

LLW *notes*

Volume 32 Number 2 March/April 2017

National Academies of Sciences, Engineering, and Medicine

NAS Releases LLW Workshop Proceedings

On April 13, 2017, the National Academies of Sciences, Engineering, and Medicine (NAS) released the publication, *Low-Level Radioactive Waste Management and Disposition: Proceedings of a Workshop*.

The NAS Nuclear and Radiation Studies Board, Division on Earth and Life Studies, hosted the workshop on October 24-25, 2016. The workshop was held at the NAS' Keck Center, which is located at 500 Fifth Street NW in Washington, DC.

The NSA proceedings are available to interested stakeholders for free download at <https://www.nap.edu/catalog/24715/>.

Overview

The U.S. Department of Energy's Office of Environmental Management (DOE-EM) is responsible for the cleanup of the sites used by the federal government for nuclear weapons development and nuclear energy research. DOE-EM cleanup involves retrieval, treatment, storage, transportation and disposition of hundreds of different radioactive and hazardous solid and liquid wastes.

Low-level radioactive waste—which is defined by exclusion as waste that does not meet the statutory definitions for spent nuclear fuel, high-level radioactive waste or transuranic waste—is physically and chemically diverse, ranging from lightly contaminated soils and building materials to highly irradiated nuclear reactor components. It is the most volumetrically significant waste stream (millions of cubic meters) being generated by the cleanup program.

The workshop considered similarities between successful case studies, in which unique disposition pathways have been developed to address low-level radioactive wastes, and explored ways to extend these similar characteristics to problematic wastes—i.e., low-level radioactive wastes currently without a clear disposition pathway.

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

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

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Low-Level Radioactive Waste Forum, Inc.

LLW Notes

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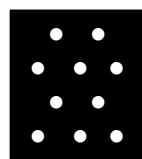
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Directors that serve on the Board of the Low-Level Radioactive Waste Forum, Inc. are appointed by governors and compact commissions. The LLW Forum, Inc. was established to facilitate state and compact implementation of the Low-Level Radioactive Waste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



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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 Holds Spring 2017 Meeting in Denver

On April 24-25, 2017, the Low-Level Radioactive Waste Forum (LLW Forum) held its spring 2017 meeting at the Embassy Suites Downtown Convention Center Hotel in Denver, Colorado.

The Rocky Mountain Low-Level Radioactive Waste Board and Midwest Interstate Low-Level Radioactive Waste Compact Commission co-sponsored the meeting.

Additional information about the meeting can be found on the LLW Forum's web site at www.llwforum.org.

Overview

The following is a list of agenda topics from the meeting:

- ◆ overview and analysis re Executive agency and Congressional transition and impacts on the nuclear industry;
- ◆ National Academies' low-level radioactive waste management and disposition workshop;
- ◆ U.S. Nuclear Regulatory Commission (NRC) regulatory activities and updates including Part 61 rulemaking initiative; low-activity waste scoping study; rulemaking SECY re financial assurance for byproduct material; and, assessment for the low-level waste branch;
- ◆ U.S. Environmental Protection Agency (EPA) activities and updates including final revisions to National Emission Standards for Radon Emissions from Operating Mill Tailings; publication of final Protective Action Guides and Planning Guidance for Radiological Incidents; and, public comments and next steps re the 40 CFR Part 190 Advanced Notice of Proposed Rulemaking (ANPR);
- ◆ U.S. Department of Energy (DOE) activities and updates;
- ◆ updates and activities re the Waste Control Specialists' commercial and federal low-level radioactive waste disposal facility in Andrews County, Texas;
- ◆ updates and activities re the Clive low-level radioactive waste disposal facility in Tooele County, Utah;
- ◆ consideration of alternative options for the management of low activity waste;
- ◆ requirements for plans regarding waste minimization;
- ◆ tools to assist decision makers regarding low-level waste management;
- ◆ perspectives from the Nuclear Energy Institute (NEI) on the state of the commercial nuclear power industry;
- ◆ industry insights and perspectives regarding waste management and disposition;
- ◆ addressing abandoned cyclotrons and decommissioning in Colorado;
- ◆ survey results re alternative technologies for irradiators and other radioactive sources and devices;
- ◆ implementation of new Part 37 requirements and review of cyber-security for nuclear-related issues;

- ◆ proposals to license Greater-than-Class C (GTCC) and transuranic waste cells and spent nuclear fuel storage in Texas;
- ◆ past, present and future use of uranium in Colorado;
- ◆ development of a radiation response volunteer medical reserves corp unit;
- ◆ lack of oversight for management of exempt sealed radioactive sources;
- ◆ the Conference of Radiation Control Program Directors (CRCPD) Part S Working Group re suggested state regulations on financial assurance for sealed sources;
- ◆ potential revisions to regulations or processes re Category 3 source protection and accountability; and,
- ◆ removal and packaging of Category 1 and 2 self-shielded devices.

Background

Over 75 officials from states, compacts, federal agencies, nuclear utilities, disposal operators, brokers/processors, industry and other interested parties attended the spring 2017 LLW Forum meeting.

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

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

LLW Forum to Hold Fall 2017 Meeting in Alexandria, Virginia

The Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce that our fall 2017 meeting will be held at the Hilton Hotel in Old Town Alexandria, Virginia on October 16-17, 2017. Please mark your calendars accordingly and save the date!

The Southeast Compact Commission for Low-Level Radioactive Waste Management and the Central Interstate Low-Level Radioactive Waste Compact Commission are co-sponsoring the meeting.

Overview

The fall 2017 LLW Forum meeting will be held on Monday, October 16 (9:00 am – 5:00 pm) and Tuesday, October 17 (9:00 am – 1:00 pm) at:

Hilton Alexandria Old Town Hotel
1767 King Street
Alexandria, Virginia

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

Background

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

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

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LLW Forum/Disused Sources Working Group

LLW Forum Releases Report re Compact Import-Export Requirements

The Low-Level Radioactive Waste Forum (LLW Forum) is pleased to announce the release of a report on Compact Import and Export Requirements.

A copy of the report can be found on the LLW Forum website at <http://llwforum.org/about/#compact>.

Overview

The report, which was prepared by the Disused Sources Working Group (DSWG), includes links to each individual low-level radioactive waste compact's websites, as well as links to any applicable policy statements and forms. For those compacts that have export and/or import permit

requirements, a brief explanation of the program is provided.

Any specific questions about a compact's permit program should be addressed to the respective compact. The contact information is available on the compact's website.

Background

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

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

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

Central Midwest Compact

Central Midwest Compact Commission Holds Spring Meeting

On April 11, 2017, the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission held its spring meeting beginning at 9:30 am CDT (Illinois)/ 10:30 am EDT (Kentucky). The meeting was held at the Illinois Emergency Management Agency (IEMA) in Springfield, Illinois.

The agenda for the meeting was as follows:

- ◆ Call to Order
- ◆ Adoption or Modification of the Agenda
- ◆ Adoption of Minutes from the Annual Meeting on September 27, 2016
- ◆ Executive Session
- ◆ First Public Comment Period
- ◆ Reports
 - Chairman and Host State Report and Acknowledgement of Agreed Mandated Responsibility
 - * Illinois 45 ILCS 140
 - * Kentucky 211.859
 - * Low-Level Radioactive Waste Forum (LLW Forum) Fall 2016 Meeting Update (Saratoga Springs, New York) and Disused Sources Working Group (DSWG) Update

- Kentucky Report
 - * Naturally Occurring Radioactive Material/Technologically Enhanced Naturally Occurring Radioactive Material (NORM/TENORM) Violation Update
 - * TENORM – Status of Regulation Revision
- Executive Assistant report
 - ◆ Second Public Comment Period
 - ◆ Other Business
 - ◆ Next Scheduled Meeting or Announcement of Special Meeting
 - ◆ Adjournment

For additional information, please contact Joseph Klinger, Chairman of the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission, at (217) 836-3018 or at joe.klinger@illinois.gov.

Interested stakeholders may also go to the Central Midwest Interstate Low-Level Radioactive Waste Compact Commission web site at <http://www.cmcompact.org>.

Northwest Compact/State of Utah

Utah Waste Management and Radiation Control Board Meets

On April 13, 2017, the Utah Waste Management and Radiation Control Board held a regularly scheduled meeting beginning at 1:30 p.m. MT in Salt Lake City, Utah.

The meeting, which was open to the public, was held in Conference Room 1015, Department of Environmental Quality (DEQ) Board Room, on the first floor of 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 April 2017 Board meeting:

- I. Call to Order
- II. Approval of Meeting Minutes for the February 9, 2017 Board Meeting (*Board Action Item*)
- III. Underground Storage Tanks Update
- IV. Administrative Rules
 - A. Solid Waste Rules: Approval to proceed with formal rulemaking and public comment to remove paragraph R315-302-1(2)(a)(iii) that prohibits a new solid waste facility from being located within certain farmland classified by the U.S. Department of Agriculture (*Board Action Item*)

- B. Solid and Hazardous Waste Rules: Approval to proceed with formal rulemaking and public comment to incorporate the U.S. Environmental Protection Agency's (EPA's) hazardous waste generator improvement rule (promulgated on November 28, 2016 at 81 *Federal Register* 85,732) into R315-15, R315-260, R315-261, R315-262, R315-263, R315-264, R315-265, R315-266, R315-268, R315-270, R315-273, R315-301, R315-304-3 and R315-305-3 (*Board Action Item*)

- V. Director's Report/ Legislative Update
- VI. Open and Public Meetings Act, Utah Public Officers and Employees Ethics Act
- VII. Other Business
 - A. Miscellaneous Information Item
 - B. Scheduling of Next Board Meeting
- VIII. Election of Board Chair and Vice-Chair
- 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.

Rocky Mountain Compact/State of New Mexico and Southwestern Compact/State of California

Confirmatory Order Issued re Decommissioning Work at Uranium Mill Site

On April 12, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency had issued a Confirmatory Order to Homestake Mining Co. of California outlining actions the company agreed to take in implementing a groundwater cleanup program at the uranium mill undergoing decommissioning in Grants, New Mexico.

Background

The Grants site received uranium ore from several local mines and performed milling operations from 1958 to 1990. Tailings generated from milling operations were placed into two piles on site, which in 1975 were found to have contaminated the groundwater.

The company began implementing a groundwater protection plan in 1977. Homestake received an NRC license in 1986 to possess residual uranium and byproduct material generated by past milling operations at the Grants site. Homestake is

processing groundwater under an NRC-approved Corrective Action Program and carrying out other activities to decommission the site.

Violations

The order finalizes commitments company officials made under the NRC's Alternative Dispute Resolution (ADR) process to address apparent violations of the NRC-approved groundwater Corrective Action Program. The NRC found the apparent violations during records inspections from October 2014 to May 2016.

The violations include the discharge of water that exceeded site standards; the discharge of water containing byproduct material to unauthorized locations; failure to obtain liquid effluent samples and report the results; and, the injection of water using a method inconsistent with the groundwater Corrective Action Program.

Homestake took immediate corrective actions to comply with NRC requirements. Homestake will also evaluate the impact of the violations to public health and safety. The NRC has no immediate public health and safety concerns, because the apparent violations did not result in the public being exposed to contaminated groundwater.

Alternative Dispute Resolution Process

The company requested the ADR process to resolve differences with the NRC and discuss corrective actions. The process uses a neutral mediator with no decision-making authority to assist the parties in reaching an agreement or resolving any differences regarding a dispute.

As a result of the settlement agreement, Homestake made a number of commitments in addition to the immediate actions to come into compliance with NRC requirements. Homestake will submit a root cause protocol to an independent third party and the NRC for review, and use the protocol to analyze the reasons for the violations.

Within 60 days of completing its root cause analysis, Homestake will propose additional corrective actions to the NRC. The company will assess all its activities, with further review by an independent third party, to determine whether they comply with NRC requirements and identify any areas of the license requiring clarification, corrective action or amendment. The assessment will include a review of the company's safety culture.

Homestake will also revise its groundwater program and submit it for NRC review and approval by the end of 2018. It will enhance the annual and refresher training for anyone doing work under the license, ensure work complies with the terms of the license and the approved groundwater program, and report effluent and environmental monitoring results to the NRC twice a year. The NRC is satisfied its concerns will be addressed by making the company's commitments legally binding through the Confirmatory Order.

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

Southeast Compact/State of Florida

Evidentiary Hearing re Proposed Turkey Point New Reactors

On May 2, 2017, the Atomic Safety and Licensing Board (ASLB) will hold an evidentiary hearing in Homestead, Florida regarding Florida Power & Light's application to build two AP1000 reactors next to two existing reactors at the Turkey Point site, which is located approximately 40 miles south of Miami.

The hearing will examine arguments regarding potential environmental impacts from the applicant's proposal to send wastewater from the plants' cooling systems into the Boulder Zone of the Lower Floridan aquifer using deep injection wells.

Hearing Overview

The hearing will begin at 9:30 a.m. on May 2, 2017. It will be held in the Council Chambers of Homestead City Hall, which is located at 100 Civic Court in Homestead. The hearing will continue on May 3, 2017, if necessary.

Members of the public and media are welcome to attend the hearing. Participation in the hearing will be limited to the applicant (Florida Power & Light), NRC staff, the intervenors contesting the application, interested local government bodies, and their lawyers and witnesses. Those planning to attend the hearing should arrive at least 15 minutes early to allow time for security screening, including searches of hand-carried items such as briefcases or backpacks. No signs will be permitted in the hearing room.

Comment Opportunity

The board will also accept written comments, known as limited appearance statements, from interested members of the public. These statements are not testimony or evidence, but they may aid the board and/or the parties in considering the issues in the hearing.

Statements may be submitted as follows:

- ◆ mail to Office of the Secretary Rulemaking and Adjudications Staff, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001;
- ◆ fax to (301) 415-1101; or,
- ◆ e-mail to hearingdocket@nrc.gov.

States and Compacts *continued*

Copies of the statements should also be submitted to the ALSB as follows:

- ◆ mail to Chief Administrative Judge E. Roy Hawkens, c/o Jennifer Scro & Kimberly Hsu, Board Law Clerks, Atomic Safety and Licensing Board Panel, Mail Stop T-3F23, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001;
- ◆ fax to (301) 415-5599; or,
- ◆ email to jennifer.scro@nrc.gov and kimberly.hsu@nrc.gov.

Documents regarding the ALSB's proceeding are available on the NRC's Electronic Hearing Docket by clicking on the folder entitled "Turkey_Point_52-040&52-041-COL" on the left side of the page.

Background

The ALSB is the independent body within the U.S. Nuclear Regulatory Commission (NRC) that conducts adjudicatory hearings and renders decisions on legal challenges to licensing actions.

Additional information about the ALSB's role in the licensing process is available on the NRC website.

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

Southeast Compact/State of Tennessee

Mid-May 2017 Meeting Scheduled re Clinch River Early Site Permit

On May 15, 2017, the U.S. Nuclear Regulatory Commission (NRC) staff will meet with the public in Oak Ridge, Tennessee to discuss the agency's environmental review of an Early Site Permit (ESP) application for the nearby Clinch River site.

The NRC is interested in the public's views on the environmental issues the agency should consider in the review.

Comment Opportunities

The NRC will hold the meetings in the Pollard Technology Conference Center Auditorium, which is located at 210 Badger Avenue in Oak Ridge, from 2:00 – 4:00 p.m. and from 7:00 – 9:00 p.m. NRC staff presentations will describe the environmental review process and the proposed review schedule. Each meeting's presentations will be followed by a formal public comment period. NRC open houses from 1:00 – 2:00 p.m. and 6:00 -7:00 p.m. will provide members of the public the opportunity to speak informally with agency staff.

Following the publication of a notice in the *Federal Register*, NRC staff will also consider written comments on environmental issues until June 12, 2017. Please include Docket ID NRC-2016-0119 with your comment, via the regulations.gov website.

Those wishing to register in advance to comment at the meetings should contact Patricia Vokoun by telephone at (800) 368-5642 – extension 3470 – or via e-mail at ClinchRiverESPEIS@nrc.gov by May 7, 2017. Those wishing to speak may also

register at each meeting no later than 1:45 p.m. and 6:45 p.m., respectively. The time available and the number of people wishing to speak may limit individual comments. Individuals with special needs for attending or presenting information at the meetings should contact Vokoun by May 1, 2017.

Background

The Tennessee Valley Authority submitted the Clinch River application and associated information in May 2016 and provided follow-up information through the remainder of the year. The ESP process determines whether a site is suitable for future construction and operation of a nuclear power plant. The NRC held meetings in Oak Ridge in April 2016 to explain the review process to the surrounding community.

The application, minus proprietary and security-related details, is available on the NRC website. In addition, the Oak Ridge Public Library (which is located at 1401 Oak Ridge Turnpike in Oak Ridge) and the Kingston Public Library (which is located at 1004 Bradford Way in Kingston) have agreed to maintain a copy of the application's environmental report for public inspection.

TVA is seeking resolution of safety and environmental issues related to a potential small modular reactor at the site, which is located approximately five miles southwest of Oak Ridge. The NRC has established docket number 52-047 for this application. Additional information about the new reactor licensing process is available on the NRC website.

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

Southeast Compact/State of Virginia

Mandatory Hearing Held on North Anna New Reactor Application

On March 23, 2017, NRC conducted a mandatory hearing on an application for a Combined License to build and operate a new reactor at the North Anna site in Virginia.

The hearing marked the final step in the agency's Part 52 reactor licensing process.

Overview

The Commission's hearing included testimony and exhibits from applicant Dominion Virginia Power, as well as NRC staff, on the question of whether the staff's review adequately supports the findings necessary to issue the license. The Commission will vote later this year on whether that question has been properly answered.

The hearing, which was open to the public and webcast, was held in the Commission Hearing Room at NRC Headquarters in Rockville, Maryland. A detailed agenda and presentation slides are available in advance on the Commission's meeting transcript page.

Background

Dominion is applying for permission to build and operate an Economic Simplified Boiling Water Reactor (ESBWR) at North Anna, adjacent to the company's two existing reactors. The company submitted its application on November 26, 2007. The NRC certified the 1,600-megawatt ESBWR design following a Commission vote in September 2014. Additional information on the ESBWR certification process is available on the NRC website.

The NRC's Advisory Committee on Reactor Safeguards (ACRS) independently reviewed aspects of the application that concern safety, as well as the staff's final safety evaluation report. The committee provided the results of its review to the Commission on November 15, 2016. The NRC completed its environmental review and published the final impact statement for the proposed reactor in February 2010.

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

Texas Compact/State of Texas

Texas Compact Activity, Disposal Reporting and Pending Legislation

At the spring 2017 meeting of the Low-Level Radioactive Waste Forum (LLW Forum) in Denver, Colorado on April 24-25, 2017, the Executive Director of the Texas Low-Level Radioactive Waste Disposal Compact Commission (TLLRWDC or Commission) provided the following information and overview related to Commission activities and operations.

Background

The Texas Low-Level Radioactive Waste Disposal Compact (Texas Compact) includes the State of Vermont and is not an agency of the State of Texas. The TLLRWDC is a "legal entity separate and distinct from the party states..."

The Commission must comply with its *federal* compact law and is charged with protecting the capacity of the compact facility for Texas and Vermont generators.

Limitations to Jurisdiction and Purview

The Texas Compact does not own or operate the compact facility, which is owned by the State of Texas and operated by Waste Control Specialists (WCS). The Texas Compact does not set surcharges or charge fees of any type, nor does it determine licensing requirements or license the facility. The Texas Commission on Environmental Quality (TCEQ) licenses the compact facility and approves waste streams.

The following matters are outside of the TLLRWDC's purview: high-level waste, transuranic waste, Greater-than-Class C waste, spent fuel storage, NORM or TENORM, site operations at the compact waste facility (TCEQ), and waste shipments (TCEQ and DSHS).

Imports and Exports

The TLLRWDC authorizes imports and exports in alignment with Texas policy and law and ensures protection of capacity. For imports, the Commission has developed an approach based on:

- ◆ a policy to ensure maximum disposal of allowed curies;
- ◆ the need for flexibility based on the regulatory and industry hurdles generators/brokers encounter; and,
- ◆ a need for a fair and unbiased allocation of curie availability.

The TLLRWDC supports exports for good cause. As such, it will be conducting an analysis of exported quantities.

Irradiated Hardware

Given that irradiated hardware can have a significant impact on the amount of curies disposed at the compact facility, the TLLRWDC will continue to approve import applications as it always has with the exception of irradiated

States and Compacts *continued*

hardware. Under the Commission's policies, irradiated hardware must be submitted as a separate import application.

All requests over 15,000 curies, if approved, will be issued conditionally. Once the generator submits documentation that substantiates volume, curies and shipment date, the Commission will release conditionally authorized curies, if available on a first come, first served basis. This approach has been adopted as policy that can be found on the Commission's website.

Forms and Automation

The TLLRWDC rules require the use of an Import Application Form—a.k.a. "Annex A." The form is currently available as a *pdf* on the Commission's website. In addition, the Export Application Form and Generator Authorization Form are also available on the website.

The Commission is beginning work to automate import and export processing. This will require the import and export forms to be fillable.

Annual Reporting and Disposal Numbers

Annual Reports are available at <http://www.tllrwdcc.org/reports-more/>. The 2016 Annual Report is more robust and includes:

- ◆ listing of import agreements, volume and curies;
- ◆ listing of export agreements; and,
- ◆ fees generated.

Disposal numbers in volume and curies for imported waste and in-compact waste are available at <http://www.tllrwdcc.org/reports-more/>.

Legislative Activities

Because the Texas Compact receives funding through the State of Texas appropriation process, the status of the Compact as an agency presents confusion. The Texas Compact is working with the legislature to provide clarification to State of Texas employees that the Texas Compact is a "legal entity separate and distinct from the party states ..."

During the current legislative session, two items—SB 1667 by Senator Seliger and HB 3946 by Representative Landgraf—have been filed as companion bills. SB 1667 and HB 3946 relate to the nature, funding, and functions of the TLLRWDC.

Management Rule

TLLRWDC Commissioner Linda Morris chairs a committee that is charged with drafting rules for management of low-level radioactive waste in the Texas Compact. These rules will have applicability in Vermont. The scope of the rule will likely include only reporting requirements. The rulemaking will include an informal comment period before instituting the formal process.

Workshops

In September 2016, the Texas Compact conducted its first workshop in Burlington, Vermont. The workshop was geared toward Vermont generators.

The Texas Compact is considering doing a similar workshop for Texas generators, particularly small generators. The compact will also consider workshops for larger generators, as may be needed.

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

WCS Places Spent Fuel Storage Application on Hold

By letter dated mid-April 2017, Waste Control Specialists (WCS) asked the U.S. Nuclear Regulatory Commission (NRC) to temporarily suspend the agency's review of its application to construct and operate a spent nuclear fuel Consolidated Interim Storage Facility (CISF) in Andrews County, Texas.

WCS "is faced with a magnitude of financial burdens that currently make pursuit of licensing unworkable," Rod Baltzer, the company's President and CEO, said in a letter to the NRC dated April 16, 2017. According to Baltzer, the estimated \$7.5 million that is needed to continue the licensing process was a significant factor in WCS' decision. The following day, NRC announced that it would freeze the review.

The request comes as EnergySolutions is trying to buy WCS, although the U.S. Department of Justice has sued to block the merger, arguing it would essentially create a monopoly on radioactive waste disposal. "WCS expects to go forward with this project at the earliest possible opportunity after completion of the sale," Baltzer said in a statement.

In the meantime, on March 16, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency was providing additional opportunities for the public to comment on the CISF application that was submitted by WCS.

Overview

NRC's review would proceed on two parallel tracks—one on safety issues and the other on environmental issues. Both the safety and environmental reviews must be completed before the NRC makes a final licensing decision on the application.

In a letter to WCS dated January 26, 2017, the NRC set a schedule for its safety and environmental reviews. The schedule sets a target of making a licensing decision by the third quarter of fiscal year 2019—assuming that WCS provides high-quality responses, on schedule, to any NRC requests for additional information.

The NRC's letter to WCS is available on the agency's website at <https://www.nrc.gov/docs/ML1701/ML17018A168.pdf>.

Public Meetings

The NRC held the following two public meetings near the site of the proposed CISF to take public comments on the scope of the environmental review:

- ◆ Hobbs, New Mexico: Lea County Event Center (5101 N. Lovington Highway) from 7:00 – 10:00 p.m. MT on February 13, 2017
- ◆ Andrews, Texas: James Roberts Center (855 TX-176) from 7:00 – 10:00 p.m. CT on February 15, 2017

On April 6, 2017, NRC staff hosted an additional public meeting at the agency's headquarters in Rockville, Maryland so members of the public could ask questions of NRC staff and present oral comments. The meeting, which was webcast, was held from 7:00 – 10:00 p.m. It was held in the Commissioners' Conference Room at One White Flint North, which is located at 11555 Rockville Pike in Rockville, Maryland.

Information about the public meetings was posted to the NRC public meetings schedule on the agency's website at www.nrc.gov.

Submitting Comments

The NRC will now take comments on the scope of its Environmental Impact Statement (EIS) on the proposed facility through April 28, 2017.

States and Compacts *continued*

Interested stakeholders can submit comments for the CISF as follows:

- ◆ **Federal Rulemaking Website:** Provide electronic comments at regulations.gov
- ◆ **Mail:** Send comments to Cindy Bladey, Office of Administration, Mail Stop: OWFN-12 H08, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Written comments should refer to Docket ID NRC-2016-0231.

Background

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

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

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

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

(Continued from page 1)

Specifically, the workshop explored:

- ◆ the key physical, chemical and radiological characteristics of low-level radioactive waste that govern its safe and secure management (i.e., packaging, transport, storage) and disposition, in aggregate and for individual waste-streams; and,
- ◆ how key characteristics of low-level waste are incorporated into standards, orders and regulations that govern the management and disposition of low-level radioactive waste in the United States and in other major waste-producing countries.

For additional information, please contact Jennifer Heimberg, Senior Program Officer, Nuclear and Radiation Studies Board (NRSB), Board on Life Sciences (BLS), Board on Environmental Change and Society (BECS), NAS at (202) 334-3293 or at jheimberg@nas.edu.

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.

Atlantic Compact/State of New Jersey

Oyster Creek Nuclear Plant On April 14, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency would increase its oversight of the Oyster Creek nuclear power plant following the finalization of an inspection finding involving deficient maintenance work on a safety-related relief valve. The finding was identified during a 2016 NRC inspection of Oyster Creek. The facility, which is owned and operated by Exelon, is located in Lacey Township (Ocean County), New Jersey. The white safety finding indicates a low to moderate safety significance. The NRC uses a color-coded system to categorize inspection findings, with colors ranging from green, for very low safety or security significance, to white, yellow or red, for substantial safety or security significance. Findings determined to be greater than green result in additional NRC scrutiny. This finding involves a problem with one of the plant's electromatic relief valves. EMRVs are used to depressurize the reactor during a pipe break. Oyster Creek has five of these valves. "These valves serve a key safety function and therefore it is important that they be available to help mitigate severe accidents at the plant," said NRC Region I Administrator Dan Dorman. "We will conduct a supplemental inspection at Oyster Creek to ensure the underlying problems that led to this issue have been appropriately addressed." Exelon was given an opportunity to request a regulatory conference to provide additional information to the NRC prior to a final agency decision, to submit a written response, or to accept the finding. The company chose to take part in a regulatory conference, which was held in the NRC's Region I Office on March 9, 2017. In terms of corrective actions, Exelon verified correct assembly of the valves following the most recent refueling and maintenance outage at the plant. *For additional information, please contact Diane Scenci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.*

Central Midwest Compact/State of Illinois

ADCO Services, Inc. On April 20, 2017, NRC held a pre-decisional enforcement conference with ADCO Services, Inc. to discuss an apparent violation identified by NRC inspectors related to the company's failure to ensure that a radiation safety officer performed the required duties and functions for radiation protection, as required of all NRC radioactive materials license holders. The meeting, which was open to public observation, was held at the NRC's Region III office in Lisle, Illinois. NRC officials were available to answer questions from the public following the business portion of the conference. The NRC identified the apparent violation while conducting a routine inspection in November 2016 at the licensee's facility in Tinley Park, Illinois. Inspection activities included a review of the licensee's radiation protection program. The purpose of the pre-decisional enforcement conference was to discuss the apparent violation, obtain additional information from the company and understand what corrective actions have been taken or planned. During the conference, the NRC specifically discussed how the corrective actions would be more effective than actions taken in response to a similar violation in 2013 and worked to understand the company's future plans since the NRC license has recently been revoked for failure to pay annual fees. No decision on the final safety significance or additional NRC actions was made at the conference. The NRC's final determination will be made publically available. *For additional information, please contact Viktoria Mitlyng at (630) 829-9662 or Prema Chandrathil at (630) 829-9663.*

LaSalle Nuclear Plant On April 26, 2017, NRC announced that the agency has begun a special inspection at the LaSalle Unit 2 nuclear power plant to review the circumstances surrounding the failure of a valve that could have prevented a safety system from fulfilling its safety function. During a refueling outage in February 2017, workers identified that a valve in the High

Pressure Core Spray system failed to open as designed. Plant operators subsequently determined that the valve was damaged. Operators repaired the valve before the plant resumed operation. The primary function of the High Pressure Core Spray system is to provide cooling water for the reactor in certain accident conditions. "While this equipment failure did not result in an actual safety event, we have a number of questions our team of specialists will seek to answer, including the technical details of the issue, assessing if plant operators fully understand its causes, and determining if the problem could affect other plants using the same valve design," said NRC Region III Administrator Cynthia Pederson. The four-member inspection team began work on April 24, 2017. The team will spend time both on and off site conducting their reviews. A report documenting the team's findings will be made publicly available within 45 days of the end of the inspection. The two-reactor facility, operated by Exelon Generation Co., is located in Marseilles, Illinois—approximately 11 miles southeast of Ottawa. *For additional information, please contact Viktoria Mitlyng at (630) 829-9662 or Prema Chandrathil at (630) 829-9663.*

Northwest Compact/State of Wyoming

Cameco Resources On May 4, 2017, NRC staff will meet with officials from Cameco Resources of Casper, Wyoming to discuss nine preliminary inspection findings regarding the shipment of low-level radioactive waste from one of its mining sites to a Utah disposal facility. The meeting, which is open to the public, will be held at the NRC Region IV office in Arlington, Texas. NRC officials will answer questions from the public after the business portion of the meeting. A telephone bridge will be available for the meeting by calling (888) 469-0565 and entering passcode 4465769. The apparent violations being considered for escalated enforcement are identified in an NRC inspection report prepared following the March 2016 incident. NRC reviewed the company's transportation program

following an incident in which leakage was detected on a container of low-level radioactive sludge when it arrived at a disposal site. No decision on the safety significance of the finding or any additional NRC actions will be made at the conference. That decision will be announced at a later time. *For additional information, please contact Victor Dricks at (817) 200-1128.*

Southeast Compact/States of Florida and Tennessee

St. Lucie Nuclear Plant On March 21, 2017, NRC staff conducted a regulatory conference with Florida Power & Light officials to discuss an NRC inspection finding related to changes made to electrical equipment that led to an August 2016 reactor trip, or unplanned shutdown, of the company's St. Lucie Unit 1. The St. Lucie nuclear power plant is located near Jensen Beach, Florida—approximately 10 miles south of Fort Pierce. The conference, which was open to the public, was held in the NRC's Region II office in Atlanta, Georgia. NRC staff was available to answer any questions or provide additional information after the business portion of the conference. The inspection finding involves a 2013 modification of electrical circuitry associated with the Unit 1 main generator. Because that modification led to the plant trip, NRC inspectors found that the workers who performed the modification had failed to properly plan and execute the work. The finding is documented in an NRC inspection report that was issued on February 2, 2017. NRC has preliminarily classified the inspection finding as "white" (low-to-moderate safety significance), but no decision on the final safety significance or any possible additional NRC actions will be made at the regulatory conference. NRC officials will make those decisions at a later time. *For additional information, please contact Roger Hannah at (404) 997-4417 or Joey Ledford at (404) 997-4416.*

Clinch River Site On April 4, 2017, NRC announced the opportunity for public participation

in a hearing on an Early Site Permit (ESP) application for the Clinch River Nuclear Site near Oak Ridge, Tennessee. (See related story, this issue.) The Tennessee Valley Authority is seeking early resolution of site safety, environmental and some emergency planning issues related to a potential small modular reactor at a location approximately five miles southwest of Oak Ridge. The TVA application, less proprietary and security-related details, is available on the NRC website. The NRC has issued in the *Federal Register* a notice of opportunity to petition for leave to intervene in the proceeding on the application. The deadline to submit a petition requesting a hearing is June 5, 2017. The notice provides petition-filing requirements in accordance with the Commission's rules. Background information regarding the hearing process is available on the NRC website. Agency staff also discussed the hearing process with the public during an April 2016 public information session in Oak Ridge. A petition to intervene must be electronically submitted in a timely manner to the NRC's Electronic Information Exchange (EIE) system. The petition to intervene must be filed in accordance with the NRC's E-Filing Rule. Additional guidance and instructions regarding electronic submissions to the EIE system are available on the NRC website. The NRC accepted the application for review, or "doctored" the application, on January 12, 2017. The NRC's docketing decision means the application contains sufficient information for an NRC review. It does not indicate whether the Commission will approve or reject the request. The NRC has established docket number 52-047 for this application. Additional information about the new reactor licensing process is available on the NRC website. *For additional information, please contact Scott Burnell of the NRC at (301) 415-8200.*

Commonwealth of Massachusetts

Plymouth Nuclear Plant On March 21, 2017, NRC staff discussed the results of a team inspection performed at the Pilgrim nuclear power

plant with Entergy, the facility's owner, during a public meeting in Plymouth, Massachusetts. The inspection was conducted in late 2016 and earlier this year as part of the agency's increased oversight of the plant. Prior to the end of the meeting, NRC staff answered questions from the public on the plant's performance and the agency's oversight activities at the single-reactor plant. Pilgrim is currently in column 4 of the NRC's Action Matrix, a designation that results in increased scrutiny. To date, NRC inspections and assessments have determined that Pilgrim continues to operate safely, and at this time additional regulatory action beyond Column 4 is not required. While the plant is in that status, the NRC will continuously evaluate Pilgrim's performance and the need for additional regulatory action. The "Phase C" inspection – one of three team inspections performed by the NRC at Pilgrim after the plant entered Column 4 in late 2015 – will support the development of a Confirmatory Action Letter. That letter will document corrective actions to be implemented by Entergy to demonstrate sustained performance improvement and to provide a basis for the plant exiting Column 4. Additional follow-up inspections will be conducted to verify that commitments contained in the letter have been satisfactorily completed. In 2016, the NRC performed approximately 12,040 hours of inspection at Pilgrim. *For additional information, please contact Neil Sheehan at (610) 337-5331.*

Nebraska

Cooper Nuclear Plant NRC will conduct a special inspection at the Cooper Nuclear Station to review operator errors that affected a safety-related heat removal system. The plant, which is operated by the Nebraska Public Power District, is located in Brownville, Nebraska. "This special inspection will help us better understand the circumstances that led to the operator error," said NRC Region IV Administrator Kriss Kennedy. "We need to assess the potential impact on plant safety and the licensee's corrective actions to ensure that the cause has been effectively

addressed." On February 5, 2017, workers discovered that a misalignment of valves may have rendered one of the plant's residual heat removal systems inoperable for several months. Operators also performed maintenance and testing on a second residual heat removal system during the same period. As a result, there may have been a period of approximately 72 hours when both systems were unavailable. The residual heat removal system is used to mitigate the effects of a variety of accidents. Two NRC inspectors conducted a weeklong inspection from March 13-17, 2017. A report on the findings will be publicly available within 45 days of the end of the inspection. *For additional information, please contact Victor Dricks at (817) 200-1128.*

Puerto Rico

Somascan, Inc. On April 5, 2017, NRC announced that the agency is proposing a \$7,000 civil penalty against a Puerto Rico firm for failing to properly secure licensed nuclear materials and for not performing decommissioning activities within the required timeframes. Somascan Inc.—which is based in San Juan, Puerto Rico—previously provided diagnostic medical treatments to patients using radiopharmaceuticals and scanning devices containing sealed nuclear sources. Based on inspections conducted at the company's facility, the NRC has identified a violation with three elements: (1) Somascan's failure to secure from unauthorized removal or access NRC-licensed nuclear materials stored in uncontrolled areas; (2) the company's failure to notify the NRC in writing within 60 days of the expiration of its license and to either begin decommissioning or submit a decommissioning plan within one year of notifying the agency; and, (3) the firm's failure to complete decommissioning of a facility covered by the NRC license no later than two years after the expiration of the license. As a result, the NRC is proposing a Severity Level III violation and a \$7,000 fine for Somascan. "This enforcement action is necessary to ensure that the company adheres to its obligation to decommission the

affected facility and to transfer or dispose of licensed nuclear material in its possession,” said NRC Region I Administrator Dan Dorman. The site does not currently pose a safety concern for the public because the NRC-licensed material contained in the facility is in the form of a sealed source. *For additional information, please contact Diane Screnci at (610) 337-5330 or Neil Sheehan at (610) 337-5331.*

NuScale Power LLC

Full Certification Review to Begin re NuScale Small Modular Reactor

On March 15, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has docketed for review NuScale Power LLC’s application to certify the company’s small modular reactor design for use in the United States.

Background

On January 12, 2017, NuScale submitted its application for the design, in which the reactor building holds 12 co-located pressurized-water reactor modules for a total output of 600 MWe. NuScale is the first company to submit a small modular reactor design for certification. SMR designs seek to meet NRC safety requirements through smaller reactor cores and passive safety features.

The NRC, after completing its acceptance review, has concluded NuScale’s application is complete enough for a full design certification review. The staff soon will provide a review schedule.

Certification Process

The NRC’s certification process determines whether a reactor design meets U.S. safety requirements. Companies can then reference a certified design when applying for a Combined License to build and operate a reactor in the United States.

The NRC’s Advisory Committee on Reactor Safeguards (ACRS) provides input on design certification reviews. If issued, certifications are valid for 15 years.

Recently, the NRC certified Westinghouse’s AP1000 and GE-Hitachi’s Economic Simplified Boiling Water Reactor designs.

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

Waste Management 2017 Conference

LLW Forum Hosts Panel at Waste Management Conference

On March 6, 2017, the Low-Level Radioactive Waste Forum (LLW Forum) presented Panel 19 titled, *Hot Topics and Emerging Issues in US Commercial Low-Level Radioactive Waste Management*, for the 2017 Waste Management Symposium conference. The panel, which included four individual speakers, focused on emerging issues in commercial low-level radioactive waste management in the United States.

The Waste Management conference was held in Phoenix, Arizona from March 6-9, 2017.

Overview

Lisa Edwards of the Electric Power Research Institute (EPRI) provided data on key trends in waste generation by nuclear power plants showing that there is a reduction in the generation of Class B and C wet solid waste and that there is a wide range of performance that indicates different practices. Edwards noted that, as practices become more uniform, we may expect averages to decrease further. She also stated that implementation of the 2015 Branch Technical Position on Concentration Averaging and Encapsulation (BTP) is expected to further lower Class B and C generation rates.

Besty Madru discussed operator perspectives regarding the Waste Control Specialists (WCS) facility in Texas including a proposal to license a disposal cell for Greater-than-Class C (GTCC), GTCC-like and transuranic waste and application to construct and operate a facility to store spent nuclear fuel. Madru reported that waste receipts are down and stated that policies do not reflect current practices. Legislation has been introduced during the current session that would increase the maximum amount of waste that could be disposed over ten years.

Ned Woodward discussed a recent U.S. Government Accountability Office (GAO) report finding that the U.S. Nuclear Regulatory Commission (NRC) has enhanced the control of dangerous radioactive materials, but vulnerabilities remain. GAO investigators, using a fictitious business, applied for a radioactive materials license in three states. In two cases, the license applications were denied. In the third case, GAO's fictitious business received a license. GAO altered the license and obtained commitments from two vendors to sell radioactive material that aggregated together would be considered attractive to terrorists for use in a dirty bomb. GAO then immediately alerted NRC of its findings, which the agency and Agreement States took corrective actions to address.

In the final presentation, John Tappert of the NRC provided an overview of the agency's low-level radioactive waste program with a focus on the programmatic assessment completed by agency staff, ongoing Part 61 rulemaking initiative, GTCC and transuranic waste disposal, financial assurance for radioactive byproduct material and a proposed very low-level waste scoping study. Many of these topics were discussed during an NRC public meeting that was held from 8:30 a.m. to 1:00 p.m. at the Renaissance Hotel on March 10, 2017. There was no registration fee to attend and participate in the NRC public meeting.

Background

The Waste Management conference takes place annually and is presented by Waste Management Symposia—a non-profit organization dedicated to education and opportunity in waste management. (See *LLW Notes*, January/February 2017, pp. 23-26.)

The international conference was founded to provide a forum for discussing and seeking cost-effective and environmentally responsible solutions to the safe management and disposition of radioactive waste and radioactive materials.

This year's conference included over 600 presentations covering all aspects of radioactive waste management, packaging and transportation, facility siting, site remediation, Fukushima progress and other related topics.

Additional information on the Waste Management 2017 Conference can be found at www.wmsym.org or by contacting the Waste Management office at (480) 557-0263.

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

U.S. Department of Energy (DOE) and U.S. Nuclear Regulatory Commission (NRC)

DOE and NRC Hold Third Advanced Reactor Workshop

On April 25-26, 2017, the U.S. Department of Energy (DOE) and the U.S. Nuclear Regulatory Commission (NRC) continued their joint workshop series on innovative reactor technologies in Bethesda, Maryland.

Overview

The NRC defines advanced reactors as those technologies using something other than water to cool the reactor core. The NRC is currently discussing one such advanced design with a vendor considering applying for design certification. The NRC remains available for early-stage discussion with other potential advanced reactor vendors.

“We are encouraging interested parties to continue discussing the most efficient and effective path forward to safely develop and deploy advanced reactors in the United States,” said Vonna Ordaz, Acting Director of the NRC’s Office of New Reactors. “We expect to discuss topics such as modeling and testing innovative technologies, as well as how vendors might approach getting their designs approved for U.S. use.”

Background

The workshop, which was open to the public, began at 8:30 a.m. on April 25, 2017. It was held at the Bethesda North Marriott in Bethesda, Maryland.

The workshop included presentations as well as structured and open discussions, using a facilitator.

For more information on the workshop, please contact Nishka Devaser at (301) 415-5196 or at nishka.devaser@nrc.gov; John Segala at (301) 415-1992 or at john.segala@nrc.gov; Trevor Cook at (301) 903-7046 or at trevor.cook@nuclear.energy.gov; or, Tom Sowinski at (301) 903-0112 or at thomas.sowinski@nuclear.energy.gov.

U.S. Nuclear Regulatory Commission (NRC)

NRC Releases Draft Regulatory Basis for Decommissioning Rule

On March 10, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency was making publicly available a pre-publication draft regulatory basis for a future power reactor decommissioning rule.

The intent is to provide an efficient decommissioning process; reduce the need for exemptions from existing regulations; and, support the principles of good regulation—including openness, clarity, and reliability.

The pre-publication draft regulatory basis for a future power reactor decommissioning rule is available on the NRC website at <http://ric.nrc-gateway.gov/docs/abstracts/sessionabstract-20.htm>.

Overview

NRC released the preliminary draft document in order to facilitate discussion during the agency’s annual Regulatory Information Conference, which was held from March 14-16, 2017. (See *LLW Notes*, January/February 2017, pp. 40-41.) The conference included a March 15 technical session on power reactor decommissioning.

Federal Agencies and Committees *continued*

The rule would establish clear requirements for commercial power reactors transitioning to decommissioning. The draft regulatory basis draws upon comments submitted in response to an Advance Notice of Proposed Rulemaking (ANPR) that was published in November 2015.

A notice regarding the draft regulatory basis was published in the *Federal Register* later in March 2017, initiating a 90-day public comment period.

Staff Analysis

In the draft regulatory basis, the NRC staff concludes there is sufficient justification to proceed with rulemaking in the following areas:

- ◆ emergency preparedness;
- ◆ physical security;
- ◆ decommissioning trust funds;
- ◆ offsite and onsite financial protection requirements and indemnity agreements; and,
- ◆ application of the back-fit rule.

The staff suggests guidance, rather than rulemaking, should be used to address the following items:

- ◆ the role of state and local governments in the decommissioning process;
- ◆ the level of NRC review and approval of a licensee's post-shutdown decommissioning activities report; and,
- ◆ whether to revise the 60-year limit for power reactor decommissioning.

The NRC staff is seeking additional public input before making recommendations on the following topics:

- ◆ cyber security;

- ◆ drug and alcohol testing;
- ◆ minimum staffing and training requirements for certified fuel handlers;
- ◆ aging management; and,
- ◆ fatigue management.

That additional input, as well as comments received on the draft document, will be considered as the staff develops the final regulatory basis, which the NRC plans to publish in late 2017. That document will be used in developing a proposed rule to be provided to the Commission in the spring of 2018. The NRC staff expects to provide a draft final rule to the Commission in fall 2019.

Background

The NRC published an ANPR on the draft regulatory basis for a future power reactor decommission rule in November 2015, seeking public comment on a number of areas to be considered during the rulemaking process.

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

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

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

NRC Issues Annual Assessments for Nation's Nuclear Plants

On March 3, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that the agency has issued annual letters to the nation's 99 commercial nuclear power plants operating in 2016 regarding their performance throughout the year. All but three were in the two highest performance categories.

Overview

Of the 96 highest-performing reactors, 83 fully met all safety and security performance objectives and were inspected by the NRC using the normal "baseline" inspection program.

Thirteen reactors were assessed as needing to resolve one or two items of low safety significance. For this performance level, regulatory oversight includes additional inspection and follow-up of corrective actions. Plants in this level include:

- ◆ Davis Besse (Ohio);
- ◆ Diablo Canyon 2 (California);
- ◆ Dresden 3 (Illinois);
- ◆ Ginna (New York);
- ◆ Grand Gulf (Mississippi);
- ◆ Hope Creek 1 (New Jersey);
- ◆ Monticello (Minnesota);
- ◆ Oyster Creek (New Jersey);
- ◆ Salem 2 (New Jersey);

- ◆ South Texas Project 1 and 2 (Texas); and,
- ◆ Vogtle 1 and 2 (Georgia).

Oyster Creek, as well as Vogtle 1 and 2, have resolved their identified issues since the reporting period ended and have transitioned to the highest performing level.

There were no reactors in the third performance category with a degraded level of performance.

Three reactors are in the fourth performance category. Arkansas Nuclear One 1 and 2 require increased oversight because of two safety findings of substantial significance. Pilgrim (Massachusetts) is in the fourth performance category because of long-standing issues of low-to-moderate safety significance. Reactors in this category receive additional inspections to confirm the performance issues are being addressed.

Later this spring and summer, the NRC will host a public meeting or other event for each plant to discuss the details of the annual assessment results. Details for each event will be announced separately. In addition to the annual assessment letters, plants also receive an NRC inspection plan for the coming year.

Background

"These assessment letters are the result of a holistic review of operating performance at each domestic power reactor facility," said Bill Dean, Director of the Office of Nuclear Reactor Regulation. "In addition to inspecting U.S. nuclear plants to verify that they are operating safely, the NRC continuously assesses their performance. The letters help our stakeholders understand our plant performance assessments and how we address any identified performance deficiencies."

Information on the NRC's oversight of commercial nuclear power plants is available through the NRC's webpage on the Reactor

Oversight Process. The NRC routinely updates information on each plant's current performance and posts the latest information as it becomes available to the action matrix summary.

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

NRC Issues Regulatory Issue Summaries

To date, the U.S. Nuclear Regulatory Commission (NRC) has released the following Regulatory Issue Summary (RIS) documents during calendar year 2017:

- ◆ RIS 2017-03, *Preparation and Scheduling of Operator Licensing Examinations*, was issued on April 5, 2017 to inform addressees of the NRC staff's need for updated information on projected site-specific operator licensing examination schedules, as well as on the estimated number of applicants planning to take operator licensing examinations.
- ◆ RIS 2017-02, *Applicability of Title 10 CFR Part 37 to Non-Manufacturing and Distribution Service Provider Licensees*, was issued on February 8, 2017 to inform licensees of the applicability of Title 10 of the Code of Federal Regulations (10 CFR) Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material," to non-manufacturing and distribution (non-M&D) service provider licensees.
- ◆ RIS 2017-01, *Human Reliability and Human Performance Database*, was issued on February 2, 2017 to inform addressees about the Scenario, Authoring, Characterization, and Debriefing Application (SACADA) system.

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

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

NRC Announces New Senior Management Appointment

On March 3, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced the appointment of Frederick Brown as Deputy Executive Director for Materials, Waste, Research, State, Tribal, Compliance, Administration and Human Capital Programs.

Overview

In this new capacity, Brown is responsible for overseeing the nuclear materials and waste safety program activities of the agency. He is also responsible for guiding and directing programs related to nuclear regulatory research, state and tribal activities, enforcement and investigations, and activities related to human resources and corporate support.

Brown replaces Glenn Tracy, who recently retired.

Background

Brown joined the NRC's Region III office in 1994. He served as a Resident Inspector at a fuel cycle facility and as a Senior Resident Inspector at a reactor site. He later moved to the Office of Nuclear Material Safety and Safeguards in NRC headquarters and served in several branch chief roles in the areas of nuclear materials and high-level waste.

Federal Agencies and Committees *continued*

After completing a Senior Executive Service (SES) rotation in the Office of Nuclear Regulatory Research, Brown held progressively responsible SES positions in the Office of New Reactors and the Office of Nuclear Reactor Regulation. Brown then served as Deputy Regional Administrator for Construction in the agency's Region II before returning to headquarters to serve in positions in the Office of the Executive Director for Operations and the Office of the Chief Information Officer.

Before joining the NRC, Brown spent 12 years as an Engineer, Supervisor and Manager at Mare Island Naval Shipyard. He holds a Bachelor of Science degree with a double major from the U.S. Merchant Marine Academy at Kings Point, New York and is a registered Professional Engineer (Mechanical) in California.

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

NRC Systems Engineer Receives Prestigious Flemming Award

On April 28, 2017, the U.S. Nuclear Regulatory Commission (NRC) announced that Tina Ghosh has been honored with an Arthur S. Flemming Award in Applied Science and Engineering from the George Washington University's Trachtenberg School of Public Policy and Public Administration.

Ghosh, who is a Senior Reactor Systems Engineer at NRC, will receive the award in a ceremony on May 24, 2017.

Overview

Ghosh was nominated for her long-standing work at the NRC, including her recent research

analyzing how the NRC reviews consequences from severe reactor accidents. A staff member in the agency's Office of Nuclear Regulatory Research, Ghosh also leads research on economic consequences in regulatory analyses. She has published numerous papers on a variety of nuclear-related topics, including two co-authored with former NRC Commissioner George Apostolakis.

"Senior NRC leaders and international partners look to Dr. Ghosh as an authority for analyzing both severe reactor accidents and possible means of reducing those accidents' consequences," said Michael Weber, Director of NRC's Research Office. "Her identification of critical uncertainties in severe accident analysis, along with related mitigation strategies, helps ensure U.S. nuclear plants continue to operate safely. This is a well-deserved award."

Background

Ghosh holds a Bachelor Degree in Civil Engineering and Operations Research from Princeton University, as well as a Master Degree in Technology and Policy and a PhD in Nuclear Engineering from the Massachusetts Institute of Technology. She has been at the NRC since 2004.

The Arthur S. Flemming Awards recognize outstanding men and women in the federal government in five different categories.

For additional information, please contact Holly Harrington 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)..... listserv@unixmail.rtpnc.epa.gov
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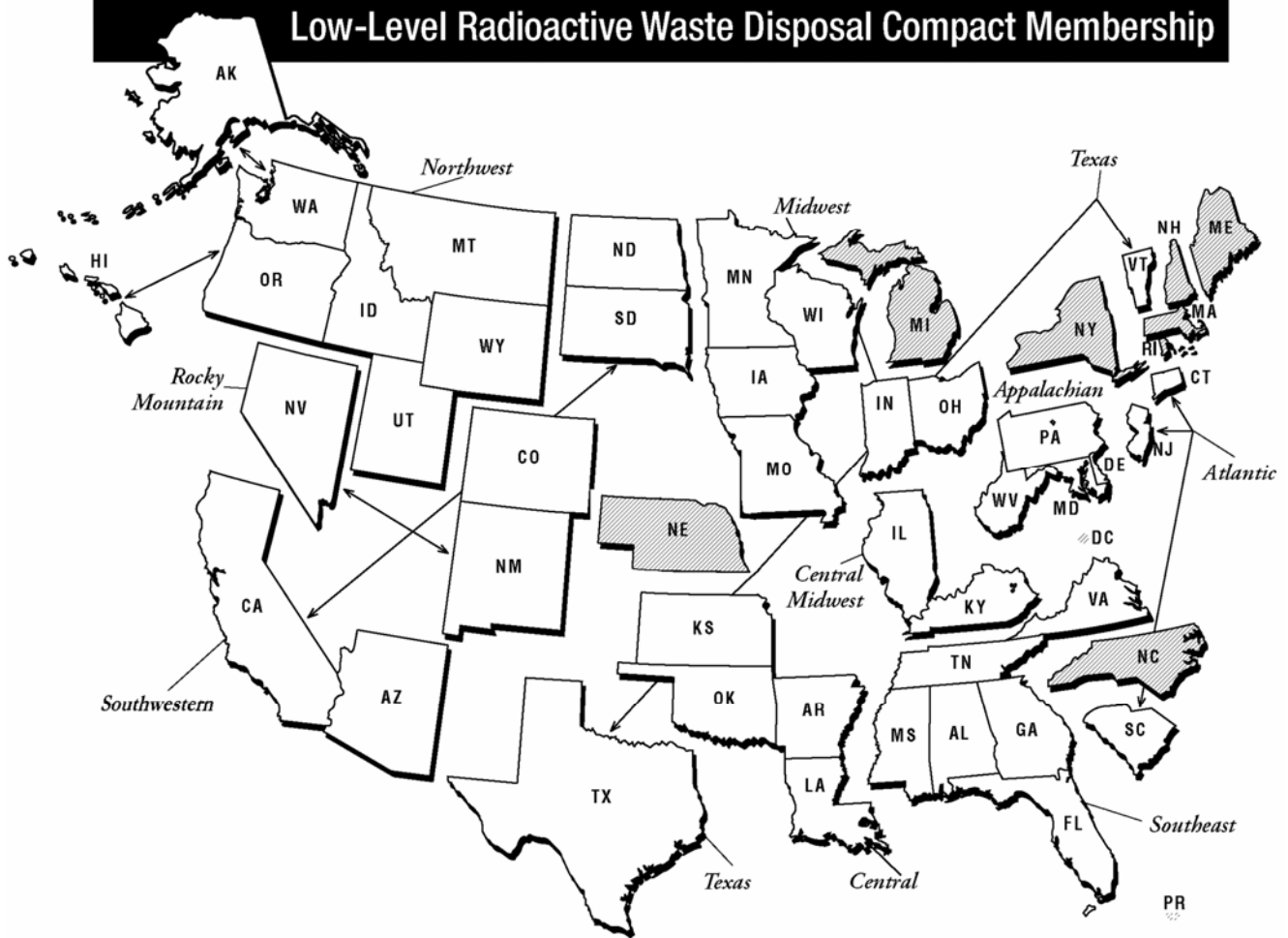
To access a variety of documents through numerous links, visit the website for the LLW Forum, Inc. at www.llwforum.org

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Low-Level Radioactive Waste Disposal Compact Membership



Appalachian Compact

Delaware
Maryland
Pennsylvania
West Virginia

Atlantic Compact

Connecticut
New Jersey
South Carolina

Central Compact

Arkansas
Kansas
Louisiana
Oklahoma

Central Midwest Compact

Illinois
Kentucky

Northwest Compact

Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact

Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

Rocky Mountain Compact

Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between compacts

Southeast Compact

Alabama
Florida
Georgia
Mississippi
Tennessee
Virginia

Southwestern Compact

Arizona
California
North Dakota
South Dakota

Texas Compact

Texas
Vermont

Unaffiliated States

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