

LOW-LEVEL RADIOACTIVE WASTE FORUM, INC.

DISCUSSION OF ISSUES: Management of Commercial Low-Level Radioactive Waste

Introduction

The following statement was developed by the Low-Level Radioactive Waste Forum, Inc. (LLW Forum) to set forth its consensus views regarding several aspects of low-level radioactive waste management¹. It is intended to guide decision-makers engaged in taking the steps necessary to serve the nation's need for services to manage low-level radioactive waste produced by industry, utilities, research institutions, medicine, and government. Through this statement, the LLW Forum highlights some of the complexities associated with addressing low-level radioactive waste management and disposal issues.

Background

The LLW Forum By its passage of the Low-Level Radioactive Waste Policy Act of 1980 and its 1985 amendments (the Act), Congress declared states responsible for the disposal of commercial low-level radioactive waste², and encouraged states to form interstate compacts to share this responsibility. As a result, it is states and interstate compacts that have the responsibility and authority for management of commercial low-level radioactive waste in the United States. Furthermore, in the majority of cases it is states, through agreements with the U.S. Nuclear Regulatory Commission (NRC) and independent state authority in certain cases³, which regulate the use of radioactive materials and the low-level radioactive waste disposal sites.

The Low-Level Radioactive Waste Forum, Inc. was established in 1985 to facilitate communications and interactions among states and compacts—the parties responsible for implementing the Act. Voting members of the Board of Directors are appointed by governors or compact commissions and are authorized to speak for their states and compacts with regard to low-level radioactive waste policy. Non-voting board members include representatives of federal agencies, disposal facility operators, brokers and processors, generators, industry organizations, and other interested parties.

¹ For purposes of this document, the term “waste management” is intended to be generic to refer to all services used for the management of commercial low-level radioactive waste, including disposal, treatment, processing, collection, packaging, consolidation, and storage. Note that the legal definition of this term varies by state and compact.

² The term “commercial low-level radioactive waste” includes most low-level radioactive waste produced by the federal, state, and local governments except for low-level radioactive waste generated by the U.S. Department of Energy, the U.S. Navy as a result of the decommissioning of naval vessels, and from the research, development, testing, or production of any atomic weapon.

³ NORM/TENORM regulation is not under Agreement State authority. However, some states and compacts do regulate NORM/TENORM.

The Federal Law The Act was designed to be flexible and to allow for change in response to events and circumstances around the country. In that regard, most people did not expect that there would be a need for ten different compact sites, but rather that as site availability conditions were established, unaffiliated states would join compacts and existing compacts would merge or establish cooperative agreements. This has happened and continues to happen. Examples include the formation of the Texas Low-Level Radioactive Waste Disposal Compact by the three unaffiliated states of Texas, Maine, and Vermont, ratified by Congress in September 1998⁴; the merger of the Northeast Interstate Compact for Low-Level Radioactive Waste Management and the State of South Carolina to create the Atlantic Interstate Low-Level Radioactive Waste Compact in July 2000; and the contract between the Rocky Mountain Low-Level Radioactive Waste Board and the Northwest Interstate Compact Committee in October 1992 to allow eleven states to use a single regional disposal facility.

Since adoption of the Act, generators have substantially reduced the volume of low-level radioactive waste being produced, which has in turn resulted in less demand for new disposal facilities.

There is the perception that no new sites have been developed since the passage of the Act. This is not accurate. The EnergySolutions' disposal facility in Clive, Utah (formerly known as "Envirocare of Utah"), which takes Class A low-level radioactive waste from all states/compacts authorizing shipment to the company's Clive disposal facility, became operational after passage of the Act and continues to operate under agreements negotiated with the Northwest Compact. This is a prime example of the ability of the current law to adjust to changing needs.

Currently disposal access exists for all classes of low-level radioactive waste from all states in the country. In contrast, the federal high-level radioactive waste and Greater Than Class C (GTCC) disposal programs continue to encounter obstacles, delays and uncertainty that have led to spent fuel and GTCC being stored nationally for an indefinite period of time.

Positions and Issues for Consideration

Position 1: Commercial low-level radioactive waste is currently well regulated and managed safely.

The management and disposal of low-level radioactive waste are carefully regulated by states that have regulatory agreements with the NRC to be the lead agency in protecting public health, safety and the environment. The Agreement states of Washington, South Carolina, and Utah currently host low-level waste disposal facilities. The possession, transfer and disposal of such waste require that a license be issued by a regulatory agency of jurisdiction. Such a license is issued only after strict regulatory guidelines are met and is subject to significant appellate processes. In addition, such licenses are subject to

⁴ Maine later withdrew from the Texas Compact, effective April 2004.

regular public review and scrutiny. Public participation is a significant component in licensing processes involving low-level radioactive waste management and disposal. As a result, the possession, transfer and disposal of low-level radioactive waste in the United States is a highly regulated and transparent activity.

Position 2: There is not an immediate crisis. The current national waste management system affords flexibility to make adjustments as conditions across the country change; however, it is important to continue working to meet all current and future disposal needs.

Since all generators currently have the opportunity to dispose of all Class A, B, and C low-level radioactive waste, there is no immediate crisis.

Disposal capacity for most Class A low-level radioactive waste is expected to be available for all generators for the foreseeable future. Future disposal capacity for Class B and C and certain types of Class A low-level radioactive waste is less certain as South Carolina state law requires that after July 1, 2008, the Barnwell regional disposal facility be limited to waste generated within the 3-state Atlantic Compact region.⁵ If this import restriction is not amended and no new disposal capacity is developed,⁶ 36 states will lack disposal capacity for Class B and C low-level radioactive waste after 2008.

It is significant to note that Class B and C low-level radioactive wastes are generated in very small quantities.⁷ Moreover, the U.S. Government Accountability Office determined in a June 2004 report that most generators can store Class B and C low-level radioactive waste indefinitely on site.⁸ While this is not the optimal solution, especially for many academic and medical radioactive material users, it does not pose a health or safety risk. This is evidenced by the fact that many of these same generators are currently storing GTCC and spent fuel due to the unavailability of federal government disposal capacity. In addition, generators continue to reduce the quantities of Class B and C low-level radioactive waste they generate.

⁵ The Atlantic Compact (Northeast Compact) statute states that no one can ship to the regional disposal facility without approval from the Commission and the host state (South Carolina).

⁶ The State of Texas is undergoing a siting process for a proposed facility that, if successful, would provide disposal for Class A, B, and C waste for the two states in the Texas Compact, Texas and Vermont. The Texas Compact law provides a discretionary option for the compact commission to contract for the disposal of waste from outside of the compact.

⁷ According to Chem-Nuclear, annual B/C waste generation is steady at about 22k cubic feet per year. States that may lose B/C access after June 2008 generate about 16k cubic feet per year, with medical and non-utility waste accounting for approximately 1,500 cubic feet of that total and utilities accounting for the remaining 14,500 cubic feet.

⁸ "Low-Level Radioactive Waste: Disposal Availability Adequate in the Short Term, but Oversight Needed to Identify Any Future Shortfalls," GAO-04-604, June 10, 2004.

Despite such mitigating factors, it cannot be stated with certainty that a crisis regarding disposal of Class B and C low-level radioactive wastes will not develop. It is important that decision-makers continue to work toward developing solutions to ensure that disposal options are provided for all classes of low-level radioactive waste.

Position 3: When evaluating alternatives to the current national waste management system, it is important to take into consideration political realities, economic consequences, and regulatory concerns. Proposals need to be carefully analyzed from the perspectives of all affected parties.

States and compacts agree that the ultimate goal is to provide safe, environmentally sound, reliable, and permanent access for the disposal of all commercial low-level radioactive waste generated in the nation. States and compacts must be allowed to pursue that goal by identifying solutions appropriate to the needs of their generators and their unique political situations.

Disposal of Commercial Waste in Federal Facilities The use of federal facilities for the disposal of commercial low-level radioactive waste has been suggested as an alternative or complement to the current system. In evaluating this suggestion, it is important to recognize that federal facilities are located in states. Proposals to use federal facilities will encounter the same, if not elevated, local and state concern associated with the development of new facilities at non-federal locations.

Further, concern exists related to the timeliness of ongoing environmental remediation at some federal facilities. Until remediation is completed at federal facilities it will be difficult to convince citizens that these facilities should be allowed to develop new disposal capacity for acceptance of off-site wastes.

Development of Commercial Disposal Capacity by Private Entities There has been discussion about the possibility of changing the Act to allow private companies to develop commercial disposal facilities. As can be seen from the history of the EnergySolutions' disposal facility in Clive, such a change in the law is not necessary to allow private entities to develop commercial facilities. If a private company is willing to develop a disposal site, either on private, state or federally-owned land, the Act is flexible enough to accommodate such action. This is already permissible under many Compacts. Individual state law can be and has been amended in some cases, to allow private entities to develop commercial disposal facilities.

Requiring Access to New or Existing Sites There has also been discussion about requiring existing or new disposal facilities to allow access to out-of-region generators. However, pressuring states with existing sites or that are developing sites to accept waste from outside their region runs the risk of inviting new restrictions or shutting down those sites altogether. It also should not be assumed that private companies operating compact sites would support this. For example, the State of Washington and US Ecology have agreed to incorporate a clause in the new sublease for the disposal facility in Richland, Washington, allowing the state to terminate the sublease if compacts lose the

exclusionary authority provided by federal law. It is important to remember that equity in disposal burden is what originally led to the passage of the Act.

Position 4: The federal government is currently providing several forms of appropriate assistance to states and compacts related to the management of commercial low-level radioactive waste.

The LLW Forum believes that there are a number of appropriate functions for the federal government to perform in a state-federal partnership to preserve existing commercial low-level radioactive waste disposal capacity and/or to develop additional capacity. The federal government can and should continue to support state and compact activities. For example, DOE can and should maintain a national database, the “Manifest Information Management System,” that provides decision-makers with current disposal information. Moreover, DOE financial support of the LLW Forum has helped to ensure that states and compacts remain aware of issues associated with the management of low-level radioactive waste throughout the nation.

Conclusions

The current system provides access for the management of Class A, B, and C low-level radioactive waste, including disposal, to all states throughout the country. Changing conditions, including the scheduled closure of the Barnwell disposal facility to out-of-region waste, may close off disposal access to Class B and C and some types of Class A low-level radioactive waste for a significant portion of the country, although other opportunities may alleviate or eliminate this problem. While the volume of Class B and C low-level radioactive waste is quite small, it remains important that disposal capacity for all classes of low-level radioactive waste be preserved and developed. Proposals for alternative approaches need to be carefully analyzed from the perspectives of all affected parties.

Waste generators can provide partial solutions through minimization and alternate procedures. This can reduce but not remove the need for reliable future disposal access.

States and compacts should continue to work with generators to ensure that disposal access remains available in the future. The LLW Forum stands ready to work with stakeholders through a collaborative process to identify a permanent solution regarding the management of all classes of commercial low-level radioactive waste. The LLW Forum is a resource for information and dialogue on national low-level radioactive waste issues.

Appendix

Statistics for the actual disposal of Class A, B, and C low-level radioactive waste over the last ten years (from MIMS)

Appendix to LLW Forum Discussion of Issues Statement:

Commercial Low-Level Radioactive Waste Disposal Summary
(Volume in million cubic feet and activity in million curies)

Year	Totals		Class A		Class B		Class C
	Volume	Activity	Volume	Activity	Volume	Activity	Volume
1995	1.247	0.172	0.861	0.000	0.014	N/A	0.005
1996	2.174	0.456	1.961	0.000	0.021	0.001	0.007
1997	2.310	0.127	2.277	0.007	0.024	0.033	0.009
1998	1.066	0.335	1.031	0.010	0.021	0.075	0.013
1999	0.983	1.877	0.939	0.014	0.024	0.033	0.020
2000	2.939	0.782	2.909	0.015	0.019	0.067	0.012
2001	3.422	0.491	3.385	0.007	0.018	0.023	0.019
2002	2.641	0.140	2.619	0.007	0.011	0.019	0.011
2003	2.830	0.623	2.795	0.005	0.012	0.136	0.023
2004	3.864	0.338	3.833	0.007	0.015	0.026	0.017
Totals	23.476	5.340	22.610	0.073	0.178	0.412	0.137

Source of information: Manifest Information Management System (MIMS), September 2005, prepared by U.S. Department of Energy. (Note: The above data does not include any DOE waste shipped to commercial disposal.)