts.

On October 13, 2015, plant owners announced that it would close by June 1, 2019. Entergy cited "market conditions and increased costs," which would have included tens of millions of dollars of necessary safety upgrades, as the basis for the decision to close the Pilgrim Station.

Palisades Nuclear Generating Station The Palisades Nuclear Generating Station is located on Lake Michigan in Van Buren County's Covert Township, Michigan. The plant is located on a 432-acre site that is five miles south of South Haven, Michigan. The Westinghouse Electric Company turbine generator can produce 725,000 kilowatts of electricity.

Built between 1967 and 1970, Palisades was approved to operate at full power in 1973. The plant's original license was due to expire on March 24, 2011. An application for 20-year extension was filed in 2005 with the NRC. It was granted on January 18, 2007. Therefore, the plant was then scheduled for decommissioning by 2031.

Entergy had made a decision to close the plant in October 2018. Consumers Energy then attempted to buy its way out of a power purchase agreement it has with Entergy and the plant. The Michigan Public Service Commission (MPSC) did not approve Consumer Energy's full request of $172 million, however, so Entergy decided to keep the plant open three years longer than planned. Entergy currently plans to close the Palisades plant in 2022.

Holtec International Holtec International is a privately held energy technology company with a principal business concentration in the nuclear power industry. In the United States, the company has operation centers in Florida, New Jersey, Ohio and Pennsylvania. Globally, it has operation centers in Brazil, Dubai, India, South Africa, Spain, United Kingdom and Ukraine.

Holtec's service offerings include densifying wet storage in nuclear plants' spent fuel pools to defer the need for and expense of alternative measures by as much as two decades; dry storage and transport of nuclear fuel; and, the supply of special-purpose pressure vessels and critical-service heat exchange equipment such as air-cooled condensers, steam generators, feedwater heaters and water-cooled condensers.

Comprehensive Decommissioning International (CDI) CDI provides comprehensive project solutions for the accelerated retirement of nuclear power plants. According to the press release, "CDI's global operations provide expertise and technological innovation to protect the public in an environmentally responsible, safe and ethical manner."

For additional information about Holtec International, please see www.holtecinternational.com. For additional information about CDI, please see www.cdi-decom.com.

For additional information about the Pilgrim and Plymouth projects, please contact Erika Grandrimo at (856) 797-0900, ext. 3920 or at e.grandrimo@holtec.com.

U.S. Congress

National Defense Authorization Act Continues NNSA Program re Voluntary Phasing Out of Cesium Chloride Blood Irradiation Devices

On August 13, 2018, President Donald J. Trump signed the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Public Law No. 115-232).

Amongst other things, the law directs the Administrator for Nuclear Security to continue working toward the voluntary phasing out of the use of blood irradiation devices in the United States that rely on cesium chloride by December 31, 2027.

The law authorizes the National Nuclear Security Administration (NNSA) to continue its current program to pay up to 50% of the per-device replacement costs and 100% of the disposition costs.

The law includes specified reporting requirements about the program to Congress.

The relevant text is as follows:

SEC. 3141. ACCELERATION OF REPLACEMENT OF CESIUM BLOOD IRRADIATION SOURCES.

(a) Goal.—The Administrator for Nuclear Security shall ensure that the goal of the covered programs is eliminating the use of blood irradiation devices in the United States that rely on cesium chloride by December 31, 2027.

(b) Implementation.—To meet the goal specified by subsection (a), the Administrator shall carry out the covered programs in a manner that—

(1) is voluntary for owners of blood irradiation devices;

(2) allows for the United States, subject to the review of the Administrator, to pay up to 50 percent of the per-device cost of replacing blood irradiation devices covered by the programs;

(3) allows for the United States to pay up to 100 percent of the cost of removing and disposing of cesium sources retired from service by the programs; and

(4) replaces such devices with x-ray irradiation devices or other devices approved by the Food and Drug Administration that provide significant threat reduction as compared to cesium chloride irradiators.

(c) Duration.—The Administrator shall carry out the covered programs until December 31, 2027.

(d) Report.—Not later than 180 days after the date of the enactment of this Act, the Administrator shall submit to the appropriate congressional committees a report on the covered programs, including—

(1) identification of each cesium chloride blood irradiation device in the United States, including the number, general location, and user type;

(2) a plan for achieving the goal established by subsection (a);

(3) a methodology for prioritizing replacement of such devices that takes

into account irradiator age and prior material security initiatives;

(4) in consultation with the Nuclear Regulatory Commission and the Food and Drug Administration, a strategy identifying any legislative, regulatory, or other measures necessary to constrain the introduction of new cesium chloride blood irradiation devices;

(5) identification of the annual funds required to meet the goal established by subsection (a); and

(6) a description of the disposal path for cesium chloride sources under the covered programs.

(e) Assessment.—The Administrator shall submit an assessment to the appropriate congressional committees by September 20, 2023, of the results of the actions on the covered programs under this section, including—

(1) the number of replacement irradiators under the covered programs;

(2) the life-cycle costs of the programs, including personnel training, maintenance, and replacement costs for new irradiation devices;

(3) the cost-effectiveness of the covered programs;

(4) an analysis of the effectiveness of the new irradiation devices' technology; and

(5) a forecast of whether the Administrator will meet the goal established in subsection (a).

(f) Definitions.—In this section:

(1) APPROPRIATE CONGRESSIONAL COMMITTEES.—The term "appropriate congressional committees" means—

(A) the Committee on Appropriations, the Committee on Armed Services, and the Committee on Energy and Commerce of the House of Representatives; and

(B) the Committee on Appropriations, the Committee on Armed Services, the Committee on Energy and Natural Resources, and the Committee on Health, Education, Labor, and Pensions of the Senate.

(2) COVERED PROGRAMS.—The term "covered programs" means the following programs of the Office of Radiological Security of the National Nuclear Security Administration:

(A) The Cesium Irradiator Replacement Program.

(B) The Off-Site Source Recovery Program.

For additional information, please see the following link to the bill: https://www.congress.gov/bill/115th-congress/house-bill/5515/text#toc-HE367D447CEDB4375A344CBBF76D48202

Annual Report to Congress Published re Nuclear Security Inspections

On July 5, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has made publicly available an unclassified version of its annual report to Congress detailing the previous year's security inspection program.

Overview

In 2017, the NRC conducted 230 security inspections at commercial nuclear power plants and Category I fuel cycle facilities. Those included 19 force-on-force inspections, involving simulated attacks on the facilities to test the effectiveness of a licensee's physical protection program.

The NRC's security inspection program and publicly available results of the inspections are addressed in the report. When NRC inspectors identify a security finding during an inspection, they ensure the licensee implements appropriate compensatory measures to correct the situation.

Details of security findings are considered sensitive and not released to the public.

Background

The annual report to Congress, which is required under the Energy Policy Act of 2005, covers the NRC's security inspection program, including force-on-force exercises for commercial nuclear power reactors and Category I fuel cycle facilities for calendar year 2017.

It also provides information regarding the overall security and safeguards performance of the commercial nuclear power industry and Category I fuel cycle facilities to ensure that Congress and the public are informed of the NRC's efforts to oversee the protection of the nation's civilian nuclear power infrastructure and strategic special nuclear material.

The report is available to interested stakeholders on the NRC's website at https://www.nrc.gov/docs/ML1808/ML18086B249.pdf.

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

Nuclear Power Plants and Other NRC Licensees

News Briefs for Nuclear Power Plants Across the Country

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

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

Appalachian Compact/States of Pennsylvania and West Virginia

Peach Bottom Nuclear Power Plant On August 29, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has accepted for review an application from Exelon Generation Company LLC to renew for an additional 20 years the operating licenses of Peach Bottom Units 2 and 3. The plant is located approximately 18 miles south of Lancaster, Pennsylvania. The NRC approved the initial license renewal for both units in May 2003. Exelon submitted its subsequent license renewal application on July 10, 2018. Unit 2 is currently licensed to operate through August 8, 2033. Unit 3 is currently licensed to operate through July 2, 2034. Accepting the application for review, or "docketing" the application, does not indicate whether the Commission will approve or reject the request. The NRC will soon publish in the *Federal Register* a notice of opportunity to intervene in an adjudicatory hearing. The notice will include the deadline for filing petitions to intervene by anyone whose interest may be affected by the proposed license renewal and who wishes to participate as a party in the proceeding. *The application, which excludes proprietary details, and information on the hearing process and the subsequent license renewal is available on the NRC website at www.nrc.gov.*

Automatic Packaging Systems Inc. On August 14, 2018, NRC announced that the agency is proposing an $8,500 civil penalty against Automated Packaging Systems Inc. for a violation related to the loss of a gauge containing a radioactive source. The firm's violation of NRC requirements was identified in an inspection report dated July 16, 2018. In particular, in November 2016, a fixed gauge holding an americium-241 sealed source was removed from service at one of the company's manufacturing plants in Keyser, West Virginia. The gauge was used to measure product thickness. At some point during the following year, it is believed that the device was inadvertently disposed of as scrap metal. On May 1, 2017, the company submitted to the NRC an annual registration for its general use licensed devices. However, APS failed to conduct an inventory of those devices. In March 2018, APS recognized that the gauge was missing. Given the circumstances, the NRC does not believe the gauge poses a threat to public health and safety. Nonetheless, the improper disposal of the device created the possibility that members of the public, including workers at the scrap yard, could receive a small non-harmful amount of radiation exposure. APS has not contested the violation and informed the NRC that it does not intend to provide a response. It has 30 days to pay the fine or dispute all or part of it. *For additional information, please contact Diane Screnci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.*

Atlantic Compact/State of New Jersey

Oyster Creek Nuclear Power Plant On July 17, 2018, NRC held a public meeting in Lacey Township (Ocean County), New Jersey to discuss and seek comments on a decommissioning roadmap report for the Oyster Creek Nuclear Generation Station. Exelon, which owns the Lacey facility, submitted the Oyster Creek Post-Shutdown Decommissioning Activities Report to

the NRC on May 21, 2018. It includes a description of the company's plans to place the plant into SAFSTOR, or long-term storage, prior to beginning dismantlement work. NRC will accept public comments on the report until September 10, 2018. Oyster Creek is scheduled to permanently cease operations in September 2018. *A copy of the report is available on the NRC website in the electronic documents section, ADAMS accession number ML18141A775. For additional information, please contact David McIntyre of the NRC at (301) 415-8200.*

Central Interstate Compact/State of Louisiana

Waterford Nuclear Power Plant On August 23, 2018, NRC announced that the agency is seeking public comment on a draft supplemental environmental impact statement for renewing the operating license of the Waterford nuclear power plant in Louisiana. The draft statement contains the NRC staff's evaluation and preliminary conclusion that the environmental impacts would not preclude renewing the license for an additional 20 years of operation. The NRC's review of Waterford's license renewal application consists of a technical safety review and an environmental review. Waterford is a pressurized -water reactor located about 25 miles west of New Orleans, Louisiana. Entergy Operations Inc. and Entergy Louisiana LLC submitted the renewal application on March 30, 2016. On August 23, 2018, the NRC published a *Federal Register* notice that provided detailed instructions on how to submit written comments on the draft supplemental environmental impact statement. Comments will be accepted through October 9, 2018. The draft supplemental environmental impact statement is supplement 59 to NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants. *The license renewal application and general information about reactor license renewal are available on the NRC website at www.nrc.gov. For additional information, please contact Scott Burnell of the NRC at (301) 415-8200.*

Midwest Compact/State of Missouri

Westinghouse Electric Company On June 29, 2017, NRC announced that the agency has approved the indirect transfer of Westinghouse Electric Company's licenses from Toshiba to Brookfield WEC Holdings Inc. The NRC action covers Westinghouse's licenses for the Columbia Fuel Fabrication Facility in Hopkins, South Carolina and the Hematite Fuel Fabrication Facility in Festus, Missouri, as well as 29 export licenses. The Hematite facility is in decommissioning. Westinghouse, which is currently a wholly owned subsidiary of Toshiba, filed for bankruptcy on March 29, 2017. Its sale was announced on January 12, 2018. Brookfield WEC Holdings is a subsidiary of Brookfield Asset Management Inc., a Canadian investment firm. There will be no direct transfer of control involved with the transaction, as Westinghouse will continue to be the licensee. There will also be no change in the management or technical personnel responsible for licensed activities. The current safety, security and licensing organizations within Westinghouse will remain unchanged. Additionally, there are no planned changes in the operational organization, location, facilities, equipment or procedures associated with the NRC licenses. There will also be no changes in Westinghouse operating procedures, emergency procedures or decommissioning financial assurance. *The NRC's Order approving the transfer and the staff's safety evaluation report are available in the NRC's ADAMS online document database on the agency's website at www.nrc.gov. For additional information, please contact David McIntyre of the NRC at (301) 415-8200.*

Northwest Compact/State of Alaska

Alaska Medical Center On August 13, 2018, the NRC announced that the agency has begun a special inspection at the Providence Alaska Medical Center in Anchorage, Alaska to review potential overexposures to some staff there. NRC issued an $11,600 fine to the facility in April 2018

for three violations of agency requirements that involved the administration of radioactive yttrium-90 to a patient on June 14, 2017. Company officials did not contest the violations and committed to take corrective actions. In particular, on June 25-26, 2018, NRC inspectors visited the facility and identified concerns related to the licensee's radiation dosimetry program including apparent failures by some staff to wear dosimeters to measure their radiation exposures; apparent failures by management to investigate abnormal dosimetry results; and, an apparent failure to assess cumulative exposures to staff who worked at other medical facilities where they may have been exposed to radiation. Based on the limited information available to the NRC, at least three staff members at Providence Alaska Medical Center may have received exposures in 2016 and 2017 in excess of NRC limits. As a result, a three-member NRC inspection team spent about a week at Providence Alaska Medical Center evaluating its radioactive control programs. An inspection report documenting any findings will be made publicly available within 45 days of the end of the inspection. *For additional information, please contact Victor Dricks at (817) 200-1128.*

Southwestern Compact/State of California

San Onofre Nuclear Generating Station On August 24, 2018, the NRC announced that the agency will conduct a Special Inspection at the San Onofre Nuclear Generating Station to review events surrounding a fuel-loading incident on August 3, 2018. The San Clemente, California plant is owned by Southern California Edison and permanently shut down in 2013. NRC is sending a team to evaluate an incident in which a loaded fuel storage canister became stuck while being lowered into an underground storage vault. Edison officials have told NRC they have stopped moving fuel into the storage vaults until NRC completes its review of the incident. The NRC team is scheduled to begin the inspection on September 10, 2018 and will spend about a week on site evaluating the licensee's cause analysis and the adequacy of corrective actions. An inspection report documenting the team's findings will be publicly available within 45 days of the end of the inspection. *The charter authorizing the Special Inspection is available on the NRC website at www.nrc.gov. For additional information, please contact Victor Dricks at (817) 200-1128.*

State of Nebraska

Crow Butte Uranium Recovery Facility On October 30, 2018, the NRC's Atomic Safety and Licensing Board (ASLB) will hold an evidentiary hearing in Crawford, Nebraska regarding a contention raised by the Oglala Sioux Tribe challenging the proposed expansion of Crow Butte Resources' uranium recovery facility in Dawes County. The board is an adjudicatory body of three administrative judges, independent of the NRC staff and Commission. The contention challenges Crow Butte's May 2012 application to the NRC for authorization to construct and operate a satellite in situ uranium recovery facility called the Marsland Expansion Area. The contention argues that the application and environmental assessment did not provide sufficient information regarding the effects of the proposed expansion on adjacent surface and groundwater resources. A Notice of Hearing, with detailed information on the evidentiary hearing—as well as the oral, written and audio-recorded limited appearance statements—was published in the *Federal Register* on August 2, 2018. *For additional information, please contact David McIntyre of the NRC at (301) 415-8200.*

Waste Management 2018 Conference

Registration Open for 2019 Waste Management Conference

Registration is now open for the 2019 Waste Management (WM) conference, which will be held at the Convention Center in Phoenix, Arizona from March 3-7, 2019.

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 young professionals are strongly encouraged to get involved. The 2019 WM conference plans to have several special programs to encourage and support their participation.

The Low-Level Radioactive Waste Forum (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.

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.

Advisory Committee on Reactor Safeguards (ACRS)

NRC Advisory Committee Holds Meeting on Reactor Safeguards

On July 26, 2018, a panel of experts that advises the U.S. Nuclear Regulatory Commission (NRC) on nuclear safety matters held a public meeting at the agency's Region I Office in King of Prussia, Pennsylvania.

Aspects of the meeting are described in the NRC's meeting notice as published at 83 Federal Register 32,697 on July 13, 2018.

Overview

The meeting was held at the regional office located at 2100 Renaissance Boulevard in King of Prussia, Pennsylvania. At the meeting, the Advisory Committee on Reactor Safeguards (ACRS) Subcommittee on Plant Operations and Fire Protection discussed with staff topics of mutual interest including the nuclear power plant performance review process, reactor safety issues and regional office interactions with plants undergoing decommissioning.

Agenda Topics

During the meeting, the Subcommittee heard presentations by and held discussions with NRC staff and other interested persons regarding this matter. The Subcommittee next plans to gather information, analyze relevant issues and facts and formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Background

The ACRS is an advisory group that provides independent technical review of, and advice on, matters related to the safety of existing and proposed nuclear facilities, as well as on the adequacy of proposed reactor safety standards. It also advises the Commission on issues in health physics and radiation protection.

Additional information about the ACRS is available on the NRC's website at www.nrc.gov. For additional information, please contact Diane Screnci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.

(Continued from page 1)

(R-NH), Trent Lott (R-MS), Jim Talent (R-MO), and John Warner (R-VA); former New Jersey Governor and former U.S. Environmental Protection Agency (EPA) Administrator Christine Todd Whitman; and, many former industry executives including former General Motors' Chair and Chief Executive Officer (CEO) Daniel Akerson, former AREVA CEO Thomas Christopher, retired Westinghouse Electric Co. and URENCO USA Chair Charles Pryor and former Battelle Memorial Institute President and CEO Jeffrey Wadsworth. In addition, three former Chairs (Nils Diaz, Dale Klein and Richard Meserve) of the U.S. Nuclear Regulatory Commission (NRC) signed the letter, as well as some former NRC Commissioners and several former Directors of national laboratories.

National Security Benefits

"The national security benefits of a strong domestic nuclear energy sector take many forms," states the letter, "many of which overlap and together are woven into the nation's greater strength and resilience." The letter continues by citing the following examples:

- Our nation's nuclear power plants are among the most robust elements of U.S. critical infrastructure, offering a level of protection against natural and adversarial threats that

goes far beyond most other elements of our nation's electrical grid. The Department of Defense depends on the nation's grid to power 99 percent of its installations, meaning large scale disruptions affect the nation's ability to defend itself.

- Nuclear plants have up to two years' worth of fuel on site, providing valuable fuel diversity and increasing the resilience of our electrical grid by eliminating the supply vulnerabilities that face some other forms of energy supply.

- Several national security organizations, including our nuclear Navy and significant parts of the Department of Energy, benefit from a strong civil nuclear sector. Many of the companies that serve the civil nuclear sector also supply the nuclear Navy and major DOE programs. For example, the Administration's 2018 Nuclear Posture Review noted that the United States is unable to produce enriched uranium for national security purposes. Re-establishing this capability will be far easier and more economical with a strong, thriving civil nuclear sector. Moreover, the nuclear industry is an important career destination for military veterans.

- Nuclear energy is by far our nation's largest source of emissions-free generation. Carbon dioxide emissions from other forms of electricity production contribute to changes in our climate, and a changing climate has been identified by the national security community as a national security risk.

- Competitiveness internationally is inextricably linked to maintaining a strong domestic nuclear program. More than six decades ago, the United States developed what is today the commercial nuclear industry, which established and maintained a leadership role that transcends power generation. However, we are in jeopardy of losing our edge and missing out on much of a global opportunity estimated at over half a trillion dollars. Today, there are 56 reactors under construction in the world and this expansion is largely driven by China and Russia.

- A strong civil nuclear export sector creates deep and long-lasting relationships between the U.S. and partner nations across important areas that advance America's national security interests, including nonproliferation, nuclear safety, and physical and cyber security. If we do not continue to play a major role in the global market for nuclear reactors, technology and fuel, our influence over nonproliferation and nuclear safety standards will be greatly diminished.

Background

By the end of 2021, twenty-four of the operating nuclear power plants in the United States are either set to close or will no longer be profitable according to a report by Bloomberg New Energy Finance (BNEF) that was issued on May 15, 2018. In addition, the report cautions that more plants are likely to close. (See LLW Forum News Flash titled, "Report Cautions Early Retirement Risks for Nuclear Power Plants: Electricity Demand, Renewable Energy and High Fixed Costs Pressure Nuclear Fleet," May 22, 2018.)

According to the BNEF study, the industry is increasingly challenged by sluggish power demand, inexpensive natural gas and the rise of renewable energy. This is especially true in the Midwest, where the use of wind power and other renewable power options are being used increasingly.

In this regard, a February 2018 report from BNER and the Business Council for Sustainable Energy found that renewable power had reached 18 percent of the U.S. electricity generation capacity. The expansion has been spurred, in part, by an increase in hyrdopower investments in the West. Nuclear power recently contributed about 20

percent, but that figure is declining as operating facilities continue to shut down.

In addition, DOE is currently weighing a March 2018 request from the competitive power unit at FirstEnergy Corporation to declare that an emergency exists its PJM market. (See *LLW Notes*, March/April 2018, p. 29.) The PJM Energy Market procures electricity to meet consumer's demands both in real time and in the near term. It includes the sale or purchase of energy in PJM's Real-Time Energy Market (five minutes) and Day-Ahead Market (one day forward). If Secretary Perry agrees to the request, it would mean the PJM would have to compensate both nuclear and coal generators in the at-risk market in order to protect the stability of the grid.

National Nuclear Security Administration (NNSA)

President Trump to Nominate William Bookless as NNSA Principal Deputy Administrator

On August 10, 2018, President Donald J. Trump announced his intent to nominate William Bookless, a former Senior Physicist at the U.S. Department of Energy (DOE) Lawrence Livermore National Laboratory (LLNL), to be the Principal Deputy Administrator at the National Nuclear Security Administration (NNSA).

Bookless participated in various nuclear security research projects during his 32-year tenure at LLNL. He worked as the Deputy Associate Director for the laboratory's Nuclear Weapons Program, as well as the Associate Director for Safety and Environmental Protection. His LLNL career culminated with a two and a half year assignment as Senior Adviser to the NNSA Administrator from 2009 to 2012. Before retiring in 2015, Bookless served for three years as the Assistant Laboratory Director for Policy and Planning at the Brookhaven National Laboratory.

Bookless received his Ph.D. in physics from the University of Wyoming in 1980. He received NNSA recognition for his advisory work on the 2010 *Nuclear Posture Review* and the *New START Treaty*.

For additional information, please see www.whitehouse.gov.

U.S. Nuclear Regulatory Commission (NRC)

Marian Zobler Named as New NRC General Counsel

On August 2, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced the selection of Marian Zobler, the agency's Deputy General Counsel for Rulemaking and Policy Support, as the agency's next General Counsel.

Zobler has been serving as Acting General Counsel since Margaret Doane was appointed NRC's Executive Director for Operations in July 2018. The appointment became effective on August 5, 2018.

Overview

As General Counsel, Zobler will oversee the Office of General Counsel and direct matters of law and legal policy; provide legal opinions, advice, and assistance to the agency; monitor adjudicatory proceedings; provide legal interpretations; and, represent and protect the interests of the NRC in legal matters.

"Marian's knowledge, leadership and dedication to public service have long impressed those of us who have had the privilege of working closely with her," said NRC Chair Kristine Svinicki. "I am confident she will step smoothly into her new role as General Counsel and lead the highly talented OGC staff to continued success."

Background

Zobler joined the NRC in 1990 as part of the Office of the General Counsel's Honor Law Graduate Program. Since then, she has served in a variety of progressively more responsible positions within OGC, including Assistant General Counsel for the High-Level Radioactive Waste Repository Program and Assistant General Counsel for New Reactor Programs. She also served as legal assistant to former NRC Chair Richard Meserve and as Acting Deputy Director for the Office of Federal and State Materials and Environmental Management Programs (FSMEMP).

Zobler earned a bachelor's degree from Barnard College and a law degree from Brooklyn Law School. She is a graduate of the NRC SES Candidate Development Program.

For additional information, please contact the NRC's Office of Public Affairs at (301) 415-8200.

NRC Names New Director of the Agency's Office of Investigations

On July 23, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that Edward "Andy" Shuttleworth has been selected as the new Director of the agency's Office of Investigations (OI).

"We are pleased to welcome Andy to our team," said NRC's Executive Director for Operations Margaret Doane. "He brings more than 30 years of law enforcement experience to the NRC, and will play a key role in upholding the agency's mission of public health and safety."

Overview

Shuttleworth most recently served as Acting Assistant Director for Intelligence at U.S. Immigration and Customs Enforcement, Department of Homeland Security Investigations (HSI). He has held a number of leadership positions within HSI, including Deputy Assistant Director for Intelligence Operations; Director of DHS's Human Smuggling Cell; Unit Chief of the Intellectual Property Crimes Unit at the National Intellectual Property Rights Center; and, Assistant Special Agent in Charge in Laredo, Texas. Shuttleworth holds a bachelor's degree in Criminal Justice from Troy University, Troy, Alabama.

Background

The Office of Investigations develops policy, procedures, and standards for conducting all NRC investigations of alleged wrongdoing by licensees and other entities. OI conducts and supervises investigations within the scope of NRC authority except those of NRC employees and contractors. OI maintains liaison with other agencies and organizations to ensure the timely exchange of information and makes appropriate referrals to the Department of Justice for prosecution of criminal violations.

For additional information, please contact the NRC's Office of Public Affairs at (301) 415-8200.

NRC Awards Fiscal Year 2018 Academic Grants

On July 18, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has awarded 51 grants in fiscal year 2018 to 40 academic institutions in 25 states, totaling more than $15 million. Recipients include four-year universities and colleges, two-year trade schools and community colleges and minority serving institutions, which are a federally recognized category of educational establishments.

Overview

Congress authorized the NRC to provide federal funding opportunities to qualified academic institutions to encourage careers and research in nuclear, mechanical and electrical engineering, health physics and related fields to meet expected future workforce needs. Recipients are to use the grants for scholarships, fellowships and faculty development.

Process

The NRC announces grant opportunities on www.grants.gov, which enables the public to find and apply for federal funding opportunities. A panel of expert reviewers, from academia and the NRC evaluates the grant proposals. The panel composition is diverse, with most reviewers having experience reviewing proposals for government agencies and advanced credentials in nuclear engineering, health physics, radiochemistry or related disciplines. Each panelist must certify no conflict of interest for the proposals they evaluate.

Background

The grant program is approaching its 10-year anniversary. More than 3,200 students in 35 states and Puerto Rico have been beneficiaries of the NRC's program. The NRC has specifically focused on developing individuals with the skills and competencies necessary to accomplish nuclear safety, including health physics, radiochemistry, probabilistic risk assessment, seismology and other nuclear-related areas. Through this program, NRC has funded multiple research and development, educational and training, and experiential learning projects to enhance academic excellence and to produce a future skilled workforce.

The complete list of grants awarded and general information about the grant program are available on the NRC's website at www.nrc.gov. For additional information, please contact Ivonne Couret of the NRC at (301) 415-8200.

NRC 2018-2019 Information Digest Now Available Online

On August 20, 2018, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has published the 2018-2019 edition of its Information Digest, which describes the agency's responsibilities and activities and provides general information on nuclear-related topics. This latest edition, NUREG-1350, Volume 30, is intended to serve as a quick reference for notable facts regarding the agency and the industry it regulates in an easy-to-use format that includes visual aids.

The Information Digest is published annually and is available electronically on the NRC website at www.nrc.gov. The electronic version has embedded hyperlinks for easy access to additional information on major topics. The NRC graphics, figures, maps and data sets are also available online.

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

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

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

- 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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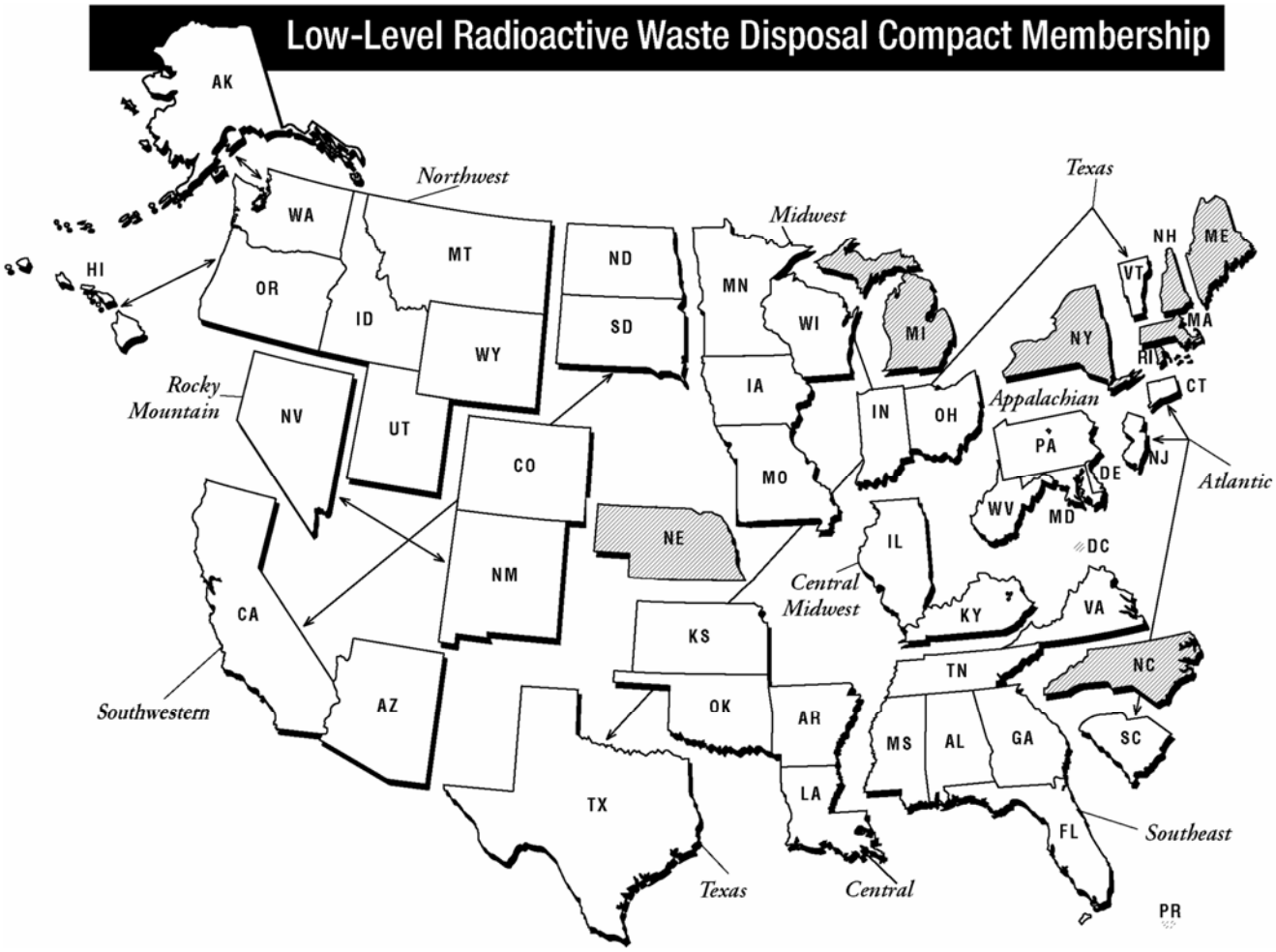

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Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

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Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact
Arizona
California
North Dakota
South Dakota

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