LLW notes

Volume 37 Number 1 January - February 2022

A Message from Dan Shrum, Executive Director

Roses are red.

Violets are blue.

I'll be at the Spring Forum meeting in person.

Hope you are there too.

Reminder -- Sign up for the Spring Forum meeting in San Antonio, TX https://llwforum.org/llw-forum-meeting/

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

In this Issue...**Find news about waste challenges for the states, leadership announcements, Texas Compact's draft of potential rules, acquisition of US Ecology, 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.

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

Acronyms Used in **LLW *notes***

CFR	Code of Federal Regulations
CRCPD	Conference of Radiation Control Program Directors
DOE	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

Contents

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum, Executive Director Email: dshrum@llwforum.org www.llwforum.org

Forum Corner

Meeting Focus

The Board's focus at the January 12, 2022 meeting included:

- Planning the Spring Meeting
- Strategic Plan
- Financials
- Issues related to import/export between Compacts with update by Stephen Raines

Meeting Dates

Board Meeting – March 9, 2022

LLW Forum Meeting
April 6-7, 2022, San Antonio, TX
Registration at https://llwforum.org/llw-forum-meeting/

DSWG April 7, 2022

Focus on Financials

- Agreed Upon Procedures – Independent Review of Finances found no anomalies in the calendar year expenditures.
- Profit/Loss Statement – 2021 financials ended positively. Net income was lower than projected due to increased hybrid meeting costs and decrease in DSWG billings.
- Balance Sheet 2021 – Dan Shrum provided an overview of year end finances, reporting income from grants and awards and memberships.
- Updated Budget 2022 – Dan Shrum explained adjusted budget numbers.

Disused Sources Working Group

Dan Shrum is submitting information to DOE/NNSA for extension of the DSWG efforts for a five-year renewal of the contract. At the next Board meeting, he will provide background and efforts and recommendations moving forward. The Board voted to continue the contract.

Mission & Operations Committee - Strategic Plan Update & Adoption

The draft Strategic Plan was presented and is broken down into five functional categories:

i. Meeting Activities
ii. Organizational Development
iii. Education
iv. Internal Evaluation & Activities
v. Policy & Technical Matters

The Board adopted the Strategic Plan. Chairman Klinger commended Ed Hammerberg on his hard work along with that of the Committee – "an excellent job that will guide the LLW Forum into the future." The next step will be implementation. The M&O Committee welcomes any new interested parties.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

A Challenge for Our States: Unwanted Radioactive Material – Where Does It Go?

by Kimberly Steves, CRCPD

Situation: There are many varied waste issues with which our states are dealing on a routine basis.

Examples are unwanted and abandoned sources, medical waste when patients go home after nuclear medicine treatments (often Iodine), NORM/TENORM, and foreign origin radioactive material.

Our states deal with many varied issues associated with disposal of unwanted radioactive material including radioactive materials showing up in landfills or at scrapyards, and challenges finding places where it can be disposed, and money to pay for disposal.

Disposal of this radioactive material is sometimes addressed inconsistently across our states.

My purpose by discussing this topic is not anticipation that we can solve the challenges today, but rather to raise awareness as it as an issue that the state radiation control programs are dealing with on a daily basis and to inform you of the activities being accomplished by the CRCPD in this area.

Challenge: Landfills and Recycling Facilities

States find that NORM/TENORM, medical waste, and sometimes licensed material (which could be lost or stolen) sometime show up at landfills and recycling facilities. With regards to NORM/TENORM and medical waste, different states have different laws with regards to disposal of radioactive material waste at landfills and states are often not consistent in how waste issues are addressed or who the regulating authority within the state is. For landfills, it's typically NOT the radiation control program which has oversight.

About the author and the article--

Kimberly (Kim) Steves, Director, Radiation Control Program, Kansas Department of Health and Environment, delivered prepared remarks to NRC at a February 8, 2022 briefing. The purpose of the meeting of the commissioners with the Organization of Agreement States and the Conference of Radiation Control Program Directors was to inform the Commission of radioactive materials policy and regulatory issues of interest to the states. Ms. Steves spoke on behalf of CRCPD as the Past-Chair of the CRCPD Board of Directors.

Landfills also have differing capabilities to detect and identify radioactive material. Some can detect (as in yes/no there is radioactive material), and fewer can identify a specific radioisotope, such as I-131.

Our states are regularly receiving phone calls and requests for assistance from landfills and recycling facilities about unwanted radioactive material and what to do with it.

NORM and especially TENORM are often the culprit found at landfills and recycling facilities. Transportation of NORM/TENORM waste occurs between states but states may handle it differently. Though we understand that TENORM is not a focus of concern for the NRC, it is an issue of significant interest across the states and especially those with oil and gas industries.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

A Challenge for Our States: Unwanted Radioactive Material – Where Does It Go? - continued

Some of the issues our states are dealing with pertaining to TENORM waste are the same we address for other types of regulated radioactive materials:

- harmonizing regulations to the extent possible
- communication with members of the public
- ownership and financial assurance
- cleanup of legacy sites
- disposal

Challenge: Disposal of LLRW

The CRCPD has been working to assist states with issues associated with the disposal of sealed sources that can be disposed of as LLRW.

In the 2007-2008 time frame, we did a pilot project in Florida, which was very successful, with approximately 500 sources disposed.

Important Lessons Learned

- State financial services are too cumbersome; each state does contracts differently. That's why we contract the disposal with licensed waste brokers through CRCPD specifically.
- An issue in 2008 was the closure of Barnwell to Out-of-Compact LLRW, the shut down of disposal pathways for four+ years until the opening of Waste Control Specialists LLRW Facility, May 2012, which opened up a new pathway for disposal to all states and territories.

Another item which helps in our success on this issue is the Revision of NRC's Branch Technical Position on Concentration Averaging and Encapsulation, May 2015.

This allowed the Low-Level Radioactive Waste sites to be able to accept higher activity packages for disposal up to the Class C limits with acceptable justification. This helped us to manage the process.

All of these activities evolved into our activities with the Source Collection and Threat Reduction (SCATR) program, which I will discuss further in an upcoming slide.

Challenge: Disposal of Higher Levels of Radioactive Materials

The disposal of higher levels of radioactive materials is an ongoing challenge because of the limited places which will accept it and the high cost.

In the next slides I'm going to briefly mention the two programs in which the CRCPD participates to provide support to states – SCATR and Orphan Source Recovery Project (OSRP).

In addition, it's important to mention a White Paper by the E-34 Committee for Unwanted Radioactive Material which was recently published on the CRCPD website covering *Disposition of Foreign Origin Radioactive Material.* See www.crcpd.org. The purpose of this paper was to analyze the impact and possible solutions for Foreign Origin Radioactive Material in the United States which requires final disposition. Sources manufactured in the U.S. are able to have final disposal at the DOE Waste Isolation Pilot Plant (WIPP) facility. However, those sources with foreign-origin material are not accepted for disposal at this facility. It is challenging to estimate the size of the foreign origin radioactive material problem in the U.S. because the majority of these sources which were brought into the U.S. were below the NRC Category 2 limits and not tracked in the National Source Tracking System. Reasonable estimates based on the data which were collected by our Committee show this to be a significant issue. The white paper provides possible solutions to secure this at-risk radioactive material in the U.S., including congressional action which is needed to allow the use of WIPP to dispose of all transuranic materials containing foreign origin material.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

A Challenge for Our States: Unwanted Radioactive Material – Where Does It Go? - continued

CRCPD Source Recovery and Threat Reduction Program (SCATR)

The Department of Energy/National Nuclear Security Administration (NNSA) and CRCPD maintain a cooperative agreement to support sealed source consolidation and commercial disposal at the state level.

NNSA funds disposal activities through cost sharing (30% and possibly up to 50% for higher activity sources). The licensee is still responsible for some of the cost of disposal of this material.

CRCPD administers the program through coordination and contracting with waste brokers for packaging/transportation/disposal.

Goal: Collect and commercially dispose of sealed sources no longer in use, which could individually or in aggregate be used maliciously.

This program is very successful. To date, under the SCATR program, we have collected and disposed:

- 32,169 Sources
- 1487.94 Curies
- An additional 34,113 Industrial Radiography Sources

SCATR has been very successful over the years to ensure the safe disposal of these materials. We know there is a lot more out there.

Currently one of our areas of focus is working with the Cesium Irradiator Disposal Group at DOE on that project.

CRCPD Orphan Source Recovery Project (OSRP)

An orphan source generally refers to unwanted or uncontrolled radioactive materials, often a sealed source of radioactive material contained in a small volume. Some of the possible characteristics of an orphan source are:

- in an uncontrolled situation, OR
- where the responsible party cannot be identified, OR
- where the licensee is incapable of providing for the safe disposition of the material, OR
- in possession of a person not licensed to possess the material, OR
- possibly where the state radiation control program took possession to mitigate a radiological threat.

An example of orphan sources are measuring and controlling devices containing radioactive materials that were improperly disposed of as scrap metal. Many of our states have had this occur.

The work the state radiation control programs have done with their scrap recycling facilities to help them prepare to identify and deal with radioactive materials which typically are NORM or TENORM, but can also be these licensed lost or stolen sources, also benefits this program when the materials do fall under the OSRP.

CRCPD has had an agreement and funding from NRC for several years to assist state programs in disposing of orphan sources, and we continue to provide support for that program.

Awareness: Waste is an Ongoing Issue for our States

Waste, and the disposal of unwanted radioactive materials, is an ongoing issue for our states.

As I stated at the beginning of my presentation, my purpose by discussing this topic is not anticipation that we can solve the challenges today, but rather to raise awareness as it as an issue that the state radiation control programs are dealing with on a daily basis and to inform you of the activities being accomplished by the CRCPD in this area.

Note: Links to slides, transcript and access to the webcast are available at www.nrc.gov/reading-rm/doc-collections/commission/tr/2022/index.html

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Leadership Announcements

Appointment to the Rocky Mountain Low-Level Radioactive Waste Board

Contributed by Leonard Slosky and Governor's Press Release

Govenor Jared Polis has made an appointment to the Rocky Mountain Low-Level Radioactive Waste Board for a term expiring at the pleasure of the Governor.

Tracie White of Morrison, Colorado, has been appointed to serve as the Governor's designee. The new appointment was occasioned by the resignation of Jennifer Tice Opila of Northglenn, Colorado.

Contact:
Tracie M. White, P.E.
Division Director, Hazardous Materials & Waste Management Division, Colorado Department of Public Health & Environment
4300 Cherry Creek Drive South, Denver, CO 80246-1530
tracie.white@state.co.us
www.colorado.gov/cdphe/hm
Source: https://www.colorado.gov/governor/news/6701-gov-polis-announces-boards-and-commissions-appointments

Southeast Compact Commission Announces New Executive Director

by John Williamson, Chairman and Donna Hodges, Chairman-Elect

After a diligent and extensive search, the Southeast Compact Commission is pleased to announce that Dr. Thomas Hansen will serve as Executive Director beginning February 15, 2022.

The Commission made this selection based on Tom's extensive experience and professional achievements. Tom possesses more than 30 years of nuclear field experience and has planned, managed, or overseen decommissioning projects at more than 60 sites. He is the founder of a decommissioning and waste management firm, Ameriphysics, LLC, and since 2008 his company has managed more than 100 million pounds of radioactive waste with shipments to virtually every disposal site and processing facility in the nation. His education includes a PhD in public health education, a master's in health physics, and a bachelor's in radiation protection. Tom is a Certified Health Physicist, Registered Radiation Protection Technologist, and eight-year veteran of the U.S. Navy where he served as a nuclear mechanical operator on submarines. He is widely regarded as an expert on nuclear decommissioning and waste management processes.

We are confident that Tom's many talents, active leadership approach, and wide-ranging experience will help us continue the Commission's record as a high-integrity, active leader in a regional and national cooperative effort to promote the protection of public health and safety through responsible low-level radioactive waste management.

Tom will work closely with the Commission by providing leadership for day-to-day operations of the organization and by assisting the Commission in developing and implementing a vision and strategic plan to ensure that low-level radioactive waste generators in the southeast party states continue to have access for permanent disposal of their waste. (Contact: tom@secompact.org)

Appreciation for Ted Bucker

Ted Buckner's last day as Executive Director will be February 28, 2022. Ted joined the Commission staff in 1991 after 16 years in corporate tax law and environmental lobbying. He assumed the role of Treasurer of the LLW Forum in 2008 and the role of Executive Director of the Commission in 2014. We cannot thank him enough for the dedication, leadership, and support he has provided over the past 30 years.

Finally, we would like to thank the search committee and other board members, who participated in our decision-making process.

Texas Compact News About Rulemaking

Source: http://www.tllrwdcc.org/rules/

Texas Solicits Informal Comment

The Rules Committee and the Texas Low-Level Radioactive Waste Disposal Compact Commission solicit informal comments on drafts of potential rule changes. The Commission has agreed to place the following documents on the website for public review and informal comment:

Texas Administrative Code

Texas Administrative Code 675 20 Revised Definitions
Texas Administrative Code 675.21 Revised Export Rule
Texas Administrative Code 675.24 Revised Management Rule

TLLRWDCC would appreciate your thoughts or comments before proceeding to formal publication for comment. You may send comments via email to administration@tllrwdcc.org or call with questions or comments to (737) 300-2154.

Technical Position Paper on Establishing a Generator of Low-Level Radioactive Waste For the Purposes of Determining Party vs. Non-Party Status

The Rules Committee and the Texas Low-Level Radioactive Waste Disposal Compact Commission have published a technical position paper Establishing the Generator of Low-Level Radioactive Waste For the Purposes of Determining Party vs. Non-Party Status. This is a guidance document being placed on the website for information only.

Technical Position Paper on Establishing a Generator

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Atlantic Compact
Connecticut • New Jersey • South Carolina

Meeting

March 22 2022
Columbia, South Carolina
For more information please contact max@atlanticcimpact.org.

NRC Issues Confirmatory Order, $50,000 Civil Penalty to HDI Over Security-Related Violations at Oyster Creek Nuclear Power Plant

The Nuclear Regulatory Commission has issued a confirmatory order to Holtec Decommissioning International LLC following an Alternative Dispute Resolution mediation session regarding security-related violations at the Oyster Creek nuclear power plant.

Source: NRC News Release No: I-22-002 January 26, 2022

Contact: Diane Screnci, 610-337-5330
Neil Sheehan, 610-337-5331

Midwest Compact
Indiana • Iowa • Minnesota • Missouri • Ohio • Wisconsin

NRC Schedules a Regulatory Conference with Energy Harbor Nuclear Corp.

The Nuclear Regulatory Commission will hold a regulatory conference with officials from Energy Harbor Nuclear Corp. on Feb.1, beginning at 9 a.m. Central time, to discuss the risk significance of a potential greater than green finding identified by the NRC during a special inspection at the Davis-Besse Nuclear Power Station.

Source: NRC News Release No: III-22-001
January 26, 2022

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

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

NRC Denies Oklo Combined License Application for Lack of Information;Company May Reapply in the Future

The Nuclear Regulatory Commission has denied, without prejudice, Oklo Power, LLC.'s application to build and operate the company's Aurora compact fast reactor in Idaho. The denial is based on Oklo's failure to provide information on several key topics for the Aurora design. The company is free to submit a complete application in the future.

Source: NRC News Release No: 22-002 January 6, 2022

Contact: Scott Burnell, 301-415-8200

NRC Schedules a Regulatory Conference with Energy Northwest

The Nuclear Regulatory Commission will hold a regulatory conference with officials from Energy Northwest on March 1, beginning at 9 a.m., Central time, to discuss the safety significance of a finding identified by the NRC during an inspection at the Columbia Generating Station. The plant is located 12 miles northwest of Richland, Washington.

The purpose of this regulatory conference is for NRC and Energy Northwest officials to discuss a preliminary finding of low-to-moderate safety significance before the agency makes a final determination.

The preliminary finding and three apparent associated violations occurred on May 28 and involved the company's failure to use appropriate radiological controls when conducting work on highly contaminated piping within the plant. As a result,

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

two workers received unplanned exposures below regulatory limits. The event is described in a Jan. 13 inspection report.

A decision on the final safety significance of the apparent violation or any NRC actions will not be made at the meeting.

Source: NRC News Release No: IV-22-002 February 17, 2022

Contact: Victor Dricks, 817-200-1128

Rocky Mountain Compact

Colorado • Nevada • New Mexico

New Appointment by Governor

See the article in this issue.

Louisiana Energy Services DBA Urenco USA – Integrated Inspection Report

Dear Mr. Padgett:

The U.S. Nuclear Regulatory Commission (NRC) completed an inspection at UUSA and discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

No violations of more than minor significance were identified during this inspection.

Source: NRC News Release No: 22-006 February 9, 2022

Contact: Scott Burnell, 301-415-8200

Southeast Compact

Alabama • Florida • Georgia • Mississippi • Tennessee • Virginia

Executive Director Selection

The Commission has announced its selection of an Executive Director with a starting date of February 15, 2022. See the article in this issue for more detail.

NRC Announces Opportunity to Request Hearing on Vogtle Unit 4 Notice of Intended Operation

The Nuclear Regulatory Commission has published in the Federal Register a notice of opportunity to request a limited scope adjudicatory hearing regarding Southern Nuclear Operating Co.'s notice to load nuclear fuel into the Vogtle Unit 4 reactor in Georgia, beginning in September.

Source: NRC News Release No: 22-005 February 2, 2022

Contact: Scott Burnell, 301-415-8200

NRC Opens Hearing Opportunity for Kairos Test Reactor Construction Permit Application

The Nuclear Regulatory Commission has published in the Federal Register a notice of opportunity to intervene in an adjudicatory hearing on Kairos Power's application for a construction permit to build the "Hermes" test reactor at a site in Oak Ridge, Tennessee.

Petitions to intervene in a hearing must be filed by April 11, by anyone whose interest may be affected by the proposed issuance of a construction permit and who wants to participate as a party in the proceeding. More information on the hearing process is available on the NRC website.

Southwestern Compact

Arizona • California • South Dakota • North Dakota

Search for Executive Director

Contributed by Kathy Davis

The Compact continues to take applications for the Executive Director postion. Applicants have expressed interest in the position and the Commissioners are doing interviews now.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Texas Compact
Texas • Vermont

Meetings TX

Thursday, January 27, 2022
Link to the recorded session is at https://www.youtube.com/watch?v=mJhpGjTeOyo

Thursday, April 7, 2022
via Zoom Meeting webinar and in person at the Low-Level Radioactive Waste Forum held at the La Quinta Inn in San Antonio, TX

Thursday, May 26, 2022
via Zoom Meeting webinar and in person at the Texas State Capitol in Austin, TX

Agendas, when available, can be seen at http://www.tllrwdcc.org/about-the-comission/public-meetings/

Sunset Advisory Commission Review of the Texas Low-Level Radioactive Waste Disposal Compact Commission

Upcoming Actions

Sunset Staff Report with recommendations is anticipated in May 2022.

Public Hearing is anticipated in June, tentatively the 22nd or 23rd.

Annual Report

The TLLRWDCC's annual report is being distributed in the near future, pending signatures and transmission to the Governors of Texas and Vermont.

Rulemaking News

See the article in this issue.

Waste Control Specialists News

Disposal by End of December 2021

234,255 cu.ft. (2.6% of license capacity)
around 500,000 Ci (12.8% of license capacity)

Source: Dave Carlson, WCS President, January 27, 2022, Texas Compact Meeting

Current Job Openings

Waste Control Specialists has posted several current job opening during January and February. For details, see https://www.wcstexas.com/careers/

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Republic Services to Acquire US Ecology

PHOENIX & BOISE, IDAHO Feb. 9, 2022 -- Republic Services, Inc. (NYSE: RSG) and US Ecology, Inc. (NASDAQ-GS: ECOL) have entered into a definitive agreement under which Republic Services will acquire all outstanding shares of US Ecology for $48 per share in cash, representing a total value of approximately $2.2 billion including net debt of approximately $0.7 billion.

US Ecology is a leading provider of environmental solutions offering treatment, recycling and disposal of hazardous, non-hazardous and specialty waste. US Ecology's trailing twelve-month revenue as of September 30, 2021, was $968 million and adjusted EBITDA was $156 million.

"Today's announcement enables Republic Services to provide customers with one of the most complete set of product offerings across the environmental services space and creates significant value for our stakeholders," said Jon Vander Ark, president and chief executive officer at Republic Services. "This strategic acquisition expands our geographic footprint across the U.S. and Canada and provides vertical integration capabilities for our environmental solutions business."

"We are pleased to have reached this agreement with Republic Services, an established leader in the industry, recognized for its commitment to safety, sustainability and superior customer service," said Jeff Feeler, chairman, chief executive officer and president at US Ecology. "2022 marks US Ecology's 70th year of operations, built around providing environmental solutions that protect human health and the environment. The combination of our companies provides a platform to accelerate our common strategy of providing a full complement of environmental solutions to better our world. In addition, this transaction showcases the value of US Ecology's business, providing our stockholders with attractive and certain value, and brings together a network of assets with extensive environmental solutions expertise to handle customers' most challenging and complex needs. I would like to thank US Ecology's employees for their hard work and dedication to this mission. We look forward to working with the Republic Services team to complete the transaction and deliver premium products and services."

Strategic and Financial Benefits

Vertically integrates and expands Republic's environmental solutions footprint. The acquisition of US Ecology will add a national platform of difficult-to-replicate assets and talent to enable Republic to provide customers environmental solutions from collection through disposal. This includes adding nine specialty waste landfills with five hazardous waste landfills, 16 RCRA permitted TSDFs, seven wastewater treatment facilities, and over 80 environmental services field locations including treatment and recycling centers.

Positions Republic as a single-source partner for customers. Customers with multiple recycling and waste service needs value the ability to consolidate services with a single partner who has a successful track record of safety, compliance, and environmental responsibility. The acquisition will allow Republic to provide customers a comprehensive set of environmental services including recycling, solid waste, special waste, hazardous waste, container rental and field services.

The acquisition of US Ecology will also provide Republic a platform to pursue additional tuck-in acquisitions in the highly fragmented environmental solutions business.

Timing and Approvals – The transaction was unanimously approved by the boards of directors of both companies and is expected to close by the end of the second quarter, subject to the satisfaction of customary closing conditions, including receipt of regulatory approvals and approval by holders of a majority of the outstanding shares of US Ecology's common stock.

For further information, contact: Media Inquiries, Donna Egan, (480) 757-9770, media@republicservices.com, or Investor Inquiries, Stacey Mathews, (480) 718-6548, investor@republicservices.com

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

IAEA Publishes Free e-Book on Nuclear Law

The IAEA's first ever book by global thought leaders on nuclear law has just been published in e-book format, providing free access to a compilation of essays on this highly specialized legal field. ***Nuclear Law: The Global Debate*** echoes the tagline of the IAEA's upcoming First International Conference on Nuclear Law (ICNL2022), to take place in Vienna from 25 to 29 April, and contains articles by leading scholars, policymakers and scientists in the field.

Nuclear law underpins the entire nuclear sector, enabling the safe, secure and peaceful uses of nuclear technology for the benefit of humanity. The international legal instruments, standards and norms provide the framework in which those operating a nuclear power plant, transporting radioactive material for cancer therapy or those experimenting in a laboratory to develop COVID-19 testing kits work.

Few issues play as central a role in the public acceptance of nuclear technologies as the management and disposal of spent fuel and high level radioactive waste. At the opposite side of the scale, finding suitable endpoints is often also a concern in many States having responsibility for a comparatively small national radioactive waste inventory resulting from a more limited use of nuclear technologies, such as in medical, food or research applications.

page 21

Source: https://www.iaea.org/newscenter/news/iaea-publishes-free-e-book-on-nuclear-law

For download: https://link.springer.com/book/10.1007/978-94-6265-495-2#toc

Reminder: Notice of Request for Information (RFI) on Using a Consent-Based Siting Process to Identify Federal Interim Storage Facilities

The Office of Nuclear Energy (NE), U.S. Department of Energy (DOE), requests information on how to site Federal facilities for the temporary, consolidated storage of spent nuclear fuel using a consent-based approach. DOE anticipates that communities; governments at the local, State, and Tribal levels; members of the public; energy and environmental justice groups; organizations or corporations; and other stakeholders may be interested in responding to this Request for Information (RFI). We especially welcome insight from people, communities, and groups that have historically not been well-represented in these discussions. Responses to the RFI will inform development of a consent-based siting process, overall strategy for an integrated waste management system, and possibly a funding opportunity.

Responses to the RFI must be received by March 4, 2022 by 5:00 p.m. (ET). See the Federal Register notice:
https://www.federalregister.gov/documents/2021/12/01/2021-25724/notice-of-request-for-information-rfi-on-using-a-consent-based-siting-process-to-identify-federal

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

NRC Opens Online Registration for Virtual 2022 Regulatory Information Conference

The Nuclear Regulatory Commission has opened registration for the agency's 34th annual Regulatory Information Conference, to be held virtually March 8-10, 2022. The three-day RIC is the agency's largest conference, jointly hosted by the NRC's offices of Nuclear Reactor Regulation and Nuclear Regulatory Research.

"Our annual conference enables attendees from all over the world to learn about the NRC's important safety and security mission and hear what the agency is doing to prepare for future regulatory challenges," said NRC Chairman Christopher T. Hanson. "Over the three days, we will share information about a diverse set of issues and gather valuable feedback from speakers and participants in engaging and dynamic sessions."

The conference is free to the public and registration is required to attend. The full conference program and registration information is available on the NRC RIC website. Additional information is available by following the NRC on Twitter, #NRCRIC2022. The conference, to be held on a user-friendly web-based platform, is expected to virtually bring together more than 3,000 attendees from more than 40 countries, representing government, industry, international agencies, other interested stakeholders, and members of the public.

This year's program will feature keynote addresses from Chairman Hanson and a plenary session with the Honorable Jennifer Granholm, U.S. Secretary of Energy. Additional programhighlights include plenary sessions with NRC Commissioners Jeff Baran and David A. Wright. The RIC plenary sessions will also include remarks by the NRC Executive Director for Operations Daniel H. Dorman. Andrea Veil, director of the Office of Nuclear Reactor Regulation, and Raymond Furstenau, director of the Office of Nuclear Regulatory Research, will moderate the plenary sessions.

Source: NRC News Release No: 22-004 January 20, 2022

Contact: Ivonne Couret, 301-415-8200

Consolidated Interim Storage Facilities

Governor Abbott Petitions Fifth Circuit To Keep Spent Nuclear Fuel Out Of The Permian Basin - February 8, 2022 | Austin, Texas | Press Release

Governor Greg Abbott yesterday joined Texas's petition urging the U.S. Court of Appeals for the Fifth Circuit to vacate a federal license from the Nuclear Regulatory Commission that would bring spent nuclear fuel to a private storage facility in the Permian Basin. The petition argues that the Commission's licensing decision exceeds its statutory authority, botches basic administrative-law principles, and fails to account for the environmental risks posed by a terrorist attack.

Congress declared decades ago that the federal government must dispose of America's growing stockpile of spent nuclear fuel in a deep geologic repository at Yucca Mountain, Nevada. Instead of following the law, however, the federal government now proposes to pile up tons of this deadly radioactive waste on the surface of the world's largest producing oilfield, at a private storage facility in West Texas. In licensing this strategic blunder, the Nuclear Regulatory Commission has run afoul of the Nuclear Waste Policy Act, the Atomic Energy Act, the Administrative Procedure Act, and the National Environmental Policy Act.

"I will not let Texas become America's dumping ground for deadly radioactive waste," said Governor Abbott. "That is why I signed House Bill 7 at a special session to ban the disposal or storage of high-level radioactive waste in Texas. And it is why I am suing the Nuclear Regulatory Commission over its illegal licensing decision in this case. I will continue pursuing every legal avenue to protect the Permian Basin, which is crucial to America's energy security, and to keep all Texans safe from nuclear waste."

From the petition --

The Commission Lacks the Statutory Authority to License a "Consolidated Interim Storage Facility."

The Atomic Energy Act does not authorize the ISP license.

No language in the Atomic Energy Act grants the Commission the power to license private, away-from-reactor storage facilities for spent nuclear fuel. The power that the Commission has arrogated to itself is significant: the ISP facility will invariably affect Texas's economy, its environment, and its susceptibility to terrorist threats. Its presence will require Texas to invest significant resources to ensure that the facility does not operate to the detriment of the State or her citizens. And it will require state officials to plan for contingencies that they otherwise would not have to consider. For instance, a rail accident or derailment during the spent nuclear fuel's transport into Texas would, even absent a radiological release, drain significant resources and logistics and "would severely disrupt the transportation of oilfield and agricultural commodities, to the detriment of the entire country." (Abbott)

Read Texas's petition at https://gov.texas.gov/uploads/files/press/Texas_v._NRC_Petition_(5th_Cir_.)_.pdf

Source: Press Release
https://gov.texas.gov/news/post/governor-abbott-petitions-fifth-circuit-to-keep-spent-nuclear-fuel-out-of-the-permian-basin

Nuclear Security & Transportation

Ohio - Missing Source

On 1/28/22 a verification of source inventory indicated a sealed source was missing. The source is an Sr-90 sealed source, activity of 0.32 milliCi, used in a Model 2210 irradiator.

The employee who indicated he most likely handled the irradiator last in the August 2021 timeframe could not remember if he removed the source holder and cap from the irradiator or not. It was also determined that a radioactive waste shipment was made on 12/6/2021 (Veolia Environmental Services/Alaron Nuclear Services). There is a chance the source was included in the shipment.

Arizona - Stolen Tritium Exit Signs

The Department received a call from a construction project manager who stated that 110-116 tritium exit signs were stolen by a contractor and are being held at his residence in Flagstaff, Arizona. A police report has been filed with the Coconino Police Department.

Illinois - Stolen Radioactive Gauges

The Agency was notified early in the morning of 1/31/22 that an Illinois licensee (Lixi, Inc., IL-01339-01) operating in Anaheim, California under reciprocity had two radioactive gauges stolen from their rental car on the afternoon of January 30, 2022 [approximately 1600 PST]. The stolen devices were portable fluoroscopes containing approximately 1 Curie of Gd-153 each.

US Navy - Lost Source Material

Naval Surface Warfare Center Crane Division (NSWC Crane), Crane, Indiana self-reported the loss of permitted radioactive material consisting of one Vapor Tracer 2 Hand Held Explosive Detector (HHED). The Vapor Tracer 2 HHED, contained one Ecker and Ziegler Isotope Products Laboratories Model NER-004 Nickel-63 (Ni-63) sealed source not exceeding 10 millicuries (370 Mega-Becquerel).

Florida - Found Moisture Density Guage

The State of Florida received a call from a business to report they found a Humboldt Soil Moisture Density Gauge [Model 5001P, Serial number 547, 1988] in the gravel parking lot of their place of business. Humboldt literature from the internet shows the sources to be Cesium-137 less than 11 millicuries and Americium-241/Be less than 44 millicuries.

Texas - Stolen Troxler Gauge

On January 10, 2022, the licensee notified the Agency that on Saturday, January 8, 2022, one of its technicians had taken a Troxler 3440 moisture/density gauge (SN: 37429) to their residence after completing a job and left it secured in the back of his pick-up truck. From there is was stolen. Activity of the sealed sources are not known at this time. Troxler specifications indicate the typical sources to be Cesium-137 (8 mCi) and Americium-241/Be (40mCi) at the time of manufacturing.

Wisconsin - Missing Static Eliminator Device

On January 10, 2022, DHS received a letter from the licensee stating that a generally licensed static eliminator device, originally shipped to them November 2, 2020, had been missing since November 2021. Activity data was not provided.

Pennsylvania - Missing Source

The sources were packed in 2 drums, and shipped to the licensee's facility in Wampum, PA. There appears to be a discrepancy in the inventory of the Strontium-90 sources within the drum When the licensee technicians inventoried the 2 drums, they only found 5 Strontium-90 sources instead of the expected 6. They believe that there was a miscount as the sources were packaged for shipment.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

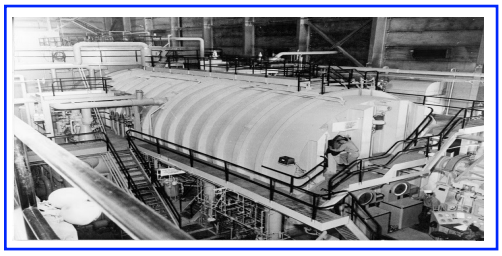
Decommissioning

DOE to Demolish Submarine Reactor Prototype at Idaho Site

IDAHO FALLS, Idaho – DOE's Office of Environmental Management (EM) is set to deactivate and demolish the prototype for a reactor plant used for the first nuclear-powered submarine, a major step toward advancing environmental cleanup at the DOE Idaho National Laboratory (INL) Site.

Known as the Submarine 1st Generation Westinghouse (S1W) prototype, the land-based reactor was built inside a section of a submarine hull at the Naval Reactors Facility (NRF) on the Arco Desert west of Idaho Falls. NRF is under the cognizance of the Office of Naval Reactors (NR), which entered into an agreement with EM to carry out the S1W facility demolition and other deactivation and decommissioning (D&D) efforts.

"This project is the first in a partnership between EM and Naval Reactors at the INL Site," said Connie Flohr, manager of the Idaho Cleanup Project for EM. "It allows NR to utilize EM expertise to remediate NR environmental liabilities such as unused infrastructure and excess facilities across the complex, the first of these being the reactor prototype and ancillary support structures."



The interior of the Submarine 1st Generation Westinghouse facility located at the Naval Reactors Facility at the U.S. Department of Energy Idaho National Laboratory Site, circa mid-1950s.

The S1W prototype supported development of the USS Nautilus, which was launched in 1954 as the world's first operational nuclear-powered submarine.

The USS Nautilus at sea, November 1955 (U.S. Navy photo).

Because nuclear propulsion allowed it to remain submerged far longer than diesel-electric submarines, the Nautilus broke many records in its first years of operation and traveled to locations previously beyond the limits of submarines. The prototype also was used to train naval officers and enlisted personnel to operate the propulsion plants of nuclear-powered submarines and aircraft carriers, and to test nuclear propulsion technology. The S1W prototype was shut down in 1989.

"Naval Reactors entered into this agreement because DOE-EM has established expertise in large-scale D&D across the DOE laboratory complex," said Mike Huth, manager of the Naval Reactors Idaho Branch Office. "We look forward to working with EM in the years to come."

Crews are scheduled to begin demolishing adjacent S1W support buildings this month. Activities to prepare for deactivation of the reactor plant, including asbestos removal and characterization of other building components to confirm facility contents and any associated risks, will also start this month. Actual D&D of S1W is expected to commence in fiscal year 2023. An engineering evaluation and cost analysis to evaluate alternatives for deactivating and decommissioning the S1W prototype will be released for public comment.

Preparations to hand the facility over to EM began in 2020. That work included preparing the facility for "cold, dark and dry" status, in which all potential hazardous energy sources are disconnected, and also working with the Idaho State Preservation Office and other stakeholders to ensure removal of historic property in accordance with the National Historic Preservation Act.

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Hanford Site News

Hanford Site to Host Free Virtual Career Fair on March 2

For Immediate Release:
February 17, 2022

RICHLAND, Wash. – The U.S. Department of Energy Richland Operations Office and Office of River Protection, along with Hanford Site contactors, Columbia Basin College, Washington State University Tri-Cities and WorkSource Columbia Basin, will host a One Hanford Virtual Career Fair on Wednesday, March 2 from 10 a.m. to 2 p.m.

DOE will be joined by Hanford Site contractors Bechtel National Inc., Central Plateau Cleanup Company, Hanford Laboratory Management and Integration, Hanford Mission Integration Solutions, HPMC Corporation and Washington River Protection Solutions in this first ever One Hanford virtual event.

During the fair, attendees will have the opportunity to chat one-on-one with DOE and contractor representatives during individual virtual sessions.

Available employment opportunities include:

Contract Specialists
Data Analysts
Engineers
Finance Professionals
Firefighters
Health Physicists
Internships
Journeyman Lineworkers
Project Controls
Project Management
Registered Nurses
Truck Drivers
And more!

Individuals interested in attending the One Hanford Virtual Career Fair can register here:

One Hanford Virtual Career Fair (brazenconnect.com)

Media Contacts:
Santos Ortega, DOE, 509-375-2075, santos.ortega@rl.doe.gov

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Northwest Compact
Alaska
Hawaii
Idaho
Montana
Oregon
Utah
Washington
Wyoming

Midwest Compact
Indiana
Iowa
Minnesota
Missouri
Ohio
Wisconsin

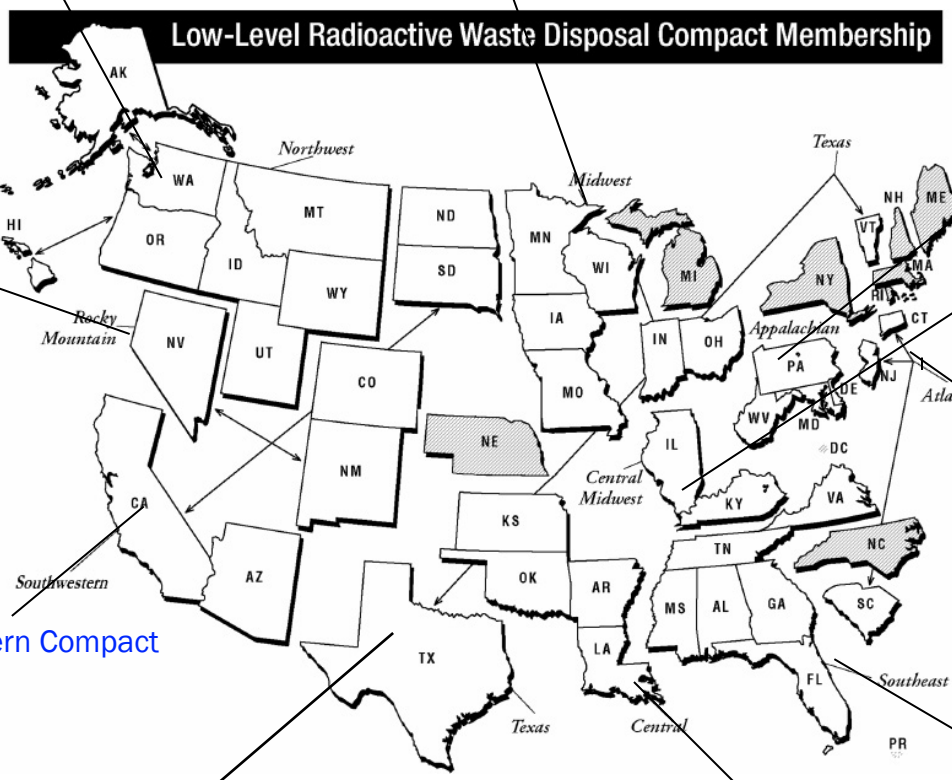
Appalachian Compact
Delaware
Maryland
Pennsylvania
West Virginia

Rocky Mountain Compact
Colorado
Nevada
New Mexico

Northwest accepts Rocky Mountain waste as agreed between Compacts

Central Midwest Compact
Illinois
Kentucky

Atlantic
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/

© LLW Forum, 309 Bradley Boulevard, Suite 201, Richland, WA 99352 Telephone: (801) 580-3201, Daniel B. Shrum , Executive Director Email: dshrum@llwforum.org www.llwforum.org

Information Resources

- DOE Public Affairs/Press Office - 202/586-5806
- DOE Distribution Center - 202/586-9642
- EPA (for program information, publications, laws and regulations) www.epa.gov
- EPA Information Resources Center - 202/260-5922
- EPA Listserve Network Contact Lockheed Martin EPA Technical Support at (800) 334-2405 or email (leave subject blank and type help in body of message) listserver@unixmail.rtpnc.epa.gov
- Government Accounting Office (GAO) Document Room - 202/512-6000
- Government Printing Office (to order entire *Federal Register* notices) - 202/ 512-1800
- Legislative Resource Center (to order U.S. House of Representatives documents)- 202/226-5200
- NRC Public Document Room - 202/ 634-3273
- NRC Reference Library (NRC regulations, technical reports, information digests, and regulatory guides) www.nrc.gov
- U.S. Government Printing Office (GPO) (for the Congressional Record, Federal Register,congressional bills and other documents, and access to more than 70 government databases) http://www.access.gpo.gov
- U.S. Senate Document Room - 202/224-7860
- Variety of documents through numerous links at LLW Forum, Inc. at www.llwforum.org

Acknowledgment & Disclaimer

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

Copyright Policy