Low-Level Radioactive Waste Forum

Disused Sources Working Group
Similar Conclusions by Other Stakeholders

Develop and Promote Alternative Technologies to Replace the Use of Risk-Significant Radioactive Sources

- The Radiation Source and Protection and Security Task Force (Task Force) recommends that the U.S. Government enhance support of research and development of alternative technologies to replace the use of risk-significant radioactive sources and establish a government-incentivized program for the replacement of risk-significant devices with effective alternatives. *Key Recommendation 2, 2010 Task Force Report, p. v.*

- The Health Physics Society (HPS) suggests that the federal and state regulatory agencies require license applicants for a new use of a Category 1, 2, or 3 radioactive source to examine alternative technologies including, but not limited to, different source forms that are technically and economically feasible and whose alternative use would result in an equal or greater net benefit than from the use of the source. *HPS Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 6, January 2006.*

Improve Life-Cycle Outreach and Develop Education Information Programs

- HPS encourages federal and state agencies, in conjunction with radiation safety organizations like the HPS and other professional and trade organizations, to develop and implement programs to better inform all entities possessing radioactive sources about available options for source disposition. In particular, this educational effort should be directed toward licensees who have had little contact with federal and state regulators and have minimal radiation safety programs. *HPS Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 15, January 2006.*

Impose and Enforce Limitations on the Storage of Disused Sources

- The Task Force advocates that the U.S. Nuclear Regulatory Commission (NRC) and Agreement States incorporate procedures for Category 1-3 sources that include consideration of the length of time, reason for, and location of storage. *Key Recommendation 6, 2010 Task Force Report, p. 38*.

Reassess and Strengthen Financial Assurance Requirements for Sealed Sources

- HPS supports the incorporation of a requirement into the licensing process that an acquirer of Category 1, 2, or 3 sources must provide financial surety for disposal of the sources. The establishment of financial surety is consistent with the IAEA Code of Conduct. *HPS*

Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 7, January 2006.

Reassess Application of General License (GL) verses Specific License (SL)

- In 2010, the Organization of Agreement States (OAS) petitioned NRC to strengthen the regulation of radioactive materials by requiring a Specific License (SL) for higher-activity devices that are currently available under the General License (GL) in 10 CFR 31.5. In addition to OAS, nine Agreement States also supported this petition. *OAS Petition for Rulemaking Regarding 10 CFR 31.5 and 31.6 Comment on Draft Proposed Rule "10 CFR Parts 30, 31, 32 and 150."*

- HPS advocates that all Category 3 sources and greater should be subject to a Specific License. *HPS comments on Docket NRC-2008-0272, Limiting the Quantity of Byproduct Material in a General Licensed Device, September 15, 2009.*

- "Sources that fall into Category 3 and lower can be assembled into Category 2 or 1 quantities of radioactive material. Further, it may be the case that some radiation sources near the upper threshold for Category 3 pose more serious risks than other sources that fall near the lower threshold of Category 2 in scenarios other than those used to create the source categorization system." *Radiation Source and Use Replacement, National Research Council, National Academies of Sciences, page 43, note 1, 2008.*

- The Task Force recognizes that Category 3 sources can be aggregated into a "risk significant quantity." *Recommendation 9-2, 2006 Task Force Report, p. 27; Summary Table of 2006 Recommendations and Actions and 2010 Recommendations, 2010 Task Force Report, p. 46; and, 2010 Task Force Report, p. 9.*

- A 2007 GAO audit of the security aspect of NRC's licensing process raised concerns about the relative ease with which lower activity sources can be purchased and potentially aggregated to higher activity levels. *Testimony Before the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, U.S. Senate, "National Security: Actions Taken by NRC to Strengthen its Licensing Process for Sealed Radioactive Sources Are Not Effective," GAO Report 07-1038T, July 12, 2007.*

- An NRC-Agreement State Working Group on the control and accountability of licensed devices examined information provided by NRC and determined that there is a lack of licensee oversight by the regulators. The working group found that regulators have not had an active role in ensuring that licensees maintain control over and accountability for devices, and in ensuring that licensees possess, use, and transfer devices in accordance with regulations. The working group further determined that both GLs and SLs have demonstrated loss of control over and accountability for devices. *NUREG-1551, "Final Report of the NRC-Agreement State Working Group to evaluate Control and Accountability of Licensed Devices," October 1996.*

- The International Atomic Energy Agency (IAEA) developed a system for categorizing radioactive sources based on their potential to cause harm to people. The system categorizes sources into five categories, Categories 1 through 5, with Category 1 being the greatest risk and Category 5 being the lowest risk. Categories 1, 2, and 3 are all classified as "dangerous" sources. *IAEA Code of Conduct and IAEA Safety Guide #RS-G-1.9, "Categorization of Radioactive Sources."*

Improve and Enhance the National Source Tracking System

- In 2008, NRC staff proposed an amendment to regulations to expand the National Source Tracking System (NSTS) to include Category 3 sources, including fixed industrial gauges (level gauges, conveyor gauges, thickness gauges, blast furnace gauges, dredger gauges, and pipe gauges); well-logging devices; medium and low-dose-range brachytherapy; and certain radiography devices. Staff also recommended inclusion in the NSTS of "sources below the Category 3 threshold, but greater than or equal to a 10^{th} of the Category 3 threshold," based on "…the nature of the sources at 1/10 of Category 3, their potential to aggregate to Category 2, and the costs to the licensed industry and the NRC." *71 Federal Register 19,749 (April 11, 2008).* On June 30, 2009, by a 2 to 2 vote, NRC announced that the Commission "was unable to reach a decision on the staff's recommendation to issue a final rule expanding the number and type of radioactive sources" covered under the NSTS. *Press Release 09-121 titled, "NRC Commission Split 2-2 on Expansion of National Radioactive Source Tracking System," NRC, June 30, 2009.*

- In a 2008 report, the U.S. Government Accountability Office (GAO) advocates enhanced tracking of radioactive sources by NRC and the Department of Homeland Security (DHS). *Report to the Permanent Subcommittee on Investigations, Committee on Homeland Security and Governmental Affairs, U.S. Senate, "Nuclear Security: NRC and DHS Need to Take Additional Steps to Better Track and Detect Radioactive Materials," GAO Report 08-598, June 2008.*

- HPS states that, because of the potential for unacceptable personal injury, economic, or social consequences from a mismanaged or poorly secured individual Category 3 source, NRC should be consistent with the approach of the IAEA and consider that Category 3 sources warrant inclusion in the tracking system, unless an analysis can demonstrate that the large number of such sources and the economic cost for tracking them would be overly burdensome. If the analysis demonstrates that the inclusion of all Category 3 sources is not justified on an economic basis, an evaluation should be performed as to how aggregate quantities of Category 3 sources that roll up to Category 1 or 2 thresholds can be identified and included in the tracking system or to identify if there are alternatives other than an "all or nothing" approach. For example, the analysis might identify some types of Category 3 sources that could be excluded while others should appropriately be included in the tracking system, or might identify alternatives to the NSTS that accomplish the same results for these sources. The analysis and inclusion/exclusion of Category 3 sources should not interfere with the timely implementation of the tracking system for Category 1 and 2 sources. *HPS Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 11, January 2006.*

Increase the Availability and Address Cost Issues Associated with Type B Shipping Containers

- HPS recommends that the U.S. Department of Transportation (DOT) extend the authorization for continued domestic use of the specification containers 20WC and 6M as necessary to provide sufficient time for design, testing, and approval of replacement containers with adequate internal volume, gross weights, and cost based on requests for an extension from potential applicants for certification. HPS further recommends that NRC expedite the review and approval process for updated replacement containers. *HPS Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 13, January 2006.*

Appropriate Sufficient Orphan Sources Recovery Funds

- HPS supports Congressional action to authorize programs and appropriate sufficient funds on an ongoing basis to maintain a robust national capability for the recovery and disposition of vulnerable and orphan sources within the United States and abroad in order to ensure the national defense and security and protection of public health and safety. *HPS Position Statement titled, "Continued Federal and State Action is Needed for Better Control of Radioactive Sources," PS021-0, Item 8, January 2006.*

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