

# LLW *notes*



Volume 36 Number 3 May/June 2021

**A Message from Dan Shrum, Executive Director**

*Remember meeting in person?*

**Be sure to save the date – October 13-14, 2021- for the next Forum meeting. We plan on meeting in person at the Magnolia Hotel located in downtown Denver.**

**Brush up on your networking skills!**

Daniel B. Shrum, Executive Director

Please submit comments, suggestions or articles for the LLW *notes* to [margaretlwf@gmail.com](mailto:margaretlwf@gmail.com)



**In this Issue...Find news about DSWG's report publication, radioactivity in solid waste from the Appalachian Compact, members' awards and honors, DOE waste facilities, and NRC 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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### Officers

**Joe Klinger, Chair**  
**Chair-Elect, Kristen Schwab**  
**Earl Fordham, Past-Chair**  
**Alyse Peterson, Treasurer**

## DSWG News

Report of the Disused Sources Working Group - "An Evaluation of the US NRC's 2015 Revision to the Branch Technical Position on Concentration Averaging and Encapsulation for the Disposal of Radioactive Sealed Sources."

The US Department of Energy's National Nuclear Security Administration (NNSA) asked the LLW Forum's Disused Sources Working Group (DSWG) to evaluate the impact that the US Nuclear Regulatory Commission's (NRC) 2015 revision to the Branch Technical Position (BTP) on Concentration Averaging and Encapsulation has had on the disposal of radioactive sealed sources.

See the report at <http://llwforum.org/wp-content/uploads/2021/06/May-2021-Report-on-2015-NRC-BTP-on-CA-and-E.pdf>

## Executive Summary

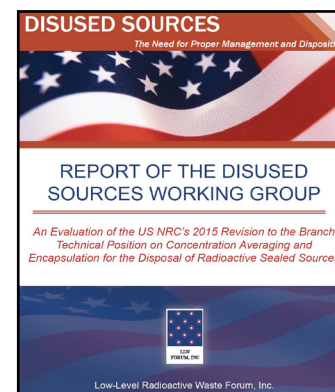
The US Nuclear Regulatory Commission (NRC) has established a classification system for low-level radioactive waste (LLRW) based on the concentration of radioactivity present in the waste. The general nature of radioactive sealed sources presents certain challenges when it comes time for their disposal because their high radioactivity and small size result in a high concentration that can easily exceed the Class C limit. In 2015, the NRC issued Revision 1 to the Branch Technical Position on Concentration Averaging and Encapsulation (BTP). The BTP provides guidance on how to properly classify low-level radioactive waste for disposal.

This report prepared by the LLW Forum's Disused Sources Working Group (DSWG) evaluates the impact of the 2015 revision has on the classification of sealed sources for disposal.

- The BTP allows for discrete items, like sealed sources, to be encapsulated in a non-radioactive binding matrix (typically cement) where the concentration is determined based on the volume or mass of the sealed source and encapsulation media.
- A process is provided in the BTP that limits the size of the container and amount of encapsulation media that can be used in classifying the waste, and considers the specific radionuclides present and the potential health impact on an inadvertent intruder.

To determine the impact of the revision, telephone interviews were conducted with LLRW disposal facility operators, brokers, and processor to determine the impact of the revision on the classification of sealed sources for disposal. The consensus was the revision improved the classification process through added clarity, allowing for the use of larger disposal containers, and providing the flexibility to apply the least restrictive classification.

While the classification process has improved with the 2015 revision, obstacles remain for disposing of sealed sources. These include the high cost of disposal, the availability and cost of Type B shipping containers, and the licensee's not adequately planning for the life cycle cost associated with sealed sources.



## Pennsylvania Regulations and Guidance for Dealing with Radioactivity in Solid Waste

by David J. Allard, MS, CHP, Appalachian Compact Chair and PA Department of Environmental Protection, Bureau of Radiation Protection

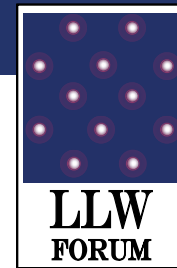
The Pennsylvania Department of Environmental Protection (PA DEP) has the responsibility for protecting the environment and health and safety of the citizens in the Commonwealth from toxic and hazardous material contaminants. This includes sources of radiation exposure. In the late 1990s, various forms of radioactive material (RAM) was being detected in municipal and residual waste by radiation monitors installed at solid waste processing and disposal facilities. The materials that set off facility radiation alarms might be regulated through specific or general license, but more likely was deregulated, exempt or unregulated. Some RAM in solid waste may be in an ambiguous framework of statutory and regulatory control (e.g., military devices with radium). Nonetheless, our two decades of experience has shown the vast majority of RAM detection events are due to short-lived nuclear medicine radionuclides (e.g., I-131, Tc-99m, etc.), where human or animal patients have returned home post medical treatment, and inadvertently contaminated household waste. However, naturally occurring radioactive material (NORM), technologically enhanced NORM (or TENORM), consumer products with RAM, or lost sealed sources (e.g., Ra-226, Cs-137, Am-241, etc.) are often detected in solid waste. Until the PA DEP promulgated its solid waste radiation monitoring regulations in 2001, there were no state or federal regulatory requirements to have radiation monitors at these facilities. Of equal concern was the lack of standards (i.e., ANSI, ANS, ASTM, HPS or IEEE) for the radiation level alarm set point, system background limit, gamma energy discrimination level, action level thresholds, and the overall administrative process for radiation control in handling such alarms. Regardless of the most probable type of RAM found in household waste or other solid waste (i.e., benign levels of short-lived medical radionuclides), prior to 2001 PA DEP's Radiation Protection Program staff always promptly

responded to solid waste and metal recycling facility alarms over the years. However, as the number of monitors increased, this was causing a measurable impact on other program activities, such as x-ray equipment and licensed RAM user inspections. With the potential for impact on the environment and worker health and safety from certain types of RAM found in the solid waste stream (e.g., high volumes of TENORM and large orphan sources), in 1999 the PA DEP Bureaus of Radiation Protection and Waste Management jointly developed regulations requiring monitoring of gamma radiation from solid waste at all Pennsylvania RCRA D landfills, incinerators and transfer facilities. A comprehensive technical guidance document (TGD) was also developed in 2001 to assist regulated community with their implementation during a three-year transition phase. At the LLW Forum meeting in October, I'll describe the nature of the problem, a regulatory analysis, the state's regulatory framework and radiation monitoring requirements, alarm set point and equipment standards, a recent update to the TGD, and 20 years of program experience with implementation. Also I'll provide an overview of the required facility Radiation Protection Action Plan, instrumentation performance checks, operational aspects, training and records, and the public dose limits applied to oil and gas TENORM waste disposal, tritium in landfill leachate effluent studies, and ongoing radium in leachate evaluations. Our practical operational approach utilizing a two tier Action Level response, and appropriate onsite RAM characterization, has allowed solid waste facilities and the PA DEP to more effectively manage the radioactive materials and TENORM detected in solid waste.

For more information, Contact the author at  
P.O. Box 8469, Harrisburg, PA 17105-8469  
Tel: 717-787-2480

Recognitions

Rusty Lundberg Receives LLWF Proclamation for Service and Contributions



LOW-LEVEL RADIOACTIVE WASTE FORUM

RESOLUTION 2021-1  
HONORING DAVID "RUSTY" LUNDBERG  
BOARD MEMBER

April 8, 2021

WHEREAS, the Low-Level Radioactive Waste Forum (Forum) was organized to serve the interests of the Interstate Low-Level Radioactive Waste Compacts and the States in implementing the Federal Low-Level Radioactive Waste Policy Act (1980) and subsequent Amendments Act of 1985;

WHEREAS, David "Rusty" Lundberg faithfully and diligently served the State of Utah for over 35 years and the Forum for over 10 years; including serving as the Forum's Chair, Chair-Elect, and Past Chair.

WHEREAS, as a board member and Chair, Rusty worked to advance the goals of the Interstate Low-Level Radioactive Waste Compacts and States through close interaction with federal and state government agencies, the nuclear power industry, other generators of low-level radioactive waste, commercial waste management businesses, low-level radioactive waste advocacy groups, and various professional organizations;

WHEREAS, effective December 31, 2020, Rusty retired, concluding his many years of service to the State of Utah and the LLW Forum;

NOW, THEREFORE, BE IT RESOLVED that the Forum, on behalf of its members, recognizes David "Rusty" Lundberg and hereby:

Expresses the Forum's deepest appreciation and gratitude for his extensive service, invaluable contributions, dedicated leadership, and unwavering commitment to the Forum as a Board Member and Chair; and

Wishes him well in his future professional and personal endeavors and interests.

BE IT FURTHER RESOLVED that this resolution be presented to Rusty Lundberg in recognition of his years of service and contributions to the Low-Level Radioactive Waste Forum.

PRESENTED this 8<sup>th</sup> day of April 2021.

Joseph G. Klinger, Chair  
Low-Level Radioactive Waste Forum

Rusty  
Lundberg  
*(Is it a mask  
or is it a beard?  
It's both!)*  
  
with  
Dan Shrum,  
Forum Executive  
Director  
  
Presenting the  
Proclamation

## Recognitions

### CRCPD Award for Meritorious Service

To recognize CRCPD members and persons who have assisted the CRCPD states, and/or public in achieving a better understanding of, and protection from, radiation exposure.



## Conference of Radiation Control Program Directors, Inc. (CRCPD)

### Meritorious Service Award Earl Fordham



#### A Partnership Dedicated to Radiation Protection

Earl Fordham (WA) is presented the Board of Directors Meritorious Service Award for significant contributions over the years to the Board as Chairperson and Member-at-Large and working groups on which he has served and to the overall mission of CRCPD. Earl has represented CRCPD in an excellent manner as liaison to the Health Physics Society and the American Academy of Health Physics. Currently, Earl is also Chair of the E-5 working group on Radioactive Waste Management. Under his leadership, E-5 submitted extensive technical comments on the NRC's Draft Regulatory Basis for the Disposal of Greater Than Class C and Transuranic Waste and to NRC's proposed interpretative rule on Transfer of Very Low-Level Waste to Exempt Persons for Disposal.

During Earl's extensive career, he also acted as the Washington state liaison to many organizations. Earl's dedication and contribution to the field of radiation protection has aided in enhancing and building not only a stronger WA State program, but also organizations including CRCPD, Low-Level Waste Forum, and the Health Physics Society.

## Recognitions

### Gerald S. Parker Award of Merit

To recognize CRCPD members who have made significant contributions, individually or as a group, in assisting the states and/or the public in achieving a better understanding of, and protection from, radiation exposure.



## Conference of Radiation Control Program Directors, Inc. (CRCPD)

### 2021 Gerald S. Parker Award David J. Allard



**A Partnership Dedicated to Radiation Protection**

The 2021 Gerald S. Parker Award is awarded to Dave Allard, for his significant contribution in the field of radiation protection, and in particular, to the goals of the Conference of Radiation Control Program Directors.

Mr. Allard served on the Board of Directors of CRCPD and was the Chairperson in the 2017-2018 year. Both as an officer and member of the Board, David served the organization in an exemplary manner.

Mr. Allard's major contributions to CRCPD include his service as liaison to the National Council on Radiation Protection and service on several CRCPD committees. He is recognized nationally and internationally for his expertise in the area of naturally occurring radioactive material (NORM), serves on working groups for the International Atomic Energy Agency on NORM issues, and served both as a speaker and planner for the International NORM IX Symposium.

Without reservation, David Allard has been and continues to be a leader in the field of radiation protection.

### **Safety Basis Assessment at the Hanford Site Tank Farms Tank Side Cesium Removal Facility - June 2021**

The U.S. Department of Energy (DOE) Office of Nuclear Engineering and Safety Basis Assessments, within the independent Office of Enterprise Assessments (EA), conducted an assessment of the safety basis amendment and safety evaluation report (SER) for incorporating the Tank Side Cesium Removal (TSCR) Facility into tank farm operations at the Hanford Site. The safety basis includes HNF-SD-WM-TSR-006, Tank Farms Technical Safety Requirements, and RPP-13033, Tank Farms Documented Safety Analysis, which have been amended to integrate the control changes required for TSCR operations. This assessment, conducted from August 2020 through February 2021, is a follow-on activity to the EA assessment of the TSCR safety design basis documents completed in early 2020, as documented in Preliminary Documented Safety Analysis Assessment at the Hanford Site Tank Farms Tank Side Cesium Removal Project, April 2020.

<https://www.energy.gov/sites/default/files/2021-06/Hanford%20Tank%20Farms%20SB%20report.pdf>

Sources: EM Update | Vol. 13, Issue 23 | June 15, 2021 and EM Update | Vol. 13, Issue 24 | June 22, 2021

### **Hanford Groundwater Sampling Crews Help Drive Program's Success**

While it's often the Hanford Site's six advanced pump-and-treat facilities that get the glory — they're on track to treat more than 2 billion gallons of contaminated groundwater for the seventh straight year — a field sampling group quietly plays a critical role in the success of the sitewide risk-reduction effort. "Groundwater sampling is a key part of our program that doesn't always get a lot of attention," said Mike Cline, director of the soil and groundwater division at Hanford. "The quality of information we get from the thousands of collected samples each year is invaluable for evaluating current cleanup methods and planning future remediation efforts." See <https://www.energy.gov/em/articles/hanford-groundwater-sampling-crews-help-drive-programs-success>

### **Idaho Site's Largest Building Moves Closer to Closure**

Major sections of the Idaho National Laboratory (INL) Site's largest building, workers have emptied those areas to prepare them for closure under federal and state regulations.

The second and third phases involve the closure of the treatment facility, associated buildings, and remaining AMWTP buildings once the inventory of transuranic and low-level waste is shipped out of state for disposal. Off-site shipments of the remaining waste are expected to continue through 2028 based on the current schedule. See <https://www.energy.gov/em/articles/idaho-sites-largest-building-moves-closer-closure>

### **New Panel for Waste Emplacement Takes Shape at Waste Isolation Pilot Plant**

WIPP practices "just in time" mining; Panel 8 will be ready about two months before Panel 7 is filled and sealed. It's planned that way because salt "creeps," or moves, 2 to 4 inches per year and begins to close the excavated space.

Panel 7 has 1.5 rooms remaining to be filled. Once Panel 7 is full, scheduled for around May 2022, bulkheads will seal the panel and waste emplacement will move to Panel 8.

The article features several interesting pictures along with the explanation of the mining process. See <https://www.energy.gov/em/articles/new-panel-waste-emplacement-takes-shape-waste-isolation-pilot-plant>



## Spent Fuel, Decommissioning and Waste Storage

### HOLTEC Interim Storage Facility

Holtec International's Application for Specific Independent Spent Fuel Storage Installation License for the HI-Store Consolidated Interim Storage Facility for Spent Nuclear Fuel – Second Request For Additional Information - NRC Letter to Holtec International – Request for Additional Information for Holtec HI-STORE CISF License Application

On May 20, 2021, NRC staff issued a letter to Holtec International transmitting its second request for additional information (RAIs), in connection with its detailed safety review of the application for a license to construct and operate the proposed HI-STORE Consolidated Interim Storage Facility (CISF), in Lea County, New Mexico. The NRC staff's letter may be viewed under ADAMS Accession Number ML21124A308, or the following link <https://adamswebsearch2.nrc.gov/webSearch2/main.jsp?Accession-Number=ML21124A308>

### IAEA Spent Fuel Topics

Promoting Safety of Spent Fuel and Radioactive Waste Management: 20 Years of the Joint Convention

<https://www.iaea.org/newscenter/news/promoting-safety-of-spent-fuel-and-radioactive-waste-management-20-years-of-the-joint-convention>

Article “Nuclear Newcomers Tackle Spent Nuclear Fuel and Radioactive Waste Management”

<https://www.iaea.org/newscenter/news/nuclear-newcomers-tackle-spent-nuclear-fu->

### Interim Storage Partners

Tuesday, June 22, 2021

8:55 a.m. NRC Affirmation Session (Public Meeting) (Tentative)

Interim Storage Partners, LLC (WCS Consolidated Interim Storage Facility), Fasken Petition for Review of LBP-21-2 (Denying Motions to Reopen and Admit a New Contention) (Tentative)

Contact: Wesley Held: 301-287-3591

The public is invited to attend the Commission's meeting live by webcast at the Web address – <https://video.nrc.gov/>

### “Modernizing the NRC Fuel Cycle and Materials Decommissioning Inspection Program”

On June 9, 2021 from 1:00 pm – 3:00 pm EDT NRC will hold a public meeting “Modernizing the NRC Fuel Cycle and Materials Decommissioning Inspection Program.” The purpose of the meeting is to inform stakeholders of NRC's efforts to revise the Fuel Cycle Facility, Uranium Recovery, Complex Materials, and Non-complex Materials Decommissioning Inspection Programs to be provided

in Inspection Manual Chapter 2602 and associated Inspection Procedures

The public meeting is an Information Meeting with a Question and Answer Session. Attendees will have an opportunity to ask questions of the NRC staff or make comments about the issues discussed throughout the meeting.

If there are any comments or questions please Contact Maurice Heath [Maurice.Heath@nrc.gov](mailto:Maurice.Heath@nrc.gov) or Jennifer Dalzell [Jennifer.Dalzell@nrc.gov](mailto:Jennifer.Dalzell@nrc.gov).

## Very Low-Level Waste & Waste Manifests & Risk Assessment

### NRC Results of Very Low-Level Radioactive Waste Scoping Study

The Nuclear Regulatory Commission recently released the results of their Very Low-Level Radioactive Waste Scoping Study. The purpose of the scoping study was to identify possible approaches to improve and strengthen the U.S. Nuclear Regulatory Commission's (NRC's) VLLW regulatory framework. The main external driver for the timing of the scoping study was the anticipated increase of early nuclear power plant (NPP) closures. NPP decommissioning could generate large volumes of VLLW.

The results of the study conclude that the current regulatory approach "provides adequate protection of public health and safety while providing licensees with flexibility under a risk-informed, performance-based framework. This approach would not result in diverting NRC or industry resources from higher priority decommissioning and LLRW activities."

Contact: Maurice L. Heath, NMSS/DUWP  
301-415-3137

Stephen Dembek, NMSS/DUWP  
301-415-2342

Note: The term "VLLW" does not have a statutory or regulatory definition, but it is generally understood as material created during the conduct of NRC or Agreement State-licensed activities that contains some residual radioactivity, including naturally occurring radionuclides, that may be safely disposed in hazardous or municipal solid waste landfills. VLLW represents a small fraction of the hazard of waste at the Class A limits in Title 10 of the Code of Federal Regulations (10 CFR) Part 61, "Licensing requirements for land disposal of radioactive waste."

Source: June 1, 2021 SECY-21-00

For additional information on NRC's VLLW activities, please visit: <https://www.nrc.gov/waste/llw-disposal/very-llw.html>

### NRC Waste Manifests

NRC has completed the revision of the Uniform Waste Manifest Forms (Form 540/A, Form 541/A, and Form 542/A) in accordance with NUREG/BR-0204, Revision 3.

Federal Register on Friday, June 25, 2021, announced the revised forms are available (86 FR 33783) See <https://www.federalregister.gov/>

The U.S. Nuclear Regulatory Commission (NRC) announces the availability of revisions to the NRC Form 540 (Uniform Low-Level Radioactive Waste Manifest (Shipping Paper)), NRC Form 541 (Uniform Low-Level Radioactive Waste Manifest (Container and Waste Description)), and NRC Form 542 (Uniform Low-Level Radioactive Waste Manifest (Manifest Index and Regional Compact Tabulation)). The forms are available for implementation, consistent with the forms included in NUREG/BR-0204, Revision 3, "Instructions for Completing NRC's Uniform Low-Level Radioactive Waste Manifest."

### Briefing on Transformation at the NRC – Midyear Review (Public Meeting)

The public is invited to attend the Commission's meeting live by webcast at the Web address – <https://video.nrc.gov/> on June 22, 2021.

Contact: Maria Arribas-Colon: 301-415-6026

### NRC Commissioner Remembered

On the Death of Former Commissioner Peter Lyons, NRC issued this statement--

"For decades, Pete distinguished himself as an influential thought leader in nuclear science and energy policy, first at the Los Alamos National Laboratory and later at the NRC and Department of Energy. He was a mentor, a friend, and a role model for public service," said NRC Chairman Christopher T. Hanson. "We are deeply saddened over the loss of this great man."

## Southeast Compact Accepting Nominations for Hodes Award

The Southeast Compact is accepting nominations for the Richard S. Hodes, M.D. Honor Lecture Award for 2021. The award honors the memory of its late chairman, Dr. Richard S. Hodes, a strong proponent for innovation in the field of low-level radioactive waste management. Dr. Hodes was a physician, statesman, educator, and chairman for 19 years of the Southeast Compact Commission for Low-Level Radioactive Waste Management. The award was created by the Commission to encourage environmental professionals and political leaders to develop innovative approaches to waste management in the United States and, in doing so, to further the mission and objectives of the Southeast Compact Commission.

### **THE DEADLINE FOR NOMINATIONS IS SEPTEMBER 30, 2021.**

Inquiries about the Richard S. Hodes, M.D. Honor Lecture Award should be directed to:

Ted Buckner, Executive Director  
Southeast Compact Commission  
Post Office Box 5427  
Cary, NC 27512

Email: [tedb@secompact.org](mailto:tedb@secompact.org) or visit the Commission web site at [www.secompact.org](http://www.secompact.org).

### **Eligibility**

To be eligible for the award, the individual/group must consent to being nominated and must be willing to prepare and present a lecture about the innovation being recognized at the Waste Management Symposium. Individuals or organizations can nominate themselves or another individual, company, institution, or organization.

### **The Award**

The Richard S. Hodes Honor Lecture Award—established in March, 2003—is awarded to an individual, company, or organization that contributed in a significant way to improving the technology, policy,

or practices of low-level radioactive waste management in the United States. The award recipient will be recognized with a special plaque and an invitation to present a lecture about the innovation during the 2022 Waste Management Conference in Phoenix, Arizona. A special time is reserved during the Conference for the lecture and the award presentation. The Southeast Compact Commission will provide the award recipient a \$5,000 honorarium and will pay travel expenses and per diem (in accordance with Commission Travel Policies) for an individual to present the lecture.

### **Criteria**

The Richard S. Hodes Honor Lecture Award recognizes innovation industry-wide. The award is not limited to any specific endeavor—contributions may be from any type of work with radioactive materials (nuclear energy, biomedical, research, etc.), or in any facet of that work, such as planning, production, maintenance, administration, or research. The types of innovations to be considered include, but are not limited to:

- Conception and development of new approaches or practices in the prevention, management, and regulation of radioactive waste;
- New technologies or practices in the art and science of waste management; and
- New educational approaches in the field of waste management.

The criteria for selection include:

- Innovation. Is the improvement unique? Is it a fresh approach to a standard problem? Is it a visionary approach to an anticipated problem?
- Safety. Does the practice enhance radiation protection?
- Economics. Does the approach produce significant cost savings to government, industry or the public?
- Transferability. Is this new practice applicable in other settings and can it be replicated? Does it increase the body of technical knowledge across the industry?

**Appalachian Compact**Delaware•Maryland•  
Pennsylvania•West Virginia**NRC Schedules Webinar to Discuss 2020 Safety Performance at Maryland, New Jersey, New York and Pennsylvania Nuclear Power Plants**

NRC scheduled a public webinar on June 16 to discuss the agency's annual assessment of safety performance at nuclear power plants in Maryland, New Jersey, New York and Pennsylvania.

Source: NRC News Release No: I-21-003 March 10, 2021

Contact: Diane Screnci, 610-337-5330

Neil Sheehan, 610-337-5331

**TMI Inspection Report**

On June 3, 2021, the NRC completed an inspection of the Three Mile Island Nuclear Station Unit 2 (TMI-2). An on-site inspection was performed May 11, 2021.

See the inspection No. 05000320/2021003 , Docket No. 05000320 , License No. DPR-73

Licensee: TMI-2 Solutions, LLC (TMI-2 Solutions)  
Facility: Three Mile Island Nuclear Station, Unit 2 (TMI-2) Address: Middletown, PA

**Atlantic Compact**Connecticut•  
New Jersey•South Carolina**Uniform Schedule of Maximum Disposal Rates for Atlantic Compact Regional Waste Effective July 1, 2021**

The Uniform Schedule of Maximum Disposal Rates for Atlantic Compact Regional Waste is a permanent-ceiling on disposal rates applicable to Atlantic Compact waste that is adjusted each year in accordance with the Producer Price Index. South Carolina may charge Atlantic Compact generators less than the Uni-

form Maximum schedule but cannot charge regional generators more than this rate.

[https://www.atlanticcompact.org/pdf\\_file\\_drs/ac67a4d5411e0f3983acb3032ce87618.Rate-schedules-annualadjustments-2021-2022.pdf](https://www.atlanticcompact.org/pdf_file_drs/ac67a4d5411e0f3983acb3032ce87618.Rate-schedules-annualadjustments-2021-2022.pdf)

**NRC Reviewing Oconee's Subsequent License Renewal Application**

NRC has received a subsequent license renewal application from Duke Energy Carolinas LLC, which requests an additional 20 years for the already-renewed operating licenses of Oconee Nuclear Station Units 1, 2 and 3. The application is now available for public inspection on the NRC website.

Source: NRC News Release No: 21-024 June 22, 2021

Contact: Scott Burnell, 301-415-8200

**Central Compact**

Arkansas•Kansas•Louisiana•Oklahoma

**Annual Meeting**

Thursday, Jun 17, 2021

The purpose of the meeting is to take necessary action on meeting minutes, administrative budgets, and all other business to come before the Commission. For an agenda, Contact the Commission's Office at (405) 702-5222, by email: [admin@gmail.com](mailto:admin@gmail.com) or visit the web page at [www.cillrwcc.org](http://www.cillrwcc.org).

**Central Midwest Compact**

Illinois•Kentucky

**NRC to Hold Virtual Meeting to Discuss 2020 Performance of Clinton and LaSalle Nuclear Power Plants**

NRC staff will discuss the 2020 safety performance of the Clinton and LaSalle nuclear power stations during a virtual meeting to be held June 30.

See complete news release at [www.nrc.gov/reading-rm/doc-collections/news/](http://www.nrc.gov/reading-rm/doc-collections/news/)

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### **NRC to Hold Virtual Meeting to Discuss 2020 Performance of Dresden and Quad Cities Nuclear Power Plants**

NRC staff will discuss the agency's annual assessment of the safety performance of two nuclear power plants in Illinois during a virtual public meeting scheduled for June 29.

Source: NRC News Release No: III-21-012 June 22, 2021

Contact: Viktoria Mitlyng, 630-829-9662 Prema Chandrathil, 630-829-9663

#### **Midwest Compact**

Indiana-Iowa-Minnesota-Missouri-Ohio-Wisconsin

### **NRC to Hold Virtual Meeting to Discuss 2020 Performance of Davis-Besse and Perry Nuclear Power Plants**

NRC will discuss the agency's annual assessment of the safety performance of two nuclear power plants in Ohio during a virtual public meeting scheduled for June 22.

### **NRC Atomic Safety and Licensing Board to Hold Oral Argument on Point Beach Subsequent License Renewal**

NRC Atomic Safety and Licensing Board will conduct an oral argument via WebEx on June 22 regarding a petition to hold an adjudicatory hearing concerning NextEra Energy's application to renew the operating licenses of the Point Beach Nuclear Plant Units 1 and 2, near Manitowoc, Wisconsin, for an additional 20 years.

Source: NRC News Release No: 21-020 June 1, 2021

Contact: Scott Burnell, 301-415-8200

#### **Rocky Mountain Compact**

Colorado-Nevada-New Mexico

**Meetings: Annual and Regular**

June 10, 2021

The Annual meeting agenda included election of officers and consideration of fiscal year 2021- 2022 budget. The Regular meeting agenda included updates from the Clean Harbors Regional Facility, URENCO USA, National Developments/LLW Forum, Compact States/Colorado, New Mexico & Nevada; Executive Director's Report; Fiscal Status/Investment Summary; Permit Fee Revenue for 2020 & 2021; Expenditure/Budget Comparison; Status of Volumes Authorized for Export and Disposal 2020 & 2021.

Contact Leonard C. Slosky, Executive Director

Phone: 303/825-1912

Email: lslosky@rmlwb.us

Web: www.rmlwb.us

#### **Northwest Compact**

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

#### **Meeting**

A meeting of the Utah Waste Management and Radiation Control Board has been scheduled for June 10, 2021 at 1:30 pm (MDT) at the Utah Department of Environmental Quality. 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>

#### **Southeast Compact**

Alabama-Florida-Georgia  
Mississippi-Tennessee-Virginia

### **NRC Schedules Virtual Meeting to Discuss 2020 Safety Performance of TVA's Three Nuclear Power Plants**

NRC staff will discuss the 2020 safety performance of the Browns Ferry, Sequoyah, and Watts Bar nuclear power plants during a virtual meeting to be held May 13.

### Southwestern Compact

Arizona•California•South Dakota•North Dakota

#### Meetings

May 5, 2021

November 2, 2021

May 5, 2021

Meeting agenda included Review & Direct Posting-Notice for Executive Director, Approve a Proposed Budget 2021-2022, and other business.

Information on a law suit against Edison San Onofre Nuclear Generating Station (SONGS) and the Coastal Commission in San Diego is anticipated prior to the November meeting. SONGS was closed in 2012 and a process of challenges and delays continues. See the article at <https://www.latimes.com/california/story/2021-06-04/hearing-set-for-lawsuit-aimed-at-stopping-dismantlement-at-san-onofre-nuclear-plant>

### Texas Compact

Texas•Vermont

#### Meetings

May 27, 2021

July 15, 2021

September 16, 2021

May 27, 2021, See meeting agenda <https://clicks.aweber.com/y/ct/?l=FNxX2&m=3ba.L3aEmthYuM-v&b=3m64WQNz3ycWsFhMqse1Lw> and link to the webinar at <https://www.youtube.com/watch?v=ID-ST9bDtMFM>

The agenda included customary business and Update on Implementation of the Management Rule 31 TAC 675.24, Legislative Update and Capacity Committee Report.

### Sunset Review

TLLRWDCD will go through a review by the state Sunset Advisory Commission in the interim time between regular legislative sessions. While TLLRWDCD may be abolished by the Sunset Advisory Commission, this review will allow for suggestions to procedural and administrative duties for the Commission and staff. TLLRWDCD was previously reviewed by the Sunset Advisory Commission as part of a review of the Texas Commission on Environmental Quality (TCEQ) in 2011. This review will be independent of the TCEQ review.

Contact more information:

Stephen Raines, Executive Director

[stephen.raines@tllrwdcc.org](mailto:stephen.raines@tllrwdcc.org)

Phone: (512) 350-6241

### Vermont Yankee Nuclear Power Station – Request for 10 CFR 20.2002 Alternate Disposal at US Ecology Idaho

NorthStar plans to dispose of material at the U.S. Ecology Idaho (USEI) Resource Conservation and Recovery Act Subtitle C hazardous disposal facility located near Grand View, Idaho. USEI is not an NRC-licensed facility. NorthStar made this request under the alternate disposal provision contained in Title 10 of the Code of Federal Regulations 20.2002, which permits a licensee to request NRC approval for alternate disposal procedures.

The SER documents the basis for the acceptability of the 10 CFR 20.2002 alternate disposal request. For this action, an Environmental Assessment and Finding of No Significant Impact were prepared and notice was published in the Federal Register on May 7, 2021 (86 FR 24675). Accordingly, pursuant to 10 CFR 20.2002, the request for alternate disposal of the approximately 2,000,000 gallons of wastewater material at the USEI Grand View, Idaho disposal facility, as described in the licensee's and USEI's submittals, is granted and effective immediately.

TLLRWDC: Texas Waste Site

**Waste Control Specialists  
Community Outreach and Support**

“Nuclear Science for the Next Generation”

The Andrews High School Radiological Control Technician class toured of the waste site at the invitation of WCS, whose staff taught students about the science and technology of safely managing radioactive waste.

WCS invests in the community by supporting future leaders and congratulating graduates and winners of the WCS scholarships awarded this year.

S.T.E.A.M. Event at the ATK Kids and Community Together S.T.E.A.M. event in Hobbs, New Mexico, provided opportunity for staff to teach children about the industry.

“Reading is Fun!,” sponsored by WCS, let 4th and 5th graders of Underwood Elementary take a free book home to read over the summer.

Source: WCS email

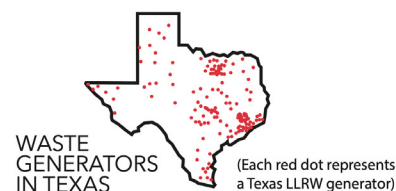
**WCS Public Information and Education  
Community Interactions**

**WASTE GENERATORS IN TEXAS**

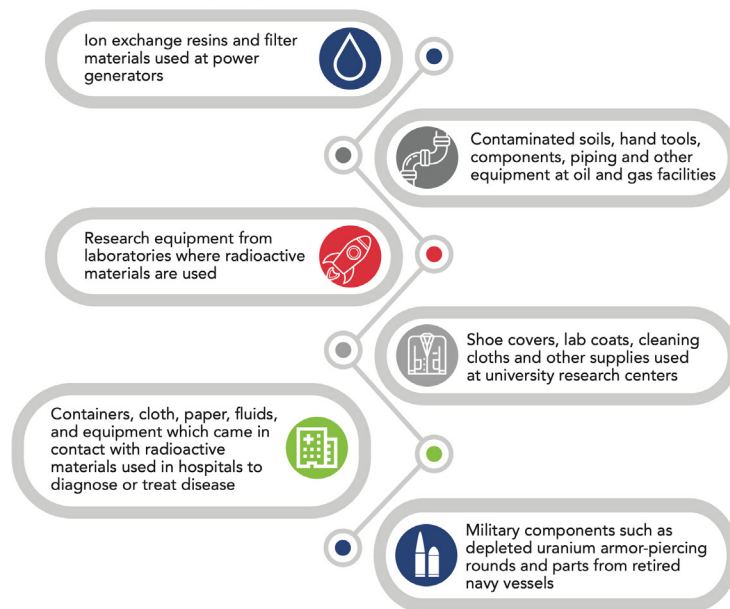
Low-level radioactive waste (LLRW) is generated from everyday activities in crucial Texas industries. This waste is not suitable for disposal in traditional, less environmentally protected landfills due to its radioactive nature. The Texas economy needs a local solution for the safe and secure disposal of this material.

Texas waste generators include facilities such as:

- Oil and Gas Operations
- Water Treatment Plants
- Hospitals
- Research Institutions
- Nuclear Power Plants
- Military Bases



LLRW includes items that have become contaminated with radioactive material or have become radioactive through exposure to radiation. For example:



Source: WCS Media Kit

## Nuclear Security

**SOURCE LOST DURING SHIPPING**

## Georgia

“Hurst Boiler Welding Company used [a common carrier] to ship a source changer back to QSA Global. It was shipped on May 19, 2021, and officially declared lost on 6/14/21. The licensee Contacted [the common carrier] on 6/14/21, who confirmed the source had been lost. The source changer contains an Ir-192 source (Serial # 9887G Model SC-800). The source activity when shipped (5/19/21) was 8.3 Ci and as of 6/16/21 it has decayed to 6.3 Ci.”

## Colorado

“A package of radium-223 (Xofigo) was lost in transit. The package was shipped on 5/22/21 containing 112.4 microCi radium-223. The activity of the package as of 6/11/21 (initial report date to Colorado) was approximately 33.5 microCi.”

## Wisconsin

“On June 4, 2021 the licensee reported to the Department [of Health Services] that a package containing 25 Curies of Cs-137 had been shipped from Wisconsin on April 16, 2021 and did not arrive at its destination in California.”

**PRIVATE CITIZEN IN POSSESSION OF NUCLEAR MATERIAL**

## New Jersey

“On Tuesday evening, June 15, 2021, the DEP was notified that a member of the public had come to the Mountain Lakes police HQ to report that he had in his possession some radioactive material that he had obtained 60 years ago when he worked for Westinghouse as an engineer. The material was reported to be “Nuclear Reactor grade U-238 with 5 percent U-235 enriched.” The material was found stored as the citizen had described. The container

was not opened. There was no detectable removable contamination on the outside of the container. The material was returned to the garage where it will be secured pending proper disposal.

**LOST LICENSED MATERIAL**

## Minnesota

“On 5/21/2021 TSI, Inc. received two of three boxes containing radioactive material shipped from NRD, LLC, 2937 Alt Boulevard, Grand Island, NY, 14072. The third package, containing paperwork for 1 NRD model P-2042 static eliminator with an activity of 5 millicuries of Po-210, was received repackaged on the same date. TSI, Inc. Contacted NRD and [the common carrier] to inquire about the status of the missing static eliminator. The [common carrier] website indicates that they were unable to deliver the package in question. TSI Contacted [the common carrier] who has to date been unable to locate the static eliminator.

## Colorado

“Event description: portable gauge came out of truck bed during transport.

“Event location: South Broadway and 340, Grand Junction, CO.

“Event type: Lost portable gauge, Troxler 3430 SN 26906, 333 MBq (9 mCi) of cesium-137 and 1.63 GBq (44 mCi) of americium-241:beryllium; or 2.44 MBq (66 microCi) of californium-252.”

“The portable gauge reported lost by Colorado on 6/10/21 has been found. The gauge was found by an employee at the worksite where the gauge fell off the back of the truck and was secured. The licensee was notified and has recovered the gauge.”

## Utah

“The Utah Division of Waste Management and Radiation Control (DWMRC) was notified by the licensee that a fixed gauge was missing on 06/04/2021 at approximately 1430 MST.

Source for Incidents: Event Reports at <https://www.nrc.gov/reading-rm/doc-collections/event-status/event/index.html>



## Nuclear Security

“The licensee was reconfiguring a portion of their facility and had relocated a number of gauges from one location to another location in their operations for use at the new location. One of the fixed gauging devices, a Thermo Fisher, model 5202, serial number B3339, containing 500 milliCuries of cesium-137 (Cs-137) would not fit at the new location. The fixed gauge was supposed to be removed from the hopper where it was located and placed in storage for future use. For some reason, this removal did not occur. The fixed gauge was left in place and had not been moved to a secured storage location.

### South Carolina

“The South Carolina Department of Health and Environmental Control was notified on 05/25/21, that a strontium-90 medical eye applicator was lost or missing. The eye applicator is an Atlantic Research Corporation Model B-1 eye applicator, serial number 300, with a maximum activity of 50 millicuries. The licensee is reporting that the last inventory listed the source activity at 15.25 millicuries. During a recent inspection conducted by the Department, the licensee was unable to provide disposal records of the medical eye applicator. The licensee is now reporting the loss of the strontium-90 medical eye applicator.

### STOLEN GAUGE

#### Texas

“On May 30, 2021, the Agency was notified by the licensee’s radiation safety officer (RSO) that a Humboldt model 5001 EZ was stolen from a truck parked overnight at a technician’s home. The gauge contains a 40 millicurie americium - 241 source and an 10 millicurie cesium - 137 source. The technician had taken the gauge home on May 29, 2021. The gauge was locked in the truck with two independent chains and locks. The technician went to their truck at 0900 [CDT] on May 30, 2021 and found both were cut and the transport case and the

gauge were stolen. The RSO stated the operating arm was locked in the shielded position.”

### E-34 Committee for Unwanted Radioactive Materials and Coordinator/Liaison – Institute of Scrap Recycling Industries, Inc. (ISRI) - Call for Volunteers

E-34 is seeking a Chairperson and members.

Contact Karen Tuccillo at karen.tuccillo@dep.nj.gov. See the full information at [https://cdn.ymaws.com/www.crcpd.org/resource/resmgr/docs/working\\_groups/enc/e-34.pdf](https://cdn.ymaws.com/www.crcpd.org/resource/resmgr/docs/working_groups/enc/e-34.pdf)

E-34 Charges by Number - of Interest to LLWF:

“1. Provide guidance on the implementation and operations of both the Unwanted and Orphan Radioactive Materials Program and the Source Collection and Threat Reduction Program (SCATR).

2. Investigate alternate disposition options including reuse, recycling, and source exchange programs for sources.

4. Investigate updated Department of Defense policy for dispositioning DoD sources and make recommendations on how states can potentially disposition such orphan DoD sources.

9. Strengthen alliances with federal, state, industry, and international organizations for information sharing. Establish and maintain communication between CRCPD and ISRI. Keep CRCPD members informed of activities, programs, and operations of ISRI relevant to CRCPD.

10. Keep ISRI members informed of the activities, programs, and operations of CRCPD where appropriate, to make valuable contributions to ISRI, become oriented in the ISRI’s activities, and make Contacts outside CRCPD.”

## NRC Amends Licensing, Inspection, and Annual Fees for FY 2021

NRC is amending its regulations for the licensing, inspection, special projects, and annual fees it will charge applicants and licensees for FY 2021.

The FY 2021 final fee rule, published in the Federal Register, includes fees required by the Nuclear Energy Innovation and Modernization Act (NEIMA) to recover, to the maximum extent practicable, approximately 100 percent of the agency's total budget authority in FY 2021, less the budget authority for certain excluded activities. NEIMA also established a new cap for the annual fees charged to operating reactor licensees and required three sets of actions related to NRC invoices for service fees. A proposed rule was published for public comment on Feb. 22.

The final fee rule reflects a total budget authority of \$844.4 million, a decrease of \$11.2 million from FY 2020. After accounting for exclusions from the fee-recovery requirement and net billing adjustments, the NRC must recover approximately \$708 million in fees in FY 2021. Of this amount, approximately \$190.6 million will be recovered under Part 170 fees for service and \$517.4 million will be recovered through Part 171 annual fees.

Compared to FY 2020, annual fees are decreasing for fuel facilities, non-power production or utilization facilities, 42 materials users fee categories, uranium recovery activities, and for the U.S. Department of Energy Uranium Mill Tailings Radiation Control Act Program. Annual fees are increasing for spent fuel storage/reactor decommissioning activities, operating power reactors, DOE transportation activities, and 11 materials users fee categories. While the operating power reactors' annual fee is increasing in FY 2021, it does not exceed the cap established by NEIMA. Generally, annual fees are impacted by changes to the budget, fees for services, the number of licensees, the results of the biennial review of fees, and other factors.

Source: NRC News Release No: 21-021 June 4, 2021

Contact: David McIntyre, 301-415-8200

## NRC Awards \$10.7 Million in Academic Grants for Students and Faculty Supporting Nuclear Science and Engineering Fields

NRC announced it has awarded 30 grants to 26 academic institutions, in 19 states, totaling nearly \$10.7 million. Recipients include four-year universities and colleges, two-year trade schools and community colleges, and minority serving institutions, which are a federally recognized category of educational establishments.

"Quality education is critical for nuclear safety in the future, not to mention the exploration of new possibilities in nuclear science and technology," said NRC Chairman Christopher T. Hanson. "We are honored to award these grants to advance scientific research at these fine academic institutions."

Congress authorized the NRC to provide federal funding opportunities to qualified academic institutions to encourage careers and research in nuclear, mechanical, and electrical engineering, health physics, and related fields to meet expected future workforce needs. Recipients are to use the grants for scholarships, fellowships, and faculty development. These grants include seven undergraduate scholarships, one trade scholarship, 11 graduate fellowships, and 11 faculty development awards. Each undergraduate scholarship provides up to \$20,000 in financial support to students over the course of the two-year program, and each graduate fellowship provides up to \$200,000 over the course of the four-year program. The NRC's trade and community college scholarships provide financial support of up to \$10,000 to students over the course of the two-year program. The NRC's faculty development awards provide up to \$450,000 over a single three-year period. The complete list of grants awarded and general information about the grant program are available on the NRC's website. The NRC announces grant opportunities on [www.grants.gov](http://www.grants.gov), which enables the public to find and apply for federal funding opportunities.

Source: NRC News Release No: 21-022 June 8, 2021

Contact: Ivonne Couret, 301-415-8200

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

Central Midwest Compact

- Illinois
- Kentucky

Atlantic Compact

- Connecticut
- New Jersey
- South Carolina

Southwestern Compact

- Arizona
- California
- South Dakota
- North Dakota

Texas Compact

- Texas
- Vermont

Central Compact

- Arkansas
- Kansas
- Louisiana
- Oklahoma

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/](http://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](http://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](mailto: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](http://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](http://www.llwforum.org)

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