

## Executive Summary

The Licensing Support Network (LSN) responds to a congressional mandate that the NRC reach a determination on the Department of Energy's (DOE) application for construction authorization for a high-level radioactive waste repository at Yucca Mountain in a three-year time frame. NRC expects to accomplish this by replacing the classic "discovery" exchanges among parties with electronic access to discovery materials prior to the docketing of a license application. The LSN is codified in 10 CFR Part 2, Subpart J. Since the original rule establishing a centralized dial-up Licensing Support System (LSS) was promulgated in 1989, there has been extensive interaction with the parties and potential parties to the proceeding under the auspices of the LSS, and later the LSN Advisory Review panel, a federal advisory committee chartered to provide advice and guidance on the design and operation of the system.

The LSN is intended to be a world wide web (www) approach to connecting each party's documentary collections on whatever hardware and software platform they choose within general guidelines reflecting agreed upon standards and formats. Subsequent to revision of Subpart J in late 1998 to adopt the LSN approach, the LSNARP met to consider web-based solutions to replacing the old mainframe-based architecture. A Technical Working Group (TWG) comprised of technical and licensing representatives of the LSNARP met for a number of sessions and developed five system architectures that met the criteria for a web-based solution that could provide an efficient and effective document discovery system. The TWG recommended three of those solutions to the LSNARP at a February 2000 meeting. The LSNARP was unable to reach consensus on a preferred solution. Subsequent presentation of the results of that February meeting to NRC's Information Technology Business Council led to a recommendation that three alternatives (numbered 1, 3 & 5) be fully characterized and presented in the Business Case.

Under Alternative 1, the LSN web site is merely a gateway to the other participant sites, at which search and retrieval activities are conducted with the tools provided by the site sponsor. In contrast, Alternative 3 uses portal technology to provide a unified search and retrieval interface, while Alternative 5 adds the potential performance boosting mechanism of a central cache that holds copies of all participant discovery information.

The Atomic Safety and Licensing Board Panel (ASLBP), as the LSN the business sponsor, after meeting with representatives of various constituencies within NRC and giving full consideration to the input from the LSNARP has reached the following conclusions relative to the LSN system alternatives:

Alternative 1 is of low benefit in delivering efficient or effective access to users, is comparable in risk to Alternatives 3 and 5, costs NRC approximately ■■■■ less than Alternative 3 and ■■■■ less than Alternative 5, but with the highest cost burden on the participants. This alternative was not recommended by the technical representatives of the members of the LSNARP. Moreover, its selection would be of concern because it creates a significant risk that system implementation and operation issues may result in disputes whose resolution could impact negatively on the agency's ability to meet its three-year schedule for making a decision on repository construction authorization.

Alternative 5 adds significant qualitative value over Alternative 1, provides the highest benefit, represents the lowest availability and performance risk, but presents the greatest risk of not meeting the existing implementation schedule and is the highest cost of all solutions examined, with NRC bearing a significant share of that cost burden. Moreover, its selection would be of concern to the LSN Administrator (LSNA) because it places the LSNA in a position of being accountable for the availability, accuracy, integrity, and custodial chain of participants' discovery materials.

The LSNA, with concurrence of ASLBP management, recommends Alternative 3 with the LSN servers established at an external location. While neither the least risky, nor the most beneficial, it represents the least cost to both NRC and the parties individually and in totality, and represents high value to the licensing proceeding users. It is the lowest cost of the two alternatives endorsed by the LSNARP TWG, is based on a proven technical solution that has been successfully implemented, facilitates the NRC's ability to comply with the schedule for decision on the repository construction authorization, provides an electronic environment that facilitates a thorough technical review of relevant documentary material, and ensures equitable access to the information for the parties to the hearing.