

LLW *notes*

Volume 37 Number 5 September - October 2022

A Message from Dan Shrum, Executive Director

Thanks to everyone who helped make our Fall 2022 Forum meeting a success. The Spring 2023 meeting will be held

March 22 and 23, 2023
in Charleston, South Carolina.

Please let me know what we could do better – we are always looking to improve.
Stay Safe!

Daniel B. Shrum, Executive Director

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

In this Issue... Find highlights of the Fall Meeting and news about the Forum Board's focus, 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
Vacant, Chair-Elect
Earl Fordham, Past-Chair
Alyse Peterson, Treasurer

Forum Corner


 LLW
FORUM

Board Meeting Focus

The Board's focus at the September and October Board meetings included:

- Planning and followup on Fall Meeting
- Selection of new Chair-Elect. LLWF seeks candidates who may be elected to the recent vacancy for Chair-Elect. The position is not a large time commitment and involves a few hours monthly and additional duties for "in-person" meetings.
- Personnel issues of evaluations, contract renewal and contractual staff compensation.
- Meeting details for the Spring 2023 meeting in Charleston, SC, including a Barnwell tour.
- New DSWG grant in place which is working perfectly with more streamline accounting and reporting.
- Issues related to import/export between Compacts -Stephen Raines.

Focus on Financials

Alyse gave updates on budget and Profit & Loss. If anyone has any fiscal questions – please ask.

- Alyse has moved forward with Agreed Upon Procedures (AUP)
- Filings to IRS and appropriate paperwork renewals and reporting to Minnesota have been accomplished.
- Credit card increase approved to \$25,000 and future consideration of choice of credit card company and benefits.
- Financial reserves of two years and investments possibly to be evaluated ending 2023.

LLW Forum Meeting Dates

LLW Forum Spring Meeting

March 22-23, 2023 – Charleston, SC

- March 21, 2023 - Tour of Barnwell Disposal Facility
- March 24, 2023 DSWG Meeting

LLW Forum Fall Meeting

Salt Lake City, UT - October 4-5, 2023

Mission & Operations Committee - Strategic Plan Update

The Committee is engaged with the larger, more extensive, in-depth LLW Forum Survey. The Committee will look at the past survey used for the LLW Transformation and build from there. Tom Hansen (SE Compact) has agreed to sit on the Mission & Operations Committee in Kristen's absence. The M&O is a great committee for newer members to learn more about the LLW Forum. If you'd like to serve, please let us know.

Executive Director News

Dan will attend the NORM/TENORM meeting in Houston, TX and will be presenting on Part 61. He also attended virtually the Central Compact and the Central Midwest Compact Commission meetings and attended in-person the Organization of Agreement States (OAS) meeting in Fort Worth, TX.

Safety Moment

Dan reminded to be ware of trip hazards in meeting rooms and noted a frightening Lyft 103 mph ride from Phoenix airport to a hotel. What can be done beyond filing a complaint?

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

Fall LLW Forum Meeting

The LLWF held its Fall Meeting on October 12-13 as a hybrid in-person and virtual meeting. The in-person meeting was held in Baltimore, MD. A meeting of the DSWG was held in conjunction with the Fall Meeting, on October 14, 2022.

The Forum thanks the excellent speakers and panelists for their contributions and outstanding presentations and discussion with attendees. The Forum thanks all the attendees who participated virtually or in-person.

Highlights

of presentations from the meeting are included in this issue and the entire presentations and audio are available online:

[presentation book](#)

[individual presentations](#)

[Webex recordings can be accessed through this link](#)



Survey

Your comments are
IMPORTANT!

Please take a moment to
repond to the [survey](#).

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

Keynote Speaker

NRC CHAIR

CHRISTOPHER T.

HANSEN

A discussion of role in policy, planning for the future, and the importance for the nation to set example to focus on every aspect, not just nuclear power.

HIS FOCUS AS CHAIR

- Groundwork for future, evolving landscape of the fuel cycle
- Risk informed and agency culture changes
- Advanced technology and designs
- Unanalyzed wastes and all aspects of fuel cycle
- Expanding nuclear medicine use
- Waste and decommission as significant issues now evolving

KEY ISSUES FOR NRC

- Risk Informed regulation
- Diversity and inclusion
- Evolution of agency culture

Risk Informed Regulation

- Important agency culture changes
- Complements safety and is not deregulation
- Uses data to focus on most significant issues

10 CFR Part 61 and Greater than Class C (GTCC)

- Pleased with direction in revision of 10 CFR Part 61, promulgated 40 years ago and in need of change
- Considering what should/or should not require disposal in geologic repository
- Consideration of how Agreement states could regulate consistently across the nation

Expect late 2023 to see a rule proposed.

“Decommissioning Rule”

- Published, with the comment period ending August 30, 2022
- Received 2000 comments
- Final adoption is anticipated in a year from now.

Spent Fuel

- 80 storage locations at 36 sites
- 1/3 of the inventory is in dry storage
- Needs an end strategy for disposal

Disposal of Sealed Sources

- Obstacles exist as identified by LLWF's DSWG.
- Staff is working on related issues of cost of disposal and risk informed decision-making.
- NRC is interested in IAEA Disused Sources work; U.S. supports the IAEA guidance on this issue. Key issues involve end of life management issues in many countries. Some countries may lack knowledge and experience in this area.
- Issue of how NRC may provide assistance is worthy of consideration.

Global Nuclear Fuel Supply

Allies need to work to disconnect from Russian supply of uranium. Russia supplies 20% of U.S. fuel. The Inflation Reduction Act includes \$1.5 billion to increase activities related to production of fuel in the US and climate change related issues.

Consolidated Interim Storage Facilities (CISF)

NRC has reviewed two applications and issued one in Texas (Interim Storage Partners, 9-2021) for 40 years. Another is under review with no decision made in New Mexico (Holtec). Legal issues are ongoing with governors of Texas and New Mexico over CISFs.

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

NRC Update

Steve Koenick
Chief, Low-Level Waste and Projects Branch
NRC - Visit <https://www.nrc.gov/waste.html>

Topics

Low-Level Waste (LLW)
LLW Programmatic Assessment
Alternative Disposal Requests (ADRs)
Radiation Source Protection and Security Task Force
Rulemaking Status
Decommissioning
Process Improvements
Rulemaking Status

Decommissioning Rulemaking

Would implement specific regulatory requirements for different phases of the decommissioning process consistent with the reduced radiological risk. Topics include:

- Emergency preparedness
- Decommissioning funding assurance
- Environmental considerations
- Spent fuel management planning
- Record retention requirements

Proposed rule published March 3, 2022 (87 FR 12254)

Comment period closed August 30, 2022

Target date for submitting the draft final rule to the Commission October 2023

Radiation Source Protection and Security Task Force

Composed of 14 Federal Agencies and 1 State organization

Chaired by NRC

Evaluates and provides recommendations related to domestic security of radioactive sources

2022 report to the U.S. President and Congress issued August 5, 2022

Working on ADRs

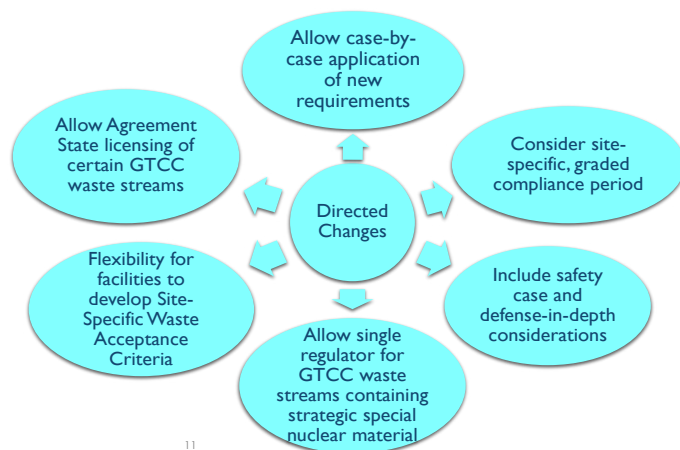
Since January 1, completed two 20.2002s and are currently reviewing a third:

- Columbia Generating Station (request approval for onsite disposal) - Approved by the NRC – 3/11/2022
- Columbia Fuel Fabrication Facility (request for disposal of material at US Ecology Idaho) - Approved by the NRC – 3/18/2022
- South Texas Project (request disposal at a landfill located within Texas (Agreement State) - Submitted to the NRC – Projected Completion of Review – 12/2022

Integrated LLW Rulemaking

NRC is preparing an integrated rulemaking to:

- Consolidate and integrate criteria for GTCC and 10 CFR Part 61 rulemaking
- Conduct site-specific analyses for all waste streams including DU and GTCC
- Include graded approach for compliance period
- Include TRU waste in the definition of LLRW
- Address physical protection and criticality concerns in GTCC waste streams
- Provide for Agreement State licensing of certain GTCC waste streams

Commission Directed Changes

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Budget

Support of Congress is indicated in budget appropriations. Key priorities for waste management are the cleanup of environmental legacy from weapons development and energy research.

Environmental Justice

Justice40 Initiative - Executive Order
40% of benefits flow into disadvantaged communities surrounding the sites

DOE focus is soil and groundwater remediation.

Disposal Capacity

DOE has sufficient capacity for disposal of its LLW and MLLW; it uses on-site, DOE and commercial facilities. DOE does not use the compact facilities.

HLW Interpretation

Affirmed in Federal Register Notice, December 21, 2021.

Depleted Uranium (DU)

DOE will only ship to selected commercial sites authorized to receive DU.

PFAS Emerging Issues

Developing internal guidance regarding handling, storage and disposal of PFAS-contaminated materials and wastes (March 2023).

MIMS

Data for Barnwell, EnergySolutions, Richland, and Waste Control Specialists, including calendar year 2021. <https://mims.doe.gov>

DOE/EM Waste Management Update

Douglas Tonkay



LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

EPA Program Updates

Dan Schultheisz
EPA Office of Radiation and
Indoor Air

Waste Isolation Pilot Plant (WIPP) Recertification

EPA performs oversight for the radioactive portion of waste which includes a recertification every five years where DOE demonstrates WIPP meets the requirements of 40 CFR parts 191 and 194 for long-term disposal.

Emergency Response Exercise

Full-scale exercise replicating search, detonation, and early recovery activities related to a radiological dispersal device (RDD) in Austin, Texas. Clear areas for improvement include notifications, communications/public information, data analysis and dissemination.

Ukraine

EPA is lead coordinating agency for domestic response to foreign nuclear incidents. EPA is tracking reports and communications, coordinating with federal partners and reviewing policies and procedures. (See map of reactor sites.)

MARSSIM

EPA is working to respond to comments to finalize Revision 2, with additional research on:

- Automated measurements – Measurement Quality Objectives (MQOs) and operational practice
- Discrete radioactive particles
- MQOs for aerial measurements

Federal Guidance Report No. 16

Updated cancer risk coefficients for ingestion, inhalation, and external exposure

Currently undergoing internal review prior to expected review by Interagency Steering Committee on Radiation Standards (ISCORS)

Science Advisory Board review anticipated 2023

Environmental Justice

Created new program office at EPA, indicating greater emphasis on this issue.

PFAS

PFAS in fracking fluid is in TENORM sometimes!



DOD Low-Level Radioactive Waste Lead Agent

Mike Kurth and Breezy
Coleman - HQ Joint Munitions
Command, Rock Island Arsenal,
IL

DoD LLRW Lead Agent program services all military property or assets containing source, special nuclear, or byproduct material and also includes:

- Mixed waste (hazardous and radioactive)
- Naturally occurring radioactive material waste (NORM)
- Naturally occurring and accelerator-produced radioactive material waste (NARM)

Military Items Found in Public Domain

- NJ: Cylindrical device with glass top – military markings identified
- Handheld spectrometer – Ra-226 Source - Metascope (early night vision device) from the 1940's
- CA: Item with military and radioactive markings in the toolbox
- IN: Old military jeep with Radium-226 gauges identified
- IN: Helicopter In-Blade Inspection System (IBIS) Strontium-90 sources

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

Disused Sources Working Group Update Fall Meeting, October 2022

by Michael Klebe

The Disused Sources Working Group (DSWG) met on Friday, October 14, in conjunction with the LLW Forum meeting. In attendance were representatives from the General Accountability Office (GAO) to discuss their July 2022 report *Preventing a Dirty Bomb – Vulnerabilities Persist in NRC's Controls for Purchases of High-Risk Radioactive Materials (GAO-22-105441)*. This report documents the GAO's continued testing of the NRC and Agreement State Programs licensing of radioactive material process. The report reads:

“Using shell companies with fraudulent licenses, GAO successfully purchased a Category 3 quantity of radioactive material of concern from two different vendors in the US. Specifically, GAO provided a copy of a license that GAO forged to two vendors, subsequently obtained invoices, and paid the vendors. GAO refused to accept shipment at the point of delivery, ensuring that the material was safely and securely returned to the sender.”

Through this effort, the GAO demonstrated that the lack of stringent license verification requirements could allow a bad actor to accumulate a Category 2 quantity of radioactive material through purchasing and aggregating several Category 3 quantities of radioactive material from multiple sources. The NRC responded that they plan to proceed with a rulemaking process for new verification regulations by late 2023.

Educational Reports

The DSWG is finalizing three new educational reports regarding the State of Texas' "Two-Year" rule, the State of Oregon's sealed source fee, and the use of the inspection exit interview process.

- Texas implemented a regulation that limits the possession of unused sealed sources to two years unless the licensee can justify continued possession.
- Oregon structured their license fees to include fees for the possession of sealed sources or devices containing sealed source.

Both programs have resulted in the disposition of sealed sources that were in extended storage.

- NRC and Agreement State program inspectors conduct an exit interview with licensee management following an inspection. The inspectors can use this interview to discuss the status of disused sources and make licensee management aware of potential liability associated with a loss of control of the radioactive source.

Evaluating Recommendations

The DSWG continues to evaluate the status of the 24 recommendations presented in their 2014 report, *Report of the Disused Sources Working Group: A Study of the Management and Disposition of Sealed Sources from a National Security Perspective*. Since publication of the report, many of the recommendations have been implemented or are no longer applicable. This evaluation will help the DSWG prioritize future activities.

Next Meeting: Friday, March 24, 2023, following the LLW Forum meeting in Charleston, SC.

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

Environmental Justice and the MD Department of the Environment

Devon Dodson
EJ Officer

Brandywine community leaders law suit in 2016 became impetus for development Environmental Justice changes at the department, including:

- Creating internal policy for diversity, equity, inclusion and justice process and issues
- Standing up a commission on Environmental Justice
- Reaching out to communities

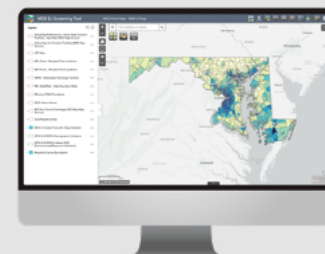
MD builds on the EPA definition to add:

“that citizens should expect to be protected from public health hazards and to have access to socio-economic resources necessary to address concerns about their livelihood and health.”

MD looked at screening tools that identified the community and environmental hazards – and created MD’s own internal screening tool.

- Launched beta version in early June for a public comment period
- For external and internal use
- Incorporates demographic and socioeconomic data with MDE elements like industrial facilities, wastewater treatment plants and proximity to dams
- Users can identify potential overburdened communities
- Allows for enhanced agency compliance, oversight, and monitoring, as well as enhanced communication and outreach in areas with permitting activities in overburdened or underserved communities.

Visit <https://mdewin64.mde.state.md.us/EJ/>



MD legislation

1. Climate Solutions Now Act – created overburdened and underserved communities definitions that toggle on in the tool.
2. Environment Permit Applications Environmental Justice Screening
Requires applicant to use theirs or UMD score and provide to MDE – verified by MDE

MD cannot deny a permit as result of this, but can condition or modify a permit depending on what is already in the community. Effective date: 10-1-22. The use of the tool gets involvement of parties upfront rather than at the end of the permit process.

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Waste Characterization and Classification - A Primer on How it's Done

Thomas Kalinowski, President, DW James and Associates

- Radiological characterization is necessary to define an isotopic profile of the waste for disposal
- Includes the determination of difficult to measure (DTM) radionuclides defined in 10 CFR Part 61 along with all the rest that are important to transportation and disposal
- Can be accomplished by:
 - Radiochemical analysis of samples
 - Gamma spectrum analysis with correlations
 - Calculations
 - Some combinations of methods
 Understanding the results requires comprehension of the processes that create, transport and remove activity in the system.

Characterizing is looking for what you have-what, how much, and waste content.

Classification is what you know put in context against other criteria (established - 10 CFR Part 61 and Agreement States).

At package level, it becomes a waste class.

Characterization is important to performance assessment and to defining risk for risk informed regulation.

Waste Characterization History

1980 Low Level Waste Policy Act – 10 CFR Part 61

1983 Branch Technical Position on Waste Classification

Insufficient Data to Implement as Intended

Simple Methods Approved (because there wasn't anything else)

EPRI Research and Reports to Advance Waste Characterization Methods

40 Years Later – Most Utilities Still Using Methods from 1985

Using NRC TableCalculator to Evaluate Parametric and Model Uncertainty in the Development of the NRC LLRW Classification Tables

Christianne Ridge, PhD

NRC TableCalculator, a software tool to evaluate uncertainty to development of original Part 61 forty years ago, is used when considering:

- Do we need to revisit classification tables after Part 61 rulemaking?
- The assumptions in the original calculations so NRC could be transparent and explain if any changes were undertaken.

NRC developed waste classification limits in the early 1980s by considering the potential dose to an inadvertent intruder in agricultural, construction, and discovery scenarios.

NRC evaluated other scenarios (e.g., accident, groundwater contamination) that did not directly affect the limits.

In 2013, the Commission directed the NRC staff to consider whether to revise the low-level waste classification tables after completing the ongoing revision to 10 CFR Part 61.

TableCalculator replicates the calculations in the original Fortran codes the NRC used to develop the tables and allows sensitivity analyses.

Like the IMPACTS code it is based on, TableCalculator is intended for use in generic regulatory calculations, not site-specific analyses.

The tool is Publicly available without fee: <https://ramp.nrc-gateway.gov/>

You need to have a free membership to get the information off the NRC website.

A non-disclosure agreement is required.

LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

The Art and Science of a GoldSim Performance Assessment: West Valley

Sean McCandless, Neptune

Nuclear Fuel Services (NFS) performed nuclear fuel reprocessing at West Valley from 1966 to 1972.

Reprocessing wastes were disposed in a Waste Tank Farm (WTF) and in an NRC-licensed Disposal Area (NDA). NFS also operated a State-licensed Disposal Area (SDA). There are several lagoons, transfer lines, and other associated contaminated areas. New York State owns the property; and Congress assigned DOE responsibility for portions of decommissioning (1980 WVDP Act).

The lion's share of inventory is found in the WTF, NDA, and SDA shown below.



Art & Science

Scenario choices influence results.

Regulations provide a general outline and leave many details to the analyst.

Different regulators can require different approaches – DOE, NRC, Agreement States.

What if...?

Even a probabilistic PA built on science will not provide a clear best choice for a complex site. The PPA has to be placed in a Decision Analysis context.

The Review of a GoldSim Performance Assessment: West Valley

Dr. Lee Gordon, New York State Energy Research and Development Authority (NYSERDA), Technical Lead and Manager

PA Challenges

Deterministic PA

Single value input produces single value output, but is it really that simple in a natural system?

Nature and magnitude of uncertainty unknown. Strive for conservatism which can obscure model complexity.

Probabilistic PA

Probabilistic distribution input/output (collection of answers reflects our knowledge)

Nature and magnitude of uncertainty explicit in model input and propagated through model

Strive for realism, not conservatism

Better-informed decisions

Deterministic Regulatory Framework

Deterministic vs. probabilistic regulatory criteria

NRC LTR: not exceed 25 mrem/year

WIPP: specific likelihoods of exceeding criteria are prescribed

Hypothetical PPA results

70% confidence peak dose occurs between 4,000-10,000 years

70% confidence that peak dose will be between 10-50 mrem/year

Acceptable level of uncertainty? Regulators?

Decision makers? Stakeholders?

PA Takeaways

PAs can address complex problems, but require careful consideration of assumptions and abstractions that form integrated systems-level model.

Probabilistic PAs can address nature and magnitude of uncertainties, but some uncertainty questions remain.

What level of uncertainty is acceptable?

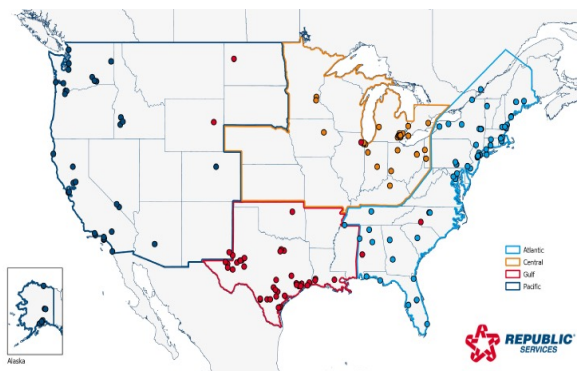
LLW FORUM'S FALL MEETING, OCTOBER 12-13, 2022 - BALTIMORE, MD

Update on US Ecology

Joe Weismann, CHP, Director of
Radiological Programs

Transition to Republic**Locations****New product lines**

Acquired by Republic Services
Now being integrated
Comprehensive waste services
In 2023 no more US Ecology signage
Growth potential
New products and services

**Grand View, ID**

RCRA Sub-C TSDF

Capacity: 10M+ yd³ permitted, 18M+ yd³
NORM, TENORM

Exempt VLLW (byproduct, Source, and SNM)

High-capacity RTF with 15k feet of rail track

New Treatment Building completed in 2021



- No changes to radioactive waste programs or services
- US Ecology will be part of larger “Environmental Solutions” Group within Republic
- ES Group divided into (4) Areas – Atlantic, Central, Gulf and Pacific
- Corporate HQ will be in Phoenix, AZ with Boise, ID office serving as Pacific Area base
- US Ecology will be rebranded to Republic Services starting this year (& throughout 2023)

Processors and Brokers Panel

Discussion Leader – Thomas Magette, Severn
Nuclear Services, LLC

Panelist:

- Scott Baskett, EnergySolutions
- Paul Larsen, Veolia
- John McCormick, Bionomics
- Brian Wood, Permafix
- David Carlson, Waste Control Specialists

Discussions of the importance and methods of Processing and Brokers in getting wastes into the disposal sites

Relationship of 10 CFR Part 61 tables waste accept criteria as driven by performance assessment of the site

How processing effects increases in average concentration and reduces volume

EnergySolutions

Scott Baskett

- Liquid Waste Processing & Fuel Pool
- Technicians & Brokers
- Characterization
- Recycling
- Volume Reduction
- All Waste Classes
- Permanent Disposal

Erwin Facility in Tennessee safely dewater, chemically reforms, homogenizes, and reduces the volume of spent ion-exchange resins into a solid-phase, stable waste form that can be disposed at EnergySolutions' Clive Facility in Utah.

Bionomics

John McCormick

- Provide the pickup and disposal of low-level waste to generators across the country
- Dedicated to assisting clients from generation to disposal
- Processing limited to Sealed Sources
- Utilize Energy Solutions, Perma-Fix, Andrews, Barnwell and Richland for processing and final disposal.
- The SCATR Broker

Veolia Federal Services

Paul Larsen

- Global Capabilities
- Water & Liquid Waste
- HAZ/Nuclear Solid Waste
- Decontamination & Decommissioning
Managing infrastructure at US DOE decommissioning sites, Prime contractor supporting at Fukushima, 50-year D&D contract with EDF for reactor decommissioning, Baseline Estimating for UK Reactor, D&D Hanford operator, Active at Idaho national labs, and others activities.

Processors and Brokers Panel

Discussion Leader – Thomas Magette, Severn Nuclear Services, LLC

Panelist:

- Scott Baskett, EnergySolutions
- Paul Larsen, Veolia
- John McCormick, Bionomics
- Brian Wood, Permafix
- David Carlson, Waste Control Specialists

Waste Control Specialists

David Carlson

TX Compact Waste Facility (CWF)

9,000,000 cubic feet of licensed volume
475,000 cubic feet currently constructed (1st phase)
236,873 cubic feet used to date (2.6% of licensed capacity)

Federal Waste Disposal Facility

26,000,000 cubic feet of licensed volume

2,640,000 cubic feet currently constructed (1st phase)

455,500 cubic feet used to date (1.8% of licensed capacity)

Also permitted for "mixed waste" (radioactive and hazardous)

Hazardous Waste (RCRA Subtitle C) Disposal Facility

Opened for hazardous in 1997, Exempt LLRW added in 2015

62,000,000 cubic feet of currently permitted capacity

Currently used = 21,700,000 ft³ (35% of permitted capacity)

NRC-reviewed agreement state exemption process allows low activity waste (lowest 10% of Class A LLRW) to be disposed

Perma-Fix

Brian Wood

Perma-Fix nuclear waste treatment services

- Specializing in the treatment of waste that is both radioactive and/or chemically hazardous
- Waste generated by commercial customers, utilities, hospitals, research facilities, and the government
- Established laboratories and R&D capabilities to solve problems quickly and efficiently
- Nuclear services group provides onsite personnel and technologies for environmental protection

Appalachian Compact

Delaware • Maryland •
Pennsylvania • West Virginia

Meeting October 28, 2022

Hybrid Meeting. In-person: Harrisburg, PA

- Treasurer's Report for FY 2021-2022
- Status of Commercial Low-Level Radioactive Waste (LLRW) Disposal Facilities and Recent Developments
- LLRW Generation in the Appalachian Compact
- Proposed Changes to the Bylaws
- Activities of LLW Forum
- Election of Officers - Chairperson
- Hiring an Administrator for the Commission
- LLW Forum Representation
- Adoption of Revised Approved Budget for FY 2022-23 and Proposed Budget for FY 2023-24
- Schedule 2023 Annual Meeting
- Materials for the meeting are available at this [link](#).

News

David Allard, Chair, noted the compact is awaiting a new governor to get appointments accomplished. TENORM is an important issue and a significant amount of PA's work involves TENORM.

Rich Janati is administrator for the compact.

Financial Information

[Statements of Revenue and Expenses
Operating Fund - Actual and Budget
Year End June 30, 2022](#)

[2022-2023 General Operating Fund
Proposed Revised Budget
and
2023-2024 General Operating Fund
Proposed Budget](#)

Atlantic Compact

Connecticut • New Jersey • South Carolina

Meetings September 21, 2022

Received updates from
Jason Jones, Director, Barnwell Disposal
Operations
James Shissias - Nuclear Utilities Group
Executive Director's Report on Revenue/Expense
Report for Fiscal Year 2022 (July 1, 2021 - June
30, 2022) and Agency News

March 22, 2023

Charleston, SC, in conjunction with the Spring LLW
Forum meeting in Charleston. For more information
please contact max@atlanticcompact.org
Max Batavia, P.E., Executive Director

Central Compact

Arkansas • Kansas • Louisiana • Oklahoma

Special Meeting September 8, 2022

The purpose of the meeting is to take necessary
action on financial audits for Fiscal Years 2019, 2020
and 2021 and all other business to come before the
Commission.

Announcements

Scott Blackwell rotated to Chair and assumed those
duties at the end of the July meeting. Kelly Dixon was
nominated for Vice-Chair.

Budget

Proposed FY23 Budget has been approved.

Central Midwest Compact

Illinois • Kentucky

Annual Meeting September 13, 2022

Resolution

The EP Act of 2005 and the Nuclear Regulatory Commission's Final Rule in 2007 regarding the "Requirements for Expanded Definition of Byproduct Material" presents many issues for the member states of Illinois and Kentucky in regard to Agreement States compatibility and the implications to CMCC's authority and Regional Management Plan (RMP) policy statements are complex. The Commission adopted [Resolution Regarding Amendments to Compact and Regional Management Plan.](#)

Officers

Remain the same.

Budget

Auditors Report and Fiscal Year 2023 Budget were approved.

CMCC Bylaws

Bylaws will be updated to set one Annual Meeting per year (allowing "special meetings" if needed).

KY LLRW Management Update

Licensee reporting for the Annual Report: KY has approximately 330 licensees along with General Licenses. They coordinate with IEMA (Illinois) on shipments through the state.

IL LLRW Management Update

Update on IL Generators & HRCQ shipments & radium licensees. IL provided licensee reporting for the Annual Report: II has 398 active generators. 1125 total HRCQ shipments, 114 of which were

nuclear power plant shipments. Of the remaining, 922 were government shipments. Most coming from the Carnotite site in South Chicago (Michael Reese hospital). A live feed link of the clean-up will be provided to Commissioners. There are 592 radium Registrants.

FY 2022 Annual Report

<https://cmcompact.org/FY-2022-annual-report/>

Next Meeting

September 12, 2023 was presented as a tentative date for the Annual Meeting, in Frankfort, KY.

Northwest Compact

Alaska • Hawaii • Idaho •

Montana • Oregon • Utah • Washington • Wyoming

Meeting

October 14, 2022

Utah Department of Environmental Quality, Waste Management and Radiation Control Board

December 5, 2022

The Committee of the Northwest Interstate Compact (NWIC) on Low-Level Radioactive Waste (LLRW) Management will meet virtually. For more information, contact Earl Fordham, Washington State Department of Health, at (509) 628-7628 or visit this [link](#).

News

Earl Fordum, Chair and Executive Director of the compact and past chair of the LLWF, noted issues for the compact include turnover in Commissioners and getting appointees from the governor.

Vern Rodgers, of EnergySolutions noted that Utah will host LLWF next fall and that the state of Utah faces hiring issues in their regulatory program.

At the Utah Program, VLLW and DU applications are under review.

Rocky Mountain Compact

Colorado • Nevada • New Mexico

News

Leonard Slosky, Executive Director, noted that the RMC Board is looking to increase fees/surcharge of the compact at the regional facility and on export. Also, policy issues on enforcement action of RMB and an interest in brokering/processing are anticipated.

For more information, contact Leonard Slosky:
lslosky@rmlwb.us

Steve Magill. URENCO, in New Mexico, noted expansions are being considered regarding the Ukraine situation (re: Russian supplies) and climate change.

Southeast Compact

Alabama • Florida • Georgia •
Mississippi • Tennessee • Virginia

News

Tom Hansen, Executive Director, noted that in terms of numbers of disused sources, the SE Compact leads all compacts. He also drew attention to the Hodes Lecture Award. Inquiries about the Richard S. Hodes, M.D. Honor Lecture Award should be directed to: Tom Hansen, Executive Director Southeast Compact Commission, PO Box 31525, Knoxville, TN 37930 Office: 919.380.7780 Email: tom@secompact.org. Commission web site www.secompact.org.

Jack Storton, VA commissioner, noted that the VA governor has stated a modular reactor in VA is anticipated in the next 10 years.

Southwestern Compact

Arizona • California • South Dakota • North Dakota

Meetings

90th Southwest Compact Meeting November 15, 2022

[Agenda](#) items include:

- Bylaws amendment to modify dual signature requirement on checks over \$3,000
- Export Actions
- Financial Audit Report
- Executive session pursuant to CA Gov. Code §11126(a)(1) to discuss staff performance evaluations
- Exec. Director's & Counsel's contracts
- Annual Governors' Report Review
- Amend Fiscal Year 2022-23 Budget
- Approve Fiscal Year 2023-24 Budget
- Discuss & Adopt fee schedule
- Election of officers

News

A new and updated website is available at this [link](#).

Ron Gaynor, the incoming Executive Director of the SW Compact, reported a busy transition is underway as Kathy Davis retires.

Dale Patrick, North Dakota Commissioner, noted the state has many TENORM issues.

Texas Compact

Texas • Vermont

Meetings

September 29, 2022

Updates and approvals, and a tour of the Vermont Yankee facility. [Link to the webinar](#)

Meetings
January 12, 2023
March 9, 2023

Check [link to agendas](#) when more information is available.

News

Sumana Nayak, Andrews, TX, has been appointed as commissioner with a term expiring August 31, 2027.

Linda Morris, Commissioner and Chair of the Rules Committee, reported on the status of two revisions (hopeful for a comment period in November 2022):

1. Adding definitions
2. Concerning exports

Changes will comply with contingency plan.

The Management Rule is in final phases of work.

John Salsman, Commissioner, reported that the compact met in Andrews, with new commissioner representing Andrews County.

He noted the disposal year begins with 403K curies requested for disposal; the limit for approval is 275K limit per year. Therefore, many are “contingent” curies.

Another issue has come up with a broker that exported waste to WCS from New Mexico with no Rocky Mountain Compact approval. The TX/VT Compact has revoked their agreement and has concerns about this situation. TCEQ is aware of the problem. Both compacts will continue to work together on this and keep the LLW Forum advised of any updates.

Sunset Rule for the State of Texas

Brian Christian, Advocates for Responsible Disposal (ARDT)

The Sunset Review is a time when the Texas Legislature takes periodic look at state agencies to determine if they are no longer needed. It can have bearing on LLW policy. This has national importance

because the Andrews site takes all three classes of waste. During this review, the TCEQ asked about its status in contract review and the compact asked about enforcement issues.

Sunset review staff perform audits but cannot abolish the compact. All findings were in report issued in May 2022. At a hearing in late June, 100+ witnesses provided general comments. GTCC topics came up. The legislative committee will meet November 10 to vote on the recommendations. Any bills will come in early 2023—probably developing after November 14. March is deadline for filing. The legislature adjourns May 29, 2023.

Staff recommended no changes to LLW policy or related operations at either agency, and recommended extension for the maximum period of 12 years.

Legislative Budget Board review issued a few weeks ago and mentions LLRW policy in the fiscal situation context—responsibility for contingency plan. Comments included that perhaps TCEQ should be involved in contingency planning, too., and that State funding possibly could be brought to bear if some contingency problem came up.

Unaffiliated

D.C. • Maine • Massachusetts • Michigan • Nebraska •
 New Hampshire • New York • North Carolina • Puerto Rico •
 Rhode Island

State of Michigan, not an Agreement State, deals with issues such as decommissioning, transportation, TENORM and lost sources.

Alyse Peterson, NY, serves as Treasurer of the LLWF.

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/

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) listserv@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

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