1132 Pipestem Place
Rockville, MD 20854
April 3, 2000

The Honorable G. Paul Bollwerk, III
Chief Administrative Judge
Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Dear Judge Bollwerk:

The Licensing Support Network Advisory Review Panel (LSNARP) met in Las Vegas, Nevada, on February 23, 2000, to consider various alternative computer system architectures for the Licensing Support Network (LSN). As chairman of the LSNARP, I am writing to report to you on the activities of the Panel at this meeting.

Pursuant to 10 C.F.R. § 2.1011(e)(1)(i) and the LSNARP charter, the LSNARP currently is charged with the responsibility of providing advice to the Nuclear Regulatory Commission, and more specifically, the agency's Chief Administrative Judge, on the type of system, and the associated functional requirements, necessary for the LSN. As you are aware, the LSN is intended to make relevant documentary material available to the parties to the high-level waste repository proceeding prior to the filing of the license application to avoid traditional time-consuming document discovery procedures. The LSNARP is comprised of representatives of the NRC, the Department of Energy (DOE), the State of Nevada, Nye County, Nevada, a coalition of the other units of local government in Nevada and California that border Nye County, the National Congress of American Indians (NCAI), the Nevada Nuclear Waste Task Force (NNWTF), and a coalition of industry groups. All Panel members were represented at the meeting except NCAI and the industry coalition.

At the February meeting, the Panel received the report of its Technical Working Group (TWG). That group, which is composed of computer technology representatives of the Panel's members, had been chartered at the first LSNARP meeting in October 1999 to examine in depth potential alternative computer system solutions and report back to the Panel. The TWG studied five alternatives. A brief description of each alternative is as follows:

- Alternative 1 makes each participant responsible for creating its own web site and providing its own search engine, with NRC principally responsible for maintaining an LSN web site with links to participants' sites.

- Alternative 2 proposes a solution building on Alternative 1, but requires an LSN web site that would perform searches by interfacing with the various search engines on the individual participant web sites.

● Alternative 3 employs "portal" technology in which software controlled by the LSNA would periodically "crawl" the other participant's web sites and create a central index of all participant database documents that would be accessible through a central search engine at the LSNA-maintained web site. When a user requests access to documents identified in a search, the portal obtains the files over the Internet from the server at the individual participant web site where the document resides. Alternative 3 provides a single user interface and allows creation of a priority user system to address denial of service problems that otherwise might arise in the event of heavy public usage or hacker attacks. This approach is the lowest cost alternative of the three architectures recommended by the TWG.

● Alternative 4 proposes a solution similar to Alternative 3, but requires that all parties co-locate their servers at a central site, controlled by the LSNA, to permit a "hard-wired" connection between the servers that would eliminate the need to use the Internet to obtain files identified in response to search requests.

● Alternative 5 also is a variation of Alternative 3. In this solution, the LSNA maintained "portal" web site not only would have a central document index and search engine, but also copies of all participant documents, thus making it unnecessary to gather relevant documents from the individual participant sites for presentation to the user. Alternative 5 has some potential system performance advantages; however, it also substantially increases the system costs to the NRC because of the significant electronic storage capacity it requires. Conversely, it substantially lowers the cost to the other participants.

Alternatives 1 and 2 were not recommended by the TWG because these solutions, although likely to have the least initial NRC expense of the five alternatives, would neither provide a uniform, centralized document search and retrieval capability nor a centralized information indexing system. Additionally, the TWG pointed out that the architecture employed by Alternatives 1 and 2 would not provide a "priority access" system for parties or their counsel and could significantly increase NRC costs for monitoring the integrity of participant databases. Alternatives 3, 4, and 5, all variants of Internet "portal" technology, were recommended by the TWG.

At the February LSNARP meeting, all five of the alternatives that the TWG studied were presented to the LSNARP. After considerable discussion, Panel members reached consensus against further consideration of Alternative 4 and no LSNARP members present favored Alternative 2. The Panel's deliberations, however, resulted in no affirmative consensus on any of the other three design alternatives.

In connection with the other alternatives, DOE and the NNWTF expressed strong sentiment in favor of Alternative 1. Similarly, the State of Nevada favored Alternative 1, but also endorsed Alternative 3 if the LSN Administrator concluded this approach was necessary for full

compliance with the 10 C.F.R. Part 2, Subpart J regulations. Nye County, on the other hand, has indicated it favors Alternative 5, with Alternative 1 as a second choice.

The LSN administrator (LSNA), who also serves as the NRC's voting representative to the LSNARP, voted for Alternative 3.

The LSNARP representative of the local government coalition requested additional time to caucus its members because not all were present at the meeting. As of this writing, I have been informed that there is no internal consensus within the local government group, with sentiment being expressed for Alternatives 1, 3, and 5.

Finally, although NCAI and the industry coalition were not present at the February 23 meeting, the LSNA thereafter attempted to contact representatives of both groups to solicit their views on the alternatives presented. As of this writing, NCAI and the industry coalition have not responded to the LSNA's request for views.

In conclusion, even though the Panel was unable to reach consensus on affirmatively recommending any one of the design alternatives, the deliberations of the LSNARP have indicated that Alternatives 1, 3, and 5 should be given serious consideration by the LSN Administrator.

The Panel greatly appreciates the work of the LSN Administrator and the members of the Technical Working Group in developing the five alternatives for the Panel's consideration. The Panel expects that, in conjunction with the TWG's technical contributions, its deliberations will be of significant benefit to the NRC in its ongoing activities leading to a final funding decision for the LSN system architecture.

Sincerely yours,

John C. Hoyle

cc: Chairman Meserve
      Commissioner Dicus
      Commissioner Diaz
      Commissioner McGaffigan
      Commissioner Merrifield