

LOW-LEVEL RADIOACTIVE WASTE FORUM, INC.

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Disused Sources Working Group Report

Southeast Compact Commission Meeting
Atlanta, Georgia
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Background

- In the fall of 2010, officials from the National Nuclear Security Administration/Global Threat Reduction Initiative (NNSA/GTRI) approached the Low-Level Radioactive Waste Forum (LLW Forum) for assistance in seeking solutions for the disposition of non-U.S. Department of Energy (DOE) owned disused sources which the agency believes to pose a threat to national security.
- By resolution dated May 2011, the LLW Forum formed the Disused Sources Working Group (DSWG) to take a holistic approach to evaluate and address both key front-end issues as well as the back-end.
- Over a 31-month period, DSWG collected information and met with a variety of stakeholders including
 - federal officials from the U.S. Nuclear Regulatory Commission (NRC), U.S. Environmental Protection Agency (EPA), U.S. Department of Transportation (DOT), and U.S. Department of Defense (DoD);
 - state and compact officials including representatives from the Organization of Agreement States (OAS), Conference of Radiation Control Program Directors (CRCPD), Health Physics Society (HPS);
 - manufacturers, distributors, users, recyclers, and brokers/processors; and,
 - disposal facility operators.
- DSWG released final report in March 2014 and is now developing a marketing and implementation strategy that will include significant outreach and coordination with all industry stakeholders.
- The Radiation Source Protection and Security Task Force, which is comprised of 14 federal agencies, will issue its next report to Congress in August 2014.

Overall Perspectives

- Sealed sources have many beneficial uses.
- Vast majority of licensees manage their sources properly.

- NNSA/GTRI considers thousands of sources (including IAEA Category 3 sources) to be risk-significant from a national security perspective.
- Sources are easy to obtain, but difficult to disposition. Users are reluctant to recycle, reuse or dispose of disused sources—in part due to costs and regulatory structure.
- There is a lack of financial assurance for sealed sources such that life-cycle costs are not being internalized and considered.
- Those who benefit from the use of sources should be the ones to pay for disposition.
- The availability of disposal access has not translated into a rush to disposal.
- There was never a notion from the DSWG of trying to prevent people from getting sources that they need, but rather to consider and plan for the entire life-cycle from manufacture through disposition.
- The DSWG is not saying that people are not doing their jobs, but rather that the system needs to be revisited. The fundamental purpose of the regulatory system is to reduce people's exposure to radiation by focusing on health and safety. When 9/11 happened, we began looking at increased controls and how to back-fit security into the system. The DSWG recommendations are an attempt to improve the system from a security perspective.
- Many states have taken the lead in developing more stringent and comprehensive regulations which should be viewed as models and guides when considering potential improvements to the system including:
 - Oregon's comprehensive General License (GL) requirements and possession fees;
 - Texas' fees on licenses to cover the cost of orphaned and abandoned source recovery;
 - Illinois' financial assurance requirement for most sources;
 - Florida's radiation protection trust fund covering all costs associated with licensee bankruptcy and orphaned sources; and,
 - Colorado's comprehensive GL registration and annual self-certification program and requirement for Specific Licenses (SLs) for certain Category 3 sources that are normally generally licensed.
- The goal is not to manage by crisis. If there were ever to be a radiation disposal device (RDD) or radiation exposure device (RED) event, it would affect the entire industry. Whatever regulators would do the day after a dirty bomb hit, the DSWG is encouraging to do today. The goal is to reduce threats, don't allow this material to get into wrong hands.

Findings and Recommendations

- The report is arranged chronologically to mirror the life-cycle of a source from manufacture through disposition.
- There are three sections addressing the need to (1) reuse sealed sources in inventory and consider alternative technologies, (2) improve regulatory controls to manage threats to national security, and (3) timely reuse, recycle or dispose of disused sources.
- Each sub-section includes a discussion of issues, overview of findings and explanation of specific recommendations.
- The findings include, among others, the following:
 - thousands of disused sources are being stored indefinitely throughout the country (e.g., some manufacturers, distributors and brokers/processors have very large inventories of disused sources), although specific figures and locations are unknown as this information is not captured in existing NRC and NNSA databases;

- sources in long-term storage are at a greater risk for loss of control;
- life cycle costs are not internalized as purchasers may not be aware of or plan for disposition;
- improvements should be made to the regulatory system to control national security risks in a post-9/11 environment (e.g. Category 3 sources should not be generally licensed; all sources that pose a national security risk should be tracked; financial assurance should be applied to risk-significant sources; reuse, recycle and disposal opportunities are underutilized and should be promoted; disposal access should be considered before allowing sources to be imported);
- type B shipping containers required for high-activity sources are in short supply and very expensive;
- although the Off-Site Source Recovery (OSRP) and Source Collection and Threat Reduction (SCATR) programs have been effective in disposing of a number of disused sources, they can also provide unintended disincentives for broader disposition; and,
- a comprehensive approach is needed to address the entire life-cycle of a source – all facets of the system contribute to the problem and must be part of the solution.
- There are a total of 24 recommendations including, among others, the following:
 - inform licensees of life-cycle costs and alternative technologies prior to purchase;
 - internalize life-cycle costs through financial assurance requirements;
 - promote use of existing sources and alternative technologies, including consideration of a “source exchange” possibly administered by the EPA;
 - reassess the importation of foreign disused sources that may not have a commercial disposition pathway;
 - expand and enforce the two-year limit on storing disused sources and give regulators authority to require disposition;
 - reduce storage inventories at manufacturers and distributors;
 - enhance regulatory oversight of Category 3 sources including tracking and licensing;
 - incorporate best practices already in use by states (e.g., annual possession fees, technical outreach programs);
 - increase availability and reduce costs of Type B containers (e.g., submission by NNSA of applications to certify several foreign package designs for domestic use, one year advance notification of container certificate expiration); and,
 - develop transition plans for SCATR and OSRP to ensure that they do not provide unintended incentives for users to delay timely disposition or avoid responsibility while maintaining the ability to recover orphan sources that pose a national security threat.

Response and Implementation

- In early April 2014, NNSA/GTRI officials presented the DSWG report to officials at the International Atomic Energy Agency (IAEA) in Vienna, Austria for consideration during the development of a guidance document affiliated with their "Code of Conduct on the Safety and Security of Radioactive Sources."
- On April 15, the Texas Compact Commission met with the regulated community in Tennessee to discuss various issues, including the disposition of disused sources, for the development of White Paper on the import and export of waste to and from the region.

- On May 12, 2014, NRC issued Regulatory Information Summary (RIS) 2014-04 to encourage licensees, on a voluntary basis, to submit additional information pertaining to sources that are identified as being in long-term storage in the National Source Tracking System (NSTS). In particular, NRC is encouraging licensees to include the “use status” of their sealed sources – i.e., whether or not their sources are in use or have become disused. This was a DSWG recommendation, although the working group recommended that it be mandatory.
- In mid-April 2014, the DSWG report was discussed during an OAS/CRCPD briefing to the NRC Commissioners. OAS Chair Mike Welling expressed some concerns about the DSWG report, particularly with regard to the recommendations concerning Category 3 sources, but also acknowledged some issues that indicate consensus with the DSWG’s concerns about the GL program. Specifically, in discussing compatibility considerations, Welling stated as follows: “The general license tracking system ... allows manufacturers/distributors to sell these devices, put them out there, quarterly report to us. And, by that point, it may be gone. That source may have left the facility. It may have been bankrupt, decommissioned or whatever. So that time tracking system is not in place. Versus the specific license tracking system allows us to know exactly where they are on the day we approve that license. And inspect them periodically to ensure that. So, that’s where Agreement States really want the flexibility in certain issues such as general license device issues.”
- On June 3-4, DSWG held the inaugural meeting of the second phase of the project to develop and execute an implementation and marketing strategy. The purpose of this next phase is not to rewrite the report, but rather to continue outreach and coordination with stakeholders. The next steps will include, among other things, the development of talking points and to:
 - provide comments by the July 14 deadline for the NRC to include implementation of the DSWG recommendations as a high-priority in its update of the strategic assessment of low-level radioactive waste regulatory program;
 - accept the OAS’ invitation to give a presentation on the DSWG report at their annual meeting in Chicago on August 26 and encourage them to continue dialogue on the issue and implement areas of agreement;
 - participate on a panel regarding the management of Disused Sources at the Exchange Monitor’s Rad Waste Summit on September 2-5 in Summerlin, Nevada;
 - give a presentation on the DSWG report at the Texas Radiation Regulatory Conference on September 11-12 in Austin, Texas as hosted by the South Texas Chapter of the Health Physics Society; and,
 - seek to continue outreach with Health Physics Society (HPS), International Source Suppliers and Producers Association (ISSPA), users, manufacturers, brokers/processors and other interested stakeholders.

Copies of the Disused Sources Working Group report can be obtained via a link on the Low-Level Radioactive Waste Forum’s web site at www.llwforum.org or via a link on the National Directory of Brokers and Processors web site at www.bpdirectory.com.

For additional information, please contact Todd D. Lovinger, Executive Director of the Low-Level Radioactive Waste Forum, at (754) 779-7551 or at LLWForumInc@aol.com.