

**From:** Dan Graser  
**To:** Chris Berlien, David Hunt, Dennis Bechtel, Elaine Ezra, Englebrecht vonTiesenhausen, Glen Foster, Harry Leake, Harvey Spiro(...)  
**Date:** Tue, Mar 28, 2000 7:26 AM  
**Subject:** TWG meeting summary

Enclosure 14

Please review and provide comments by Thursday 3/30/2000. I'd like to send this out to the full ARP on Friday.

**CC:** internet:gfoster@gfoster.com, internet:Joseph\_speicher@labat.com, INTERNet:tony\_neville@labat.com, John Hoyle, John Hoyle, Matthew Schmit(...)

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**Creation Date:** Tue, Mar 28, 2000 7:26 AM  
**From:** Dan Graser

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twg_minutes_0320.wpd	127403	Tuesday, March 28, 2000 7:20 AM
MESSAGE	606	Tuesday, March 28, 2000 7:26 AM

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**Licensing Support Network Advisory Review Panel**  
**Technical Working Group Meetings**  
**March 20, 2000**

Attending:

Dan Graser	NRC/ASLBP	(301)415-7401	<a href="mailto:dig2@nrc.gov">dig2@nrc.gov</a>
Glen Foster	NRC/Labat	(703)598-3759	<a href="mailto:gfoster@gfoster.com">gfoster@gfoster.com</a>
E. v. Tiesenhausen	Clark Co	(702)455-5184	<a href="mailto:evt@co.clark.nv.us">evt@co.clark.nv.us</a>
Dennis Bechtel	Clark Co	(702)455-5178	<a href="mailto:dax@co.clark.nv.us">dax@co.clark.nv.us</a>
Chris Berlien	Nye Co	(702)795-8254	<a href="mailto:chris.berlien@terraspectra.com">chris.berlien@terraspectra.com</a>
Tom Nartker	UNLV-ISRI	(702)895-0848	<a href="mailto:tom@isri.unlv.edu">tom@isri.unlv.edu</a>
Kazem Taghva	UNLV-ISRI	(702)895-0873	<a href="mailto:taghva@cs.unlv.edu">taghva@cs.unlv.edu</a>
Lew Robertson	MTS/YMP	(702)794-5077	<a href="mailto:lew_robertson@ymp.gov">lew_robertson@ymp.gov</a>
Harry Leake	M&O/YMP	(702)295-5531	<a href="mailto:harry_leake@ymp.gov">harry_leake@ymp.gov</a>
Josie Larson	White Pine Co		<a href="mailto:wpnucwst@idsely.com">wpnucwst@idsely.com</a>
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Sheldon Trubatch	DOE/Winston & Strawn	(202)	<a href="mailto:Strubatc@winston.com">Strubatc@winston.com</a>

The meeting commenced at 8:30 am.

Dan Graser opened the meeting by explaining the need for developing system functional requirements. Functional requirements are included with a Capital Planning and Investment Control document being prepared for presentation to NRC's Executive Council in order to receive authorization to commence system design activities. The presentation set of functional requirements used to commence the discussion (ATTACHMENT A) are based on a restatement of the functional requirements generated by DOE/TRW and presented to the LSSARP in 1995 and additional requirements derived from the current rule. The numbering sequence of high level functional requirements and secondary level functional requirements was provided.

Sheldon Trubatch representing the Department of Energy stated a number of positions and opinions prior to the commencement of discussions about the technical attributes of the system. His comments addressed issues on LSNA authority to levy requirements, the Functional Requirements being a regulation and a "compliance document", and identification of who in NRC has the authority to establish policy for the agency or on behalf of the agency. He cautioned that the functional requirements if adopted by staff will be fair game in a proceeding and requested that NRC's Office of General Counsel "needs to opine on the role of the LSNA".

The group then took up the business at hand. At DOE's request, a clarification was made to specify that data management processes were in the scope of the system. At DOE's request, the system scope was revised to remove any data processing procedures. At DOE's request, the system scope was revised to remove any provision for end user training. Additionally, at DOE's request, the system scope was revised to remove end-user assistance or help-desk capability. Therefore, the system definition now reads:

LSN 1.01 The term Licensing Support Network is defined as the combined totality of hardware, software, communications, data management processes, documentation, security, and backup and recovery services that makes relevant documentary material

available by methods including searching, retrieving and delivery to the users of the headers, text and images as detailed in 10 CFR Part 2, Subpart J to parties, potential parties, and interested governmental participants to the proceeding for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to 10 CFR, Part 63, as part of the electronic docket or electronic access to documentary material, beginning in the pre-license application phase.

At DOE's request, a requirement was proposed that each component of the system include a disclaimer to be drafted by each party for their own sub-component system to the effect that their sub-system implementation does not inherently guarantee the delivery or either precision or recall, regardless of the tools that the party chooses to make available for users visiting that site. Finally, an editorial correction to the CFR citation used in the old LSS Functional Requirements document was made so that it now reads Part 63, rather than Part 60.

At 10:10 am discussion commenced on the subsequent functional requirements as follows:

LSN 1.02      No change

LSN 1.03      Revise to read:

LSN 1.03 - The LSN shall adhere to established Federal Government, international, and/or industry hardware and software standards appropriate to meeting the intent of the rule.

LSN 1.04      No change

LSN 1.05      Revise to read:

LSN 1.05 - The LSN shall utilize an electronic information exchange function that provides for an electronic acknowledgment that a motions practice document has been transmitted to a requester. The acknowledgment shall include as a minimum, the name and electronic address of the recipient and the date the document was delivered.

LSN 1.06      No change

LSN 1.07      No change

LSN 1.08      Discussion focused on the fact that the rule requires only that users be provided with instructions as to where they may locate images of documentary material unless it is of the class of materials that are graphically oriented and for which there is no text. Revise to read:

LSN 1.08 - The LSN shall be capable of electronically storing and retrieving digital images of each page of a graphic oriented documentary material.

LSN 1.09      Discussion focused on the fact that conversion is entirely the responsibility of the participants. Strike in its entirety.

- LSN 1.10 Discussion focused on the fact that the rule requires only that headers be made available, not that they need to be presented by the participants in a software package. E.g., nothing is required of the participant that allows the header records to be electronically searchable. Revise to read:
- LSN 1.10 - The LSN shall provide tools to assist users in identifying documents consistent with the technology.
- LSN 1.11 Discussion focused on the fact that this capability is entirely up to the capabilities of the users' workstation. Strike in its entirety.
- LSN 1.12 Discussion focused on removing "and other automated processes" since this terminology does not apply to any need identified in rule, only to processes that may be anticipated by future technology developments and that it may be construed as requiring an open-ended commitment that may be difficult for smaller participants to meet. Revise to read:
- LSN 1.12 - The LSN shall provide a user interface compatible with current browser technologies including access using both graphical and text-only browsers to documentary collections. Additionally, the LSN shall support non-interactive access by web "crawlers" to the LSNA.
- LSN 1.13 Discussion focused on removing entire requirement as per DOE opinion that a) 10 CFR Part 2, Subpart J does not authorize LSNA to levy any regulatory requirements; b) that the LSNA is responsible for coordinating access and [coordinating] integrity of the data; and c) that the LSNA is not responsible for the integrity of the data *per se*. No change pending DOE action.
- LSN 1.14 Discussion focused on the fact that participants self certify their compliance with making documentary material available and the DOE assertion that the rule does not make anyone, including the LSNA, responsible for data integrity. Revise to read:
- LSN 1.14 - The LSN shall be designed to allow the LSN Administrator to coordinate the availability and the integrity of the information stored within the LSN.
- LSN 1.15 Discussion focused on the fact that participants are responsible for ensuring the security of their own system and that LSNA is not responsible for the integrity of the data that is accomplished via system security measures. Strike in its entirety.
- LSN 1.16 Discussion focused on the fact that duplicate copies are inherent in each participant making their own documents available. Strike in its entirety.
- LSN 1.17 No change
- LSN 1.18 No change
- LSN 1.19 No change
- LSN 1.20 No change

LSN 1.21      Revise to read:

LSN 1.21 - Each participant must have the designated official certify, in accordance with § 2.1009 that procedures have been implemented, that documentary material has been made electronically available, and update these certifications at 12 month intervals. DOE additionally certifies its compliance at the time of the license submission.

LSN 1.22      Revise to read:

LSN 1.22 - Each participant must obtain the computer system necessary to comply with the requirements for document production and service.

LSN 1.23      Revise to read:

LSN 1.23 - For documents not provided to other parties in electronic form, potential parties, interested governmental participant, or party responsible for the submission of documents must identify all documents not made available in electronic form per § 2.1003 in an electronic notice; and make them available within five days after a request for a document on that list is received.

LSN 1.24      No change

LSN 1.25      Discussion focused on not allowing terminology such as "other web access tools" that might be useful in anticipating technology developments, and also remove language that implies that the participants must provide search tools for structured data header records. Revise to read:

LSN 1.25 - Each LSN participant must prepare and publish its documentary collections in a manner that allows access by internet users.

LSN 1.26      No change

LSN 1.27      No change

LSN 1.28      Discussion focused on removing terminology that implies that the participants must provide search tools for structured data header records. Revise to read:

LSN 1.28 - Each LSN participant must provide a bibliographic header with each document or other material submitted, including submissions for which no text or image is available and for privileged, confidential, safeguards and other types of limited access documentary material as specifically identified.

LSN 1.29      Discussion focused on not paraphrasing the rule. Revise to read:

LSN 1.29 - NRC, DOE, and each other potential party, interested governmental participant or party shall provide an authentication statement that indicates where an authenticated image copy of the document can be obtained.



- LSN 1.30 Discussion focused on this FR being duplicative of LSN 1.17. Delete 1.17 in its entirety. Second level requirements listed will be moved and renumbered accordingly.
- LSN 1.31 Discussion focused on use of the term "provision" and on the concept of "periods of normal activity". Revised to read:
- LSN 1.31 - Each LSN participant must design and implement their web facility to ensure acceptable access and responsiveness during periods of normal activity consistent with performance specifications.
- LSN 1.32 et seq. Discussion focused on the distinction between the pre-licensing docket and the official docket established by SECY. Revised to read:
- LSN 1.32 - The LSN in its management of the electronic docket must provide a docket that receives, stores, distributes, and maintains docket materials beginning 30 days after DOE submission of the site recommendation to the President.
- LSN 1.33 - The NRC, in its management of the electronic docket, must provide a Protective Order File.
- LSN 1.34 - The NRC, in its management of the electronic docket, must deliver all answers, orders and decisions per §2.1013(c) (e.g., electronically, using secured process).
- LSN 1.35 - The NRC, in its management of the electronic docket, must provide the computer system necessary to comply with service requirements.
- LSN 1.36 - The NRC, in its management of the electronic docket, must maintain the docket.
- LSN 1.37 - The NRC, in its management of the electronic docket, must provide an electronic docket that contains a list of all exhibits, showing where in the transcript each was marked for identification and where it was received into evidence or rejected.
- LSN 1.38 - The NRC, in its management of the electronic docket, must enter hearing transcripts into the docket on a daily basis in order to provide next-day availability at the hearing.
- LSN 1.39 - The NRC, in its management of the electronic docket, must establish a mechanism whereby all filings are able to be submitted/received electronically and to require that a password security code for transmission of these documents.
- LSN 1.40 - The NRC, in its management of the electronic docket, must provide a mechanism by which all Presiding Officer and Commission issuances and orders are transmitted electronically.
- LSN 1.41 - The NRC, in its management of the electronic docket, must provide a mechanism by which the Presiding Officer and all counsel of all parties have access

to the electronic docket (including Protective Order File) as authorized during the hearing.

LSN 1.42 - The NRC, in its management of the electronic docket, must identify a means by which the unavailability of the electronic docket for more than 4 hours in any day is communicated to the Presiding Officer so that the day is not counted in the computation of time.

LSN 1.43 - The NRC, in its management of the electronic docket, must provide a mechanism to receive electronically transmitted depositions (including questions, cross-questions, and answers) and enter them into the docket file.

LSN 1.44 - The NRC, in its management of the electronic docket, must identify a means by which only a part or parts of a deposition may be offered into evidence.

LSN 1.45      Strike in its entirety

LSN 1.46      Revised to read:

LSN 1.46 - Each LSN participant must demonstrate substantial and timely compliance with §2.1003 in order to be granted party status.

LSN 1.47      Revised to read:

LSN 1.47 - Absent good cause, each LSN participant must ensure that any exhibit is available before the commencement of that portion of the hearing where it will be offered.

LSN 1.48      Revised to read:

LSN 1.48 - For parties and interested governmental participants service is completed when a the sender receives electronic acknowledgment ("delivery receipt") that the electronic submission has been placed in the recipient's electronic mailbox.

LSN 1.49      Revised to read:

LSN 1.49 - Each LSN participant may utilize an electronic acknowledgment ("delivery receipt") as proof of service.

LSN 1.50      Revised to read:

LSN 1.50 - Deponents and must submit an electronic index of all documents in his/her possession relevant to the subject matter of the deposition to all parties and interested government participants identifying which were already made available electronically.

LSN 1.51      Revised to read:

LSN 1.51 - Deponents must bring a paper copy of all documents on an electronic index of all documents in his or her possession, relevant to the subject matter of the deposition, that the deposing party or interested governmental participant requests that have not already been provided electronically.

LSN 1.52 No change

LSN 1.53 Delete in its entirety

LSN 1.54 Discussion focused on the separate requirements for use of electronic submissions in the pre-hearing phase versus those to the electronic docket. There was request to split this requirement. Revise to read:

LSN 1.54 - During the pre-license application phase, each LSN participant must use the procedures specified in §2.1013(c) for service of all pleadings, and answers, orders, and decisions.

LSN 1.54a - During the licensing proceeding, each LSN participant must use the procedures specified in §2.1013(c) for service of all pleadings, and answers, orders, and decisions.

LSN 1.55 Revised to read:

LSN 1.55 - Absent good cause, parties and interested government participants must submit all filings electronically using a password security code for transmission of documents to the electronic docket.

LSN 1.56 Revised to read:

LSN 1.56 - Parties and interested government participants must transmit depositions to SECY in electronic form for entry into the docket. Source: [§2.1019(d) and (e)].

In addition to these understandings on the high level functional requirements, commentary was made on many, but not all, of the second level functional requirements as they were presented (and can be found in Appendix A to these minutes). The commentaries were as follows:

LSN 2.03.03 w3.org was identified.

LSN 2.04.01 request by non-technical participants at the TWG to remove the term "arbitrary" expressing the ability to support browser products as a class rather than all named/specified. (e.g., "arbitrary" was used in the ADP environment as in the capability to "...support hypermedia extensions via arbitrary hypertext links and symbolic cross-references between evolving remote documents. It also allows the specification of conditional text and the inclusion of raw HTML commands...."

LSN 2.05.01 Discussed until it became evident that all web site servers keep logs and the logs are needed for auditing/performance functions.

- LSN 2.10.01 Discussion focused on the need to remove this since the rule does not require participants to provide any mechanism for users to search bibliographic headers that the participants provide.
- LSN 2.12.01 Discussion to revise "must" to shall, and, to remove all text beginning with the sentence beginning "Alternatively, separate browser-specific....."
- LSN 2.12.02 Discussion by DOE that they may have comments on authoring their web site so that it complies with the w3.org guidelines for making their site accessible by individuals with disabilities.
- LSN 2.12.04 Discussion about the intent - that we wanted to allow the participants to place their data on a platform that is not necessarily dedicated to LSN. Final comment was to keep this statement as worded.
- LSN 2.15.01 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.15.02 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.16.01 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.19.01 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.19.02 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.20.01 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.20.02 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.20.03 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.20.04 Discussion on the powers of the LSNA to require that participants adhere to an LSNA stated acceptable security principles and practices. Pending DOE input.
- LSN 2.22.04 Discussion that some other parameter rather than three working days needs to be established. Perhaps replace the last sentence to read ". . .complete restoration of the site within the parameters of the participants disaster recovery plans."
- LSN 2.22.06 request by non-technical participants at the TWG to remove the term "arbitrary" expressing the ability to support browser products as a class rather than all named/specified. (e.g., "arbitrary" was used in the ADP environment as in the capability to "...support hypermedia extensions via arbitrary hypertext links and

symbolic cross-references between evolving remote documents. It also allows the specification of conditional text and the inclusion of raw HTML commands....”

- LSN 2.27.02 Discussion to place the accuracy threshold at 95% on a document level and to delete any per-page standard. Adjust the percentage points accordingly throughout the proposed statement.
- LSN 2.27.03 Discussion the use of PNG instead of JPEG, GIF, or TIFF/JPEG. DOE requested one week to check with their technical staff on the ramifications. Pending DOE input.
- LSN 2.27.04 (Erroneously labeled as 2.27.06 on the working paper) Discussion focused on the need to remove this since the rule does not require participants to provide any mechanism for users to search bibliographic headers that the participants provide.

Subsequently, there was discussion on Table A and the header field structures for the old LSS system design. Clarification was provided as to what the column labeled “Mandatory or Required by LSSA” meant. The meeting adjourned at approximately 5:25 pm.

## **Appendix A**

### **Licensing Support Network Functional Requirements Revised Draft for TWG Consideration**

20 March 2000

#### **1. Overall**

##### **1.1 LSN System Definition**

LSN 1.01 The term Licensing Support Network is defined the combined totality of hardware, software, communications, data processes and procedures, training, end-user assistance and help-lines, documentation, security, and backup and recovery services that makes relevant documentary material available by methods including searching, retrieving and delivery to the users of the headers, text and images as detailed in 10 CFR Part 2, Subpart J to parties, potential parties, and interested governmental participants to the proceeding for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to 10 CFR, Part 60, as part of the electronic docket or electronic access to documentary material, beginning in the pre-license application phase.

The specific method of providing access to documentary material is not mandated by the LSN Rule in order to accommodate on-going and future technology advances. [63 FR 71735, SUPPLEMENTARY INFORMATION]. For the purposes of developing these requirements, the technology to be adopted for development and implementation of the LSN is based on the facility popularly known as the "World Wide Web" (www or web) on the Internet. More specifically, this can be defined as dissemination of information with HTTP (HyperText Transport Protocol) servers to HTTP clients.

##### **1.2 General Characteristics of Overall System**

LSN 1.02 - LSN components shall be integrated using modular design techniques and well-documented interfaces which allow individual components of the system to be replaced without significantly impacting other components. Source: adaptation of [LSS 1-001].

LSN 1.03 - The LSN shall adhere to established Federal Government, international, and/or industry hardware and software standards to the extent feasible. Source: adaptation of [LSS 1-002].

LSN 2.03.01 - The standard for network access shall be HTTP/1.1 [<http://www.faqs.org/rfcs/rfc2068.html>] over TCP (Transmission Control Protocol, [<http://www.faqs.org/rfcs/rfc793.html>]) over IP (Internet Protocol, [<http://www.faqs.org/rfcs/rfc791.html>]).

LSN 2.03.02 - The standard for associating server names with IP addresses shall be the DNS (Domain Name System), [<http://www.faqs.org/rfcs/rfc1034.html>] and [<http://www.faqs.org/rfcs/rfc1035.html>].

LSN 2.03.03 - The standard for web page construction shall be HTML version 4.0 [<http://www.w3.org/TR/REC-html40/>].

LSN 2.03.04 - The standard for electronic mail (e-mail) exchange between e-mail servers shall be SMTP (Simple Mail Transport Protocol, [<http://www.faqs.org/rfcs/rfc821.html>]).

LSN 2.03.05 - The standard for the format of an electronic mail message shall be per [<http://www.faqs.org/rfcs/rfc822.html>] optionally extended by MIME (Multimedia Internet Mail Extensions) per [<http://www.faqs.org/rfcs/rfc2045.html>] to accommodate multimedia e-mail.

LSN 1.04 - The LSN shall provide for electronic exchange of information. This function shall allow users to identify and receive electronic documents (e.g. motions, filings, orders, decisions, etc.). Source: adaptation of [LSS 1-003].

LSN 2.04.01 - All participating entities shall ensure access to their documentary collection through electronic means. Specifically, ensuring that any Internet user, through the use of an arbitrary web browser, will be able to locate, identify, and retrieve documents of interest in relevant formats (header, text, and image).

LSN 2.04.02 - All participating entities shall ensure that they can receive and reply to Internet-standard electronic mail by arbitrary Internet users using Internet-standard e-mail MUAs (Mail User Agents) and MTAs (Mail Transfer Agents).

LSN 1.05 - The LSN shall utilize an electronic information exchange function that provides for an electronic acknowledgment that a document has been delivered to a recipient. The acknowledgment shall include as a minimum, the name and electronic address of the recipient and the date the document was delivered. Source: adaptation of [LSS 1-024].

LSN 2.05.01 - All participating entities shall maintain an electronic log of all retrievals of LSN documents from their web site. This log will contain the IP address or DNS host name of the recipient's computer and the date and time of delivery. The log shall be in either the web standard "Common Log Format" or "Combined Log Format."

LSN 2.05.02 - All participating entities shall maintain a log of all LSN-related electronic mail transactions. This log will contain the IP address or DNS host name of the recipient's computer, the sender and recipient's user names, and the date and time of exchange.

LSN 2.05.03 - All participating entities shall maintain a log of all non-electronic LSN-related deliveries. This log will contain recipient identification, date of delivery, and method of delivery.

LSN 1.06 - The LSN shall be capable of electronically storing and retrieving bibliographic headers in the system. Source: adaptation of [LSS 1-012].

LSN 2.06.01 - Bibliographic headers will contain all fields as described in Table A.

LSN 2.06.02 - Bibliographic headers will be stored in a manner that they can be retrieved through reference to any field as designated in Table A (key fields).

LSN 2.06.03 - Bibliographic headers will be stored in a manner that the contents of their fields can be searched for specific data.

LSN 1.07 - The LSN shall be capable of electronically storing and retrieving document texts. Source: adaptation of [LSS 1-013].

LSN 1.08 - The LSN shall be capable of electronically storing and retrieving digital images of each page of a document. Source: adaptation of [LSS 1-014].

LSN 2.08.01 - All participating entities must provision their web server with enough storage to accommodate their entire document collection headers, text, and images.

LSN 2.08.02 - All participating entities must store each document image in a page per file format.

LSN 1.09 - The LSN shall provide the capability to convert documents to standard text electronic format including the ability to recognize characters from an image of a document and convert these characters into a standard text representation of the document. Source: adaptation of [LSS 1-005].

LSN 2.09.01 - All participating entities must provide the capability to OCR or otherwise convert documents to standard searchable text.

LSN 2.09.02 - All participating entities must either store this text for retrieval from their web servers or provide on-the-fly conversion. If the latter, the technique



adopted for conversion must be capable of identical output over multiple conversions of a particular document.

LSN 1.10 - The LSN shall provide tools to give users the ability to identify and retrieve documents when the unique identifiers for the document are not known to them. Examples might include document categorization via taxonomies, thesauri, synonym processing, natural language queries, or other search aids. Source: adaptation of [LSS 1-020].

LSN 2.10.01 - All participating entities must provide the capability of identification of relevant documents through searching the text and/or header of the document.

LSN 2.10.02 - All participating entities must provide an index or table of contents of documents housed on their web site.

LSN 2.10.03 - All participating entities must provide the capability to retrieve documents identified either through searching or browsing.

LSN 1.11 - The LSN must be able to provide a mechanism that will allow retrieval and display of document text with the associated page images on a standard web browser. Source: adaptation of [LSS 1-029].

LSN 2.11.01 - All participating entities must provide the capability of retrieving the image of a specified document's page that contains a text selection provided by an arbitrary user.

LSN 2.11.02 - All participating entities must provide the capability of retrieving the image of a specified document's page when provided with the page number reference in the document.

LSN 2.11.03 - All participating entities must provide the capability of retrieving the relevant or entire text of a document when provided with any image page reference.

LSN 1.12 - The LSN shall provide a user interface compatible with current browser technologies including access using both graphical and text-only browsers to documentary collections. Additionally, the LSN shall support access by non-interactive web "crawlers" and other automated processes. Source: adaptation of [LSS 1-022].

LSN 2.12.01 - All participating entities must provide a web page interface to their documentary collections. These web pages must be written to be easily deciphered by graphical, text-only, and automated HTTP clients. Alternatively, separate browser-specific web pages may be provided for alternative browser technologies. If this alternative is adopted, these web page hierarchies must

present substantively identical information to all types of clients and be maintained in concert with updates occurring to all trees simultaneously.

LSN 2.12.02 - Web pages must be authored in compliance with the Web Content Accessibility Guidelines for access by individuals with disabilities [<http://www.w3.org/TR/WAI-WEBCONTENT/>].

LSN 2.12.03 - An HTML hypertext link must exist for every document entity (header, text, and image) intended to be made available. These links must be organized in logical fashion and be titled appropriately for the document to which they reference.

LSN 2.12.04 - Non-LSN-related information may be maintained on the same web site as LSN-related material but must be kept logically separate. All LSN materials on a particular site must be maintained together within a single hypertext sub-tree. The entire LSN-related sub-tree must be able to be navigated under a single URL (Uniform Resource Locator) reference for each site. Site navigation links on LSN-related pages (e.g. a "home" button, or the result of a search) must point exclusively within the LSN-related sub-tree and not to another part of the web site or off site.

LSN 2.12.05 - Each web page must be identified with the organization, date of last page revision, and either contact information for the page maintainer or a link to this information.

### **1.3 LSN Administrator (LSNA) Related**

LSN 1.13 - The LSN shall provide the LSN Administrator with access to participant collections necessary and sufficient to allow the LSN Administrator to independently verify the integrity of data available via the Licensing Support Network. Source: adaptation of [LSS 1-008].

LSN 2.13.01 - Each site shall allow monitoring of various parameters by a monitoring station established by the LSNA. Specific access shall include SNMP monitoring of network utilization and ICMP access for determination of certain performance characteristics as well as access to the normal web distribution facility.

LSN 2.13.02 - Each site shall allow LSNA access to their logs of electronic transactions in raw and summary formats to enable tracking of site usage.

LSN 1.14 - The LSN shall be designed to allow the LSN Administrator to certify the availability and the integrity of the information stored within the LSN. Source: adaptation of [LSS 1-018].

LSN 2.14.01 - A monitoring/audit station shall be established to allow the LSNA to obtain, store, and report information on the availability and integrity of LSN information.

LSN 2.14.02 - The monitoring/audit station shall have the capability of non-interactively "crawling" participant web sites, and fetching a subset or the entire site for analysis.

LSN 2.14.03 - The monitoring/audit station shall have the capability of tracking changes on participant web sites, monitoring participant site responsiveness and other performance characteristics, and reporting this information to the LSNA.

LSN 1.15 - The LSN shall be designed to allow the LSN Administrator to certify the security of LSN systems. Source: adaptation of [LSS 1-019].

LSN 2.15.01 - All participating entities must follow acceptable security principles and practices when establishing their site. This includes such things as developing and implementing a security policy and security, contingency, and recovery plans. These plans must be acceptable to the LSNA.

LSN 2.15.02 - The monitoring/audit station shall have the capability of performing remote security scanning and analysis of participant web sites and the ability to report the results of these procedures to the LSNA.

LSN 1.16 - The LSN must have the ability to determine whether two electronic copies of a document are identical. Source: adaptation of [LSS 1-021].

LSN 2.16.01 - The monitoring/audit station shall have the ability to perform an MD5 checksum operation on each participant document and store the result for later comparison to establish a document's uniqueness and invariance.

LSN 2.16.02 - The monitoring/audit station shall have the ability to store integrity checks in a database for subsequent retrieval. This database shall have the capability of storing the date when a document became available, its web reference/URL, its checksum, and the participant site from which it was obtained.

## **1.4 Timeliness**

LSN 1.17 - The LSN must be operationally available in time to allow the Department of Energy (DOE) and NRC to meet their obligations to make documents available 30 days after the submission of the site recommendation to the President, and the obligation of all other participants to make their documents available 30 days after the selection decision becomes final after review by Congress. Source: [§2.1003].

## **2. Participant Web Site Specific**

## **2.1 General**

**LSN 1.18** - Each LSN participant must designate an official who is responsible for the administration of its responsibility to make documentary material available. Source: [§2.1009(a)(1)].

LSN 2.18.01 - Each designated official must provide contact information to the LSNA including telephone number, e-mail address, and postal address.

**LSN 1.19** - Each LSN participant must establish its own procedures to make its own documentary material available. Source: [§2.1009(a)(2)].

LSN 2.19.01 - Procedures shall cover all aspects of the production and web publication process including (as applicable on a per-document basis) authorship, content guidelines, stylistic guidelines, distribution guidelines, maintenance and revision guidelines, format conversion, quality assurance, uploading to the web server, accessing documents, and removal from the web server.

LSN 2.19.02 - Procedures shall be acceptable to the LSNA. Procedural guidelines will be developed and provided sufficiently in advance of their production deadline to enable timely review by the LSNA and allow for revision.

**LSN 1.20** - Each LSN participant must train its own staff on how to make its documentary material available. Source: [§2.1009(a)(3)].

LSN 2.20.01 - Staff shall be trained in document production, conversion, and web publication in compliance with acceptable procedures.

LSN 2.20.02 - Staff shall be trained in operation and maintenance of the web server system.

LSN 2.20.03 - Staff shall be trained in operation and maintenance of the web site.

LSN 2.20.04 - Staff shall be trained in performing the user assistance and help desk function.

**LSN 1.21** - Each LSN participant must have the designated official certify that procedures have been implemented, that documentary material has been made electronically available, and, update these certifications at 12 month intervals. Source: [§2.1009(b)].

**LSN 1.22** - Each LSN participant must obtain the computer system necessary to comply with the requirements for production and service. Source: [§2.1011(b)].

LSN 2.22.01 - The system must provide the function of HTTP service. HTTP service may be provided by a dedicated computer, a virtual server (dedicated computer hosting multiple web sites), or be provided by a commercial web hosting service (that can comply with requirements).

LSN 2.22.02 - The system must be configured with hardware sufficient to store and serve all documentary and associated materials, e.g. sufficient disk storage, RAM (Random Access Memory), processing power, network interface, etc. at estimated usage levels and to be easily upgradable should estimates fail to adequately characterize usage.

LSN 2.22.03 - The system must be configured with software, licensed at sufficient levels, to store and serve all documentary and associated materials, e.g. networking-capable operating system, web server software, HTML authoring and site maintenance software, database server, etc. at anticipated usage levels.

LSN 2.22.04 - The system must be designed to maintain the integrity of the collection and provide for timely recovery in the event of a hardware or software failure with complete restoration of the site within three working days.

LSN 2.22.05 - The system must be designed to maintain the security of the collection and the system itself including the ability to deny unauthorized access or update privileges, detect and defeat compromise attempts, and defend against denial of service attempts.

LSN 2.22.06 - The system must be connected to the Internet with the capability of being accessed by any arbitrary Internet user. This connection shall be sufficient to provide reasonable responsiveness during periods of normal usage.

LSN 2.22.07 - The system must be designed to be accessible to arbitrary Internet users. Industry best practices for web page and site layout and formatting must be followed. A consistent organization and style is to be maintained throughout the LSN-related portion of the web site. Aids to users shall be provided to include on-line help on use of the site, usage guidelines, and contact information for further assistance. Depending on the amount of information provided, the complexity of the site, and the software assistance provided, a user help desk functionality may be required.

LSN 2.22.08 - The system design and configuration must be fully documented to preserve operational capabilities over staff transitions. This documentation must be made readily available on the participant's web site logically apart from the LSN document collection materials.

LSN 2.22.09 - Documentation must be prepared and published on the web site describing how to use the features of the web site, specifically the search and retrieval functions.

LSN 1.23 - Each LSN participant must identify all documents not made available in electronic form per §2.1003 in an electronic notice; and make them electronically available within five days after a request for a document off that list is received. Source: [§2.1004].

LSN 2.23.01 - Identification shall be by means equivalent to the requirements for general publication, i.e. inclusion in a list, index, or table of contents on a web page.

LSN 2.23.02 - Availability can be achieved by publication on the relevant web site and proactive notification of the requester by telephone, e-mail, or fax or through direct delivery by e-mail, fax, or post.

LSN 2.23.03 - Requests will be accepted by telephone, e-mail, fax, or post, a user clicking the appropriate hyperlink on the web page listing, or filling out a web form.

LSN 1.24 - DOE must provide electronic access to the LSN at DOE Headquarters and at all DOE Local Public Document Rooms (LPDRs) in the vicinity of the site, including Las Vegas, Reno, Carson City, Nye County and Lincoln County. Source: [§2.1007(a)(1)].

LSN 2.24.01 - Access is to be provided by publicly-available computers equipped with a web browser.

LSN 2.24.01 - Access is to be provided to visually impaired and otherwise disabled individuals as needed through appropriate hardware and software or by provision of user assistance.

## **2.2 Document Production and Service**

LSN 1.25 - Each LSN participant must prepare and publish its documentary collections in a manner that allows retrieval and viewing by Internet users with both graphical and text-only web browsers and other web access tools. [LSS 1-010].

LSN 2.25.01 - Each participant must convert their documents from their native format or from paper to a format that allows their publication through a web server including a header, text, and image portion.

LSN 2.25.02 - Quality standards for conversion must be maintained to ensure accurate representation of documents by web browsers.

LSN 1.26 - Each LSN participant must ensure each document has a unique ID on their system. Source: [§2.1009(a)(4)].

LSN 2.26.01 - Each copy of a document must contain within it, its clearly designated document ID. The document ID must occur on every page within the document.

LSN 2.26.02 - Each representation of a document (header, text, and image) must be indexed by its document ID.

LSN 2.26.03 - It must be possible to retrieve all or any part of a document by providing its document ID.

LSN 1.27 - Each LSN participant must follow format standards for providing electronic access. Source: [§2.1011(e)(2)(I)].

LSN 2.27.01 - Header format shall be as shown in Table A with key fields as indicated. Key fields indicate items on which structured queries (e.g. author field contains "Smith") can be performed.

LSN 2.27.02 - Text format shall comply with US.ISO\_8859-1 and be a searchable full text representation of the document. OCR'd documents must be accurately represented with an overall error rate of no more than 0.5% and a per page error rate of no more than 1.5%. Documents converted through means other than OCR shall have an error rate of less than 0.05%. Text documents will have a line end marker at the end of each line and paragraphs will be separated by blank lines.

LSN 2.27.03 - Image format shall be TIFF CCITT G3.2D for bi-tonal images or PNG (Portable Network Graphics) per [<http://www.w3.org/TR/REC-png-multi.html>] format for grey-scale or color images, or PDF (Portable Document Format) for compound documents. TIFF images will be stored at 300 dpi (dots per inch), grey scale images at 150 dpi with eight bits of tonal depth, and color images at 150 dpi with 24 bits of color depth. Images shall be stored as single image-per-page to facilitate retrieval of no more than a single page. Alternatively, images may be stored in a page-per-document format if software is incorporated in the web server that allows single-page representation and delivery.

LSN 2.27.06 - Headers shall be searchable to enable document identification by structured queries on key field content to identify all documents that meet a specific criteria. Searching a single header field or multiple header fields, up to the full set of header fields, will be supported. Query results will be returned to users as a list of hypertext links to the documents that match the search criteria (headers, texts, and images) sorted in accordance with specifiable criteria. Query tools shall operate logically on the content-type of each field (e.g. date, text,

numeric) with full Boolean and comparative capabilities, e.g. "return all documents where (author CONTAINS smith) AND (title CONTAINS water) AND creation\_date IS.GREATER.THAN 12/31/1999".

LSN 2.27.05 - All texts shall be identifiable through queries of the occurrence of text content through all document texts. Specific query options include the ability to: search for the occurrence of a phrase in the full text of documents, perform proximity searching (i.e. search for phrases near each other or near the beginning or end of the document), perform wild card searching, perform root searching, perform frequency searching, and to arbitrarily combine any search strategy through the use of Boolean operators.

LSN 1.28 - Each LSN participant must provide a bibliographic header record with each document or other material submitted, including submissions for which no text or image is available and for privileged, confidential, safeguards and other types of limited access

documentary material as specifically identified. Source: [§2.1003(a)(1)] [§2.1003(a) (3)] [§2.1003(a)(4)(i) through §2.1003(a)(4)(iii)] [LSS 1-007].

LSN 2.28.01 - Headers for limited access exhibits will be maintained as those for full access documents.

LSN 2.28.02 - Headers for limited access exhibits shall be logically organized on the web site in a list, index, or table of contents separate from those that designate full documents together with user instructions for reviewing these materials.

LSN 1.29 - Each LSN participant must make text of documents available, with a statement of where an authenticated image copy of the document can be obtained. Source: [§2.1003(a) (1)].

LSN 2.29.01 - Documents for which the electronic image is not available on the web site may be made available by means of authenticated image copy distribution. The web site shall contain the document's header record and its text representation.

LSN 2.29.02 - Headers and texts of documents for which no image is available shall be logically organized on the web site in a list, index, or table of contents separate from those that designate full documents together with user instructions for obtaining an authenticated image copy of the document.

LSN 2.29.03 - Requests for an authenticated image copy will be accepted by telephone, e-mail, fax, or post, a user clicking the appropriate hyperlink on the web page listing, or filling out a web form.



LSN 2.29.04 - Delivery of authenticated image copies shall be made by hand, courier, or post.

### **2.3 Timeliness**

LSN 1.30 - DOE must make documentary material available 30 days after the submission of the site recommendation to the President. All participants other than DOE must make documents available 30 days after the selection decision becomes final after review by Congress. Source: [§2.1003(a)]

LSN 2.30.01 - The computer system providing document production and service must be designed, specified, acquired, integrated and installed sufficiently in advance of the specified date to meet the availability criteria. Customary funding and procurement lead times must be considered when scheduling these actions.

LSN 2.30.02 - Document conversion and web site page authoring and document collection population must be begun sufficiently in advance of the specified date to meet the availability criteria. Collection size and resource availability must be considered when scheduling these actions.

LSN 2.30.03 - Each participating entity must ensure their site availability and integrate it into the overall LSN sufficiently in advance of the specified date to meet the availability criteria. The availability of other participant staff must be considered when scheduling these actions.

LSN 2.30.04 - Each participating entity must complete site and LSN integration testing acceptable to the LSNA sufficiently in advance of the specified date to meet the availability criteria. The availability of LSNA staff must be considered when scheduling these actions.

LSN 1.31 - Each LSN participant must provision their web facility to ensure acceptable access and responsiveness during periods of normal activity.

LSN 2.31.01 - Sites must be provisioned to be able to satisfy not less than 500 web page requests per minute.

LSN 2.31.02 - Sites must be provisioned to be able to deliver a web page or document page on average in not more than 5 seconds to a web browser located on the same LAN segment.

LSN 2.31.03 - Communications between the server and the Internet must be provisioned to be able to deliver interactive response acceptable to the LSNA.

### **3. Docket Related**

LSN 1.32 - The NRC, in its management of the official docket, must provide a docket that receives, stores, distributes, and maintains docket material beginning 30 days after DOE submission of the site recommendation to the President. Source: [§2.1013(a)(2)].

LSN 1.33 - The NRC, in its management of the official docket, must provide a Protective Order File. Source: [§2.1006(b)].

LSN 1.34 - The NRC, in its management of the official docket, must deliver all answers, orders and decisions per §2.1013(c) (e.g., electronically, using secured process). Source: [§2.1010(d)].

LSN 1.35 - The NRC, in its management of the official docket, must provide the computer system necessary to comply with service requirements. Source: [§2.1011(b)].

LSN 1.36 - The NRC, in its management of the official docket, must maintain the docket. Source: (NRC SECY) [§2.1013(a)(1)].

LSN 1.37 - The NRC, in its management of the official docket, must provide an electronic docket that contains a list of all exhibits, showing where in the transcript each was marked for identification and where it was received into evidence or rejected. Source: [§2.1013(b)].

LSN 1.38 - The NRC, in its management of the official docket, must enter hearing transcripts into the docket on a daily basis in order to provide next-day availability at the hearing. Source: [§2.1013(b)].

LSN 1.39 - The NRC, in its management of the official docket, must establish a mechanism whereby all filings are able to be submitted/received electronically and to require that a password security code for transmission of these documents. Source: [§2.1013(c)(1)].

LSN 1.40 - The NRC, in its management of the official docket, must provide a mechanism by which all Presiding Officer and Commission issuances and orders are transmitted electronically. Source: [§2.1013(c)(5)].

LSN 1.41 - The NRC, in its management of the official docket, must provide a mechanism by which the Presiding Officer and all counsel of all parties have access to the electronic docket (including Protective Order File) during the hearing. Source: [§2.1013(d)].

LSN 1.42 - The NRC, in its management of the official docket, must identify a means by which the unavailability of the electronic docket for more than 4 hours in any day is communicated to the Presiding Officer so that the day is not counted in the computation of time (NRC SECY). Source: [§2.1017].

LSN 1.43 - The NRC, in its management of the official docket, must provide a mechanism to receive electronically transmitted depositions (including questions, cross-questions, and answers) and enter them into the docket file (NRC SECY). Source: [§2.1019(d)&(e)].

LSN 1.44 - The NRC, in its management of the official docket, must identify a means by which only a part or parts of a deposition may be offered into evidence (NRC SECY). Source: [§2.1019(f)].

LSN 1.45 - Each LSN participant must follow acceptable procedures and standards for motions practice. Source: [§2.1011(e)(2)(ii)].

LSN 1.46 - Each LSN participant must demonstrate substantial and timely compliance in order to be granted party status. Source: [§2.1012(b)(1)].

LSN 1.47 - Each LSN participant must ensure that any document intended to be used as an exhibit is available before the commencement of that portion of the hearing where it will be offered. Source: [§2.1013(b)].

LSN 1.48 - Each LSN participant must capture the event of a document being placed in a recipients mailbox (delivery receipt) in order to provide proof of the completion of service. Source: [§2.1013(c)(3)].

LSN 1.49 - Each LSN participant must provide and show a proof of service for each document filed into the docket. Source: [§2.1013(c)(4)].

LSN 1.50 - Each LSN participant must, when being deposed, submit an electronic index of all documents in his/her possession relevant to the subject matter of the deposition to all parties, identifying which were already made available electronically. Source: [§2.1019(l)(1)].

LSN 1.51 - Each LSN participant must, when being deposed, if requested bring along paper copy of all such documents and deliver paper copies with the certified deposition. Source: [§2.1019(l)(4)]

LSN 1.52 - DOE must submit the license application to the docket in electronic form. Source: 2.1013(a)(2).

LSN 1.53 - The LSN docket shall provide users with a mechanism to identify and logically access records present in documentary collections which are part of records packages. Source: adaptation of [LSS 1-027].

#### 4. EIE related

LSN 1.54 - Each LSN participant must use electronic submissions (see §2.1013(c)) for all their motions practice. Source: [§2.1010(d)].

LSN 1.55 - Each LSN participant must submit all filings electronically using a password security code for transmission of these documents. Source: [§2.1013(c)(1)]

LSN 1.56 - Each LSN participant must transmit depositions to SECY in electronic form for entry into the docket. Source: [§2.10139(d) and (e)].

TAB A

Minimum Header Fields for LSS Documentary Material  
 OLD Header Structure  
 LSN Candidate Deletions marked "(DELETE?)"

LSS Field	Mandatory or Req'd by Participant	Mandatory or Req'd by LSSA	Multivalued (max # of entries)	Max Field Length	Authority Table	Required Format
LSS Accession Number	N	M	N	13	N	Must be a unique number 3 digit alpha code w/ submitting organization, 7 numerics and check digit
Participant Accession Number	M	N	Y (50)	25	N	Alpha numeric, no required format
Title	M	N	N	1000	N	N
Author Name	M	Y	Y (200)	50	Y	Last Name, First Initial, Middle Initial
Author Organization	M	N	Y (200)	65	Y	
Document Date	M	N	N	8	N	YYYYMMDD
Document Number	R	N	Y (5)	30	N	N
Version	R	N	Y (5)	50	N	N
Access Control Information	R	N	Y (10)	3	Y	N

LSS Field	Mandatory or Req'd by Participant	Mandatory or Req'd by LSSA	Multivalued (max # of entries)	Max Field Length	Authority Table	Required Format
Related Records Number	R	Y	Y (500)	25	Y	Alpha numeric
Related Record Code	R	Y	Y (500)	7	Y	N
Special Class	R	N	Y (10)	50	Y	N
Abstract (Field under consideration to be deleted)	N	N	N	5000	N	N
Package Identifier	R	Y	Y (500)	50	N	N
Document Type (Includes package types)	M	N	Y (3)	40	Y	N
Identifiers	N	N	Y (100)	80	N	N
Comments	N	N	N	1000	N	N
Media	R	N	Y (5)	7	Y	N
QA Record	M	N	N	1	Y	N
Traceability Number	R	R	Y (10)	50	N	N
Traceability Code	R	R	Y (10)	5	Y	N
Keywords	N	N	N	5000	N	Y - Separate terms and phrases by punctuation
Number of Images	N	M	N	6	N	N

LSS Field	Mandatory or Req'd by Participant	Mandatory or Req'd by LSSA	Multivalued (max # of entries)	Max Field Length	Authority Table	Required Format
Physical Location Reference Information	R	R	N	1000	N	N
Address Name	R	N	Y (500)	50	Y	Last Name, FI MI
Addressee Organization	R	N	Y (500)	65	Y	
LSS Record Housekeeping Info: Date Received at LSS Date Available in LSS Date/Time Loaded into LSS Date/Time of Last Modification LSS Indexer ID (DELETE?) Station ID (DELETE?) QC ID (DELETE?) Subject and Abstract Cataloger ID (DELETE?) Cataloging QC ID (DELETE?) Processing Stage Status (DELETE?) Verification ID (DELETE?) Change Tracking Log Electronic Signature Verification Electronic Image Location Searchable Text Reference Info.	N	Y	TBD	TBD	TBD	TBD
LSS Audit Info	N	R	TBD	TBD	TBD	TBD

Symbols: Y = Yes; N = No; R = Required; M = Mandatory; TBD = To Be Determined For date fields, Y = year, M = month, D = day  
Table definitions:

Data submitted by participant: This field will be submitted by the participant (Mandatory = must be provided for each unit [record]; Required = must be provided if applicable; Optional = provided at discretion of participant.)

Provided by LSS System or LSSA: This field will be provided by LSS. (Mandatory = must be provided for each unit [record]; Required = must be provided if applicable)

Multi-valued: Multiple entries allowed in a field.

Controlled Authority List: List of accepted entries to be used by all participants, such as document types or specific forms of an organization name.

Text searchable: The ability to perform phrase or single-word searches of the field entries.

Comments/Issues: Any additional comments or outstanding issues.

Note: Detailed definitions of header fields are provided in TAB C.

## TAB B

### Old LSS Response Time Requirements (New LSN Benchmarks Required)

Requirement Identifier	Function/Event	Conditions	Response Time 15/50 concurrent users
LSS2-065-2	Retrieval of query results list.	UNLV test query INJD-T3-Q1 or TEJA-T#-Q2.* Database contains headers for at least 5 million pages of documents. A total of 10 documents found.	90 seconds/140 seconds
LSS2-065-3	Retrieval of header data for document identified in query results list.	Database contains headers for at least 5 million pages of documents.	10 seconds/15 seconds
LSS2-065-4	Retrieval of text data for document identified in query results list.	Database contains at least 5 million pages of document.	First page: 10 seconds/15 seconds Each subsequent page: 3 seconds at the Main Facility, 6 seconds at the Supported Sites
LSS2-065-5	Retrieval of image data for document identified in query results list.	Database contains at least 5 million pages of documents.	First page: 30 seconds/45 seconds Each subsequent page: 6 seconds at the Main Facility 9 seconds at the Supported Sites



Requirement Identifier	Function/Event	Conditions	Response Time 15/50 concurrent users
LSS2-065-6	Document bilevel scanning	8 ½ inch paper. All prior data entry needed for document scanning complete prior to initiation, paper loaded on scanner.	30 pages per minute for single sided, 15 pages per minute for double-sided (30 bilevel images created)
LSS2-065-7	New Document Access	Measured from the time a new document (header, text and image) has been captured and stored in the LSS until it is available for retrieval and viewing at the supported sites.	24 hours. Comment: This means that any method of dissemination from the capture site(s) to the retrieval sites must support access to newly entered documents within 24 hours, on an ongoing basis. Weekly or monthly updates to the reading rooms, for example, would not be acceptable.
LSS2-065-8	New Transcripts	Measured from the time that daily transcripts are imported into the LSS until the time they are available for viewing as text.	1 hour.
LSS2-065-9	Prepare Searchable Text	Time to perform <u>Prepare Text for Search</u> function. (See Section 3.1)	Less than 20 seconds, on average, to add a document consisting of 10 full text pages, to an existing text base of 5 million pages.
LSS2-065-10	Backup Data	Time to backup system data of any type. Incremental or full backup.	2 Gigabytes per hour
LSS2-065-11	Restore Data	Time to restore system data of any type.	1.5 Gigabytes per hour

\*These queries were selected as representative of typical user queries which are not overly simple or complex. INFD-T3-Q 1: Find documents where text includes phrase like 'repository' & 'seals or text includes phrase like 'shaft' & 'seal' or text includes phrase like 'borehole' and 'seal', order by document id. TEJA-T3-Q2: Find documents where text includes phrase like 'faults' & 'Basin and Range Province' or text includes phrase like 'faults' & 'Nevada' or text includes phrase like 'faults' & Yucca Mountain' order by document id.

## **TAB C**

### **Abstract**

A brief narrative description of the subject content of the document, or a full description of the contents of a document that cannot be imaged and converted to searchable text. The abstract is generally written by the author.

### **Access Control Information**

A code indicating that access to a document is restricted. Access is restricted if the document is privileged, proprietary, or copyrighted.

### **Addressee Name**

The names of all the persons to whom a document is addressed. Each entry in this field is linked to a corresponding entry in the Addressee Organization field.

### **Addressee Organization**

The affiliation of each receiver or the organization to whom the correspondence is addressed if there is no personal receiver. Each entry in this field is linked to a corresponding entry in the Addressee Name field.

### **Author Name**

The name of each person listed on the document as responsible for all or part of its creation. Only personal authors are entered in this field. Corporations as authors are captured in the Author Organization field. Each entry in this field is linked to a corresponding entry in the Author Organization field.

### **Author Organization**

The name of the organization (i.e., company, corporation or group) with which the author is affiliated at the time the document was created, or the name of the organization responsible for creating or originating the document when there is no personal author. If an author works for one organization and is representing another, both affiliations should be captured. Each entry in this field is linked to a corresponding entry in the Author Name field.

### **Comments**

Any information not covered in other fields which the submitter or indexer believes would be of help to identify or retrieve the document, or to further explain any field entry for the document. This field can be used for entries such as the language of the document (if it is not English) or the page numbers that are missing in an incomplete document.

**Document Date**

The date on which the document was completed, issued, effective or published. If the date is unknown, information in the document will be used to estimate a date.

**Document Number**

The identifying number(s) assigned to a document that distinguishes it from other documents (e.g., DOE Order No., Public Law number, report number). Document numbers appear (typed or handwritten) on the document itself and are considered to be control numbers. The Document Number is generally assigned by the issuing agency. Examples are report numbers, or public law numbers such as SAND86-1023, PL95-16, or H101-364.

**Document Type**

The general format or physical presentation of the document. Examples include correspondence, report or procedure.

**Identifiers**

Words or phrases that the submitter or indexer believes represent the subject content of the document and will assist users in retrieval. These may be acronyms or informal terms or cross-references to alternate nomenclature. The terms in this field may be included in a controlled vocabulary/LSS Thesaurus.

**Keywords**

Words or phrases that the submitter provides with the document to represent the subject content of the document and to assist the user in retrieval. Keywords are not necessarily contained in the LSS Thesaurus.

**LSS Accession Number**

A unique identifier assigned to each document entering the system. The capture station at which the document enters the LSS is also identified as part of this number. The LSS Accession Number will also be used as a Related Record Number pointer for documents which have relationships to other documents in the LSS.

**Media**

The physical material upon which a document is stored.

**Number of Images**

The number of images of a document that was imaged from a hard-copy.

**Package Identifier**

An identifier assigned to all components of a group of documents submitted as a single entity. This field enables a package containing many documents which may or may not have relationships among them to be reassembled quickly and easily.

**Participant Accession Number**

A unique identification number assigned by the participant organization to each document submitted for entry into the LSS. This number assists the organization in locating documents it has submitted. This field should contain a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alphanumeric scheme which the submitting organization might use in accessioning their own documents. The number used may be the accession number used in the submitting organization's records system.

**Physical Location Reference Information**

Information on the storage location of an item submitted to the LSS as header only because its form does not permit imaging.

**QA Record**

An indicator of whether the document is a quality assurance record. Quality assurance records are those whose contents have been determined to furnish evidence of the quality and completeness of data, items, and activities related to the safety of the repository program.

**Related Record Code**

The code that represents the type of relationship between the document being entered and a document to which it is related. Each code in the authority list will have a reciprocal code; for example, the reciprocal of a document (A) that is attached to another document (B) is document (B) has attachments (A). Examples of Related Record Codes include: REV (revises or is a later version of), COR (corrects) or SUPR (supersedes). Each entry in this field is linked to a corresponding entry in the Related Record Number field.

**Related Record Number**

This field contains the LSS Accession Number(s) of a document that has a particular relationship to the document being entered. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document

and a later version, comments, corrections, or errata); and whole/part (a book and its chapters, a journal and its articles); and an information package and the cataloging units it contains. The type of relationship is captured in the Related Record Code field. Each entry in this field will be linked to a corresponding entry in the Related Record Code field.

**Special Class**

This field identifies documents with special characteristics that are not captured in other fields; for example, a document in a foreign language.

**Title**

An identifying sentence or phrase given to the document that appears on the document, i.e., the actual title. If the actual title is not present for a document, a title must be created.

**Traceability Code**

A code that indicates the type of traceability number. Examples of this code include: DTN (technical data link), DI (Document Identifier), and WBS (Work Breakdown Structure). Each entry in this field is linked to a corresponding entry in the Traceability Number field.

**Traceability Number**

An identifier that has been assigned to a document in order to link it to a specific activity. These identifiers will enable searchers to easily retrieve all documents associated with any given activity by providing a special linkage not available through other fields. Examples of traceability numbers include WBS numbers, Data Tracking Number, and configuration item identifiers. Each entry in this field is linked to a corresponding entry in the Traceability Code field.

**Version**

The version, revision number, or status of a document that has or will have multiple iterations. It will correspond to information contained on the document, e.g., Revision 2, Version 1. Final, or Draft.

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**TAB D: 1. HIGH ESTIMATE OF RELEVANT LSN PAGES**  
February 15, 2000

Year	DOE Pages/Year	DOE Cumulative	NRC Pages/Year	NRC Cumulative	Others Pages/Year	Others Cumulative	Total Pages Added Yearly	Total Cumulative Relevant Pages
1999		4,000 k <sup>1</sup>		306 k <sup>2</sup>		90 k <sup>3</sup>		4,396 k
2000	440 k	4,440 k	34 k	340 k	9 k	99 k	483 k	4,879 k
2001	488 k	4,928 k	37 k	377 k	10 k	109 k	535 k	5,414 k
2002	887 k	5,815 k	38 k	415 k	11 k	120 k	936 k	6,350 k
2003	1,015 k	6,920 k	77 k	492 k	12 k	132 k	1,194 k	7,544 k
2004	1,245 k	8,165 k	121 k	613 k	13 k	145 k	1,379 k	8,923 k
2005	1,306 k	9,471 k	119 k	732 k	14 k	159 k	1,439 k	10,362 k
2006	1,326 k	10,797 k	43 k	775 k	16 k	175 k	1,385 k	11,747 k
2007	864 k	11,661 k	46 k	821 k	17 k	192 k	927 k	12,674 k
2008	933 k	12,594 k	43 k	864 k	19 k	211 k	995 k	13,669 k
2009	1,008 k	13,602 k	46 k	910 k	21 k	232 k	1,075 k	14,744 k

<sup>1</sup> This estimate assumes that approximately 50% of currently stored DOE program-relevant (~8 million) pages may be relevant to the HLW licensing proceeding in accordance with the definition of "documentary material" in §2.1001 of the LSN Rule when other participant requests are addressed by the presiding officer. (Note: The previous DOE page estimate to be stored through 1999 was over 7.3 million pages, applying a 50% relevancy factor.) Yearly additions (pages/year) for DOE and NRC are based on the yearly percentage increases used in the previous LSS input estimates (Milestone date shifts are taken into account).

<sup>2</sup> It is estimated that 18,000 currently stored NRC program-relevant documents have an average of 17 pages per document. For the high estimate, it is assumed that the license hearing will take 2.5 years. Accordingly, hearing transcripts (~284 pages/day, 5 days/week, 48 weeks/year) and exhibit material (~1,000 pages/month) have been added into years 2003 - 2005 estimates.

<sup>3</sup> It is estimated that approximately 6,000 program-related documents (~10 pages/document) are currently stored by other LSN participants and an additional 3,000 program-related documents (~10 pages/document) are stored by their consultants and contractors. Yearly additions are estimated at 10% per year.



2010	952 k	14,554 k	57 k	967 k	23 k	255 k	1,032 k	15,776 k
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**TAB D: 2. LOW ESTIMATE OF RELEVANT LSN PAGES**  
February 15, 2000

Year	DOE Pages/Year	DOE Cumulative	NRC Pages/Year	NRC Cumulative	Others Pages/Year	Others Cumulative	Total Pages Added Yearly	Total Cumulative Relevant Pages
1999		100 k <sup>1</sup>		306 k <sup>2</sup>		60 k <sup>3</sup>		466 k
2000	11 k	111 k	34 k	340 k	6 k	66 k	51 k	517 k
2001	12 k	123 k	37 k	377 k	7 k	73 k	56 k	573 k
2002	22 k	145 k	38 k	415 k	7 k	80 k	67 k	640 k
2003	28 k	173 k	77 k	492 k	8 k	88 k	113 k	753 k
2004	31 k	204 k	121 k	613 k	9 k	97 k	161 k	914 k
2005	33 k	237 k	39 k	652 k	10 k	107 k	82 k	996 k
2006	33 k	270 k	43 k	695 k	11 k	118 k	87 k	1,083 k
2007	22 k	292 k	46 k	741 k	13 k	142 k	81 k	1,164 k
2008	23 k	315 k	43 k	784 k	14 k	156 k	80 k	1,244 k
2009	25 k	340 k	46 k	830 k	16 k	172 k	87 k	1,331 k
2010	24 k	364 k	57 k	887 k	17 k	189 k	98 k	1,429 k

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<sup>1</sup> This estimate is the minimum number of relevant web pages that DOE currently intends to make available based on its understanding of "relevant documentary material." Yearly additions (pages/year) for DOE and NRC are based on the yearly percentage increases used in the previous LSS input estimates (Milestone shifts are taken into account).

<sup>2</sup> It is estimated that 18,000 currently stored NRC program-relevant documents have an average of 17 pages per document. For the low estimate, it is assumed that the licensing proceeding will take 1.5 years. Accordingly, hearing transcripts (~285 pages/day, 5 days/week, 48 weeks/year) and exhibit material (~1,000 pages/month) have been added into years 2003 - 2004 estimates.

<sup>3</sup> It is estimated that approximately 6,000 program-related documents (~10 pages/document) are currently stored by other LSN participants. Yearly additions are estimated to be 10% a year.