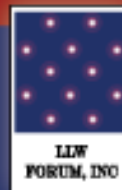


# DISUSED SOURCES

*The Need for Proper Management and Disposition*

## **Overview of the LLW Forum's Disused Sources Working Group**

**Michael Klebe**  
**April 5, 2024**



# DSWG Current Membership

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- Members:

Joseph Klinger, CMCC – Chair

Rich Janati, PA

Larry Kellum, UT

Dane Blakinger, WA

Earl Fordham, WA

John Williamson, FL

Michael Kurth, US Army

Tom Hansen, SECC

- Organizational Liaisons

Randall Redd, CRCPD

Augustinus Ong, OAS

Craig Little, HPS

- Staff

Dan Shrum

Michael Klebe

Cecilia Snyder

# Disused Sources Working Group Origin

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- DSWG formed in 2011 at the request of the NNSA/GTRI to address the problem of disused radioactive sealed sources
  - Approximately 2 million sealed sources in use
  - Tens of thousands disused sources with no exact knowledge of number, activity, and storage security

# Disused Source Problem Contributing Factors

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- Life-cycle costs for managing and disposing of sources not internalized
- Inconsistent view of which sources pose a security threat
- Regulatory system inadequacies for a post-9/11 threat environment
- No financial incentive for reuse, recycle, or disposal
- Opportunities for recycling and reusing sources are underutilized
- Type B shipping container availability and cost

# DSWG Report

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- Report published – March 2014
- 24 recommendations for improving the security of sealed sources
- Several recommendations have been completed
- Currently revising the priority of the remaining recommendations



## REPORT OF THE DISUSED SOURCES WORKING GROUP

*A Study of the Management and Disposition of Sealed Sources  
from a National Security Perspective*



# National Source Tracking System

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- The NSTS is a secure user-friendly web-based database designed to track Category 1 and 2 radioactive sources.
- Tracking spans the life cycle of the source from manufacture through shipment receipt, decay and burial.
- About 1,300 licensees began reporting Cat 1 and 2 sources in January 2009

# National Source Tracking System

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- In 2008, NRC proposed to add Cat 3 sources to NSTS. Failed on a 2-2 Commission vote.
- DSWG's 2014 report recommended adding Cat 3 sources to the NSTS.
  - #5 –The NRC should expand the NSTS to track Category 3 sources.
- Response received from Agreement States has been the effort is not worth the return without any quantification of the effort involved.

# Pilot Study for Adding Cat 3 Sources to NSTS

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- DSWG is seeking an Agreement State program partner to evaluate the level of effort associated with adding Cat 3 sources.
- Two phases:
  - Figure out what it will take
  - Do it
- Funding
  - Phase 1 - flat fee
  - Phase 2 – based on estimate generated in phase 1



# Pilot Study Scope of Work – Phase 1

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- Determine:
  - resources to identify licensees possessing Cat 3 sources
  - resources to collect and assemble information about specific Cat 3 sources
  - impact to licensees for maintaining their sealed source information in the NSTS
  - resources needed to create and implement an informational campaign to educate Cat 3 licensees
  - changes in regulations

# Pilot Study Scope of Work – Phase 2

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- Identify the licensees who possess Cat 3 sources
- **Collect and assemble information for Cat 3 sources**
- Develop an informational campaign to educate licensees
- Develop a draft amendment to regulations to require the tracking of Cat 3 sources

# Agreement State Partner

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- Looking for an Agreement State program participant
- Had discussion with a few, but no takers.
- Hoping that a change in the project scope may be fruitful.

# NRC Integrated Rulemaking

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- Changes to 10 CFR Part 61 LLRW disposal regulations to integrate criteria for licensing near-surface disposal of GTCC and LLRW streams significantly different than originally considered in developing Part 61 (DU).
- DSWG interested from the perspective of disposal of GTCC sealed sources (especially transuranic Am-241).
- Would allow Agreement State Program licensing of GTCC

# Near-Surface Disposal of GTCC

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- WCS hosts a federal LLRW disposal facility and is likely interesting in expanding the waste streams they can dispose.
- State of Texas has indicated an opposition to “any increase in the amount of concentration of radioactivity authorized for disposal at the facility in Andrews County, Texas.” (2019)
- Andrews County Commissioner’s resolution in opposition to GTCC disposal at WCS (2024).

# DOE Disposal of GTCC

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- The LLRW Policy Amendments Act makes the Federal Government responsible for the disposal of GTCC waste
- DOE chose to co-dispose GTCC waste with spent fuel
- DOE is not progressing with developing a permanent repository for spent fuel/GTCC
- GTCC is not suitable for disposal at WIPP

# DOE Disposal of GTCC

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The DSWG will begin discussions on how to engage DOE on fulfilling their responsibility under the LLW Policy Amendments Act

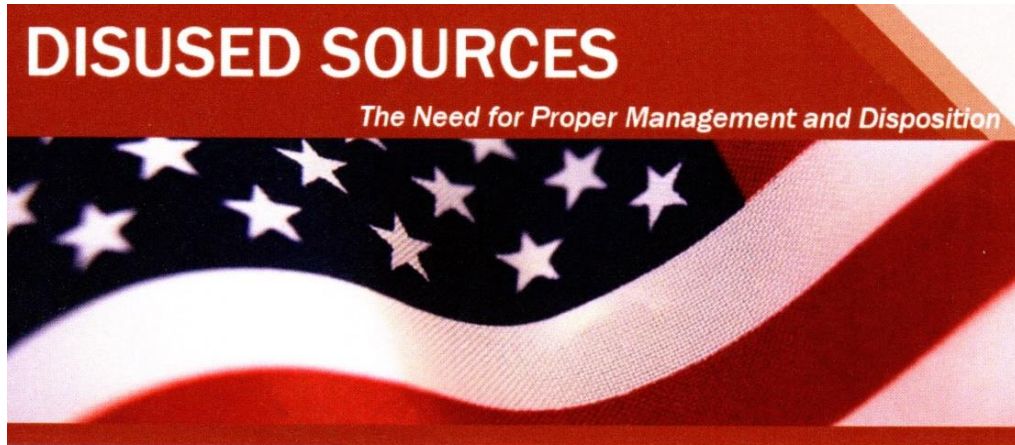
# Re-evaluation of DSWG recommendations

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- #4 – Require a Specific License (SL) for all Category 3 sources.
- #7 – Robust financial assurance requirements for Cat 1 – 3 sources
- #9 – Annual source fee to encourage disposal
- #10 – Storage time limit for unused Cat 1 – 3 sources
- #12 – Require manufacturers/suppliers to dispose of sources that have no recycle or reuse value on an annual basis.
- #23 – Continue to fund NNSA activities for the collection of orphaned and abandoned sources that don't have a disposal pathway



# Additional Information:



A project of the Low-Level Radioactive Waste Forum, Inc.

**[www.disusedsources.org](http://www.disusedsources.org)**



**DISUSED SOURCES**  
*The Need for Proper Management and Disposition*

The DWSG was formed to develop recommendations for improving the management of disused sealed radioactive sources.

**[www.disusedsources.org](http://www.disusedsources.org)**

Additional Resources Include:

- Report of the Disused Sources Working Group
- Brochures for current and prospective licensees re: lifecycle costs of sealed source ownership
- Report on Disposition Options and Costs for Certain Radioactive Sealed Sources and Devices
- Report on Compact Import and Export Requirements

