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**OFFICE OF  
THE INSPECTOR GENERAL**

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**U.S. NUCLEAR  
REGULATORY COMMISSION**

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Audit of the Licensing Support Network

OIG-04-A-16 August 12, 2004

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**AUDIT REPORT**

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August 12, 2004

MEMORANDUM TO: G. Paul Bollwerk, III  
Chief Administrative Judge

Luis A. Reyes  
Executive Director for Operations

FROM: Stephen D. Dingbaum/**RA**  
Assistant Inspector General for Audits

SUBJECT: AUDIT OF THE LICENSING SUPPORT NETWORK  
(OIG-04-A-16)

Attached is the Office of the Inspector General's audit report titled, *Audit of the Licensing Support Network*.

The report reflects the results of our audit to determine if (1) the Licensing Support Network (LSN) meets its required operational capabilities, (2) NRC's communication with parties regarding LSN has been adequate, and (3) LSN provides for the confidentiality, availability, and integrity of the data stored in the system. Overall, we found that, in May 2004, NRC reached a long-sought agreement with the Department of Energy concerning LSN document availability. Additionally, the Atomic Safety and Licensing Board Panel (ASLBP) communications with the parties about LSN and the Yucca Mountain licensing process have been effective. However, improvements are needed to strengthen LSN system security. Specifically, NRC needs to establish security agreements with all LSN interconnected parties and bring the LSN security plan into compliance with Federal regulations.

This report makes two recommendations to ASLBP to strengthen security of the LSN system.

Comments provided at the June 24, 2004, exit conference, during subsequent discussions, and in two memos dated July 14 and 16, 2004, have been incorporated, as appropriate, in our final report. Appendices D and E contain the Agency's comments in their entirety and our specific response to each comment.

If you have any questions or wish to discuss this report, please call me at 415-5915 or Beth Serepca at 415-5911.

Attachment: As stated

cc: W. Dean, OEDO

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## **EXECUTIVE SUMMARY**

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### **BACKGROUND**

The Nuclear Waste Policy Act of 1982, as amended, defines United States policies governing the permanent disposal of high-level radioactive waste. This act mandates that the Department of Energy (DOE) has responsibility for constructing, operating, and permanently closing a high-level nuclear waste storage and disposal facility. This process requires DOE to obtain authorization from the Nuclear Regulatory Commission (NRC) to construct such a repository, as NRC is the agency that regulates the civilian use of nuclear materials. Federal regulations that dictate the rules for licensing Yucca Mountain require NRC to develop the Licensing Support Network (LSN), a Web-based search and retrieval system designed to allow parties electronic access to all documents that could be used in the hearing.

### **PURPOSE**

The objectives of this audit were to determine if (1) the LSN system meets its required operational capabilities, (2) NRC's communication with parties regarding LSN has been adequate, and (3) the system provides for the confidentiality, availability, and integrity of the data stored in the system.

### **RESULTS IN BRIEF**

In May 2004, NRC reached a long-sought agreement with DOE concerning LSN document availability. Additionally, Atomic Safety and Licensing Board Panel (ASLBP) communications with the parties about LSN and the Yucca Mountain licensing process have been effective. However, improvements are needed to strengthen LSN system security. Specifically, NRC needs to establish written agreements addressing security responsibilities with parties whose servers are interconnected with LSN and to bring the LSN security plan into compliance with Federal regulations.

### NRC and DOE Agree on an Approach for Making Documents Available via LSN

In May 2004, NRC and DOE reached a long-sought agreement that allows parties access to DOE's discovery document collection in accordance with LSN Rule requirements concerning document availability. Through this agreement, DOE began providing NRC with electronic access to DOE's initial set of approximately 500,000 discovery documents before DOE certified this collection on June 30, 2004. Such access allowed NRC to begin processing and making these documents available in anticipation of a December 2004 license application submittal.

### ASLBP Communications With Parties Have Been Well Received

ASLBP staff efforts to communicate with and accommodate the technical needs of the parties who will be using LSN have been well received by party representatives. Responses to technical needs have included allowing parties access for both viewing the universe of discovery documents and making their own document collections available through the system.

### NRC Lacks Agreements on Security With Interconnected Parties

ASLBP lacks written agreements on security with parties whose servers are interconnected with LSN. Such agreements are required by Federal regulations between interconnecting system owners when one party is a Federal agency. NRC lacks such agreements<sup>1</sup> because ASLBP does not view LSN as interconnected, even though it meets the Government's definition of such a system. By establishing written agreements addressing security responsibilities with parties whose servers are interconnected with LSN, NRC can strengthen LSN's protection against security breaches that could compromise LSN and the interconnected servers. A security breach could compromise the discovery data, which would affect both the Yucca Mountain license proceedings and public confidence in NRC.

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<sup>1</sup> LSN is the only NRC owned interconnecting system.

### LSN Security Plan Lacks Complete Documentation

NRC has conducted extensive reviews of LSN system security; however, review results have not been documented in the system security plan despite Federal requirements that this occur. This information was not included in the security plan because ASLBP was unaware of these particular requirements. As a result, the security plan is not in compliance with Federal regulations. Furthermore, by storing this information in a single location, NRC can better ensure that security issues are addressed and resolved.

### **RECOMMENDATIONS**

This report makes 2 recommendations to ASLBP to strengthen security of the LSN system. A consolidated list of recommendations appears on page 11 of this report.

### **AGENCY COMMENTS**

On July 14, 2004, the Executive Director for Operations provided comments and on July 16, 2004, the Chief Administrative Judge provided comments concerning the draft audit report. We modified the report as we determined appropriate in response to these comments. Appendices D and E contain both NRC's comments and our specific response to each comment.

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## **ABBREVIATIONS AND ACRONYMS**

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ASLBP	Atomic Safety and Licensing Board Panel
DOE	Department of Energy
LSN	Licensing Support Network
NIST	National Institute of Standards and Technology
NRC	Nuclear Regulatory Commission
OMB	Office of Management and Budget



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## I. BACKGROUND

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### **Nuclear Waste Policy Act**

The Nuclear Waste Policy Act of 1982, as amended, (The Act) defines United States policies governing the permanent disposal of high-level radioactive waste. The Act mandates the Department of Energy (DOE) has responsibility for constructing, operating, and permanently closing a high-level nuclear waste storage and disposal facility. This process requires DOE to obtain authorization from the Nuclear Regulatory Commission (NRC) to construct such a repository, as NRC is the agency that regulates the civilian use of nuclear materials. The Act identifies Yucca Mountain, Nevada, as the single candidate site for the high-level waste repository. The Act, as amended, requires that once DOE submits a license application, NRC will have 3 years to perform its review, conduct a public hearing, and reach a decision as to whether DOE can proceed with construction. The law allows for a fourth year for the review process, if needed. Currently, DOE projects it will submit its license application in December 2004.

### **Creation of the Licensing Support Network**

Federal regulations that dictate procedures applicable to the proceeding for issuance of a license for a high-level waste geologic repository are contained in the Code of Federal Regulations, Title 10, Part 2, Subpart J, "Procedures Applicable to Proceedings for the Issuance of Licenses for the Receipt of High-Level Radioactive Waste at a Geologic Repository" (LSN Rule). These regulations require NRC to develop the Licensing Support Network (LSN), a Web-based search and retrieval system designed to allow parties electronic access to all documents that could be used in the hearing. One of LSN's main purposes is to lessen the discovery period (i.e., time spent on the exchange of documents that may be used as evidence in the NRC licensing proceeding), which occurs at the start of the license application process. Usually, the discovery process involves requests for physical access to documents.

The LSN Rule also identifies NRC's role and the roles of the other licensing process participants such as the LSN Administrator and the LSN Advisory Review Panel. According to the LSN Rule, the LSN Administrator is an NRC employee responsible for coordinating access to and the integrity of all data available on LSN. This individual also identifies technical and policy issues for the LSN Advisory Review Panel and Commission consideration.

The panel is a group of 17 representatives from interested parties<sup>2</sup> who are to provide advice to NRC on the technical requirements and functionality of LSN. The LSN Rule also:

- Describes the rules and guidelines for submitting documents to LSN,
- Defines the parties and their responsibilities for establishing their own data repository servers and providing their information to LSN,
- Establishes that once a party has submitted all documents to NRC, a party representative must certify to NRC that its collection is complete and electronically available, and
- Requires DOE to initially certify its document collection at least 6 months before submitting its license application and update the certification when submitting its license application.

### **System Capability**

LSN is a Web-based system that accesses other party-owned servers. Once each party establishes a server to house its documents, LSN connects with these servers, scans the information contained within these servers, and indexes the documents. (See Appendix B for a diagram of LSN architecture.) Indexing is a process that consists of searching the documents to identify key words and themes and then creating a store of these key words and themes with reference to the original data source for easy search and retrieval.

NRC's Atomic Safety and Licensing Board Panel (ASLBP) manages LSN development and is responsible for system security and functionality<sup>3</sup>. ASLBP conducts hearings for the Commission and performs other regulatory functions as the Commission authorizes. It will be ASLBP's role to act as the judge during the Yucca Mountain license proceeding. To date, NRC has spent over \$5 million to make the system capable and ready to receive discovery documents. The LSN business case states that the system will operate through fiscal year 2008, which will allow for its use throughout the licensing process.

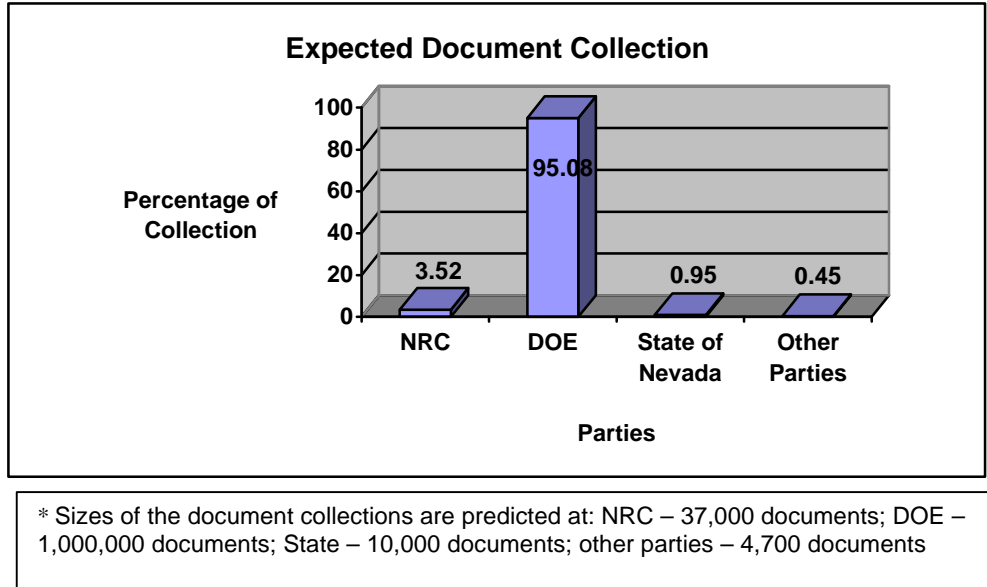
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<sup>2</sup> 10 CFR § 2.1001 states that for the purpose of the Yucca Mountain proceedings, party means DOE, the NRC staff, the state of Nevada, any affected unit of local government, and any affected Indian Tribe.

<sup>3</sup> The LSN system was developed under contract by AT&T. Network security is provided by the contractor, including firewall protection.

While LSN is capable of housing 4 million documents (40 million pages), as of May 2004, 140,455 documents had been loaded and indexed. Figure 1 contains the projected percentage of documents expected from each party.

Figure 1.



## II. PURPOSE

The objectives of this audit were to determine if (1) the LSN system meets its required operational capabilities, (2) NRC's communication with parties regarding LSN has been adequate, and (3) the system provides for the confidentiality, availability, and integrity of the data stored in the system.

## III. FINDINGS

In May 2004, NRC reached a long-sought agreement with DOE concerning LSN document availability. Additionally, ASLBP communications with the parties about LSN and the Yucca Mountain licensing process have been effective. However, improvements are needed to strengthen LSN system security. Specifically, NRC needs to establish written agreements addressing security responsibilities with parties whose servers are interconnected with LSN and to bring the LSN security plan into compliance with Federal regulations.

## **A. NRC AND DOE AGREE ON AN APPROACH FOR MAKING DOE DOCUMENTS AVAILABLE VIA LSN**

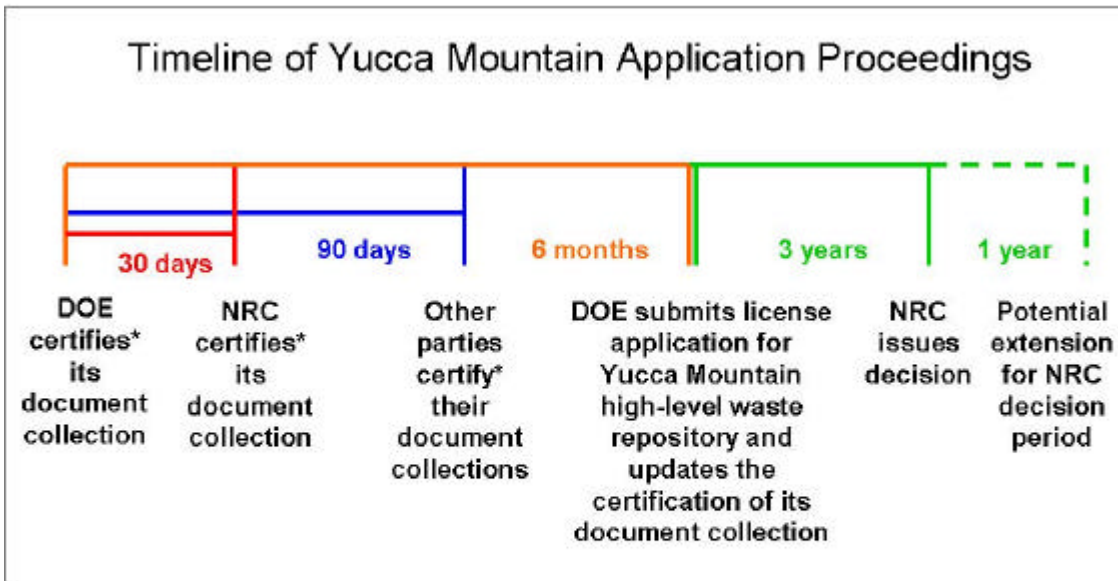
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In May 2004, NRC and DOE reached a long-sought agreement that allows parties access to DOE's discovery document collection in accordance with LSN Rule requirements concerning document availability. Through this agreement, DOE began providing NRC with electronic access to DOE's initial set of approximately 500,000 discovery documents before DOE certified this collection on June 30, 2004. Such access allowed NRC to begin processing and making these documents available in anticipation of a December 2004 license application submittal.

### **Document Availability Requirements**

LSN Rule requirements are intended to facilitate access to discovery documents before DOE submits a license application. DOE is required to certify and make its discovery documents electronically available at least 6 months before submitting the license application and must update this certification at application submittal time. NRC must certify and make its own discovery documents electronically available within 30 days after DOE's initial certification, and other parties must certify and make their material available within 90 days after DOE's initial certification (see Figure 2). The LSN Rule states that certification occurs when a responsible party official formally asserts to NRC that its discovery document collection has been identified and made electronically available.

Figure 2.



\*Through initial certification, each LSN participant (DOE, NRC, and other parties to the Yucca Mountain licensing proceeding) certifies the completeness of its document collection. Participants will be required to make available via LSN their initial collections as well as material created throughout the discovery process.

**NRC and DOE Concerns Over Availability**

The issue of timely document availability has been a point of contention for NRC and DOE in past years and, until recently, the two agencies had not been able to negotiate a solution to accommodate LSN processing time requirements. LSN can process and make documents available at a rate of approximately 150,000 documents per week. Given this processing rate, NRC requested that parties provide a significant percentage of their documentary material before certification in order to be indexed and loaded for availability in accordance with LSN Rule requirements. (See Appendix C for a timeline reflecting significant communications concerning LSN document availability.)

Prior to the recent agreement, DOE had not agreed to accommodate this request because DOE was concerned it would lose control over its collection and that its documents would become available prior to certification.



### **LSN Rule Revision and New LSN User Guidance Support NRC-DOE Agreement**

The recent NRC-DOE agreement is supported by (1) a revision to the LSN Rule concerning supplementation of initial document collections and (2) an ASLBP update of LSN user guidance with a section concerning pre-certification submission of documents to NRC for processing. The LSN Rule revision requires DOE and other parties to supplement their initial document collections with documents produced after certification up until the close of the discovery period<sup>4</sup>. ASLBP's new LSN user guidance (LSN Guideline Number 23, "Access Control Prior to Initial Certification") provides a strategy for parties to submit documents to LSN for pre-certification processing. The guidance explains that these documents need not be made available to the public or another party until the owner party provides initial certification of its document collection.

### **B. ASLBP COMMUNICATIONS WITH PARTIES HAVE BEEN WELL RECEIVED**

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ASLBP staff efforts to communicate with and accommodate the technical needs of the parties who will be using LSN have been well received by party representatives. Responses to technical needs have included allowing parties access for both viewing the universe of discovery documents and making their own document collections available through the system.

According to party representatives, ASLBP staff communicated effectively during numerous LSN Advisory Review Panel meetings held in Nevada during the LSN development stage. These meetings provided a forum in which party representatives could freely express concerns about the system. One representative stated these meetings allowed smaller parties to feel equal to large government agencies because all viewpoints expressed during these meetings received careful consideration. Another representative stated these meetings provided party representatives with valuable information on the licensing process, which they could then convey to their communities. A different party representative stated ASLBP staff consistently provided quick

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<sup>4</sup> Code of Federal Regulations, Title 10, Part 2, Appendix D, "Schedule for the Proceeding on Consideration of Construction Authorization for a High-Level Waste Geologic Repository," anticipates the close of discovery to occur near the time of the second pre-hearing conference held to finalize issues for hearing and set schedule for prefiled testimony and hearing.

and thorough responses to their questions. One party representative, experienced in public-government interactions, said these meetings provided the best interactions with government entities he ever experienced.

ASLBP staff have also provided technical support to the parties, although this type of assistance is not required by Federal regulations. Party representatives reported ASLBP addressed their system issues fairly and completely. These individuals stated the guidance they received helped them establish their servers. Some party representatives received hands-on training on LSN from ASLBP staff.

ASLBP's success in communicating with the parties has generated a positive view toward the agency and provides an example of NRC's efforts to strengthen public confidence.

### **C. NRC LACKS AGREEMENTS ON SECURITY WITH INTERCONNECTED PARTIES**

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ASLBP lacks written agreements addressing security responsibilities with parties whose servers are interconnected with LSN. Such agreements are required by Federal regulations between interconnecting system owners when one party is a Federal agency. NRC lacks such agreements<sup>5</sup> because ASLBP does not view LSN as interconnected, even though it meets the Government's definition of such a system. By establishing written agreements addressing security responsibilities with parties whose servers are interconnected with LSN, NRC can strengthen LSN's protection against security breaches that could compromise LSN and the interconnected servers. A security breach could compromise the discovery data, which would affect both the Yucca Mountain license proceedings and public confidence in NRC.

#### **Interconnected Parties Should Agree on Security Procedures and Controls**

Office of Management and Budget (OMB) Circular No. A-130 Appendix III, "Security of Federal Automated Information Resources," establishes a minimum set of controls that Federal agencies must include in their automated information security programs. OMB requires that before an agency allows its systems to be connected to other entities' systems, it must obtain written management authorization from the other system owners agreeing

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<sup>5</sup> LSN is the only NRC owned interconnecting system.

to implement measures to protect the integrity of the interconnections. This written agreement – which can be in the form of a memorandum of understanding between the agency and each interconnected entity – should define the rules of behavior and controls that must be maintained for the system interconnections, and should be included in the Federal agency’s system security plan.

The National Institute of Standards and Technology (NIST) defines interconnection as the direct connection of two or more information technology systems for the purpose of sharing data and other information resources. NIST identifies basic components of a system interconnection: two information technology systems and the mechanism by which they are joined (the “pipe” through which data is made available, exchanged, or passed one-way only).

### **LSN Has No Requirements for Interconnected Servers**

Although LSN meets NIST’s definition of an interconnected system, NRC lacks written agreements with interconnected LSN parties agreeing to protect the integrity of the interconnections. LSN contains numerous security features intended to protect the integrity of the system data, such as virus scanning and audit trails; however, there are no security requirements for interconnected servers. While such security requirements are not required for private sector interconnected servers, as a matter of prudent best practices, written agreements addressing security responsibilities should nonetheless be obtained.

### **NRC Does Not View LSN as an Interconnected System**

NRC never pursued written agreements with the other parties because ASLBP views the system as independent and not connected with other systems. An ASLBP member stated that LSN does not connect to the servers, but that it indexes the information on the server. The LSN security plan reflects this view, stating that LSN is an intermediary between public Web sites and LSN-specific sites and users. Thus, according to the plan, there is no interconnectivity between LSN and any other system.

During the course of this audit, OIG conveyed to ASLBP officials the need for a memorandum of understanding. ASLBP officials agreed and subsequent to the meeting developed a draft document for review by the parties and issued a final version on May 27, 2004.

### **Agreement Would Help To Mitigate Risk**

By establishing agreements on security with the interconnected server parties, NRC will strengthen LSN's protection against the risks posed by interconnectivity. For example, if an interconnection is not properly designed, security failures could compromise the connected systems and the data that they store, process, or transmit. Although LSN has not faced a security compromise, if LSN data were to become compromised this could affect both the license proceedings and the public confidence in the agency. The potential for compromise is underscored by the fact that, in most cases, the participating organizations have little or no control over the operation and management of the other party's system. It is critical NRC establish written agreements with parties whose servers are interconnected with LSN regarding the management, operation, and use of the interconnection.

### **RECOMMENDATION**

OIG recommends that the ASLBP:

1. Establish written agreements with each interconnected party detailing minimum security responsibilities for their interconnected system.

## **D. LSN SECURITY PLAN LACKS COMPLETE DOCUMENTATION**

NRC has conducted extensive reviews of LSN system security; however, review results have not been documented in the system security plan despite Federal requirements that this occur. This information was not included in the security plan because ASLBP was unaware of these particular requirements. As a result, the security plan is not in compliance with Federal regulations. Furthermore, by storing this information in a single location, NRC can better ensure that security issues are addressed and resolved.

According to OMB Circular No. A-130, Federal agency system security plans must be consistent with guidance issued by NIST. System security plans document the management, technical, and operational controls for protecting Federal automated information systems. NIST Special Publication 800-18, *Guide for Developing Security Plans for Information Technology Systems*, provides guidance for Federal agencies to follow when developing these plans. According to OMB and NIST, agencies must:

- Conduct a risk assessment as part of a risk-based approach to determining adequate, cost-effective security for a system,
- Perform, at least every 3 years, an independent review of the security controls for each major application,
- Include in each system's security plan information about the last independent review and any findings or recommendations from the review, and
- Place responsibility for ensuring system security and updating the system security plan on a management official<sup>6</sup> with knowledge of and responsibility for the system.

ASLBP has conducted extensive reviews of LSN system security; however, review findings and improvements made to LSN security have not been documented in the system security plan. These review efforts have included both NRC-sponsored risk assessments and an independent review by the National Security Agency to provide verification that existing controls provide a level of protection commensurate to the needs of the system. The ASLBP staff working on LSN have resolved the issues from both the in-house and independent reviews, yet NRC's LSN security plan does not reflect these efforts because ASLBP was unaware that this was required.

By documenting the results of NRC's risk assessments and security reviews in the LSN security plan, NRC will comply with Federal requirements and better ensure that security issues are addressed and resolved.

#### **RECOMMENDATION**

OIG recommends that the ASLBP:

2. Update the security plan to include information required by OMB Circular No. A-130.

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<sup>6</sup> For the LSN system this responsibility is placed with the LSN project officer who oversees the LSN contract.

## **IV. CONSOLIDATED LIST OF RECOMMENDATIONS**

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OIG recommends that the ASLBP:

1. Establish written agreements with each interconnected party detailing minimum security responsibilities for their interconnected system.
2. Update the security plan to include information required by OMB Circular No. A-130.

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## **V. AGENCY COMMENTS**

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On July 14, 2004, the Executive Director of Operations provided comments and on July 16, 2004, the Chief Administrative Judge provided comments concerning the draft audit report. We modified the report as we determined appropriate in response to these comments. Appendices D and E contain both NRC's comments and our specific response to each comment.



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## SCOPE AND METHODOLOGY

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This audit reviewed the Licensing Support Network (LSN) to (1) assess if the LSN system meets its required operational capabilities, (2) determine if the Nuclear Regulatory Commission's (NRC) communication with parties to the Yucca Mountain licensing proceedings has been adequate, and (3) determine if LSN provides for the confidentiality, availability, and integrity of the data stored in the system.

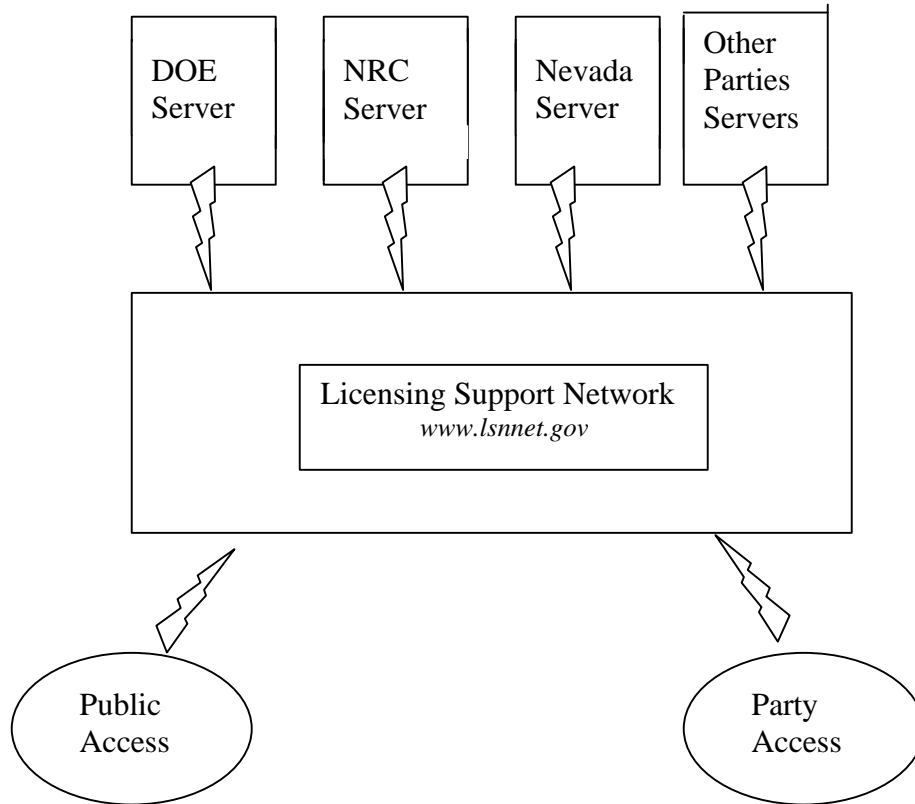
The Office of the Inspector General audit team reviewed relevant criteria, including the Code of Federal Regulations, Title 10, Part 2, Subpart J, "Procedures Applicable to Proceedings for the Issuance of Licenses for the Receipt of High-Level Radioactive Waste at a Geologic Repository" (LSN Rule); Office of Management and Budget Circular No. A-130 Appendix III, "Security of Federal Automated Information Resources"; General Accounting Office "Federal Information System Controls Audit Manual"; and National Institute of Standards and Technology guidance. The audit team also reviewed LSN business case and NRC system development documents to gain a comprehensive understanding of the system.

Auditors interviewed Atomic Safety and Licensing Board Panel staff to better understand the activities and actions taken concerning LSN, an Office of the Chief Information Officer staff member to determine compliance with system security requirements, and Office of the General Counsel staff to better understand NRC's role in the Yucca Mountain licensing process. Interviews were conducted with representatives from interested parties, including the Department of Energy; State of Nevada; City of Las Vegas; Clark, Churchill, Eureka, Lander, Lincoln, Mineral, and White Pine counties; and the Nevada Nuclear Waste Task Force.

This work was conducted from November 2003 through March 2004 in accordance with Generally Accepted Government Auditing Standards. The work was conducted by Elizabeth Bowlin, Auditor; Rebecca Underhill, Management Analyst; and Beth Serepca, Team Leader.

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## DIAGRAM OF LICENSING SUPPORT NETWORK ARCHITECTURE



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## **TIMELINE OF SIGNIFICANT LSN EVENTS**

<b>DATE</b>	<b>ACTIVITY</b>
June 2001	ASLBP issues LSN Guideline Number 8, "Schedule of Submission of Documentary Material." This guideline discusses the need for parties to make a "significant percentage" of their documentary material available before certifying their document collections are complete.
August 2001	LSN Semiannual Report to the Commission states once LSN is operational, an LSN-related dispute potentially could be raised that would require consideration by a Pre-License Application Presiding Officer.
August 2001	DOE estimates its document collection will comprise 900,000 documents.
October 2001	LSN system becomes operational.
June 2002	DOE projects it will submit its license application for the Yucca Mountain High-Level Waste Repository in December 2004, extending the date from March 2002. Given this application date of December 2004, DOE projects it will certify the completeness of its document collection in June 2004.
September 2002	LSN Semiannual Report to the Commission describes DOE's projected schedule. See June 2002 item above.
February 2003	LSN Semiannual Report to the Commission states that in November 2002, DOE issued a solicitation for a contractor to organize and prepare DOE documentary material, but has not indicated the date it expects to start making this material available to LSN.
April 2003	DOE revises its document collection estimate to 3- to 4-million documents. The documents are expected to comprise between 27.5- and 36.5-million pages.
April 2003	ASLBP responds in writing to DOE's new estimate of its document collection. ASLBP predicts it will take LSN software 40 weeks to index 4 million documents.
June 2003	DOE offers to index its document collection prior to certification. ASLBP declines, citing document integrity.

## Appendix C

DATE	ACTIVITY
August 2003	LSN Semiannual Report to the Commission states ASLBP advised DOE in a letter dated April 29, 2003, of their understanding that documents are not “available” via LSN until the indexing process is complete.
September 2003	ASLBP upgrades the capacity of LSN to visit, identify, and retrieve newly available materials from 100,000 to 150,000 documents per week.
February 2004	ASLBP corresponds in writing with DOE to negotiate a strategy to make the DOE document collection available to the LSN Administrator before certification. According to ASLBP, this could reduce the impact of LSN processing time on the licensing proceedings.
March 2004	ASLBP and DOE meet to discuss a strategy to make the DOE document collection available to the LSN Administrator before certification to reduce the impact of LSN processing time on the licensing proceedings.
April 2004	ASLBP issues LSN Guideline Number 23, “Access Control Prior to Initial Certification,” to inform parties of the steps required to submit documents to the LSN Administrator for processing prior to certification. This guidance specifically explains that these documents would not be available to other parties for case preparation until after certification.
April 2004	10 CFR, Part 2, Subpart J (the LSN rule) is in final draft stage of revision. Amendments pertain to LSN participants’ continuing obligation to update their documentary material after initial certification and other issues.
May 2004	DOE revises its document collection estimate to 1 million documents. The documents are expected to comprise 12 million pages.
May 2004	ASLBP and DOE reach agreement concerning document availability for processing by LSN. DOE agrees to provide documents to NRC in accordance with ASLBP guidance issued in April 2004.
June 2004	DOE submits initial certification of its document collection.
July 2004	The effective date of the revised final LSN Rule is July 14, 2004.

## ASLBP COMMENTS AND OIG RESPONSE

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UNITED STATES  
**NUCLEAR REGULATORY COMMISSION**  
 ATOMIC SAFETY AND LICENSING BOARD PANEL  
 WASHINGTON, D.C. 20555

July 16, 2004

TO: Steven D. Dingbaum  
 Assistant Inspector General for Audits  
 Office of the Inspector General

FROM: G. Paul Bollwerk, III *G. Paul Bollwerk III*  
 Chief Administrative Judge

SUBJECT: ATOMIC SAFETY AND LICENSING BOARD PANEL COMMENTS ON  
 LICENSING SUPPORT NETWORK AUDIT REPORT

The Atomic Safety and Licensing Board Panel (ASLBP) would like to thank the Office of the Inspector General (OIG) for the efforts of its audit team and for its recommendations for improving the effectiveness of the Licensing Support Network (LSN). We have some comments regarding the audit report, which are set forth below.

Regarding the discussion in Section C, NRC Lacks Agreements on Security With Interconnected Parties, we preface our comments with an update. We believe that documenting any mutual understanding of responsibility regarding information technology (IT) system security is a good practice that enhances the overall security posture of the system. Therefore, based on our discussions with OIG staff during the course of the audit, the LSN Administrator took the initiative to issue revisions to two guidelines and an associated Notification and Memorandum of Agreement (NMA) that were forwarded to the potential high-level waste repository licensing proceeding participants on May 27, 2004. We already have received one agreement, which was executed by the Department of Energy as part of its June 30, 2004 10 C.F.R. Part 2, Subpart J certification activities.

ASLBP nonetheless disagrees with the foundation of this finding, i.e., that the LSN, which was established pursuant to an agency rulemaking, represents an interconnection of information systems within the meaning of OMB Circular No. A-130 insofar as the participant equipment housing non-NRC document collections is not "used by the executive agency directly or . . . by a contractor under a contract with the executive agency."<sup>1</sup> The LSN architecturally is identical to FirstGov.gov in that it is an Internet-based, content-indexing, search engine with a standardized user interface that connects independently controlled document collection servers. Those participant servers and the data on them are not "under the direct management control"<sup>2</sup> of the LSN Administrator. Indeed, the view that the LSN does fit the A-130 criteria, carried to its logical conclusion, would mean that: (1) the NRC desktop web browser would require similar agreements for every page that each NRC user accesses; (2) every link on NRC's external web page that is marked with an exit tag would need to have a similar written agreement in place;

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<sup>1</sup> OMB Circular A-130, § 6.

<sup>2</sup> OMB Circular A-130, App. III, § A.2.c.



**Appendix D**

S. Dingbaum

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and (3) an agreement would be required for every file an NRC employee acquires across the Internet and saves on his or her "C:" drive.

With regard to Section D, LSN Security Plan Lacks Complete Documentation, ASLBP acknowledges the conclusion made in this finding. We further acknowledge not having responded to the NIST 800-18 guidance requiring inclusion of audit activities in the security plan and appreciate OIG bringing this to our attention. Recent efforts to resize the LSN platform afforded an opportunity to update the existing LSN security plan with the results of previous security audit efforts, which were fully, albeit separately, documented. For the record, however, we would note that all applicable security requirements prior to the September 12, 2003 release of Management Directive 12.5 were followed by the LSN project team. In response to this OIG finding, however, subject to the availability of funding, ASLBP commits to updating the LSN security plan to include the information required by OMB Circular No. A-130 to conform with Federal guidelines.

cc: Chairman Diaz  
Commissioner McGaffigan  
Commissioner Merrifield  
Annette Vietti-Cook, Secretary  
Luis E. Reyes, Executive Director for Operations

***OIG's Analysis of ASLBP's Comments***

While LSN is similar to FirstGov.gov in respect that they are both web portals, LSN is unique from this other system. LSN not only connects independent document collection servers, it retains information from those collection servers on its server. In addition, LSN deposits a unique identifier on every document contained within each independent document server. This transfer of information between independent servers increases the vulnerability to the LSN system. We contacted a NIST official who verified that LSN met the requirements of OMB Circular A-130 regarding interconnecting systems. Therefore this finding is unchanged.

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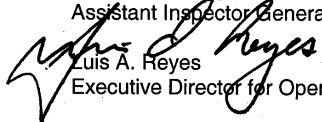
## EDO COMMENTS AND OIG RESPONSE



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 14, 2004

MEMORANDUM TO: Stephen D. Dingbaum  
Assistant Inspector General for Audits

FROM:   
Luis A. Reyes  
Executive Director for Operations

SUBJECT: OFFICE OF THE INSPECTOR GENERAL DRAFT AUDIT REPORT:  
REVIEW OF NRC'S LICENSING SUPPORT NETWORK

This memorandum provides comments on the subject draft report provided by your office on June 29, 2004, for NRC staff review. The staff provided comments on the discussion draft report during the exit conference on June 24, 2004. We note that revisions have been made to the report in response to the comments provided at the exit conference and appreciate the opportunity to review and formally comment on this latest version of the report.

Section C (NRC Lacks Agreements on Security With Interconnected Parties) and section D (LSN Security Plan Lacks Complete Documentation) of the report still appear to inappropriately imply that there have been NRC failures to comply with "Federal regulations," when in fact the operative reference is a Federal guideline. Consequently, we are recommending several changes to the report to address this issue. We also have recommendations to improve the clarity of the report. These suggestions and our rationale for the changes are provided in the attachment.

Should you have any questions about these comments, please contact either Bill Dean, at 415-1703, or Melinda Malloy at 415-1785.

Attachment: Comments

**COMMENTS ON OIG'S DRAFT OIG AUDIT REPORT:  
REVIEW OF NRC'S LICENSING SUPPORT NETWORK**

1. The first sentence of the paragraph entitled "Creation of the Licensing Support Network" (LSN) (page 1), incorrectly indicates that the Federal regulations that dictate the "rules for licensing" Yucca Mountain are contained in 10 CFR Part 2, Subpart J. Part 2, Subpart J defines procedures applicable to proceedings for issuance of licenses for receipt of high-level radioactive waste at a geologic repository. We suggest changing this sentence to read: "Federal regulations that dictate the rules for licensing Yucca Mountain procedures applicable to the proceeding for issuance of a license for a high-level waste geologic repository are contained in...Part 2, Subpart J."
2. Section A, NRC and DOE Agree on an Approach for Making DOE Documents Available via LSN (page 5). This section needs to be updated to reflect DOE's certification to the NRC on June 30, 2004, of the public availability through the Internet of documents relative to Yucca, as well as to reflect DOE's provision of documents prior to this certification (see DOE's press release at [http://www.doe.gov/engine/content.do?PUBLIC\\_ID=16120&BT\\_CODE=PR\\_PRESSRELEASES&TT\\_CODE=PRESSRELEASE](http://www.doe.gov/engine/content.do?PUBLIC_ID=16120&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE)).
3. The first paragraph under the section entitled "Future Issues" (page 7), is a discussion of estimates of the size of DOE's document collection. OIG may wish to update this information to reflect the estimates provided in the DOE press release issued on June 30, 2004 (see comment #2 for address).
4. Section C, NRC Lacks Agreements on Security With Interconnected Parties. The first sentence (page 9) should be clarified by revising it to read: "ASLBP lacks written agreements on addressing security responsibilities with parties whose servers are interconnected with LSN."
5. We do not believe that a plain reading of the information-sharing provision of Office of Management and Budget (OMB) Circular A-130, *Management of Federal Information Resources* (Appendix III, section f) serves as the legal regulatory reference source for "Federal regulations" in the context of mandating a written agreement. The circular does not use obligatory terms ("shall" or "must"). The draft audit report's reference to "Federal regulations" may be appropriately attributed to National Institute of Standards and Technology (NIST) Special Publication Number 800 -18, *Guide for Developing Security Plans for Information Technology Systems*. However, it should not be assumed that this publication is "Federal regulation" or requires complete compliance with the published guidance. The publication's introduction states, "This document provides a *guideline* for federal agencies to follow..." (emphasis added), and uses "should" throughout. Additionally, the Department of Justice Memorandum to Federal Chief Information Officers dated December 30, 1998, regarding the NIST security planning guide, refers to NIST Special

Attachment

## Appendix E

Publication 800 -18 as a useful “guide” that Federal agencies “can” use. Moreover, NIST Special Publication Number 800-47, *Security Guide for Interconnected Information Technology Systems*, expressly notes that it is not a guideline under NIST’s statutory authority and serves as **recommended** guidance. (emphasis added). Therefore, we recommend the following changes to the report:

- a. In the first paragraph of section C (page 9), we recommend changing the reference in the second sentence, “are required by Federal regulations,” to be more accurate, e.g., change to “are recommended by a National Institute of Standards and Technology (NIST) publication” or “are recommended by Federal guidelines.”
- b. In the paragraph of section C entitled “LSN Has No Requirements for Interconnected Servers” (page 10), we recommend adding the following sentence at the end of the paragraph: “While such security requirements are not required for private sector interconnected servers, as a matter of prudent best practices, written agreements addressing security responsibilities should nonetheless be obtained.”
- c. In the first paragraph of section D (page 11), we recommend that the third sentence be changed to read: “As a result, the security plan is not in compliance with Federal ~~regulations~~ guidance.”
- d. Change the sentence just prior to recommendation 2 in section D (page 13) to read: “By documenting the results of NRC’s risk assessments and security reviews in the LSN security plan, NRC will ~~comply~~ conform with Federal ~~requirements~~ guidelines...”
6. The diagram of the LSN architecture in Appendix B of the report (page 17) contains a block “Access to LSN Documents,” which is not connected to the rest of the diagram. We suggest providing an appropriate connection or deleting the block.
7. OIG may want to consider including the recent DOE certification on June 30, 2004 to the timeline of significant LSN events in Appendix C of the report (pages 18-19).

### ***OIG's Analysis of the EDO's Comments***

Below are the agency's comments to the draft audit report and OIG's response to each comment. Agency's comments appear in bold italics.

1. ***The first sentence of the paragraph entitled "Creation of the Licensing Support Network" (LSN) (page 1), incorrectly indicates that the Federal regulations that dictate the "rules for licensing" Yucca Mountain are contained in 10 CFR Part 2, Subpart J. Part 2, Subpart J defines procedures applicable to proceedings for issuance of licenses for receipt of high-level radioactive waste at a geologic repository. We suggest changing this sentence to read: "Federal regulations that dictate the rules for licensing Yucca Mountain procedures applicable to the proceeding for issuance of a license for a high-level waste geologic repository are contained in...Part 2, Subpart J."***

We modified the report wording to correctly characterize Subpart J.

2. ***Section A, NRC and DOE Agree on an Approach for Making DOE Documents Available via LSN (page 5). This section needs to be updated to reflect DOE's certification to the NRC on June 30, 2004, of the public availability through the Internet of documents relative to Yucca, as well as to reflect DOE's provision of documents prior to this certification (see DOE's press release at [http://www.doe.gov/engine/content.do?PUBLIC\\_ID=16120&BT\\_CODE=PR\\_PRESSRELEASES&TT\\_CODE=PRESSRELEASE](http://www.doe.gov/engine/content.do?PUBLIC_ID=16120&BT_CODE=PR_PRESSRELEASES&TT_CODE=PRESSRELEASE)).***

We modified the report wording to reflect DOE's certification to the NRC.

3. ***The first paragraph under the section entitled "Future Issues" (page 7), is a discussion of estimates of the size of DOE's document collection. OIG may wish to update this information to reflect the estimates provided in the DOE press release issued on June 30, 2004 (see comment #2 for address).***

We deleted this paragraph from the report.

4. ***Section C, NRC Lacks Agreements on Security With Interconnected Parties. The first sentence (page 9) should be clarified by revising it to read: "ASLBP lacks written agreements on addressing security responsibilities with parties whose servers are interconnected with LSN."***

We modified the report wording to reflect the agency's comment.

**5. We do not believe that a plain reading of the information-sharing provision of Office of Management and Budget (OMB) Circular A-130, Management of Federal Information Resources (Appendix III, section f)) serves as the legal regulatory reference source for “Federal regulations” in the context of mandating a written agreement. The circular does not use obligatory terms (“shall” or “must”). The draft audit report’s reference to “Federal regulations” may be appropriately attributed to National Institute of Standards and Technology (NIST) Special Publication Number 800 -18, Guide for Developing Security Plans for Information Technology Systems. However, it should not be assumed that this publication is “Federal regulation” or requires complete compliance with the published guidance. The publication’s introduction states, “This document provides a guideline for federal agencies to follow...” (emphasis added), and uses “should” throughout. Additionally, the Department of Justice Memorandum to Federal Chief Information Officers dated December 30, 1998, regarding the NIST security planning guide, refers to NIST Special Publication 800 -18 as a useful “guide” that Federal agencies “can” use. Moreover, NIST Special Publication Number 800-47, Security Guide for Interconnected Information Technology Systems, expressly notes that it is not a guideline under NIST’s statutory authority and serves as recommended guidance. (emphasis added). Therefore, we recommend the following changes to the report:**

- a. In the first paragraph of section C (page 9), we recommend changing the reference in the second sentence, “are required by Federal regulations,” to be more accurate, e.g., change to “are recommended by a National Institute of Standards and Technology (NIST) publication” or “are recommended by Federal guidelines.”**

EDO officials believe that section C is only recommended guidelines and not Federal requirements. OMB Circular A-130 is in fact a Federal regulation as noted by Circular A-1. This Circular states, “The provisions of any Circular or Bulletin, except as otherwise specifically provided in any given Circular or Bulletin, shall be observed by every such department or establishment insofar as the subject matter pertains to the affairs of such department or establishment.” Therefore the report wording remains unchanged.

- b. In the paragraph of section C entitled “LSN Has No Requirements for Interconnected Servers” (page 10), we recommend adding the following sentence at the end of the paragraph: “While such security requirements are not**



Appendix E

***required for private sector interconnected servers, as a matter of prudent best practices, written agreements addressing security responsibilities should nonetheless be obtained.”***

We included the agency’s recommended sentence.

- c. In the first paragraph of section D (page 11), we recommend that the third sentence be changed to read: “As a result, the security plan is not in compliance with Federal regulations guidance.”***

See OIG response for comment a.

- d. Change the sentence just prior to recommendation 2 in section D (page 13) to read: “By documenting the results of NRC’s risk assessments and security reviews in the LSN security plan, NRC will comply conform with Federal requirements guidelines...”***

See OIG response for comment a.

- 6. The diagram of the LSN architecture in Appendix B of the report (page 17) contains a block “Access to LSN Documents,” which is not connected to the rest of the diagram. We suggest providing an appropriate connection or deleting the block.***

We modified the diagram to more clearly delineate access to LSN.

- 7. OIG may want to consider including the recent DOE certification on June 30, 2004 to the timeline of significant LSN events in Appendix C of the report (pages 18-19).***

Added row to Appendix C to reflect DOE certification.