LLW notes

Volume 39 Number 3 May - June 2024

A Message from Dan Shrum, Executive Director

Reminder to register for the Fall Forum meeting in Reno, Nevada. Conference and hotel registration can be found on the Forum's website https://llwforum.org/.

Look forward to seeing everyone in October.

Daniel B. Shrum, Executive Director

Please submit comments, suggestions or articles for the LLW *notes* to margaretllwf@gmail.

In this Issue...Find the Forum Board's focus, highlights of NRC's proposed rule package for Integrated Low-Level Radioactive Waste Disposal, updates on Small Modular Reactors, news about the Senate Advanced Nuclear Caucus, along with compact and regional news.

About LLW Forum

LLW Forum, established to facilitate state and compact implementation of the Low-Level Radioactive Waste Policy Amendments Act of 1985, promotes the objectives of the low-level radioactive waste regional compacts. LLW Forum provides opportunity for state and compact officials to share information with each other and to exchange views with officials of federal agencies and other interested parties.

LLW notes, a copyrighted publication of the LLW Forum, is distributed bimonthly to the Board of Directors of the Low-Level Radioactive Waste Forum, an independent non-profit corporation. Anyone--including compacts, states, federal agencies, private associations, companies and others--may support and participate in the LLW Forum by purchasing memberships and/or by contribution grants or gifts. For information on LLWF memberships and/or subscriptions to the LLW notes, visit www.llwforum.org or contact Daniel Shrum, Executive Director, telephone (801) 580-3201, dshrum@llwforum.org. For permission to reproduce or share information from LLW notes, see the Copyright Policy at the conclusion of this publication.

Acronyms Used in LLW notes **CFR** Code of Federal Regulations CRCPD Conference of Radiation Control Program **Directors** DOE U.S. Department of Energy DOT U.S. Department of Transportation U.S. Environmental Protection Agency EPA **IAEA** International Atomic Energy Agency **ICRP** International Commission on Radiation Protection **LLWF** Low-Level Waste Forum NARM Naturally occurring and accelerator produced radioactive material **NCRP** National Council on Radiation Protection and Measurements NORM Naturally occurring radioactive material **NRC** U.S. Nuclear Regulatory Commission OAS Organization of Agreement States TENORM Technologically enhanced naturally occurring radioactive material

Contents

A Message from Dan Shrum, Executive Director	1
Forum Corner	3
NRC Proposed Rule: Integrated Low-Level Radioactive	
Waste Disposal (RIN 3150-Al92; NRC-2011-0012)	
Proposal and History	(
Agreement State Impacts Anticipated by NRC	[
Cost - Benefit Analyses	٠. ک
Environmental Justice & Consent-Based Siting Process.	9
DOE Releases First Update to Consent-Based Siting	
Process For Spent Nuclear Fuel, Prioritizing	
Environmental Justice For American Communities	
Congressional Nuclear Caucus	
Small Modular Reactors	
NuScale Waste Volume Estimates	
The New Energy Race	12
DOE Announces \$900 Million to Accelerate the	
Deployment of Next-Generation Light-Water Small	4.
Modular Reactors	
When Nuclear Waste is an Asset, not a Burden	
Source Security NRC Identifies Eleven Abnormal Occurrences in FY 2023	
Annual Report to Congress International Community Meets to Discuss the Future of	
Nuclear Security	
IAEA Database on Trafficking of Nuclear and Other	ΤĊ
Radioactive Material Records 4243 Incidents Since	
1993	
NRC Awards \$1.78 Million in Scholarships and Fellowsh	
to Minority-Serving Institutions	
Appalachian Compact	
Atlantic Compact	
Central Compact	
Central Midwest Compact	
Northwest Compact	
Southeast Compact	
Texas Compact	
Low-Level Radioactive Waste Compact Membership	

Officers
Doug Hansen, Chair
Ron Gaynor, Chair-Elect
Tom Hansen, Past-Chair
Alyse Peterson, Treasurer



Forum Corner

Board Focus

On-going issues of concern for the Forum include various initiatives, policy statements, potential collaborative efforts, upcoming policy, and rulemaking activities.

Regarding LLWF meetings, the Board will continue discussions about hybrid meetings, operations, attendance possibilities and virtual attendance, financial constraints for compact attendees, etc.

Topics the Board is following include development of Small Modular Reactors and the NRC's Part 61 Integrated Rulemaking. Articles on both these topics are included in this issue of the newsletter.

LLW Forum Meeting Dates

Fall 2024 LLW Forum Meeting October 9-10, 2024 Board Meeting on the 10th Reno, NV

Spring 2025 LLW Forum Meeting April 9-10, 2025 Odessa, TX

> Tour of Urenco and WCS April 8, 2025

The Board Invites You to ---

SAVE THE DATE!

2024 Fall Meeting

October 9-10 in Reno, NV.

Click here to register. Click here to reserve your room.



Forum Corner



Executive Director News

Dan participated in the RadWaste Summit meeting, hosting a panel with Duane White from NRC.







Dan Shrum, far left, then Duane White, NRC. Paul Black, Neptune Associates. Tom Magette, Severn Nuclear.

At the CRCPD meeting, he met with the representative on DSWG (Shea). He will provide updates at our next meeting.

Dan participated in the Rocky Mountain Compact meeting. He also attended Southeast Compact meeting in June as guest presenter. He spoke on LLRW Policy Updates.

Dan will be going to DC in the coming month.

Focus on Financials

Kristen will be the new treasurer and would like a transition period, maybe in a shadow/mentor relation for six months.

Formal paperwork transitions will need changing.

The motion was passed for the Board to appoint Kristen Schwab as Treasurer-in-Training of the Forum, initiating a transition period to learn the responsibilities of Treasurer, and in anticipation of Kristen being elected Treasurer at the Forum's Fall 2024 meeting. At that time, Kristen will assume primary control of accounts, and the current Treasurer will serve as mentor for the remainder of the period.

Integrated LLRWD Rulemaking

NRC PROPOSED RULE: INTEGRATED LOW-LEVEL RADIOACTIVE WASTE DISPOSAL (RIN 3150-Al92; NRC-2011-0012)

.....

Status

The NRC staff submitted the "Proposed Rule: Integrated Low-Level Radioactive Waste Disposal (SECY-24-0045)" to the Commission on May 29, 2024. The package includes a Commission paper, the Proposed Rule Federal Register Notice (Enclosure 1), the Draft Regulatory Analysis (Enclosure 2), and the Greater-Than-Class-C (GTCC) Regulatory Basis Public Comments Summary (Enclosure 3). The package is available at the link below.

https://www.nrc.gov/docs/ML2324/ ML23242A249.html

Reference Documents Links

- <u>SECY-24-0045 Proposed Rule Integrated Low-Level Radioactive Waste Disposal</u>
- <u>SECY-24-0045 Enclosure 1 Proposed Rule ML23242A258</u>
- SECY-24-0045 Enclosure 3 GTCC
- Regulatory Basis Public Comments Summary ML23226A106
- <u>SECY-24-0045 Enclosure 2 Regulatory Analysis</u>
 <u>ML23242A259</u>

Contact

NRC is not collecting public comments at this time, rather Commission policy is to release documents under its consideration in the interest of transparency. If the Commission approves, the NRC will publish a notice in the Federal Register requesting public comments.

If you have any questions please send an e-mail to George. Tartal@nrc.gov.

Previous General Public Comment

The NRC received a large number of comments expressing concern and general opposition to the disposal of GTCC waste in a near-surface low-level radioactive waste (LLW) disposal facility. Comments were provided both in writing (including a large number of form letters) and during the two public meetings the NRC held as part of the comment period on the draft regulatory basis. Some comments were of a general nature, such as (1) GTCC waste should be disposed in a deep geologic repository, (2) GTCC waste was too hazardous for near-surface disposal and would remain hazardous for thousands of years, and (3) near-surface disposal of GTCC waste would create considerable psychological stress on local communities near the disposal facility. Some commenters provided very specific concerns and opposition to siting a facility in the State of Texas due to potential future health impacts and contamination of land and resources (e.g., water and oil). Some commenters expressed concern for "reclassifying" certain wastes to allow their disposal in a near-surface facility.

Integrated LLRWD Rulemaking





Amend regulations in Title 10 of the Code of Federal Regulations (10 CFR) Parts 20, 61, 73, and 150 to (1) require new and revised site specific technical analyses and permit the development of site-specific criteria for low-level radioactive waste (LLW) acceptance based on the results of these analyses, and (2) authorize the near-surface disposal of certain Greater-Than-Class-C (GTCC) waste streams and provide for Agreement State licensing of these waste streams if certain requirements are met. The rulemaking would change requirements at currently licensed and operating LLW facilities that plan to accept GTCC waste or significant quantities of long-lived radionuclides after the effective date of this rulemaking but would provide criteria for a case-bycase application of certain revised requirements for existing facilities that do not plan to accept these waste streams.

If Approved: Entities that Could Be Impacted

Table 1 Impacted LLW Disposal Licensees					
Licensee	Location				
1. EnergySolutions	Clive, Utah				
2. U.S. Ecology, Inc.	Richland, Washington				
3. Waste Control Specialists LLC	Andrews, Texas				
4. EnergySolutions	Barnwell, South Carolina				
Table 2 Impacted Agreement States					
1. Utah					
2. Washington					
3. Texas					
4. South Carolina	·				

Historical Timeline

10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste

1982 10 CFR Part 61, Licensing Requirements for Land Disposal of Radioactive Waste - Since then LLW streams differ in quantity and concentrations from those initially considered. New technologies may result in other LLW streams.

2015 NRC proposed rule regarding new waste streams.

2017 Commission directed substantial changes to that proposal.

GTCC & Transuranic (TRU) Waste

2015 Commission directed staff to prepare a regulatory basis for disposal of GTCC through means other than deep geologic disposal.

2019 Staff draft regulatory basis issue which received wide comments.

2020 Staff recommended a path forward with integrating the two rulemakings into one.

2022 Commission approved rulemaking integrating GTCC licensing and disposal and 10 CFR Part 61 rulemaking.

2024 NRC staff submitted the "Proposed Rule: Integrated Low-Level Radioactive Waste Disposal (SECY-24-0045)" to the Commission.

Integrated LLRWD Rulemaking

AGREEMENT STATE IMPACTS ANTICIPATED BY NRC

Agreement States Role

Agreement State Regulation of Greater-Than-Class-C Waste Section 274 of the AEA provides a role for the States in the regulation of certain radioactive materials, authorizing the Commission to enter into an agreement with the Governor of a State whereby the Commission relinquishes some of its regulatory authority, which the State assumes. An Agreement State can assume authority for one or more of the following categories of materials within the State: (1) byproduct materials, (2) source materials, and (3) SNM in quantities not sufficient to form a critical mass. Generally speaking, Agreement States already have authority to license and oversee possession, use, and storage of radioactive materials that would be GTCC, but not for disposal.

Agreement State Action

If the Commission ultimately approves a rulemaking allowing for the near-surface disposal of certain GTCC waste streams, then an Agreement State seeking to license and regulate facilities that can accept such GTCC waste streams will need to update its program to ensure that it has adequate and compatible legislation, regulations, licensing, inspection, staffing and training, enforcement, and incident response to support GTCC disposal. In SRM-SECY-15-0094, the Commission directed the staff to analyze whether, in accordance with section 274c.(4) of the AEA, disposal of GTCC waste presents a hazard such that the NRC should retain authority over its disposal, or if that authority can be relinquished to an Agreement State.

NRC Regulations Concerning Agreement State Authority in Quantities Sufficient to Form a Critical Mass

The NRC's regulations in 10 CFR Part 150, "Exemptions and Continued Regulatory Authority in Agreement States and in Offshore Waters under Section 274," implement section 274 of the AEA. Because some GTCC waste streams contain SNM, any relinquishment of regulatory authority must comply with the AEA section 274b.(3) provision that such relinquishment be limited to SNM in quantities not sufficient to form a critical mass. The NRC implements this requirement through 10 CFR 150.11, "Critical mass." Under 10 CFR 150.14, "Commission regulatory authority for physical protection," an Agreement State licensee will need to obtain some form of NRC authorization if the licensee chooses to receive and store (i.e., storage incident to disposal) GTCC waste containing quantities of SNM that, by itself or together with other SNM stored on the site, exceed the 10 CFR 150.14 mass thresholds.

Therefore, under the AEA, the NRC cannot relinquish its authority to regulate SNM in quantities sufficient to form a critical mass. The NRC regulations in 10 CFR 150.11 establish the critical mass thresholds for uranium-233, plutonium, enriched uranium-235, or a combination of these isotopes or elements. The staff concluded that a conservative and prudent approach in any potential rulemaking is to limit the scope of Agreement State licensing to those near-surface disposal facilities that can accept only those GTCC waste streams that do not exceed the mass thresholds of 10 CFR 150.11.







Table 10 Net Costs and Benefits					
Attribute	Total Averted Costs (Costs)				
7 111 111 111	Undiscounted	7% NPV	3% NPV		
Industry Implementation	(\$100,000)	(\$60,000)	(\$80,000)		
Industry Operation	\$319,810,000	\$135,760,000	\$219,130,000		
Industry Totals	\$319,710,000	\$135,700,000	\$219,050,000		
Agreement State Implementation	(\$1,030,000)	(\$710,000)	(\$880,000)		
Agreement State Operation	(\$1,090,000)	(\$560,000)	(\$800,000)		
Agreement State Totals	(\$2,120,000)	(\$1,270,000)	(\$1,680,000)		
NRC Implementation	(\$570,000)	(\$480,000)	(\$530,000)		
NRC Operation	\$530,000	\$320,000	\$430,000		
NRC Totals	(\$40,000)	(\$160,000)	(\$100,000)		
Net:	\$317.550.000	\$134,270,000	\$217,270,000		

^{*}Values are rounded to the nearest \$10,000. Totals may differ among tables due to rounding and modeling.

Table 6 Agreement State Implementation Costs

Year	Activity	Number of	Labor	Weighted		Cost	
rear	Activity	Affected Entities	Hours	Hourly Rate	Undiscounted	7% NPV	3% NPV
2027	Rulemaking Activities	4	960	\$129	(\$496,000)	(\$354,000)	(\$428,000)
2028	Rulemaking Activities	4	960	\$129	(\$496,000)	(\$331,000)	(\$415,000)
				Total:	(\$992,000)	(\$684,000)	(\$843,000)

Agreement State Implementation Costs

The Agreement States will incur costs to update its program to ensure adequacy and compatibility, including issuing compatible regulatory requirements and guidance as well as ongoing costs to review technical analyses (at renewal and closure) and waste acceptance criteria. In addition, Agreement States would incur costs from taking over the processes of reviewing disposal requests, ensuring environmental compliance, generating GTCC inspection procedures, issuing the license amendment, and performing other licensing actions.



Figure 5 is a sensitivity analysis that identifies the key variables whose uncertainty drives the largest impact on total costs for Alternative 3. These figures rank the variables based on their contribution to cost uncertainty.

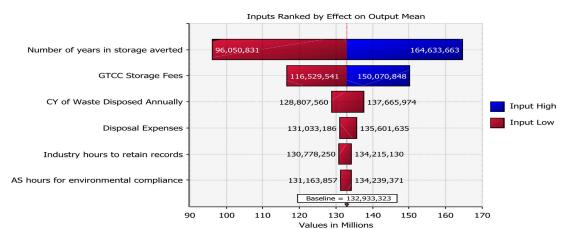


Figure 5 Key Variables Whose Uncertainty Drives the Largest Impact on Costs for Alternative 3 (7 Percent NPV)

Figure 5 shows that the parameters having the greatest cost impact on Alternative 3 are the number of years the waste streams would have been in storage without the proposed rule, and the storage fees for that waste. The influence of a variable on the output is not only a function of the value of that variable but also of the shape and range of its distribution. The other parameters shown have less impact on the results.

Cost Analyses are with Rulemaking Chosen

Environmental Justice & Consent-Based Siting Process



May 02, 2024

Historically marginalized and underserved communities often face greater socioeconomic and environmental burdens such as disease, poverty, and pollution.

Some communities are exposed to higher levels of air pollution from diesel exhaust, live closer to hazardous waste facilities, experience higher rates of asthma and heart disease, or face higher housing and energy costs.

The Justice40 Initiative, along with other recent environmental justice efforts, aims to secure environmental justice and spur economic opportunity in these communities through federal investments. The initiative, established in 2021, currently includes 500 programs in 19 federal agencies involving billions of taxpayer dollars invested in communities across the country.

Source available at this link.

EJ Clearinghouse

On April 21, 2023, President Biden signed Executive Order 14906 Revitalizing Our Nation's Commitment to Environmental Justice for All which included the establishment of an environmental justice (EJ) Clearinghouse to be a public, internet-based, whole-of-government clearinghouse composed of culturally and linguistically appropriate and accessible materials related to environmental justice. The EJ Clearinghouse is a compilation of resources to assist EJ partners. EPA relies on the continued submission of proposed resources to be added to this EJ Clearinghouse.

DOE Releases First Update to Consent-Based Siting Process For Spent Nuclear Fuel, Prioritizing Environmental Justice For American Communities

The U.S. Department of Energy is using a consent-based siting process to identify one or more federal consolidated interim storage facilities for the nation's spent nuclear fuel.

See the publication at https://www.energy.gov/sites/default/files/2023-05/Consent-Based%20Siting%20Process%20Report-0424%203.pdf

CONSENT-BASED SITING ROADMAP

The U.S. Department of Energy is pursuing one or more federal consolidated interim storage facilities to **store** the nation's commercial spent nuclear fuel in the near-term using a multi-stage consent-based approach that nuts communities' interests at the froefront.





Congressional Nuclear Caucus



PRESS RELEASE

WASHINGTON - U.S. Sens. Mark R. Warner (D-VA) and Jim Risch (R-ID) today announced the launch of the **Senate Advanced Nuclear Caucus.**

"Advancing the next generation of nuclear energy technology is critical to meeting U.S. and global energy demands. The U.S. has a rich history of leadership in the nuclear industry, and it is crucial that we maintain this competitive edge. I'm proud to launch the Advanced Nuclear Caucus with Senator Risch to promote the advancement of the U.S. nuclear energy industry," said Sen. Warner.

"America must maintain its leadership in nuclear energy development. From lighting the first nuclear powered lightbulb to groundbreaking advanced reactor research, Idaho and the Idaho National Laboratory continue to play a crucial role in achieving this goal," said Sen. Risch.

'With Senator Warner, I am launching the Senate Advanced Nuclear Caucus to showcase the Gem State's continued nuclear innovation and to expand opportunities for Congress to support nuclear research and development."

The launch of the caucus is supported by multiple stakeholders.

"The near-term, commercial deployment of advanced nuclear technology is fundamental to providing the clean, reliable and resilient power needed to meet the nation's energy and national security demands. The establishment of the Senate Advanced Nuclear Caucus is a testament to the benefits that nuclear power provides to the energy, technology, manufacturing and scientific communities. I thank senators Risch and Warner for their leadership," said John Wagner, director, Idaho National Laboratory.

"A reliable, affordable, and safe clean energy grid is the foundation to our nation's energy independence, national security, and global energy leadership," said Nuclear Energy Institute (NEI) President and CEO Maria Korsnick.

The Senate
Advanced Nuclear
Caucus will
amplify the critical
role nuclear energy
plays in the United
States, explore
emerging nuclear
technologies, and
promote the goals
and priorities of
the U.S. nuclear
industry.

"Senator Mark Warner and Senator James Risch's bipartisan leadership in establishing the Senate Advanced Nuclear Caucus demonstrates the growing recognition on the hill of nuclear's critical role in strengthening our nation's national security while meeting rapidly growing electricity needs now and in the future. We look forward to working with the caucus to help pave the way for the next generation of nuclear reactors."

... "Ten years ago, when Third Way was a lone voice in the wilderness advocating for American leadership on advanced nuclear innovation, our wildest dream was to have a robust private sector backed by government investment and bipartisan leadership in the US Senate," said Senior Vice President of Third Way's Climate and Energy Program, Josh Freed. "Today, that's exactly where we are. The launch of the Senate Advanced Nuclear Caucus reinforces how committed the United States is to advanced nuclear as a key clean firm energy, economic, and security tool for our nation. We welcome their leadership and look forward to working closely with the Caucus."

Advanced and Small Modular Reactors



Small Modular Reactors (LWR designs)

The NRC refers to light water reactor (LWR) designs generating 300 MWe or less as small modular reactors (SMRs). The NRC has engaged in varying degrees of preapplication activities with several SMR designers over the past several years. In August of 2020, the NRC approved a design for an SMR from NuScale Power, LLC.

https://www.nrc.gov/ reactors/new-reactors/smr. html



Status of Projects at NRC

Project Name / Design	Application Type	Applicant	Status
Clinch River Nuclear Site	Pre-Application for a Construction Permit	Tennessee Valley Authority (TVA)	In- progress
Carbon Free Power Project / NuScale US460 SDA	Pre-Application for a Combined License	Utah Associated Municipal Power Systems (UAMPS)	Withdrawn
<u>AP300</u>	Pre-Application for a Design Certification	Westinghouse Electric Company (WEC)	In- progress
SMR-300	Pre-Application	SMR, LLC, a subsidiary of Holtec International	In- progress
BWRX-300	Pre-Application	GE-Hitachi Nuclear Energy (GEH)	In- progress
<u>Duke Energy Belews Creek</u>	Pre-application for Early Site Permit	Duke Energy	In- progress

SMR NRC Activities

https://www.nrc.gov/reactors/new-reactors/smr/licensing-activities/pre-application-activities.html Volume 39 Num

Advanced Reactors (non-LWR designs)

The NRC refers to non-light water reactor (non-LWR) designs as advanced reactors. These reactors will use different technologies from existing operating reactors such as passive safety features, using different fuel or coolant, or scaling the entire reactor smaller.

NRC Approves Proposed Rule on Physical Security Requirements for Advanced Reactors

The Nuclear Regulatory
Commission has approved the staff's proposal to establish voluntary alternative physical security requirements for advanced reactors. The proposed rule is to be published in the Federal Register for public comment once the staff incorporates changes directed by the Commission.

The proposed rule would apply to non-light-water reactors and light-water small modular reactors that meet certain criteria related to the potential radiological consequences of an accident or sabotage. ... The proposed rule would allow such facilities to employ voluntary alternative physical security requirements appropriate to the risk posed by their technology instead of the prescriptive requirements in current NRC regulations for large light-water reactors. Source: NRC News Release No: 24-050

June 18, 2024

Advanced and Small Modular Reactors



NuScale Waste Volume Estimates

Standard Design Certification for an integrated pressurized water reactor assembly comprised of twelve NuScale Small Modular Reactors (SMR) approved September 11, 2020

For waste volume estimates, see
NuScale Standard Plant Design
Certification Application, Chapter
11, Radioactive Waste Management
(Revision 5, July 2020)
Table 11.4-2: Estimated Annual Volumes
of Dry Solid Waste
Table 11.4-3: Estimated Annual Volumes
of Wet Solid Waste

THE NEW ENERGY RACE

"Small nuclear reactors may be coming to Texas, boosted by interest from Gov. Abbott.

A nuclear power plant hasn't been built in Texas in decades because of cost and public fears of a major accident. Now the governor wants to find out if smaller reactors could meet the state's growing need for on-demand power."

By Emily Foxhall, The Texas Tribune March 27, 2024 Article available at https://www.texastribune. org/2024/03/27/texas-small-nuclear-reactors-power/

The Texas Tribune is a nonprofit, nonpartisan media organization that informs Texans — and engages with them — about public policy, politics, government and statewide issues. texastribune.org

NRC Proposes FY 2025 Budget to Congress

The Nuclear Regulatory Commission is proposing to Congress a budget of \$151 million in net appropriations for fiscal year 2025. The budget supports the Administration's climate change priorities, including supporting:

- Continued use of nuclear energy
- Safe and secure use of radioactive materials
- Developing the regulatory infrastructure for the deployment of advanced nuclear technology

\$82.8 million for new reactors

Highlights of the budget request include:

- Funding of \$503.5 million for nuclear reactor safety, including \$420.7 million for operating reactors and \$82.8 million for new reactors.
- Funding of \$144.9 million for nuclear materials and waste safety.
- Funding of \$19.2 million for the continued development of a regulatory infrastructure and staff capabilities for licensing of advanced nuclear reactor and fuel cycle technologies.

The FY 2025 Congressional Budget Justification and summary presentation slides are available on the NRC website.

https://www.nrc.gov/docs/ML2406/ML24061A093.pdf https://www.nrc.gov/docs/ML2406/ML24066A110.pdf

Advanced and Small Modular Reactors

DOE Announces \$900 Million to Accelerate the Deployment of Next-Generation Light-Water Small Modular Reactors

Anticipated Funding Aims to Promote Advanced Reactor Orderbook and Prepare Domestic Nuclear Industry for Deployments June 17, 2024 News Release

As part of President Biden's Investing in America agenda, the U.S. Department of Energy (DOE) issued a Notice of Intent (NOI) to fund up to \$900 million to support the initial U.S. deployments of Generation III+ (Gen III+) Small Modular Reactor (SMR) technologies.

This funding—made possible in part by President Biden's Bipartisan Infrastructure Law—will help strengthen America's domestic nuclear industry and spur follow-on reactor projects, which are vital to achieving our nation's ambitious clean energy and climate goals and meeting the growing demand for clean, reliable power. Today's announcement underscores the Biden-Harris Administration's efforts to support the demonstration and deployment of advanced reactor technologies, create new good-paying, high-quality jobs, and reinforce America's leadership in the nuclear industry.

https://www.energy.gov/articles/doe-announces-900-million-accelerate-deployment-nextgeneration-light-water-small-modular

Spent Nuclear Fuel

When Nuclear Waste is an Asset, not a Burden by Lucy Ashton

What if the high level nuclear waste generated by nuclear power plants could fuel a circular economy in the energy sector? Fast neutron reactors operating in a closed fuel cycle could make that happen.

"Countries are looking more and more at ways of recycling resources such as spent nuclear fuel to cleanly power their economies," said Vladimir Kriventsev, Team Leader for Fast Reactor Technology Development at the IAEA. "This comes at a time when technological innovations in material science, reactor physics and engineering have led to better designs, with enhanced safety features and reduced construction and operational costs that improve the economics of a nuclear plant powered by a fast reactor."

Source: IAEA, May 2024 at https://www.iaea.org/bulletin/when-nuclear-waste-is-an-asset-not-a-burden

Source Security

GAO News

Priority Open Recommendations: Nuclear Regulatory Commission - GAO-24-107311

Published: May 10, 2024

In May 2023, GAO identified eight priority recommendations for the Nuclear Regulatory Commission (NRC). Since then, NRC has implemented one of those eight priority recommendations, which improved the security of personally identifiable information. Seven priority recommendations remain open.

In May 2024, GAO identified one additional priority recommendation for NRC, bringing the total number to eight. NRC's continued attention to these issues could lead to significant improvements in government operations.

Contact: Mark Gaffigan at (202) 512-3841 or gaffiganm@gao.gov

GAO's eight recommendations for NRC involve:

- Addressing the security of radiological sources
- Improving the reliability of cost estimates

Overseas Nuclear Material Security: A Comprehensive National Strategy Could Help Address Risks of Theft and Sabotage - GAO-23-106486

In 2023, GAO recommended that DOD and NNSA clarify and document the roles and responsibilities for programs that work together.

The U.S. and other countries have made efforts to secure nuclear material from theft and to prevent sabotage of facilities containing nuclear materials; however, significant risks remain that could result in catastrophic damage and mass casualties.

As part of those efforts, certain programs in the Department of Defense (DOD) and the Department of Energy's National Nuclear Security Administration (NNSA) have an overlapping mission to secure nuclear materials, and they conduct similar activities—in some cases, in the same countries and in collaboration with the same foreign officials.

In response, the agencies signed a new memorandum of agreement in 2023 for cooperation, integration, and synchronization between NNSA and the Defense Threat Reduction Agency. As a result of these efforts, DOD and NNSA can better prevent duplication of effort and improve the efficiency of international nuclear security efforts.

Source Security



NRC Proposes \$9,000 Civil Penalty to Prein & Newhof

The Nuclear Regulatory Commission has proposed a \$9,000 fine to Prein and Newhof for a violation of NRC requirements associated with the control of NRCregulated material.

The violation involved four examples of failing to appropriately secure portable gauges from removal whe not under constant surveillance and control. The gauges are used for measuring the moisture content and density of soil and aggregate.

Source: NRC News Release No: III-24-013 June 10, 2024 Contact: Viktoria Mitlyng, 630-829-9662

Prema Chandrathil, 630-829-9663

20 May 2024

IAEA Database on Trafficking of Nuclear and Other Radioactive Material Records 4243 Incidents Since 1993

A total of 4243 incidents of illegal or unauthorized activities involving nuclear and other radioactive material have been reported in the IAEA Incident and Trafficking Database (ITDB) since 1993, according to a new fact sheet released by the International Atomic Energy Agency (IAEA). See the fact sheet at https://www.iaea.org/sites/default/files/24/05/itdb_factsheet_2024.pdf

NRC Identifies Eleven Abnormal Occurrences in FY 2023 Annual Report to Congress

The Nuclear Regulatory Commission has published its annual report to Congress for fiscal year 2023 on abnormal occurrences involving medical and industrial uses of radioactive material.

...Three events involved the theft or diversion and recovery of Category 2 radioactive material sources as defined in 10 CFR Part 37, "Physical Protection of Category 1 and Category 2 Quantities of Radioactive Material."

...An abnormal occurrence is defined as an unscheduled incident or event that the NRC determines to be significant from the standpoint of public health or safety.

https://www.nrc.gov/docs/ML2412/ML24121A231.pdf Source: NRC News Release No: 24-032

International Community Meets to Discuss the Future of Nuclear Security

IAEA hosted, International Conference on Nuclear Security: Shaping the Future in May 2024

FOCUS: How to further strengthen global nuclear security and addressing challenges related to new risks, threats and emerging technologies. Enhance nuclear security efforts to counter the threat of nuclear terrorism and other malicious acts in the face of emerging risks.

HIGHLIGHTS: How emerging and innovative technologies, including artificial intelligence (AI), present both challenges and benefits for nuclear security. The increasing global use of digital technologies means that concrete vigilance is needed to precisely address computer security threats, cyberattacks and any potential vulnerabilities that digital technologies have and are presenting.

NRC Awards \$1.78 Million in Scholarships and Fellowships to Minority-Serving Institutions

The Nuclear Regulatory Commission's Minority Serving Institutions Grants Program has distributed five scholarship and fellowship grants, totaling \$1.78 million to four minority-serving institutions. These institutions are part of a federally recognized category that includes historically Black colleges and universities; tribal colleges and universities; Hispanic-serving institutions; and Asian American and Pacific Islander-serving institutions.

Source: NRC News Release No: 24-035 May 13,

2024

Contact: Ivonne Couret, 301-415-8200

OAS 2024

Organization of Agreement States
Annual Meeting will be held 08/18-22/2024, in Santa Cruz, California.

Christopher Hanson Sworn in as Chair for Second Term

Christopher T. Hanson, nominated by President Joe Biden and confirmed by the U.S. Senate, was sworn in today by General Counsel Brooke Clark for a second term. He was first sworn in as an NRC Commissioner in June 2020 and designated as NRC Chair in January 2021. His new term expires June 30, 2029.

During Hanson's tenure as Chair, the agency developed a technology-inclusive framework to license new and advanced reactors and for regulating fusion energy systems, licensed the first non-light water reactor in the United States in over 50 years, efficiently oversaw the addition of 2500 MW of new nuclear generation at the Vogtle plant in Georgia, and strengthened its U.S. leadership role abroad.

Source: NRC News Release No: 24-049

June 18, 2024

Contact: Office of Public Affairs, 301-415-8200

NRC Offered Condolences on the Death of Former Chairman William A. Anders

The Nuclear Regulatory Commission offered condolences on behalf of the NRC Commission and staff on the passing of former NRC Chairman William A. Anders.

"Chairman Anders had an illustrious career far beyond taking one of the most widely seen photos from space," said NRC Chair Christopher Hanson. "He was the only person to serve as Commissioner on both the Atomic Energy Commission and NRC and he served as the new agency's first Chairman, providing institutional continuity while unambiguously committing the agency to serve as an unbiased, independent, and open regulator. We are saddened by his death and extend our condolences to his family."

Source: NRC News Release No: 24-048 June 18, 2024

Contact: Office of Public Affairs, 301-415-8200

Appalachian Compact

Delaware • Maryland •
Pennsylvania • West Virginia

Meeting

The next meeting will be held November 1, 2024. Details to follow. Contact Rich Janati at richjanati@pa.gov

Atlantic Compact

Connecticut • New Jersey • South Carolina

Meeting

The next Atlantic Compact Commission meeting has been scheduled on September 18, 2024 in Columbia, SC. More details will be available in July. Contact M.K. Batavia, P.E. at max@atlanticcompact.org

Central Compact

Arkansas • Kansas • Louisiana • Oklahoma

Meeting

Annual Meeting on Thursday June 27, 2024 at 10:00 a.m. Via Zoom Teleconference. In person accommodations will be available. See https://www.cillrwcc.org/

Central Midwest Compact

Illinois • Kentucky

Meeting

The Central Midwest Interstate Low-Level Radioactive Waste Compact (CMCC) will hold its Annual Meeting on September 10, 2024, in Springfield, IL. https://cmcompact.org/

Northwest Compact

Alaska • Hawaii • Idaĥo • Montana • Oregon • Utah • Washington • Wyoming

Meeting

The proposed meeting for the NW compact is October 1, 2024 in Richland, WA. Please check with the Compact for possible changes.

Rocky Mountain Compact Colorado • Nevada • New Mexico

Meeting

The continuation of the Rocky Mountain Low-Level Radioactive Waste Board June 5, 2024 Regular Meeting will be held on Tuesday June 25 at 11:00 am MDT. The only agenda item is consideration of a settlement agreement with Lotus, LLC. For further information, contact Leonard Slosky, Executive Director of the Board, at lslosky@rmllwb.us or (303) 825-1912

Southeast Compact

Alabama • Florida • Georgia • Mississippi • Tennessee • Virginia

Meeting

The Southeast Interstate Low-Level Radioactive Waste Compact Commission held its annual meeting on June 18, 2024, in Virginia Beach, VA. Dan Shrum represented the LLWF and spoke on LLRW Policy Updates.

Texas Compact

Texas • Vermont

Meetings

May 23, 2024

The Texas Low Level Radioactive Waste Disposal Compact Commission has scheduled a meeting in Bay City, Texas on Thursday, May 23, 2024 meeting at 9 am CDT by webinar and in person.

August 22, 2024 via Zoom Meeting webinar and in person in Manchester, Vermont at 10 am EDT.

October 24, 2024 via Zoom Meeting webinar and in person in Andrews, TX at 10 am CDT.

NRC Issues Final Supplemental Environmental Impact Statement for Comanche Peak Nuclear Power Plant License Renewal

The Nuclear Regulatory Commission has published the final supplemental environmental impact statement for renewing the operating licenses of the Comanche Peak Nuclear Power Plant, near Glen Rose, Texas. The final SEIS explains the NRC staff's conclusion that no environmental impacts would preclude renewing the licenses for an additional 20 years of operation.

Comanche Peak Units 1 and 2 are pressurized-water reactors about 40 miles southwest of Fort Worth, Texas. Unit 1's operating license expires Feb. 8, 2030, and Unit 2's on Feb. 2, 2033. The NRC issued a draft SEIS in October 2023 and collected public input before finalizing the document.

The NRC's consideration of a license renewal application includes a safety review and an environmental review. The final SEIS concludes the NRC's environmental review and is available on the NRC's website. The staff issued its safety evaluation report in March, and a final decision on the Comanche Peak renewal is expected later this year.

The Comanche Peak license renewal application is available on the NRC website and can be viewed at either the Somervell County Library, 108 Allen Drive in Glen Rose, or the Hood County Library, 222 N. Travis St. in Granbury, Texas. General information about reactor license renewal is available on the NRC website.

Source: NRC News Release No: 24-030 May 2, 2024

Contact: Scott Burnell, 301-415-8200



Unaffiliated States

District of Columbia

Maine

Massachusetts

Michigan

Nebraska

New York

North Carolina

Puerto Rico

Rhode Island

Membership details available at llwforum.org/membership/

New Hampshire Volume 39 Number 3 May - June 2024 Page 19

Information Resources

- DOE Public Affairs/Press Office 202/586-5806
- DOE Distribution Center 202/586-9642
- EPA (for program information, publications, laws and regulations) www.epa.gov
- EPA Information Resources Center 202/260-5922
- 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
- Government Accounting Office (GAO) Document Room 202/512-6000
- Government Printing Office (to order entire Federal Register notices) 202/512-1800
- Legislative Resource Center (to order U.S. House of Representatives documents)- 202/226-5200
- NRC Public Document Room 202/ 634-3273
- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides) www.nrc.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) http://www.access.gpo.gov
- U.S. Senate Document Room 202/224-7860
- Variety of documents through numerous links at LLW Forum, Inc. at https://
- H Ilwforum.org/

丩

ᆈ

丩

Acknowledgment & Disclaimer

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

Disclaimer: Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.



Copyright Policy

All LLWF materials are copyrighted and for permission to use or reproduce, please send your request to the Daniel B. Shrum

Executive Director,

dshrum@llwforum.org