

LLW *notes*

Volume 35 Number 6 November/December 2020

A Message from Dan Shrum, Executive Director

It was a strange first year as your Executive Director - 2020 brought forth new challenges and we conquered them together. We had numerous accomplishments, not the least of which was moving an entire Forum meeting from in-person to virtual. We held a transformation meeting and developed a new mission statement and objectives. We are currently developing a strategic plan to align our actions with our mission.

I look forward to next year and for the opportunity to bring together the members of the Low-Level Forum. We have a lot to accomplish and are well equipped to handle whatever 2021 brings.

Happy New Year!

Daniel B. Shrum, Executive Director

Please submit comments, suggestions or articles for the LLW *notes* to margaret-llwf@gmail.com

In this Issue...Find news about NRC's VLLW withdrawal, path forward on rulemakings, 2021 Hodes Award recipient, decommissioning and low-level waste updates, 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.

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Acronyms Used in LLW notes

- CFR ♦ Code of Federal Regulations
- CRCPD ♦ Conference of Radiation Control Program Directors
- DOE ♦ US Department of Energy
- DOT ♦ US Department of Transportation
- EPA ♦ US Environmental Protection Agency
- 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 ♦ US Nuclear Regulatory Commission
- OAS ♦ Organization of Agreement States
- TENORM ♦ Technologically enhanced naturally occurring radioactive material

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Very Low-Level Radioactive Waste

WITHDRAWN: 10 CFR Chapter [NRC-2020-0065] Transfer of Very Low-Level Waste To Exempt Persons for Disposal

The U.S. Nuclear Regulatory Commission (NRC) is withdrawing a proposed interpretation of its low-level radioactive waste disposal regulations that would permit licensees to dispose of waste by transfer to persons who hold specific exemptions for the purpose of disposal by burial. The proposal is being withdrawn based on the NRC staff's assessment that the proposed changes may not benefit the regulatory framework for the disposal of low-level radioactive waste.

The proposed interpretive rule is withdrawn as of December 17, 2020.

The NRC staff assesses that the potential main benefit of the proposed interpretive rule—the potential for fewer regulatory approvals related to disposal at an authorized disposal site—would not outweigh the costs of implementing the proposed interpretive rule, especially given the lack of Agreement State support and a limited number of potential users. Therefore, the NRC has decided to withdraw its proposed interpretation of “authorized recipient” related to the requirements in § 20.2001 based on the conclusion that the proposed changes would not benefit the current regulatory framework for the disposal of VLLW.

The information obtained through the public comments on this effort will be considered in other ongoing low-level waste program initiatives, including the staff's Very Low-Level Waste Scoping Study.

The scoping study is an ongoing action from SECY-16-0118, “Programmatic Assessment of Low-Level Radioactive Waste Regulatory Program” (ADAMS Package Accession No. ML15208A305). The staff will continue to monitor the external environment and seek innovations in the low-level waste regulatory program.

Source: Federal Register / Vol. 85, No. 243 / Thursday, December 17, 2020 / Proposed Rules 81849

Path Forward and Recommendations
for Certain Low-Level Radioactive Waste Disposal Rulemakings

SECY-20-0098 - Path Forward and Recommendations for Certain Low-Level Radioactive Waste Disposal Rulemakings

Accession Number: ML20143A164

Date Released: Thursday, November 5, 2020

Link: <https://www.nrc.gov/docs/ML2014/ML20143A164.html>

Package Contents

The SECY outlines a path forward for two separate rule making activities. Specifically, the SECY provides considerations, options, and the staff's recommendation for proceeding with (1) the Part 61 of Title 10 of the Code of Federal Regulations (10 CFR) rulemaking, "Low-Level Radioactive Waste Disposal" (10 CFR Part 61 rule); and (2) a proposed rulemaking to promulgate requirements for the near-surface disposal of greater-than-Class C (GTCC) waste (GTCC waste rulemaking) in a consolidated and integrated rulemaking.

NRC will seek opportunities to communicate with external stakeholders during the comment period. The NRC will also actively engage Agreement State representatives during the development process.

ML20143A165 - SECY-20-0098 - Path Forward and Recommendations for Certain Low-Level Radioactive Waste Disposal Rulemakings (16 pages, 10/21/2020)

ML20143A166 - SECY-20-0098 - Enclosure 1 - Differing Views on Agreement State Regulation of GTCC Waste Disposal (17 pages, 10/21/2020)

Consolidated Interim Storage Facility

NEW MEXICO COMMENTS:

November 3, 2020

As the Governor of the State of New Mexico, I write to express my opposition to the proposed action to issue a license in response to the Interim Storage Partners (ISP) LLC's License Application for a Consolidated Interim Storage Facility (CISF) for Spent Nuclear Fuel (SNF) in Andrews County, Texas. The May 2020 draft Environmental Impact Statement (EIS) is significantly flawed and does not adequately address significant threats to the health and safety of New Mexicans, impacts to our economy, and protection of our environment.

The U.S. Nuclear Regulatory Commission (NRC) proposed approval of the ISP license application to construct and operate a CISF for SNF and Greater-Than-Class C waste and spent mixed oxide fuel at the existing Waste Control Specialists (WCS) site in Andrews County, Texas. If licensed, the facility could store up to 5,000 metric tons of uranium (MTUs) for a license period of 40 years. ISP has indicated that they will seek amendments and extensions of the license to store an additional 5,000 MTUs for each of seven expansion phases over 20 years, resulting in an expanded facility with total storage of up to 40,000 MTUs of spent nuclear fuel.

New Mexicans have a vested interest in this proposed action due to the proximity of the site to the Texas-New Mexico border; the facility is located just .37 miles east of the border and five miles east of Eunice, New Mexico. Additionally, the New Mexico side of the border is more densely populated, meaning that the proposed action would disproportionately impact New Mexicans in the immediate area.

The draft EIS does not adequately address the many safety concerns that siting a CISF in Andrews County, Texas raises. With no active planning for a permanent repository for SNF underway, there is significant risk that this and other facilities proposed as interim storage facilities become de facto permanent repositories. Over time, it is likely that the casks storing spent nuclear fuel and high-level waste will lose integrity and will require repackaging. Any repackaging of spent nuclear fuel and high-level waste increases the risk of accidents and radiological health risks. The consequences of a release of radiation due to accidental events (such as fire, flood, earthquakes, ruptures of fuel rods, explosion,

lightning, extreme temperatures and more), potential acts of terrorism or sabotage, and the risks associated with aging spent nuclear fuel canisters all pose unacceptable health, safety, and environmental risks that the draft EIS fails to address.

Further, the ISP project would place unfunded safety mandates on local communities. Transporting spent nuclear fuel across the nation is complex and extremely dangerous. Safe transportation of spent nuclear fuel requires both well-maintained infrastructure and highly specialized emergency response equipment and personnel that can respond quickly to an incident at the facility or on transit routes. New Mexico residents cannot afford and should not be expected to bear the costs associated with transporting material to the proposed CISF or responding to an accident on transport routes or near the facility.

The proposed CISF also poses unacceptable economic risk to New Mexicans, who look to southeastern New Mexico as a driver of economic growth in our state. New Mexico's agricultural industry contributes approximately \$3 billion per year to the state's economy, \$300 million of which is generated in Eddy and Lea Counties, adjacent to the West Texas site. Further, the site is located in the Permian Basin, which is the largest inland oil and gas reservoir and the most prolific oil and gas producing region in the world. New Mexico's oil and natural gas industry contributed approximately \$2 billion to the state last year, driven by production in Lea and Eddy County. Any disruption of agricultural or oil and gas activities as a result of a perceived or actual nuclear incident would be catastrophic to New Mexico, and even taking steps toward siting a CISF in the area could cause a decrease in investment in two of our state's biggest industries.

Recognizing the risks outlined above, a broad range of businesses, state, local, and tribal leaders have expressed their opposition to this project and to a similar project in New Mexico proposed by Holtec International. That opposition includes both myself and Governor Abbott of Texas, who similarly recognizes the risk a CISF in this region poses to Texas residents.

The ISP proposal poses unacceptable risk to New Mexico's citizens, communities, and economy, and I urge you to deny the ISP license application.

Sincerely,
Michelle Lujan Grisham, Governor

Consolidated Interim Storage Facility

TEXAS COMMENTS:

As Governor of Texas, I strongly oppose ISP's application for a license to construct and operate a consolidated interim storage facility in Andrews County, Texas. Having consulted with numerous state agencies, including the Texas Department of Public Safety, the Texas Commission on Environmental Quality, and the Texas Department of Transportation, I urge the NRC to deny ISP's license application.

If ISP's license application were approved, its proposed facility would store spent nuclear fuel and Greater-Than-Class-C waste, both of which present a greater radiological risk than Texas is prepared to allow. This deadly radioactive waste — up to 40,000 metric tons of uranium — would sit right on the surface of the facility in dry cask storage systems. Spent nuclear fuel is so dangerous that it belongs in a deep geologic repository, not on a concrete pad above ground in Andrews County. See, e.g., 42 U.S.C. § 10101(18); *Nevada v. DOE*, 457 F.3d 78, 81 (D.C. Cir. 2006). This location could not be worse for storing ultra-hazardous radioactive waste.

Andrews County lies within the Permian Basin Region, which has surpassed Saudi Arabia's Ghawar Field as the largest producing oilfield in the world. There are approximately 250,000 active oil-and-gas wells in Texas's portion of the Permian Basin. In 2019, oil production in the Permian Basin exceeded 1.5 billion barrels, and the oil-and-gas industry directly employed 87,603 individuals in the region. Also in 2019, the Permian Basin was responsible for \$9 billion in severance taxes and royalties to the State of Texas. In 2018, the Permian Basin produced more than 30 percent of total U.S. crude oil and contained more than 40 percent of proved oil reserves. In short, the Permian Basin is a significant economic and natural resource for the entire country.

The proposed ISP facility imperils America's energy security because it would be a prime target for attacks by terrorists, saboteurs, and other enemies. Spent nuclear fuel is currently scattered across the country at various reactor sites and storage installations. Piling it up on the surface of the Permian Basin, as ISP seeks to do, would allow a terrorist with a bomb or a hijacked aircraft to cause a major radioactive release that could travel hundreds of miles on the region's high winds.

Such an attack would be uniquely catastrophic because, on top of the tragic loss of human life, it would disrupt the country's energy supply by shutting down the world's largest producing oilfield. The Permian Basin is already a target for America's enemies, and granting ISP's license application would paint an even bigger bullseye.

Under the National Environmental Policy Act of 1969, the NRC has an obligation to consider the environmental effects of a terrorist attack on the proposed ISP facility. See *Mothers for Peace v. NRC*, 449 F.3d 1016, 1028–35 (9th Cir. 2006); but see *N.J. Dep't of Env'tl. Prot. v. NRC*, 561 F.3d 132, 136–43 (3d Cir. 2009) (creating circuit split on issue); *New York v. NRC*, 589 F.3d 551, 554 n.1 (2d Cir. 2009) (per curiam) (avoiding circuit split because “the NRC did sufficiently take into account acts of terrorism”). Perhaps recognizing as much, the NRC addressed the risk of terrorism in section 4.19 of its Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel. See 10 C.F.R. § 51.23 (cross-referencing NUREG-2157). The Generic Environmental Impact Statement determined (at page 4-97) that terrorism's “environmental risk is SMALL” during the period beyond a facility's license term. But see 42 U.S.C. § 2210e (reflecting Congress's judgment that the risk of a terrorist attack on a nuclear facility warrants the NRC's careful attention).

Now, in sections 1.4.4 and 5.1.3 of the Draft Environmental Impact Statement for the license application in Andrews County, the NRC apparently seeks to apply its generic terrorism determination to ISP. The proposed ISP facility, however, would be a uniquely provocative target: The probability of a terrorist attack is higher than for a generic reactor site, because the consequences are higher when a terrorist can disrupt the country's energy supply with a major radioactive release. So the Generic Environmental Impact Statement does not adequately assess terrorism risk as to ISP in particular, while the Draft Environmental Impact Statement does not speak to that issue at all. Indeed, the word “terrorism” appears just once, in a mere citation, in the Draft Environmental Impact Statement (at page 2-31).

Although the Draft Environmental Impact Statement repeatedly refers to ISP's construction and operation of a “consolidated interim storage facility,” it would be

Consolidated Interim Storage Facility

TEXAS COMMENTS - continued

naïve to believe the highlighted word. ISP's application seeks a 40-year license, with the possibility of a 20-year renewal. The Draft Environmental Impact Statement simply assumes (at pages xix, 1-3, 2-2, 8-1, 9-16) that a permanent geologic repository will be developed and licensed before those 60 years are up, without addressing any contingency for the spent nuclear fuel if such a repository is not ready when ISP's license expires.

Those rosy assumptions are unsound: Radioactive waste has "the capacity to outlast human civilization as we know it," *Nuclear Energy Inst., Inc. v. EPA*, 373 F.3d 1251, 1257 (D.C. Cir. 2004) (per curiam), and any spent nuclear fuel that comes to the proposed ISP facility will be there to stay. Congress began working on a lasting solution to the spent nuclear fuel problem by passing the Nuclear Waste Policy Act of 1982, which set standards for a permanent geologic repository, and the NWPA Amendments Act of 1987, which designated Yucca Mountain as the only site for it.

Today, 38 years later, there is still no permanent geologic repository, with Yucca Mountain effectively having been abandoned. See, e.g., *New York v. NRC*, 824 F.3d 1012, 1014-15 (D.C. Cir. 2016); *In re Aiken County*, 645 F.3d 428, 430-33 (D.C. Cir. 2011). Once again, then, "[t]he [NRC] apparently has no long-term plan other than hoping for a geologic repository. If the government continues to fail in its quest to establish one, then [spent nuclear fuel] will seemingly be stored on site at nuclear plants on a permanent basis. The [NRC] can and must assess the potential environmental effects of such a failure." *New York v. NRC*, 681 F.3d 471, 479 (D.C. Cir. 2012).

The Generic Environmental Impact Statement concedes (at page 4-95) that "additional security requirements may be necessary in the future if spent fuel remains in storage for a substantial period of time. Under those circumstances, it is reasonable to assume that, if necessary, the NRC will issue orders or enhance its regulatory requirements for ISFSI and DTS security, as appropriate, to ensure adequate protection of public health and safety and the common defense and security." This approach to future terrorist threats — essentially, a promise of I'll tell you later — is not good enough and does not protect Texas and its citizens.

Finally, safe transportation of spent nuclear fuel would require specialized emergency response equipment and trained personnel, as well as significant infrastructure investments. Texas currently has four counties (Bexar, Dallas, Midland, and Nueces) and one city (San Antonio) that have passed resolutions prohibiting the transportation of spent nuclear fuel and high-level waste. According to the Draft Environmental Impact Statement (at page 3-8), the cargo currently shipped on rail lines through the Permian Basin consists primarily of "oilfield commodities such as drilling mud, hydrochloric acid, fracking sand, pipe, and petroleum products, including crude oil, as well as iron and steel scrap." There are also significant agricultural commodities. In the event of a rail accident or derailment, even absent a radiological release, the resources and logistics required to address such an accident would severely disrupt the transportation of oilfield and agricultural commodities, to the detriment of the entire country.

In light of the grave risks associated with the proposed ISP facility, the absence of a permanent geologic repository, and the importance of the Permian Basin to the country's energy security and economy, I respectfully and emphatically request that the NRC deny ISP's license application.

Sincerely,
Greg Abbott
Governor

Consolidated Interim Storage Facility

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY (TCEQ) COMMENTS:

The Texas Commission on Environmental Quality (TCEQ) is a unique Texas stakeholder as we have subject matter expertise, but no regulatory authority over the licensing of this proposed consolidated interim storage facility (CISF). This authority resides with the federal government, specifically the Nuclear Regulatory Commission (NRC).

The TCEQ has significant policy concerns as they pertain to the adjacent low-level radioactive waste disposal facility. The CISF proposal has unprecedented implications as it has created significant unease with the public. Continuing with this licensing action jeopardizes public consent and presents significant challenges as we carry out our responsibility to regulate the low-level radioactive waste disposal facility.

Specific Comments

1. Page 2-2, Line 4 – The EIS states “In its license application, ISP has requested that NRC license the proposed CISF to operate for a period of 40 years (ISP, 2020). ISP stated that it may seek to renew the license for an additional 20 years, for a total 60-year operating life (ISP, 2020). Renewal of the license beyond an initial 40 years would require ISP to submit a license renewal request, which would be subject to an NRC safety and environmental review at that time.”

Comment: The TCEQ understands that the initial licensing period for a CISF is 40 years with the ability for an additional renewal period of 40 years. Based on the requirements in 10 Code of Federal Regulations (CFR) Part 72, the applicant is only required to provide technical and design analyses for the term of the license being requested. Because 10 CFR Part 72 appears to only allow one 40-year license renewal term, how will the NRC ensure that interim storage does not extend beyond the second 40-year license term, or in this case a 20-year term? Since the U.S. Department of Energy has been unsuccessful in developing a permanent geologic repository, the TCEQ is concerned that a CISF in Texas will become the permanent solution for dispositioning the nation’s spent nuclear fuel (SNF).

2. Page 2-2, Line 9 – The EIS states “By the end of the license term of the proposed CISF, the NRC staff expects that the SNF stored at the proposed facility would have been shipped to a permanent geologic repository. This expectation of repository availability

is consistent with the NRC’s analysis in Appendix B of NUREG–2157, “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel,” (NRC, 2014). In that analysis, the NRC concluded that the reasonable period for the development of a repository is approximately 25 to 35 years (i.e., the repository is available by 2048) based on experience in licensing similarly complex facilities in the United States and national and international experience with repositories already in progress (NRC, 2014).

Comment: The NRC did not address an alternative or contingency for stored SNF in the event that a permanent geologic repository is not developed and licensed at the end of a CISF license term. The assumption is speculative and may result in the State of Texas becoming the permanent solution for disposition of SNF.

3. Page 2-2, Line 36 – The EIS states “The Federal Waste Disposal Facility. This facility serves the U.S. Department of Energy 36 (DOE) and is also authorized to dispose Class A, B, and C LLRW and Mixed Low-Level Waste (MLLW) under Texas Radioactive Materials License No. R04100, Amendment No. 30 (TCEQ, 2016a).”

Comment: The Federal Waste Disposal Facility is authorized to receive both LLRW and MLLW. The MLLW is authorized by both Radioactive Material License R04100 and Hazardous Waste Permit No. 50397. The TCEQ respectfully suggests revising to add the hazardous waste permit number.

4. Page 2-7 line 10 - “Southeastern” does not match the location of Phase 1 on Figure 2.2-5.

Comment: Suggest revising location to match Figure 2.2-5.

5. Page 2-10 line 16 - Description of rail car movement in “Rail Sidetrack” paragraph does not match Figure 2.2-1 and Figure. 2.2-5.

Comment: Suggest revising paragraph to match Figures 2.2-1 and 2.2-5.

6. Page 4-22 line 36 - Reference to “town of Deaf Smith, Texas” should be “county of Deaf Smith, Texas.”

Comment: Suggest revising reference to read county instead of city.

Disused Sealed Radioactive Sources

Colombia Enhances Security of Disused Sealed Radioactive Sources

An IAEA press release discusses the continued efforts in Columbia to dispose of disused sealed radioactive sources (DSRS). IAEA is supporting over twenty countries, on their request, to improve the security and safety of national inventories of DSRSs through large scale field operations and complementary capacity building for enhanced sustainability.

“Disused sealed radioactive sources can remain radioactive for a long time and present both security and safety challenges,” said Raja Abdul Aziz Raja Adnan, Director of the IAEA Division of Nuclear Security. “Appropriate management of these sources helps protect against accidental radiation exposure and intentional use for malicious purposes.”

The article provides related stories:

- IAEA Kicks Off Multi-Regional Project on Sustainable Management of Disused Sealed Radioactive Sources
- Fostering Cradle-to-Grave Management of Radioactive Sources: Interregional Project Concludes, Paving the Way for Future Activities
- IAEA Helps Countries Build Knowledge on Safely Disposing Disused Sealed Radioactive Sources
- IAEA Guidance on Managing Disused Radioactive Sources Now Available

IAEA also provides related resources:

- Disused sources
- Management of Disused Sealed Radioactive Sources
- Nuclear safety and security

Source: <https://www.iaea.org/newscenter/news/colombia-enhances-security-of-disused-sealed-radioactive-sources>

Decommissioning and Radioactive Waste Disposal

Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities

NUREG-1307 is titled "Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities," and has different LLW burial scenarios described in detail in Section 1.2, "LLW Disposal Cost Scenarios." (for the current LLW sites). The due date for comments was December 17, 2020.

See: <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1307/r18/>

From the abstract:

The currently operating LLW disposal facilities are located in 1) Texas, 2) South Carolina, 3) Washington, and 4) Utah. The Texas, South Carolina, and Washington facilities are the host disposal sites for the Texas LLW Disposal Compact (Texas Compact), the Atlantic Interstate LLW Management Compact (Atlantic Compact), and the Northwest Compact on LLW Management (Northwest Compact), respectively (Appendix E provides additional information about LLW compacts), and are referred to in this report as compact-affiliated disposal facilities. The Washington LLW disposal facility also accepts LLW generated in the three member-states of the Rocky Mountain LLW Compact (Rocky Mountain Compact). The fourth site (Utah) is not associated with a specific LLW compact, and so is referred to in this report as a non-compact disposal facility. Nuclear power plant facilities located within the LLW compacts for the compact-affiliated disposal facilities can dispose of their LLW at the affiliated disposal facility or, in some cases, can dispose of a portion of their LLW at the non-compact disposal facility. Nuclear power plants not located within an LLW compact having a compact-affiliated disposal facility can dispose of their LLW at either the Texas or Utah disposal facilities. The Utah site accepts only Class A LLW while the Texas site will accept Class A, B, and C LLW (see Section 1.1 for definitions of these LLW classes). For plants that have no disposal site available within their designated LLW compact, this report assumes that the cost for disposal of Class A LLW is the same as that for the Utah disposal facility, and the cost for disposal of Class B and C LLW is the same as that for the Texas disposal facility, and includes accounting for out-of-compact fees.

Disclaimer: The views expressed in this report are not necessarily those of the NRC. NUREG-1507, Revision 18, is not a substitute for NRC regulations. The approaches and methods described in this NUREG are provided for information only. Publication of this report does not necessarily constitute NRC approval or agreement with the information contained herein.

Disposition of Foreign Origin Americium

A new white paper on Disposition of Foreign Origin Americium has recently been approved by the Conference of Radiation Control Program Directors (CRCPD) Board of Directors for publication. The white paper was developed to analyze the impact and possible solutions for Foreign Origin Americium (FORM) in the U.S., requiring final disposition.

It's available for download at [CRCPD.org/page/Publications](https://www.crcpd.org/page/Publications) under "White Papers."

For more information, contact:

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Decommissioning and Radioactive Waste Disposal

Strategic Programmatic Overview of the Decommissioning and Low-Level Waste and Nuclear Materials Users Business Lines (Public Meeting) - November 5, 2020

Purpose: The purpose of the briefing is to provide the Commission with a discussion of strategic considerations associated with the Decommissioning and Low-Level Waste business line and the Nuclear Material Users business line.

Topics and speakers:

John Lubinski, Director, Office of Nuclear Material Safety and Safeguards (NMSS)

- Decommissioning and Low-Level Waste Business Line Safety and Security – General Program Overview
 - o Decommissioning
 - o Uranium Recovery and Low-Level Waste

Patricia Holaban, Director, Division of Decommissioning, Uranium Recovery, and Waste Programs, NMSS

- Innovations within the business line
 - o In Situ Recovery rulemaking
 - o Greater-Than-Class C/Part 61 rulemaking
- Transition of Decommissioning Plants from Nuclear Reactor Regulation (NRR) to NMSS

Mary Muesle, Director, Division of Nuclear Material Safety, Region IV

- Risk-informing Decommissioning and UR Guidance

Sources:

<https://www.nrc.gov/docs/ML2030/ML20304A301.pdf>

Slides: <https://www.nrc.gov/docs/ML2030/ML20304A302.pdf>

Transcript: <https://www.nrc.gov/docs/ML2031/ML20317A207.pdf>

NRC Fiscal Year 2020 Agency Financial Report

NRC's FY 2020 Report addresses low-level radioactive waste oversight and identifies it as Challenge 7. "Challenge 7: NRC and Agreement State Coordination on Oversight of Materials and Waste Why is this a serious management and performance challenge?"

The report explains this challenge involves sustained, high level coordination between the NRC and 39 Agreement States to ensure a consistent understanding and implementation of regulations associated with the oversight of materials and waste.

SA-109, Interim Guidance "Reviewing the Non-Common Performance Indicator, Low-Level Radioactive Waste Disposal Program" was issued. This document describes the procedure for conducting reviews of an Agreement State radiation control program for the Non-Common Performance Indicator "Low-Level Radioactive Waste Disposal Program."

Source: <https://www.nrc.gov/docs/ML2032/ML20321A325.pdf>

Decommissioning and Radioactive Waste Disposal

NRC Seeks Public Comment on Draft Environmental Study on Waste Transfer at Church Rock Site in New Mexico

The Nuclear Regulatory Commission is seeking public comment on a draft Environmental Impact Statement for United Nuclear Corp.'s proposed transfer of mine waste from the Church Rock uranium mine in McKinley County, New Mexico.

United Nuclear has applied for a license amendment authorizing it to excavate approximately 1 million cubic yards of mine waste from the Northeast Church Rock Mine Site and dispose of it at an existing uranium mill site nearby. The proposal is part of a longstanding effort to clean up the Church Rock site, which was contaminated during mine operations from 1967 to 1982.

The draft EIS concludes that most impacts, in areas such as groundwater, surface water, air quality, traffic, and noise would occur primarily during the 3.5-year duration of the project. If approved, the license amendment would facilitate the safe disposal of the mine waste from Navajo Nation land.

The NRC staff will conduct two virtual public meetings, on Dec. 2 and Dec. 9, at 4 p.m. Eastern Time (2 p.m. Mountain Time) to present its preliminary findings and take comments from the public. Details will be available on the agency's public meetings webpage.

Comments may also be submitted over the federal government's rulemaking site, www.regulations.gov, using Docket ID NRC-2019-0026; by email to UNC-ChurchRockEIS.resource@nrc.gov; by voicemail to 1-888-672-3425; or by U.S. mail to Office of Administration, Mail Stop: TWFN-7-A60M, ATTN: Program Management, Announcements and Editing Staff, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. Comments will be accepted through Dec. 28.

Southeast Compact Honors Frank Hahne with 2021 Hodes Award

The Southeast Compact Commission (SECC) selected Frank Hahne to receive the 2021 Richard S. Hodes Award for the significant role he played in successfully designing, implementing and leading the U.S. Department of Energy's (DOE) successful uranium bartering program during the deactivation and decommissioning (D&D) clean-up work at the former enrichment site in Portsmouth, Ohio.

The Award is given to an individual, company, or organization that contributed in a significant way to improve technology, policy, or practices of radioactive waste management in the United States. The criteria for selection include innovation, safety, economics, and transferability.

Frank Hahne is a national and international expert on uranium supply. For the past 50 years, with NAC International, Nuclear Fuel Services and most recently BWX Technologies (BWXT), he has focused his work on bringing uranium to market and recycling and preserving potential uranium waste streams back into the commercial nuclear fuel cycle. He retired from BWXT in 2020 after designing, implementing and leading his most recent project, the Fluor-BWXT Portsmouth (FBP) Uranium Bartering Program

The Barter Program was an innovative partnership between the U.S. DOE and FBP, the prime contractor, to leverage excess inventories of uranium in order to accelerate the D&D projects at the Portsmouth site. Mr. Hahne was able to overcome market, processing and economic challenges and he negotiated revenue sharing contracts to gain support of the Program from industry companies. The program provided over \$1.25 billion dollars of additional funding to DOE and the Portsmouth site for cleanup and risk reduction efforts, while serving as a model to other projects for the reuse and repurposing of surplus materials.

Jack Storton, one of the SECC commissioners participating in the Award recipient selection, said the creative work of Mr. Hahne with the Barter Program clearly exemplifies the spirit and commitment that the Hodes Award is intended to recognize.

"The recovery and recycle of uranium avoided alternate disposition strategies, such as continued storage or disposal, which would have introduced safety and environmental risks," Storton said. "The Program salvaged \$250 million worth of uranium that was stranded at Portsmouth, which would have otherwise been designated as waste."

The award will be presented during the 2021 Waste Management Conference, which will be held using a fully virtual online format during March 8-12, 2021. Immediately following the award presentation, Mr. Hahne will present a lecture on his innovative efforts.

The Commission established the Richard S. Hodes, M.D. Honor Lecture Award to honor the memory of Dr. Richard S. Hodes, who served as chair of the Southeast Compact Commission from its inception in 1983 until his death in 2002. He was a strong proponent of innovative approaches to improve the management of radioactive waste in the U.S.

The Commission would like to thank those individuals and organizations that participated in the 2021 awards program. Their involvement has helped to assure the continued success of the Richard S. Hodes, M.D. Honor Lecture Award.

Appalachian CompactDelaware•Maryland•
Pennsylvania•West Virginia**NRC Approves License Transfer for Three Mile Island, Unit 2**

The Nuclear Regulatory Commission has approved the transfer of the license for the Three Mile Island Generating Station, Unit 2, from FirstEnergy Companies to TMI-2 Solutions.

FirstEnergy Companies, comprising Metropolitan Edison Co., Jersey Central Power and Light Co., Pennsylvania Electric Co. and GPU Nuclear Inc., requested the transfer for TMI-2 Solutions to complete the decommissioning of the unit. TMI-2 Solutions is a wholly owned subsidiary of EnergySolutions, a Utah-based radioactive waste disposal company.

The TMI-2 reactor, located approximately 10 miles southeast of Harrisburg, Pa., operated for approximately six months before suffering reactor core damage on March 28, 1979. Subsequently, about 99 percent of the fuel and damaged reactor core material was removed and shipped to the Department of Energy's Idaho National Laboratory, and in 1993 the plant was placed in a Post-Defueling Monitored Storage status. The license currently authorizes only possession of byproduct and special nuclear materials remaining at the reactor.

The NRC review determined that the proposed transfer complies with NRC regulatory requirements, provides reasonable assurance that public health and safety will be protected, and is not detrimental to the common defense and security.

The approval is effective immediately, and the license will be amended to reflect the new ownership once the sale of Unit 2 is completed.

Source: NRC News Release

No: 20-058 December 2, 2020

Contact: David McIntyre, 301-415-8200

Atlantic CompactConnecticut•
New Jersey•South Carolina**Meeting**

Next Regular Meeting: April 2021

For more information please contact max@atlantic-compact.org

Central Midwest Compact

Illinois•Kentucky

Meeting

The CMCC Spring Meeting is tentatively scheduled for April 20, 2021. Location and method TBD.

Midwest Compact

Indiana•Iowa•Minnesota•Missouri•Ohio•Wisconsin

NRC Makes Point Beach Subsequent License Renewal Application Available for Public Inspection

The Nuclear Regulatory Commission has received a subsequent license renewal application from NextEra Energy, which requests an additional 20 years for the already-renewed operating licenses of Point Beach Nuclear Plant Units 1 and 2. The application is now available for public inspection on the NRC website.

NextEra filed the application on Nov. 16 to renew the licenses. The Point Beach units are pressurized-water reactors in Two Rivers, Wisconsin, located approximately 13 miles northwest of Manitowoc. The NRC approved the initial license renewal in December 2005, with Unit 1 currently licensed to operate through Oct.

5, 2030, and Unit 2 through March 8, 2033.

The NRC staff is reviewing the application to determine if it has sufficient information to complete the agency's extensive safety and environmental reviews. If the NRC determines the application to be complete, the staff will docket it and publish a notice of opportunity to request an adjudicatory hearing before the NRC's Atomic Safety and Licensing Board.

Information regarding the license renewal process is available on the NRC website. When conditions related to the COVID-19 public health emergency have improved, a copy of the Point Beach subsequent license renewal application will be available at the Lester Public Library, 1001 Adams St., in Two Rivers.

Source: NRC News Release

No: 20-059 December 8, 2020

Contact: Scott Burnell, 301-415-8200

Northwest Compact

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

Nov. 12, 2020 State of Utah Waste Management and Radiation Control Board Meeting Notice

The Agenda and Board packet information for the Waste Management and Radiation Control Board Meeting is available for your review at:

<https://deq.utah.gov/boards/waste-management-and-radiation-control-board-meetings>

The Agenda and Board packet information has also been posted on the Utah Public Notice website at: <https://www.utah.gov/pmn/index.html>

Southeast Compact

Alabama•Florida•Georgia•
Mississippi•Tennessee•Virginia

NRC Fines TVA More Than \$900,000 for Watts Bar Nuclear Power Plant Violations; Cites Three Individuals for Their Roles in the 2015 Incident

The Nuclear Regulatory Commission has issued notices of violation and three civil penalties totaling \$903,471 to the Tennessee Valley Authority, and issued violations to two managers and a plant operator for their roles in a 2015 incident.

The enforcement actions are the result of an NRC investigation into events that occurred during and after the startup of Watts Bar Unit 1 following a maintenance outage in November 2015. During the startup, operators failed to follow plant procedures and subsequently failed to properly document their actions in the control room log. Shift managers also failed to review the logs to ensure their accuracy.

Through numerous inspections, interviews, and predecisional enforcement conferences over more than four years, the NRC identified five TVA violations associated with non-conservative decision making, procedural violations, and incomplete and/or inaccurate information regarding the events provided by the utility to the NRC.

TVA and the three cited individuals have 30 days to respond to the NRC's enforcement actions.

Source: NRC News Release

No: 20-054 October 27, 2020

Contact: Scott Burnell, 301-415-8200

Southwestern Compact

Arizona•California•South Dakota•North Dakota

NRC Issues Confirmatory Order to Arizona Public Service Company

The Nuclear Regulatory Commission has issued to Arizona Public Service Co. a Confirmatory Order, documenting mutually agreed upon actions to implement programs designed to address regulatory compliance issues that contributed to two apparent violations of NRC requirements. APS operates the Palo Verde Nuclear Generating Station in Tonopah, Ariz.

The apparent violations involved the company's failure to (1) perform a written evaluation for a change to a dry cask storage system used for spent nuclear fuel and obtain a license amendment for the way they performed accident calculations and (2) adequately analyze the consequences of a hypothetical accident involving a cask tip over on the independent spent fuel storage installation pad. The apparent violations of NRC requirements are described in a July 6 NRC inspection report.

Company officials requested the Alternative Dispute Resolution process with the NRC to discuss corrective actions. The process uses a neutral mediator with no decision-making authority to assist the NRC and its licensees in reaching an agreement.

Following a Sept. 16 meeting with company officials, the NRC issued the Confirmatory Order documenting actions that the company has agreed to take.

Source: NRC News Release

No: IV-20-024 November 18, 2020

Contact: Victor Dricks, 817-200-1128

Note: In the States and Compact Section, NRC news releases may be abbreviated. Access the complete news release at the NRC website www.nrc.gov/reading-rm/doc-collections/news/

Texas Compact

Texas•Vermont

Meetings

December 17, 2020

February 25, 2021. Location to be determined – Austin, TX or via Webinar

April 15, 2021. Location to be determined - Austin, TX or via Webinar

The December 17, 2020, meeting included:

Chairman's report on Compact Commission activities:

- a. Report on Communications with other Compacts and the Low Level Forum.
- b. Fiscal and Budget Updates
- c. Personnel Updates

Discussion and possible action regarding the contingency plan described in Section 3.04 of the Texas Low-Level Radioactive Waste Disposal Compact including report from the Committee.

Capacity Committee Report.

Possible action on import and export applications and amendments.

For information, contact:
administration@tllrwdcc.org

Nuclear Security

Gauges and Camera

Texas - Stolen Nuclear Gauges

On November 5, 2020, the Agency was notified by the licensee that three of their nuclear density/level measurements gauges had been stolen from one of their storage sites. The storage site had been vandalized and various pieces of equipment were damaged as well. The licensee has contacted local law enforcement about this incident.

The gauges contain Cs-137 sources. The total activity of the missing sources is estimated to not exceed 200 mCi. The licensee does not have any additional information regarding the incident or gauges at this time.

On November 9, 2020, the licensee provided additional information on the stolen gauges. All gauges contained cesium-137 sources. Two of the gauges were Thermo Fisher model 5192 gauges. One of the two gauges contained a 250 milliCurie (mCi) (original activity now 215 mCi) source and the other contained a 200 mCi (now 162 mCi) source. The third gauge was a Thermo Fisher model 5190 gauge containing a 200 mCi (now 166 mCi) source. The gauges had been stored in a locked cage on the licensee's site. The gauges were still installed on the pipes they were used on. The licensee stated the last time the gauges were seen was September 1, 2020. The Agency instructed the licensee to notify local scrap yards of the theft and provided them with a copy of the attached picture. The Agency has requested additional information from the licensee. Additional information will be provided as it is received in accordance with SA-300.

Arizona - Lost Density Gauge

The Department received notification from the licensee that a portable gauge was lost. A technician left the portable gauge on the tailgate of his truck while completing paperwork and then drove off. When he realized that the gauge was missing, he retraced his steps but was unable to locate it. The gauge is a Troxler 3430, Serial Number 32909, containing approximately 8 milliCuries of Cesium-137 and 40 milliCuries of Americium-241:Beryllium. The Department has requested additional information and continues to investigate the event.

Oklahoma- Lost or Missing Radiography Camera

On 11/3/20, the licensee reported to the Oklahoma Department of Environmental Quality that a radiography camera was missing. The device was shipped from a Stanley facility in Pennsylvania to Oklahoma. The shipping paper arrived at the Oklahoma facility on 11/2/20, but the package containing the camera was missing. On 11/2/20, Stanley notified the shipment carrier of the missing package.

The radiography camera is a QSA Global Model 880 Delta (S/N: D14241) with a 25.5 Ci Ir-192 source.

The device has been located by the shipment carrier and is scheduled to be returned to the licensee.

Nuclear Security

Miscellaneous Radioactive Materials

Illinois- Lost Am-241 Sealed Source Package

The Agency was contacted on 11/23/2020 by the Radiation Safety Officer for Heuft USA, Inc. to advise that a package scheduled to arrive today at their Downers Grove, IL facility had not arrived. The carrier, [common carrier], could not immediately locate the package. The package contained (1) special form model AMC-25 sealed source containing approximately 45 mCi of Am-241. The package left their Kearny, NJ terminal on 11/19/2020. There is conflicting information on whether or not the package arrived at [the common carrier's] Akron, OH terminal.

North Carolina - Source Sent to Recycling Center, Then Recovered and Returned

Licensee reports that a laminating device containing a 500 mCi of Kr-85 source was inadvertently disposed through their recycling service on 10/1 and was discovered missing on 11/4. On 11/5, working with the licensee, RMB was able to trace the disposal of the device to a recycling yard in York, SC. Licensee arranged with an authorized service provider that was able to assess the device for leakage/contamination and arrange for transport to return to vendor. No evidence of leakage or contamination was found, and the device was packaged and removed from the recycling yard on 11/6. South Carolina DHEC [Department of Health and Environmental Control] was made aware of this incident on 11/5.

Nebraska - Accidentally Sold a Sealed Source Device

On November 2, 2020, the Department received a call from a licensee about disposal of a sealed source device.

The licensee was getting ready to dispose of their device and was informed by their surplus department that it had been accidentally sold at a surplus auction on September 17, 2020. Sale information was retrieved from auction records on November 3, 2020, and the purchaser was located and contacted. The device had been delivered to the purchaser in Columbus, Ohio and the purchaser is working with the licensee to properly dispose of the device. The device is to be retrieved from Columbus, Ohio by the disposal company, but a date has not yet been set. The licensee will notify the Department when disposal arrangements have been finalized.

Low-Level Radioactive Waste Disposal Compact Membership

Northwest Compact

- Alaska
- Hawaii
- Idaho
- Montana
- Oregon
- Utah
- Washington
- Wyoming

Midwest Compact

- Indiana
- Iowa
- Minnesota
- Missouri
- Ohio
- Wisconsin

Appalachian Compact

- Delaware
- Maryland
- Pennsylvania
- West Virginia

Rocky Mountain Compact

- Colorado
- Nevada
- New Mexico

Northwest accepts Rocky Mountain waste as agreed between Compacts

Southwestern Compact

- Arizona
- California
- South Dakota
- North Dakota

Texas Compact

- Texas
- Vermont

Central Compact

- Arkansas
- Kansas
- Louisiana
- Oklahoma

Central Midwest Compact

- Illinois
- Kentucky

Atlantic Compact

- Connecticut
- New Jersey
- South Carolina

Southeast Compact

- Alabama
- Florida
- Georgia
- Mississippi
- Tennessee
- Virginia

Unaffiliated States

- District of Columbia
- Maine
- Massachusetts
- Michigan
- Nebraska
- New Hampshire

- New York
- North Carolina
- Puerto Rico
- Rhode Island

Membership details available at llwforum.org/membership/

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) list-server@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 www.llwforum.org

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.

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