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May 4, 1995

Mr. Dan Graser
U.S. Nuclear Regulatory Commission
Mail Stop T6F15
Washington, D.C. 20555

Reference: Contract 3C-D-USA-0055; Task Order D504, Modification 1,
Dated February 8, 1995
Subject: Draft LSSARP Summary for March 22-23, 1995 Meeting
Enclosure: As Above

Dear Mr. Graser:

Please find enclosed one copy of the subject deliverable. If you have any questions, please do not hesitate to call me at (703) 506-9600.

Sincerely,

LABAT-ANDERSON Incorporated

Tony Neville
Project Manager

cc: LAI contract file

**SUMMARY OF PRESENTATIONS
LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL (LSSARP) MEETING
MARCH 22-23, 1995**

INTRODUCTION

This paper summarizes the discussions at the March 22-23 LSSARP meeting and lists issues that relate to the planning and operation of the Licensing Support System Administrator's (LSSA's) Compliance Assessment Program (CAP). The primary agenda items were updates on current LSS activities at DOE and NRC, including comments received on the draft LSS Participant Commitments, and reports from the Technical and Header Working Groups.

In this summary, the numbers that appear in bold and brackets refer to the page number and line number in the official transcript where the particular discussion can be found.

PANEL MEMBER ATTENDEES

Kirk Balcom, State of Nevada
Dennis Bechtel, Clark County
Chip Cameron, NRC
Peter Cummings, Las Vegas
Steve Frischman, State of Nevada
John Gandi, DOE
Juanita Hoffman, Esmerelda County
John Hoyle, NRC
Moe Levin, NRC
Brad Mettam, Inyo County
Lloyd Mitchell, National Congress of American Indians
Mal Murphy, Nye County
Claudia Newbury, DOE
Jay Silberg, Nuclear Energy Institute and the Industry Coalition

PRESENTATIONS

WEDNESDAY, MARCH 22

Introduction, John C. Hoyle, LSSARP Chairman
Attachment A: Agenda LSSARP Meeting, March 22-23, 1995, Las Vegas, Nevada.

The tenth meeting of the LSSARP was convened, in open session, by Chairman John Hoyle. Tom Nartker, Information Science Research Institute, welcomed the group to the University of Nevada-Las Vegas (UNLV) campus. The meeting began with DOE's presentations on its current LSS activities.

Status of Arrangement for LSS Operation, Fielden Dickerson, OCRWM M&O contractor
Attachment B: Status of Arrangement for LSS Operation.

At the last LSSARP meeting, an arrangement was discussed whereby DOE would provide support to NRC in the operation of the LSS and would supply fiscal support for that effort. Since the meeting, DOE has been exploring various options such as a Memorandum of Understanding (MOU), an interagency agreement, and grants, all of which have drawbacks. [9(8)] An MOU cannot be used to transfer money from one Federal agency to another. [10(12)] An interagency agreement is appropriate for transferring funds, but the responsibility would still rest with DOE, which seemed to be contrary to the concept of NRC oversight and control of the LSS. [10(11)] There are terms and conditions that are fixed in grants also. [10(22)] DOE is now considering another mechanism, known as "direct payment." Direct payment is achieved through an appropriations bill, which would spell out that DOE will transfer funds to NRC. The only terms and conditions are that NRC must certify that the activities for which they are expending funds are consistent with the Nuclear Waste Policy Act. [10(25)] DOE has drafted a decision memo, and is ready to move forward to get approval to proceed with the direct payment mechanism. [12(4)] A direct payment from DOE to NRC can be made as soon as an appropriation has been made by Congress. [12(10)]

Panel members expressed concern that this concept would make the LSS dependent on Congress for funding on an annual basis. [13(11)] NRC responded that whatever mechanism is used, funding will always be dependent on Congress. [15(1)]

LSS Functional Requirements Definitions, Fielden Dickerson, OCRWM M&O contractor
Attachment C: LSS Functional Requirements Definitions.
Attachment D: LSS Phase I Functional Requirements (Draft, February 28, 1995).

DOE discussed the functional requirements for the LSS. The discussion began with a brief history and background on the development of the original functional requirements and the DOE LSS Working Group's subsequent review and revision of the requirements to produce a document that would facilitate an analysis of benefits and costs (ABC) and a possible Request for Proposal (RFP). The DOE Working Group developed a draft LSS Phase I functional requirements document that was distributed to DOE and the members of the LSSARP Technical Working Group on February 28, 1995. The document covers high-level requirements derived from the Rule and includes matrices that trace each Level 1 requirement to an associated Subpart J citation. Phase II will expand Level 1 requirements into lower level requirements. [17(12)]

DOE then discussed three regulatory issues that could impact the implementation of the LSS. The first issue pertained to access mode. Prior to the hearing notice, the Rule states that LSS parties will have access to full text and the public will have access to bibliographic headers only. [20(1)] Full text search of the database is not required for the public until after the hearing notice is issued. This dual access mode creates inefficiencies which impact the

design, cost, and header requirements. [20(9)] When asked what the impact on cost would be, DOE responded that the cost would increase, but the exact impact on cost had not been quantified. [23(9)] When asked what the impact on header requirements would be, DOE responded that fewer headers would be needed if all users were given full text search capability.

NRC stated that the documents will be available to the public in the DOE Public Reading Rooms. However, the full text will not be available electronically until after the hearing notice. [24(6)] From a policy standpoint, NRC said that it would be best to maintain the requirement for restricted public access to the system.

DOE then said that the functionality of being able to restrict access could be dealt with; the real issue is that the Rule states that the public will be restricted to headers only. The LSSA will have to decide who gets access to what. Cost may not be much of a factor. [29(4)]

The second issue concerned the creation of functional requirements. DOE created a requirement for OCR capability that is not explicitly stated in the Rule. OCR capabilities would allow the input of documents that are not submitted by participants in standard text files. [31(2)]

The final issue concerned DOE's restatement of a requirement. The LSS requires a function that allows the LSSA to alert users that subsequent revisions to a document exist. However, if the header resides on a read-only medium such as optical disk, the original header cannot be revised. Therefore, DOE restated the requirement to prevent the language of the Rule from eliminating specific LSS implementation options. [34(6)]

Removing Technology Constraints, Preston Junkin, OCRWM M&O contractor
Attachment E: Removing Technology Constraints from 10 CFR 2 Subpart J.

The purpose of this presentation was to bring to the panel's attention some of the Rule's technology constraining language. DOE's goal is to 1) restate the language in the Rule and 2) get the panel to agree to a Rule change that would remove technology constraining language. DOE feels that some of the technical language in the Rule is unnecessarily specific as to the design of the system. [35(18)] DOE suggests that minor changes to the language of the Rule would allow DOE to produce a better system at a lower cost because it would allow design decisions to be made based on the best technology currently available. [36(6)] The language of the Rule reflects the technology that was current at the time the Rule was written. Technology has changed dramatically since that time. [36(18)]

DOE identified six specific items for changes to the language:

- Change references to "dial-up access" to specify "remote access"
- Change references to "ASCII" to "searchable text files"

- Replace the word "terminal" with "workstation"
- Remove reference to "optical or magnetic media"
- Remove requirements for signed paper copies from the Rule
- Formally embrace electronic mechanisms for the "signing" of filings and other documents.

A panel member asked why the word "terminal" could not be interpreted very broadly to mean anything that is most current and most practical as a means of carrying out the intent of the Rule. [38(25)] DOE responded that the answer to that is probably something DOE and NRC will have to agree upon in terms of how the requirements document will be viewed. It is really for the two agencies to decide if that is an acceptable mode versus a Rule change. DOE cannot be at risk of not knowing whether that assumption is going to be a problem in the future. [39(4)]

DOE stated the Rule's reference to dialup access is probably intended to mean remote access. Dialup implies access by modem over a telephone line. Remote access could be provided through wide area networks. [40(12)] Even CD distribution could turn out to be beneficial to the user, particularly in terms of equipment cost for accessing the data. [40(17)]

The Rule makes specific references to optical and magnetic media. Something else may come along that may seem inconceivable now. [42(16)]

Concerning the requirement for signed paper copies, NRC commented that, at the time the Rule was developed, the Office of the Secretary (NRC) wanted to make sure there was a hard copy docket. [43(18)] NRC is moving in the direction of electronic authorization and electronic submission. However, the Rule is very specific in requiring hard copies. [44(2)] NRC's stance is driven by that of the Federal court system, which still requires hard copy. [44(10)] If the LSS is to include electronic authorization, that needs to be stated, because it will affect the decisions on the design and implementation of the system. [45(16)]

One of the panel members said that rule interpretation is always the duty of the agency that has the responsibility and authority to implement the rule. In this case, it is the NRC's Rule. [51(5)] Another panel member recommended that the term ASCII mean ASCII or whatever is best. [52(7)] The panel member went on to state emphatically that he would never vote for a Rule change—even for minor changes—because it would open the Rule to other changes in areas such as the Topical Guidelines, document retention, relevancy, privilege, and management of the system. [52(12)] DOE stated that it needs firm, well-understood requirements to reduce or minimize the risk that the requirements will be unclear, misunderstood, or change halfway through the design and development phase. [53(12)]

Another panel member mentioned a discussion he had had with DOE after the last LSSARP meeting that DOE will be going through the lengthy process of creating documents electronically, converting them into paper, and then scanning them in, to create the electronic image. The panel member asked whether the Rule change would help correct this inefficient

process. [56(4)] DOE responded that it would not and volunteered to develop an explanation for the panel. [57(11)]

NRC felt that the issues raised by DOE could be dealt with without a Rule change, although not all of them fall into the same category, i.e., the hard copy requirement. [55(10)] The LSSARP moved to allow DOE to interpret the Rule loosely relative to the issue of technologically constraining language. John Hoyle will write a letter to document the panel's decision. [57(13)]

LSS Schedule, Fielden Dickerson, OCRWM M&O contractor
Attachment F: LSS Schedule.

DOE gave a presentation on its short-term and mid-term planning and scheduling for the LSS. DOE would like to bring the functional requirements to a close quickly. LSSARP review of Level 1 functional requirements is to be completed by May 23, 1995, and DOE will begin development of Level 2 requirements on April 12. [62(10)] DOE would like LSSARP comments on the Phase 1 requirements before April 12; all comments must be in before May 23 or they will not be considered. [62(19)]

As for the funding process for LSS, one panel member expressed dismay that DOE has decided against all the other options except going to Congress every year for an appropriation. [64(15)] He felt that this exposes the LSS to too great a risk. [65(10)] DOE responded that if the agency has to get the money, they will get the money. The question is how does DOE get the money to NRC? In all the other options, DOE has oversight responsibility over the agency that is overseeing DOE, which seems convoluted. [65(12)] Another panel member asked why it has to be a separately identified line item and why it can't come out of the Nuclear Waste Fund money that is transferred from DOE to NRC every year. [66(6)] NRC responded that NRC no longer gets their money from DOE; it does come out of the Waste Fund, but in a separate appropriation for NRC. [66(21)] If DOE is willing to do this, and if any request for appropriations whether it is NRC or DOE is going to have to be approved by Congress, then why not do it. [67(20)] The LSS will always be subject to the vagaries of the budget appropriations process. Another panel member stated that the burden is still on DOE, even if the Congress does not want to fund the LSS, DOE will still have to develop a workable database for the license application. [68(25)] A panel member said that DOE and NRC need to persuade Congress to fund the LSS because the overriding reason for the LSS is to allow the licensing process to be conducted within three years. [69(25)] Ninety percent of the reason for the LSS is to benefit NRC and DOE. [70(19)]

Technical Working Group Report on Review of LSS Requirements Document, Roger Hardwick, Clark County, Nevada

Attachment G: LSSARP March 22 & 23, 1995: Technical Working Group [Outline of Presentation].

Attachment H: LSSARP Technical Working Group Members.

Attachment I: Licensing Support System Advisory Review Panel (LSSARP) Technical Working Group (TWG) Charter - March 22, 1995.

Attachment J: Technical Working Group (TWG) Priorities - March 22, 1995

Roger Hardwick, chairman of the Technical Working Group, introduced the other members of the TWG and discussed its recent activities. He began by reading the group's charter. [73(5)] Mr. Hoyle asked for consensus on the charter and received it from the panel. [74(2)]

The Technical Working Group has met three times since the last LSSARP meeting in December 1994. [74(8)] The group has reviewed and provided comments on the *LSS Participant Commitments* document [74(23)] and the *LSS Phase I Functional Requirements* document. [75(10)] The group concluded that the Functional Requirements document was a good first effort, but there were problems with the interpretation of who was doing what. [75(16)] The Technical Working Group would like to develop their own set of Level 1 requirements to submit to DOE and NRC for review and comment. [75(22)] The group plans to meet April 17-18 in Denver to accomplish this task. [76(13)] DOE expressed concern that if the Working Group came up with some requirements that are not explicitly stated in the Rule, then DOE would need to get LSSARP consensus, which would effect their LSS schedule. [79(8)] DOE also asked whether they would be bound by the recommendations of the working group or whether these would just be suggestions. [86(7)] Mr. Hardwick said that they would merely be suggestions. [86(24)]

Mr. Hardwick said that DOE's Phase I requirements were vague in some areas [76(18)] and that the requirements need to be as specific as possible from a systems design aspect. [82(10)] Another Working Group member said he saw a problem with tying the Level 1 requirements to the Rule, and that he was looking for requirements that would get the job done and did not see this in DOE's version. [84(3)] DOE defended the document by saying that the Level 1 requirements were meant to be an interpretation of 10 CFR 2 and not intended to go any further than that. [77(15)] Mr. Hoyle suggested that the Working Group meet before April 17-18 to accommodate DOE's schedule. [85(2)]

Mr. Hardwick also mentioned the subject of determining a site for the LSS facility. The FY89 appropriations bill put the LSS facility at UNLV, but NRC has the responsibility for siting the LSS. [97(21)] The TWG suggests that the panel make a formal statement declaring UNLV as the site of the LSS. [98(8)] The TWG also believes that the decision should be made soon, because the longer it is before the decision is made, the harder it will be to implement it. [98(14)]

Header Working Group Activity, Kirk Balcom, State of Nevada**Attachment K: Summary Table for Field Definitions (3/17/95)****Attachment L: Header Working Group document**

Mr. Balcom presented the latest version of the header field definitions, as revised by the Header Working Group. The group met on March 2 to look at the header definitions. No new fields were added, but some field were deleted or changed. [100(15)] The Working Group deleted the following fields: Submitter Center, Document Date Flag, Document Condition, Event Date/Code, Package Code, Publication Data, Descriptor, Submitter Page Count, Concurrence Approval information, Document Routing and Tracking information, and Copyee information. [101(18)] Mr. Balcom discussed each of the changes.

- Submitter Center is being subsumed by another field. It will be obvious from the documents where they came from as part of the accession number process. [102(5)]
- Document Date Flag shows that the date was estimated. With the ability to see the actual image of the document the user will be able to determine whether the document has a date. [102(11)]
- Document Condition was meant primarily to determine whether the document contained marginalia. The user will be able to determine this by viewing the image of the document. [103(1)] One of the panel members asked whether the user would have to look through the entire document to find the marginalia as opposed to looking in the header. [103(23)]
- Event Date/Code was an NRC desire to be able to track certain events, and it now seems unnecessary [104(23)].
- Package ID Code does not seem to do anything or add anything. [105(6)]
- Publication Data was intended to include citations to publications. This information can be obtained from the document image. [105(18)]
- Submitter Page Count seemed like an unnecessary burden on the participants and the document images will be counted anyway. [105(24)]
- Document Routing/Tracking Information seemed unnecessary. [106(9)]
- Copyee is a typical field used in litigation support systems. It allows users to see all the people the document was copied to. This information will be available on the document image. [106(11)]
- Concurrence/Approval List - DOE is going toward electronic submission of documents, and the Concurrence Approval List will actually be part of the electronic packaging of that. [107(7)]
- Descriptors - There were two terms that would provide subject term access—Descriptors and Identifiers. The Descriptors field was tied specifically to the old LSS Thesaurus. Catalogers were supposed to be able to look at a document and decide which Thesaurus categories it fit into. Current technology has better automation tools for generating index terms. This field will be left as optional, for use by the submitter. [107(25)] Often the terms in the title describe the document better than an indexer could.
- Keywords was added to allow users to be able to flag a document to retrieve later. [111(14)]

- Copyright has been subsumed by Access Control. [114(10)]
- Electronic Signature now appears as a field. [114(14)]
- Abstract, which would involve creating a description of each document, was determined to be too costly, and there will already be a header and full text. It remains as an optional field. [114(22)]
- Title field is frequently not very descriptive. The Working Group is suggesting that if the LSSA determines that the title is not descriptive enough that additional information can be added. [115(12)]

One panel member asked if some of the fields could be taken out in order to save time. [116(7)] Mr. Balcom said as many fields have been deleted as possible and that some of the fields are mandatory and some are optional. [116(12)] Mandatory means that if there is no information for that field on the face of the document, it must be created. Required means that information must be put in if it exists. Optional means that the information does not need to be input. [117(9)] A panel member also expressed concern that some fields, such as key word or identifiers, were optional, as it might effect the ability to retrieve as many documents as possible from a search. [118(3)]

A panel member was concerned about removing some fields based on the availability of the image. With Internet searches some people might turn off the graphics capability and will not have access to the images. [120(5)] Mr. Balcom responded that some precision may be lost, but there is a cost-benefit trade-off in giving the user everything. [121(8)] If the system relies on image, will some users get cut out of access? A Header Working Group member responded that it would mainly effect the ability to see marginalia. [123(19)]

A panel member asked whether there would be an error check to catch misspelled words or digital transposing of numerical digits. [125(8)] Mr. Balcom responded that there will be elaborate front-end editing processes and spell checkers and the text that is submitted must be 98.5 percent accurate. There will be a lot of automation to ensure that things are as accurate as possible, but the submitter must be responsible for checking for the transposition of numbers. [127(25)] DOE will provide training to participants. [129(1)]

Mr. Graser cautioned that some things that they are anticipating the system will be able to do, such as automated thesaurus term generation, may need to be studied further. [131(2)] The Header Working Group recommended that the LSSARP adopt the Summary Table for Field Definitions (3/17/95) as is, but leave the identifier field or how the thesaurus would be implemented to more research. [149(11)] The panel voted on the adoption of the header fields, but there was not consensus. [150(20)]

Inspector General (IG) Report, Dave Williams, NRC IG

Attachment M: NRC Needs to Provide Strong Direction for the Licensing Support System (OIG/95A-01), Audit Report, Office of the Inspector General, U.S. Nuclear Regulatory Commission, March 17, 1995

The NRC conducted an audit of its portion of the LSS project. Russell Irish, NRC Senior Auditor, highlighted the findings and recommendations of the IG report. The IG recognizes that pending legislation could ultimately impact the need for the LSS, but recommends that NRC move forward to prevent further delay. [152(9)] Overall the audit found that NRC needs to provide strong leadership and direction to help resolve several long-standing inter-agency issues and to prevent unnecessary delays. [152(19)] Since its inception, the program has suffered from setbacks and delays that have significantly slowed the progress of the LSS. [153(1)] The LSSA also must provide proper direction to ensure that the long-standing management issues are resolved and that the LSS is ready when it is needed. [153(16)] Changes in DOE's repository program have caused delays. When responsibility for the LSS was transferred to the Yucca Mountain Site Characterization Office, it began a re-evaluation of the LSS concept and the implementation requirements and virtually all lines of communication between the LSSA and DOE ceased for several months. [154(6)]

A 1992 preliminary NRC/DOE report noted that it normally requires about five years to procure, develop, implement and test a major automated system like the LSS. Therefore, if DOE were to begin the process today, the system may not be ready until the year 2000. [154(17)] The report also noted that the LSS has not been developed on a schedule that makes it available for loading four to five years before the submission of the license application. It is unlikely that the estimated 18 million pages of relevant material would be in the LSS system by 2001. [154(22)]

The IG believes that the LSS program has stalled over the past five years primarily due to delays in the construction license application schedule, personnel changes in NRC and DOE, changes in program direction, and a lack of agreement over funding for the LSS. Many of these delays can be attributed to a lack of clear definition and agreement on the roles and responsibilities both between and within DOE and NRC. As a result, only six years remain in which to develop and implement an LSS. [155(20)]

The IG report recommends that the LSSA obtain a formal commitment from DOE in the form of an interagency agreement or MOU on key aspects of the LSS. At a minimum, such an agreement should include such items as the respective roles of each agency, funding, and the LSS timetable. [156(11)] The LSSA should develop a management plan for the Commission to approve that minimally will include items such as the roles and responsibilities of NRC staff in the different program offices, contractor support, and internal funding for the LSS. [156(20)] If no agreement can be arranged between DOE and NRC, or if DOE cannot meet its obligations, the LSSA should develop a contingency plan for developing the LSS. [157(2)]

One of the panel members commented that pending legislation will only increase the need for the LSS and will constrict the time period to develop it. [157(22)] Another panel member asked whether they were going to see a formal agreement between NRC and DOE. [161(11)] He asked whether an interagency agreement could be crafted that would resolve the funding issue without giving DOE too much control. [163(12)] The IG responded that they would have serious concerns if the NRC would ever view DOE as anything other than just another licensee. [163(18)]

NRC and DOE need to craft an agreement soon because, based on DOE's projections, it will take five years to develop a system. Therefore, this will have to be the year where conceptualization ends and implementation begins. [165(3)]

DOE said that the five-year estimate seemed incorrect because the LSS is an electronic system, it should be fairly simple to load. [166(11)] A panel member said that there may not be as many backlog documents to process as originally estimated, so it may not take four to five years to load the LSS. [166(21)] DOE responded that their current estimate is three years, including the six-month procurement period. [167(20)] March 1999 will be the drop-dead date. [168(16)] The IG stated that, although the Rule requires certification of the system six months prior to implementation, the intent of the Rule was that the LSS would be available four to five years before the licensing application for various other types of discovery uses. [169(6)] NRC stated that their intention was to have an MOU in place soon. [169(22)]

A panel member commented that the recommendation for the contingency plan sounded as if the decision may have to be made as to whether to abandon the LSS. [170(12)] The IG responded that NRC may want to consider this. If they see themselves failing, they need to alert someone. [171(6)]

Current LSS Activity at NRC, Moe Levin, NRC

The LSSA has instituted several measures in response to the recommendations in the IG report. NRC has drafted a rough MOU based upon a seven-year-old MOU between the two agencies that was never used. The two agencies are beginning to work together. [172(9)] A panel member asked if the draft MOU could be made available before the next meeting. [171(14)] DOE asked what the purpose would be of having the panel review the MOU. A panel member responded that many of the issues are of interest to the panel. LSSARP input would help to avoid problems and benefit both agencies by getting advice from the panel. [173(2)]

NRC has developed a Senior Management Team to strengthen management and to review the direction, roles, responsibilities, and user needs for the LSS. The Team consists of Moe Levin (LSSA), Bill Olmstead (OGC), and Mal Nap (NMSS). [174(8)] In response to the IG's recommendation to develop a contingency plan, NRC plans to develop a set of triggers or dates that indicate a failure to accomplish necessary goals. Once a trigger has been activated, then an action, such as informing Congress, will take place. [175(4)] As a result of

the IG audit, NRC has been conducting a series of internal briefings, including a briefing for the chairman. The following issues have emerged. [175(23)]

- What are the fundamental assumptions that validate the need for the LSS and are they still valid? [176(7)]
- Are we putting too many documents into the system? Does the size of the LSS need to be re-evaluated. [176(14)]
- Will the LSS be available in time? Will it be ready ahead of time for additional uses as identified during the negotiated rule making? [176(21)]
- How much will the LSS cost the ratepayers? The LSS was envisioned as one system that would be DOE's records management system and the LSS. The chairman is concerned about the incremental cost of duplicating hardware and software for two separate systems. [177(12)]

NRC reiterated a point made in the IG presentation concerning the objective of using the LSS in the pre-license application phase. One other prelicense application use of the LSS that was discussed during negotiated rulemaking was the idea of issue tracking, e.g., the "institutional memory" of the LSS. Having this capability is tied to what the state of DOE's records management system is in terms of having links between decisions and documents. There is also a related concern for the page estimates that DOE may not have sufficient discipline in its records management system. [178(4)]

As for funding of the LSS, the NRC Office of Controller has identified at least two mechanisms of transferring funds legally from DOE to NRC. [180(2)]

A panel member commented that the Senior Management Team is looking at the size of the LSS and asked whether they would be looking at the definition of relevancy. [180(17)] Mr. Levin said that he has not been a part of any discussions that question the definition of relevancy. [181(5)]

One panel member said that he was not concerned about having access to the LSS four years ahead of time, as long as the system can get done in time. [183(19)] However, another panel member said that the earlier the system is available the better because it will allow people to learn how to use it. He was concerned that little progress has been made, the same issues are being discussed, and a lot of money has been spent. [184(18)]

DOE asked whether the issues-tracking capability would necessitate different design requirements. [185(13)] A panel member responded that it would be the same system, but people would use it for different purposes. [185(19)] NRC asked whether DOE had a link between DOE documents and DOE decisions. (NRC is currently developing a system which covers many different areas of regulation and that identifies all the documents that were used in a Commission decision on a particular issue. [188(4)]) DOE was unsure, but said they would do a presentation at the next meeting. They also expressed concern that if their system did not provide the link, they would have to go back and retrofit it. [188(24)]

A panel member asked whether the LSSARP would be kept informed as to the activities of the Senior Management Team. NRC said it plans to report on such activities at every meeting. [193(17)]

Comments Received on Draft Participant Compliance Document, Moe Levin, NRC; Tony Neville, Joe Speicher, LABAT-ANDERSON

Attachment N: Comments on Draft *LSS Participant Commitments*.

Attachment O: Review of LSSARP Comments on the *LSS Participant Commitments*.

Attachment P: Definition of Terms and Listing of Acronyms.

At the time of the meeting, comments on the *LSS Participant Commitments* had been received from Clark and Nye Counties and DOE. Most of the comments covered two recurring themes, the degree of burden to the participants generated by some of the commitments and some of the specific dates for deadlines that were based on earlier LSS system development schedules. There were some comments that NRC felt were outside the purview of the Commitments document; those comments were not addressed. Terminology questions were addressed in a definition of terms appendix. [199(3)]

A panel member commented that he agreed that the commitments seemed burdensome. He believes that the system will be self-policing. He also hopes that the commitments can be scaled back considerably. [200(17)] The panel member went on to say that many of the commitments depend on LSSA guidance that the panel has not seen. He said that makes it difficult to evaluate the commitments. [201(14)] He also said that he hoped the panel would have an opportunity to review the guidance. [202(8)] NRC said that they would go through the Commitments document, identify every reference to guidance, and make sure that the LSSARP gets to review the guidance, as appropriate. [202(11)]

A panel member said he was glad that the LSSA was addressing the comments. He asked if it was true that under Commitment 1.B, the LSSA is no longer requiring that all participants maintain an intricate audit trail on material determined to be not relevant. [204(10)] Mr. Speicher said that the reference not only refers to the simplification of the audit trail, whereby you would not have to track inclusion/exclusion decisions, but is also related to how much material will be put into the LSS and in what fashion. DOE proposes to input a portion of their collection that they consider relevant without a particular rescreening effort. If that takes place, the whole process of tracking that particular operation in the audit trail will be simplified. Also, the actual physical "doing" of the relevancy screening will be much simplified and less burdensome. [206(2)]

A panel member said that everyone realizes that the universe of documents to be input into the LSS is much smaller than originally expected. He asked how the smaller number of documents would make the process easier. [206(18)] Mr. Speicher responded that it is not necessarily a question of the number of documents, it is how they are determined to be included or excluded. [207(13)]

A panel member asked what was meant by "Participants should maintain an audit trail." [208(14)] NRC said it means that every participant should have a good administrative process for tracking their documents as they go through their own internal systems and end up in the LSS. Several panel members felt that it should not be of interest to the LSSA how a participant's documents are tracked. The LSSA is creating a bureaucracy that is not necessary. NRC said they would look at the requirements again. [212(1)]

A panel member asked how other panel members felt about the need for a priority loading schedule to prioritize backlog documents. [212(8)] NRC responded that it depends on how much time there is to load the LSS and how much backlog there is to load. [213(8)] NRC asked DOE if they could add some priority categories. A panel said that the guidance needs to come from the people who are going to be conducting the licensing process. They need to decide what are going to be the critical issues in licensing. [214(12)]

NRC asked whether documents could be prioritized by loading the basic regulatory documents first, and whether DOE could design and develop a loading plan that could accommodate the idea of priority categories. [215(9)] DOE responded that they would need to have sufficient lead time to identify what categories of priorities were wanted. [216(4)] NRC stated that this may not be an issue. If the LSS is provided to the LSSA fully loaded for certification with all the backlog documents loaded, and that would be the first time participants would have access to the system, then priority loading is not an issue. [216(19)] The real issue is whether a fully loaded system will be available by 1998 for access or will there be a system available in 1996 that contains only the priority documents. [217(11)] DOE said that their procurement schedule puts a constraint on early availability of the LSS. [218(6)] However, DOE said that the Automated Technical Data Tracking System could be used. [218(17)] The issue hinges on how long it will take to load the system, according to one panel member. DOE said that they hope to start loading their system in May and have already begun loading some documents as a test case. The amount of time loading will take is a function of money, the number of headers, and the amount of error correction on text fields. [221(18)]

DOE needs to look at using technical basis reports to develop priority categories and to discuss, from a systems design standpoint, whether it is feasible. [232(2)] NRC and DOE will discuss this at the next meeting.

A panel member said that he would like to be assured that DOE was really beginning to load documents. DOE said they are starting to capture images and are in the process of evaluating text conversion tools. [233(2)]

DOE will report at the next meeting on their progress with loading documents. DOE will also distribute copies of the Technical Basis Reports to panel members, along with their due dates, prior to the next meeting. NRC will give panel members two more weeks (until April 7) to review the Commitments document. [203(10)]

Location of LSS Facility, Fielden Dickerson, OCRWM M&O contractor

The Technical Working Group is attempting to address issues that have been overlooked, one of which is the decision on where the LSS will be physically located. The location will effect funding and design issues. The Working Group understands that NRC is responsible for making the decision, but would like to recommend that the LSS be located at UNLV. [237(21)] Mr. Hardwick added that one of the concerns was the timing of defining the requirements for the site. [239(5)]

A panel member asked DOE when the decision would have to be made. [239(19)] It would depend on whether a new building would need to be built or an existing building could be used. In a worst case scenario, it would take UNLV about five years to place a new building. [240(22)] A panel member commented that Congress may direct NRC to put the facility as close to the site as possible. [241(21)] DOE said that the location will have to be specified when the RFP is written. [244(8)] An audience member asked whether the RFP for the design and development of the LSS could include a line for operations and maintenance, e.g., a turnkey operation. DOE said yes, that would be possible and thought it might be a good solution. [244(13)]

NRC and DOE will discuss specifications for the site and report back at the next meeting. [245(2)]

Inclusion/Exclusion Criteria for DOE's Records Management System, David Warriner, OCRWM M&O contractor

Attachment Q: Inclusion/Exclusion Criteria for the Department of Energy's Office of Civilian Radioactive Waste Management Records Management System.

The purpose of DOE's presentation was to inform the LSSARP of the Federal program requirements for its records system (which are much broader than the Rule); to give an historical perspective on DOE's attempts to incorporate the licensing requirements into their records management system; and to propose criteria that would enable DOE to cost-effectively implement those requirements. [247(10)] Mr. Warriner presented a list of the requirements for a Federal government records management program. [248(3)] The inclusion/exclusion issue has been addressed in a variety of documents, including the Records Management Requirements and Responsibilities document, an inclusion/exclusion list generated in 1992, and the draft Topical Guidelines. [248(21)] Mr. Hoyle confirmed that the Topical Guidelines were still in draft, but they are close to being ready to go to the Commission. He promised to distribute them to the LSSARP at the same time they are sent to the Commission. [250(1)]

Mr. Warriner explained what is meant by "non-OCRWM program records." As with any Federal agency, DOE receives documents and records from a variety of other sources outside DOE. These are Federal documents, so they must be controlled by DOE to meet Federal records requirements. However, in terms of content, these documents have nothing

to do with OCRWM's mission. [250(21)] Mr. Hoyle stated that NRC only has one record copy of a document. If one division creates a document and sends copies elsewhere within the agency, only the originating office has the record copy [252(4)] A panel member asked what the significance was of having a record copy. DOE responded that if someone wants a copy of a record, DOE has to certify that what they have is their record copy. The records must be controlled, managed, and disposed of according to the guidelines provided by the National Archives and Records Administration. [252(21)]

A second category of records includes OCRWM program records excluded by the Rule. DOE still has to manage these documents even though they are not a part of the LSS. [253(16)] A third category of record includes OCRWM program records included by the Rule. [254(3)] To develop a set of criteria that would enable DOE to administer its records program and meet the requirements under the Rule, DOE proposes that three questions be asked of the record:

1. Does it contain information related to the OCRWM Program? If DOE received the document from an outside organization and it contains information related to the program, then go to question two.
2. Is it excluded by 10 CFR, Subpart J, §2.1003? If not, then it becomes part of the LSS.
3. If in doubt, include in the LSS. [254(10)]

Mr. Warriner discussed several records-related terms from the Rule for which DOE would like clarification from the LSSARP.

- DOE said that the term "official notice material" may be interpreted differently by different participants.
- What is meant by "readily available," and how "readily available" participants expect documents to be, e.g., within 24 hours, a few weeks, or months. [255(23)]
- The Rule refers to financial information that is to be included when it is confidential financial information but excluded when it is material related to budgets and financial management. [257(1)]
- The Rule lists a number of administrative records to be excluded, for which DOE would like clarification or examples. [257(22)]
- It is unclear what is meant when the Rule says that references that are in contractor-generated reports must be readily available and what is meant by readily available. DOE suggested that it could mean available in an OCRWM-funded technical information center, or it is copyrighted, or it is contained in a university library. [258(3)]

A panel member responded that DOE should use common sense. Readily available means someone can get a copy of the document in a reasonable time frame. To say

something is readily available if it is copyrighted does not make any sense at all. If it is a journal that can be found in a library, then it is readily available. [260(2)] DOE said that the lack of clarification on this issue is costing them a lot of money. Mr. Cameron stated that the problem is not that DOE cannot devise a common sense definition for "readily available," but that the agency would like input from panel members. [261(5)] Mr. Cameron said that the panel needs to remember what the rationale for the provision was because the idea is not that a record is readily available, but that the material is supposed to be in searchable full text. [263(9)] Mr. Graser recommended saying that if the document can be found in the OCLC (Ohio College Library Center) or any other standard bibliographic database that you could access through an interlibrary loan, then exclude the document. If it is in OCLC, then it is generally available through some sort of interlibrary loan. [266(18)] Reference books and text books can be handled the same way. [275(11)] As for confidential financial information, the Commission's regulations in 10 CFR 2.790 incorporate a lot of the FOIA law on those issues. There should be plenty of guidance on how to handle financial information. [277(11)] The financial management information refers to internal DOE and NRC financial management, e.g., NRC's budget, DOE's budget, what type of information should be excluded. [278(17)]

Mr. Graser asked whether documents related to the MRS or to the Hanford site would be in the LSS based on the three criteria. DOE said that documents related to the MRS would be included, but that for documents related to Hanford, it would depend on their relevance to the Yucca Mountain site. [281(9)]

A panel member said that some documents that seemed relevant at one time, may no longer be relevant, e.g., documents related to the exploratory shaft to be drilled through Yucca Mountain. [282(15)] The panel discussed the pros and cons of excluding documents versus putting everything in the system. Some felt that it would affect search time or the number of hits as a result of a search. Mr. Levin raised another issue concerning the size of the system. He said the number of documents could have a logistical effect, e.g., the amount of storage, the cost of the system, backup. [292(13)] DOE will record the clarifications to the inclusion/exclusion criteria for distribution to the panel by the next meeting. [295(6)]

Use of the LSS on a Pilot Project Basis, NRC/DOE

The technical staff of NRC and DOE were tasked with deciding what a suitable topic would be for using the LSS on a pilot project basis. Surface processing was mentioned as a potential topic because that is the first Technical Basis Report. [297(19)] DOE said that what would be available would be basically headers and some images. [298(18)] A panel member expressed concern that the pilot system may not provide a suitable test if it is not a full text search system. [299(4)]

Ms. Newbury clarified that the purpose of the pilot would be to test the functionality of the system, not to determine whether DOE has all the participants' documents in the system. [300(7)] DOE cautioned the pilot project could slow down the development of the

LSS, but it could also provide valuable information to help in the design phase. [302(4)] DOE will report back to the panel at the next meeting as to what their decision is.

NEXT MEETING SCHEDULE AND AGENDA

The Commission will hold a public meeting on the LSS in Washington, tentatively scheduled for May 9 or 10 in Washington, DC. The purpose of the meeting will be to discuss the IG Report and to have the NRC staff respond. Mr. Hoyle suggested that a discussion of the Technical Working Group's issues at this half-day meeting would fit well with DOE's schedule for functional requirements development. Other topics may include a briefing on DOE records management system's issues-tracking ability, DOE development of priority categories based on the Technical Basis Reports, a report on DOE's progress in loading their own documents, and an NRC and DOE discussion on the location of the LSS. A subsequent meeting was scheduled for July 6 and 7. Location alternatives were discussed.

ACTION ITEMS

- The LSSARP chairman will
 - schedule another LSSARP meeting for early May 1995.
 - write a letter to document the panel's decision to interpret the Rule, so that minor language changes will not necessitate a Rule change.
- LSSA/NRC will look at the Participant Commitments document to identify all references to guidance and update and eliminate unnecessary references to guidance.
- DOE will provide, prior to the next meeting, a copy of the Technical Basis Reports to the LSSARP and a schedule of when reports are due.
- DOE will make a record of the clarifications to the inclusion/exclusion criteria to distribute to the panel by the next meeting.
- The Technical Working Group meet April 17-18 and provide a report by the April 21.

ATTACHMENTS

- Attachment A: Agenda LSSARP Meeting, March 22-23, 1995, Las Vegas, Nevada.
Attachment B: Status of Arrangement for LSS Operation.
Attachment C: LSS Functional Requirements Definitions.
Attachment D: *LSS Phase I Functional Requirements* (Draft, February 28, 1995).
Attachment E: Removing Technology Constraints from 10 CFR 2 Subpart J.
Attachment F: LSS Schedule.
Attachment G: LSSARP Meeting March 22 & 23, 1995: Technical Working Group [Outline of Presentation].
Attachment H: LSSARP Technical Working Group Members.
Attachment I: Licensing Support System Advisory Review Panel (LSSARP) Technical Working Group (TWG) Charter - March 22, 1995
Attachment J: Technical Working Group (TWG) Priorities - March 22, 1995
Attachment K: Summary Table for Field Definitions 3/17/95
Attachment L: Header Working Group document
Attachment M: *NRC Needs to Provide Strong Direction for the Licensing Support System* (OIG/95A-01), Audit Report, Office of the Inspector General, U.S. Nuclear Regulatory Commission, March 17, 1995
Attachment N: Comments on Draft *LSS Participant Commitments*.
Attachment O: Review of LSSARP Comments on the *LSS Participant Commitments*.
Attachment P: Definition of Terms and Listing of Acronyms.
Attachment Q: Inclusion/Exclusion Criteria for the Department of Energy's Office of Civilian Radioactive Waste Management Records Management System

ATTACHMENT A

3/16/95

AGENDA
LSSARP MEETING, MARCH 22-23, 1995
Las Vegas, Nevada

THOMAS BEAN ENGINEERING BLDG., ROOM A-207

Wednesday, March 22, 1995

- 1:00 Introduction (LSSARP Chairman)
- 1:15 Current LSS Activity at DOE (DOE)
- 2:45 Technical Working Group Report on Review of LSS Requirements Document (TWG)
- 4:00 Header Working Group Repo(HWG)

Thursday, March 23, 1995

- 9:00 Current LSS Activity at NRC (NRC/LSSA)
- 10:15 Break
- 10:30 Progress Toward Development of an NRC/DOE Memorandum of Agreement (NRC/DOE)
- 12:00 Lunch
- 1:15 Inclusion/Exclusion Criteria for DOE's Records Management System (DOE)
- 2:30 Location of LSS Facility (DOE)
- 3:00 Break
- 3:15 Comments Received on Draft Participant Compliance Document (LSSA)
- 3:45 Topic Selection for Use of LSS on Pilot Project Basis (NRC)
- 4:00 Action Item Review/Next Meeting Schedule (All)

ATTACHMENT B

LSSARP MEETING

STATUS OF ARRANGEMENT FOR LSS OPERATION

**Fielden Dickerson
March 22-23, 1995**

MEMORANDUM OF UNDERSTANDING

- **An MOU cannot be used to transfer money**
- **A documentation of procedures and understandings**

INTERAGENCY AGREEMENT

- **Transfers funds**
- **Responsibility for the activity remains with DOE**
- **Terms and conditions set by DOE must be identified in the document**

GRANTS

- **Have been used with State and Counties**
- **DOE fixes terms and conditions**

DIRECT PAYMENT

- **Achieved through an Appropriations Bill**
- **Terms and conditions are funds shall be expended for activities as defined in the Nuclear Waste Policy Act, as amended**

**ENERGY AND WATER DEVELOPMENT
APPROPRIATION ACT, 1992
NUCLEAR WASTE DISPOSAL FUND
PUBLIC LAW 102-104 - AUGUST 17, 1991
105 STAT. 527**

***Provided*, That of the amount herein appropriated, within available funds, not to exceed \$5,000,000 may be provided to the State of Nevada, for the conduct of its oversight responsibilities pursuant to the Nuclear Waste Policy Act of 1982, Public Law 97-425, as amended: *Provided further*, That of the amount herein appropriated, not more than \$4,000,000 may be provided to affected local governments, as defined in the Act, to conduct appropriate activities pursuant to the Act: *Provided further*, That the distribution of the funds**

**ENERGY AND WATER DEVELOPMENT
APPROPRIATION ACT, 1992
NUCLEAR WASTE DISPOSAL FUND
PUBLIC LAW 102-104 - AUGUST 17, 1991
105 STAT. 527 (cont'd)**

herein provided among the affected units of local government shall be determined by the Department of Energy (DOE) and made available to the State and affected units of local government by direct payment: *Provided further*, That within 90 days of the completion of each Federal fiscal year, each entity shall provide certification to the DOE, that all funds expended from such direct payment moneys have been expended for activities as defined in Public Law 97-425, as amended.

MILESTONES

- **Obtaining approval of Senior DOE management to proceed with the direct payment concept for NRC operations of the LSS**
 - **Draft decision memorandum has been generated for Senior DOE management**
- **No MOU has to be developed between NRC and DOE for operation of the LSS**

ATTACHMENT C

LSSARP MEETING

Licensing Support System

Functional Requirements Definitions

**Fielden Dickerson
March 22-23, 1995**

Functional Requirements Purpose

- Describe the required LSS system functionality
- Facilitate an Analysis of Benefits and Costs (ABC)
- Necessary to build the LSS or include in a Request for Proposal (RFP) depending upon outcome of ABC

Background

- **SAIC prepared a LSS System-Level Requirements Document in 1990**
- **Functional requirements in SAIC document were the product of analysis, conceptual design, and prototyping efforts performed at the time**
- **LSS Working Group reviewed this document to determine if it was suitable for the ABC and possible RFP**

Background (cont)

- **LSS Working Group concluded that SAIC document was not sufficient for the ABC or RFP since it:**
 - specified system design
 - included procedural requirements
 - contained ambiguous and unsuitable requirements
- **Working Group recommended that the requirements document be revised to specify only system functionality**

Requirements Definition Process

- **LSS functionality is defined at different “levels”**
- **Lower levels provide increasingly detailed information regarding functionality**
- **Classic method of decomposing problems into tractable components**

Requirements Definition Process (cont)

- **Definition process has be divided into two phases:**
- **Phase I describes only the high-level requirements (i.e. Level 1 requirements)**
- **Phase II will describe lower level requirements (i.e. Level 1+n requirements)**

Requirements Definition Process (cont)

- **Level 1 requirements are contained in the draft LSS Phase I Functional Requirements document**
- **The Phase I document coalesces Subpart J regulatory citations into more concise functional requirements.**
- **Trace matrices are included in the document to associated Subpart J citation(s) with each Level 1 requirement**

Requirements Definition Process (cont)

- **Phase I Functional Requirements documents represents a “hand-off” between Regulatory and Information Resources Management (IRM) organizations.**
- **IRM will develop Phase II requirements document which expands Level 1 requirements into all lower level requirements**

Technology-specific Language

- **Language currently found in Subpart J could constrain LSS implementation options. Examples include:**
 - **ASCII file vs standard text file**
 - **dial-up access vs remote access**
 - **bit-mapped image vs digital image**
 - **terminal vs workstation**
- **This issue was discussed at a previous LSSARP meeting and a technology-neutral revision to the rule was distributed**

Technology-specific Language (cont)

- **The need for a rule change has been brought to the attention of NRC general counsel**
- **The LSS Phase I Functional Requirements document assumes technology neutral language in anticipation of a rule change.**

Status

- **A draft of the LSS Phase I Functional Requirements document was delivered to DOE on February 28, 1995**
- **Members of the LSSARP Technical Working Group were given a copy of the document the same day**

Dual Search Mode

	<u>Public Access</u>	<u>Parties Access</u>
Before hearing notice	Headers only	Full text
After hearing notice	Full text	Full text

Thus, we have a dual search mode in the period before notice

- » impacts the design and cost of the LSS
- » potentially impacts the resolution of header requirements

Created Requirement

- Requirement LSS1-005
- Identifies a requirement for OCR capabilities
- However,
 - Subpart J does not explicitly require the LSS to include OCR capabilities since each participant is expected to provide standard text files as part of his document submissions

Restatement of Requirement

- **2.1004 (b) (3)**
 - **...ensure that the bibliographic header for the original document specifies that a corrected version is also in the LSS**
 - **Comment**
 - **If the header resides on a read-only medium, then it cannot be modified**
 - **Requirement LSS1-009**
 - **The LSS shall provide a function to allow the LSSA to alert users that subsequent revisions to a document exist**
-

ATTACHMENT D

WBS: 1.2.5
QA: N/A

**Civilian Radioactive Waste Management System
Management & Operating Contractor**

**Licensing Support System
Phase I Functional Requirements**

Draft

February 28, 1995

Prepared for:

**U. S. Department of Energy
Yucca Mountain Site Characterization Office
P.O. Box 98608
Las Vegas, Nevada 89193-8608**

Prepared by:

**TRW Environmental Safety Systems Inc.
101 Convention Center Drive
Las Vegas, Nevada 89109**

**Under Contract Number
DE-AC01-91RW00134**

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1. INTRODUCTION

1.1 PURPOSE

This document presents the first level of Licensing Support System (LSS) functional requirements from which more detailed requirements can be derived. LSS functional requirements are necessary to facilitate an Analysis of Benefits and Costs (ABC), as required by Department of Energy Orders 1330.1D and 1360.1B, and to support system design. All functional requirements presented in this document are derived from the regulations found in 10 CFR Part 2 Subpart J. The regulatory language found in Subpart J is cast into more precise statements that can be used as the basis for detailed specifications. The functional requirements consider only those Subpart J citations that specify or imply required LSS design features. Traceability is maintained between the applicable Subpart J citations and the functional requirements by means of a trace matrix which provides a side-by-side matching of requirements to the applicable regulations.

1.2 BACKGROUND

This document is not the first to present LSS functional requirements. LSS functional requirements are specified in a document entitled "Licensing Support System System-Level Requirements Document" (Reference 1). This document presents a listing of functional and performance requirements identified for the LSS through analysis, conceptual design, and prototyping efforts performed by Science Applications International Corporation (SAIC) during the 1988 - 1990 time frame. This document was evaluated as part of the LSS Working Group's efforts to identify an optimal LSS implementation strategy. The evaluation focused on determining if the document could be used to perform an ABC, and if it could be used as part of a Request for Proposal (RFP) if a buy decision is made, or as a requirements document if the LSS is developed internally.

The Working Group's evaluation (Reference 2, Section 3.4) suggested that as an overall specification, the requirements in 10 CFR Part 2, Subpart J are satisfied by the SAIC document. However, there are several deficiencies in the document, when viewed as a system-level or software requirements specification, that preclude its use in an ABC or in an RFP. In many instances, the document specified system design, included procedural requirements, and contained ambiguous and untestable requirements. In addition, there were many design requirements included in the document that were judged to exceed Subpart J requirements. In short, the document reflected the proposed LSS architecture at the time and the requirements that describe this design could exclude many potentially feasible LSS implementations. Based upon these observations, the LSS Working Group recommended that the LSS requirements document be revised to specify only system functionality. The LSS Phase I Functional Requirements document represents the first step in this effort--the coalescing of regulatory citations into more concise functional requirements. Detailed functionality will be developed in a separate LSS Phase II Functional Requirements document.

2. LSS DEVELOPMENT CONSIDERATIONS

Use of the LSS during the high-level waste hearings will represent the first time that an electronic document discovery system has been used during an NRC licensing hearing. Because the LSS is a first-of-a-kind system that is intended to support a first-of-a-kind licensing process, there is a certain degree of uncertainty that should be anticipated in designing and implementing the LSS. This section describes a process for developing LSS functional requirements that should minimize this uncertainty and maximize participation by interested parties. In addition, the LSS will pose unprecedented challenges to the information management community because of the projected size of the LSS database and longevity of the system. Several design and operation considerations are discussed in this section that could impact the specification of lower-level requirements. Finally, several regulatory issues are discussed that could ultimately impact how the LSS is implemented.

2.1 REQUIREMENTS DEFINITION PROCESS

The technical description of the LSS presented in 10 CFR Part 2 Subpart J is general in nature. It provides a framework for how the LSS should be structured and operated, but does not describe the intended LSS functionality in the detail necessary to purchase or develop the system. Therefore, the details of how the LSS will be implemented are not clearly defined and will most likely be a subject of discussion with interested parties. To facilitate this discussion, LSS functionality will be defined using a "level" concept where subsequently lower requirement levels provide increasingly detailed information on how the function will be implemented. The level concept is simply a method of decomposing the LSS system design requirements into finer and finer detail until sufficient information exists to either buy or build the system. This concept also supports LSS requirements discussions with interested parties who want to understand the LSS design, but do not wish to delve into the details of the design. The individual reviewer may focus on the level that presents LSS functionality at the granularity that he/she is most comfortable.

Before the LSS system design can be decomposed into finer detail, it is necessary to provide a starting point. The LSS Phase I LSS Functional Requirements document represents this starting point. The LSS design requirements and implied functionality contained in Subpart J have been analyzed and coalesced in this document into a set of requirements definitions that represent the first level of LSS requirements. In several instances, this activity required interpretation of the Subpart J requirements. Comments are included in the requirement definition to explain these interpretations. The LSS Phase II Functional Requirements document will contain all subsequent requirement levels.

The LSS directly supports the high-level waste repository licensing process and is therefore considered a tool of licensing. Consequently, defining the general nature of the electronic information management system required in Subpart J is the responsibility of the Regulatory and

Licensing organization within the Office of Radioactive Waste Management (OCRWM). The LSS Phase I Functional Requirements document was prepared by the Regulatory and Licensing organization to provide this general description and facilitate a "hand off" to the OCRWM Information Resources Management (IRM) organization. The LSS Phase II Functional Requirements document will be prepared by the OCRWM IRM organization to define LSS functionality in sufficient detail to support the ABC and support LSS evaluation and acceptance testing.

2.2 DESIGN CONSIDERATIONS

The LSS is described in Subpart J as an electronic records management system containing the documentary material of all parties to the high-level waste licensing hearing (§2.1002). Although the LSS is effectively a large database management system, it is unique because the volume of information expected to be processed and stored in the system is enormous. This volume has been estimated through the year 2010 in Reference 2 and is shown in Table 1. From this table it is apparent that the manner in which the LSS data is stored must be flexible enough to accommodate the projected volume. It must also be flexible enough to adapt to the varying rates at which data is added to the system, particularly if these rates are significantly different than estimated.

Processing this large volume of data will also represent a unique challenge. The sheer volume demands that an efficient information processing procedure be identified and implemented. Studies performed by the LSS Working Group indicate that the cost of processing documents (e.g. indexing), and hence the cost of operating the LSS, is very sensitive to the time necessary for humans to participate in the processing procedure. Therefore, to minimize LSS operating costs, the LSS design should attempt, to the greatest extent possible, to incorporate automation technologies that eliminate document processing tasks currently performed by humans.

As part of its charter, the LSS Working Group was asked to recommend a preferred option for implementing the LSS. The Working Group identified and evaluated seven implementation options. A description of these options is found in Section 4 of the LSS Working Group report (Reference 2), and is summarized in Table 2. The LSS Working Group recommended that DOE implement Option 6, although Options 5, 6, and 8 were all considered viable implementation options. It is expected that the LSS Phase II Functional Requirements document will describe a concept of operation for the LSS based upon the option chosen by DOE.

Table 1. Estimated LSS Page Volume

Year	OCRWM Pages/Year	OCRWM Cumulative	NRC Pages/Year	NRC Cumulative	Others Pages/Year	Others Cumulative	Total Pages Added Yearly	90% Relevant Cumulative
1994	580,000	6,905,000	59,000	550,000	18,000	18,000	657,000	6,782,000
1995	750,000	7,655,000	59,000	654,000	23,000	41,000	832,000	7,584,000
1996	1,351,000	9,005,000	65,000	760,000	42,000	82,000	1,457,000	8,947,000
1997	1,682,000	10,687,000	71,000	891,000	52,000	134,000	1,804,000	10,644,000
1998	1,970,000	12,657,000	78,000	1,046,000	61,000	195,000	2,109,000	12,632,000
1999	2,013,000	14,670,000	86,000	1,203,000	62,000	257,000	2,161,000	14,663,000
2000	2,276,000	16,946,000	95,000	1,381,000	70,000	327,000	2,440,000	16,959,000
2001	2,371,000	19,317,000	104,000	1,567,000	73,000	400,000	2,548,000	19,351,000
2002	1,628,000	20,945,000	114,000	1,694,000	50,000	450,000	1,793,000	20,994,000
2003	1,584,000	22,529,000	126,000	1,818,000	49,000	498,000	1,759,000	22,593,000
2004	1,756,000	24,285,000	139,000	1,956,000	54,000	552,000	1,949,000	24,365,000
2005	1,708,000	25,993,000	152,000	2,089,000	53,000	605,000	1,913,000	26,088,000
2006	1,514,000	27,506,000	168,000	2,208,000	47,000	652,000	1,728,000	27,615,000
2007	1,674,000	29,181,000	184,000	2,339,000	52,000	703,000	1,910,000	29,305,000
2008	1,756,000	30,937,000	203,000	2,476,000	54,000	757,000	2,013,000	31,077,000
2009	1,247,000	32,184,000	223,000	2,574,000	38,000	795,000	1,509,000	32,335,000
2010	1,124,000	33,308,000	245,000	2,662,000	35,000	830,000	1,404,000	33,469,000

Note: The number of bibliographic headers can be approximated by dividing total page counts by 13, the nominal number of pages per document.

Table 2. LSS Option Features

Licensing Support System Features	Option						
	2	3	4	5	6	7	8
Microfilm based system	No	No	No	No	No	No	No
Electronic images based system	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electronic image on-line (electronic dissemination)	No	No	No	Yes	Yes	No	Yes
Image disseminated on CD-ROM library ¹	No	Yes	No	No	No	Yes	Yes ²
Image available as hard copy from central site (mail/fax)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Text on-line (electronic dissemination, including full text search)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Human verified and corrected text	Yes	Yes	No	Yes	No	No	No
Bibliographic header on-line (electronic dissemination)	Yes	Yes	Yes	Yes	Yes	Yes	Yes

¹ The CD-ROM library contains all LSS holdings, and is not generated as a response to particular queries. The CD-ROM contains image, text and text search index of the documents held on each individual CD.

² Electronic images will be provided via on-line transmission between CD-ROM distributions.

2.3 REGULATORY ISSUES

Technology-specific Language

Even with the general technical description of the LSS presented in Subpart J, there are several instances where the rule includes technology-specific language which could unnecessarily constrain LSS design options. These instances are identified in this section along with the language introduced in this document for dealing with these instances.

The most apparent instance of technology-specific language in Subpart J is the requirement for LSS participants to submit a document as an ASCII file. The intent of the ASCII file is to

facilitate full-text search and retrieval of information. However, there are other text formats the preserve the ability to perform these functions with the added benefit of retaining other potentially useful information (e.g. formatting and linkage information). A more neutral wording of Subpart J would use a term such as "standard text file" as opposed to "ASCII file" since the later is a more specific version of the former.

Another instance of technology-specific language is use of the term "dial-up access". This term suggests access must be provided to the LSS via telephone lines and modems when in fact the intent of the rule is actually to access the LSS from remote sites. Dial-up access is simply one method of accessing any system remotely. A more generalized wording of Subpart J would replace the term "dial-up access" with "remote access."

Use of the term "bit-mapped image" is another instance of technology-specific language found in Subpart J. Once again, the intent of the rule is to store a retrievable digital likeness of a document. A more appropriate term for "bit-mapped image" could be "digital image" which includes the more specific bit-mapped digital image format.

Finally, Subpart J uses the term "terminal" without specifically defining it in §2.1002. The word terminal has the connotation to information management professionals of a terminal without intelligence or a "dumb-terminal." A more fitting term today for terminal would be "workstation" since workstations are common today much like terminals were common when Subpart J was promulgated.

Subpart J is NRC's rule and it is incumbent upon NRC to re-write the rule to eliminate technology-specific language. These technology issues have been brought to NRC's attention and efforts are currently underway to eliminate technology-specific language from Subpart J. In anticipation of a technology independent clarification to the rule, this document has been written under the assumption that the technology-specific terminology identified previously will be replaced with the more general terms suggested.

LSS Search Modes

Section 2.1007 of Subpart J provides two modes of searching for material within the LSS database depending upon whether a notice of hearing on the high-level waste license application has been issued. Prior to the notice, members of the public are allowed access to bibliographic headers only to search for information. Full-text search of the document text file is not required for the public until after the hearing notice is issued. This dual search mode reflects a position that the DOE successfully negotiated during the rulemaking process to effectively restrict document discovery for the public to only header searches until after the hearing notice is issued, or until the interested public entity chooses to become a potential party to the hearings. Although this strategy does have merit, it unintentionally introduces inefficiencies in document indexing process which could have a profound impact on the cost of operating the LSS.

The LSS Advisory Review Panel (ARP) chartered a working group to examine the header fields required for each document entered into the LSS. This working group proposed a fairly large set of fields primarily to offer the public, who cannot initially perform full-text document searches, a reasonable chance at finding information within the database. Members of the LSS Working Group have recommended reducing the number of required header fields under the assumption that the document text would be available to search. Minimizing the required header fields will reduce the labor required to generate the headers thereby resulting in significant cost savings. However, it is unlikely that the LSS ARP would be willing to reduce the number of required header fields unless the DOE agreed to provide only one mode of access to the LSS--document full-text search. As the requirement is written in this document, DOE can continue to support dual access modes, or could adopt a single access mode. This issue should be carefully considered and specific guidance should be provided in the LSS Phase II Functional Requirements document.

3. REQUIREMENT DEFINITIONS

This section presents an overview of the requirements included in Subpart J that specify or imply system design and presents the detailed trace matrices that link Level 1 requirements to the applicable Subpart J citations. The requirements derived from Subpart J are termed Level 1 requirements because they are at the root of the LSS requirements hierarchy and thus form the requirements foundation from which more detailed requirement levels will be derived in the LSS Phase II Functional Requirements document.

3.1 OVERVIEW OF APPLICABLE 10 CFR 2 SUBPART J CITATIONS

Requirements that impact system design directly or imply system functionality are included in seven sections of Subpart J. These requirements are summarized below.

10 CFR 2.1002, High-level waste Licensing Support System

- The LSS is an electronic information management system containing the documentary material of the DOE and its contractors, and the documentary material of all other parties, interested governmental participants and potential parties and their contractors.
- Access to the LSS by the parties, interested governmental participants, and potential parties provides the document discovery in the proceeding.
- The LSS provides for the electronic transmission of filings by the parties during the high-level waste proceeding, and orders and decision of the Commission and Commission adjudicatory boards related to the proceeding.

10 CFR 2.1003, Submission of material to the LSS

- Submission of material to the LSS shall be accomplished by submitting an ASCII file, an image, and a bibliographic header for all material to be included in the LSS.

10 CFR 2.1004, Amendments and additions

- A document submitter shall make a reasonable effort to verify that documents have been entered correctly into the LSS.
- The LSS Administrator shall ensure that the bibliographic header for the original document specifies that revisions have been entered into the system.

10 CFR 2.1007, Access

- Access to the LSS for potential parties, interested governmental participants, and parties will be provided by full text search capability through dial-up access from remote sites, image access at remote locations, and the capability to electronically request a paper copy of a document at the time of search.
- During the pre-license application phase, terminal for access to full headers and access to images will be provided at DOE Headquarters, NRC Headquarters, and at all NRC and DOE public reading rooms in the vicinity of the candidate site for a geologic repository. Additionally, terminals will be provided at the Uranium Recovery Field Office in Denver, Colorado, and at Las Vegas, Nevada; Reno, Nevada; Carson City, Nevada; Nye County, Nevada; and Lincoln County, Nevada. After the license application is docketed, access is to include searchable full text at the identified sites.

10 CFR 2.1011, LSS Management and administration

- The LSS Administrator shall ensure availability and integrity of the LSS database, maintain security for the LSS database including assigning user password security codes and maintain the thesaurus and authority tables for the LSS.

10 CFR 2.1013, Use of LSS during the adjudicatory proceeding

- The LSS Administrator shall establish a file within the LSS to contain the official record materials of the proceeding in searchable full text, or for material that is not suitable for entry in searchable full text, by header and image, as appropriate.
- All filings in the adjudicatory proceeding shall be transmitted electronically. Parties and interested governmental participants will be required to use a password for electronic transmission of documents.

10 CFR 2.1017, Computation of time

- If the LSS is unavailable for more than four hours of any day that would be counted in the computation of time, that day will not be counted in the computation of time.

The details of how the LSS is to be designed, constructed, and operated to meet these objectives are not identified in Subpart J. The above requirements are re-cast into functional requirements in Section 3.2.

3.2 INTERPRETATION OF SUBPART J DESIGN REQUIREMENTS

This section presents the Level 1 requirements that are derived from Subpart J citations. These requirements are presented in the form of trace matrices where the applicable Subpart J citations are listed next to the associated Level 1 requirement. A comment column is included within each matrix to allow for discussions of how a particular requirement is interpreted or the presentation of issues to be considered when deriving lower-level requirements. Each requirement is labeled with a unique identifier indicating the level and the requirement number within the level. For example, [LSS1-003] is the third in a series of Level 1 requirements. The requirements are ordered based upon the order of their associated Subpart J sections (e.g. 2.1002(a), 2.1003(a)(1), 2.1003(b)(1),...).

Applicable 10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1002(a) The Licensing Support System is an electronic information management system containing the documentary material of the DOE and its contractors, and the documentary material of all other parties, interested governmental participants and potential parties and their contractors. Access to the Licensing Support System by the parties, interested governmental participants, and potential parties provides the document discovery in the proceeding. The Licensing Support System provides for the electronic transmission of filings by the parties during the high-level waste proceeding, and orders and decisions of the Commission and Commission adjudicatory boards related to the proceeding.</p>	<p>[LSS1-001] The LSS shall be designed in a modular fashion to allow for the integration of functional components.</p>	<p>The LSS must be available to support the licensing proceedings from the pre-license phase, through the amendment to receive and possess waste, and until the license is amended for permanent closure. It is reasonable to expect that during this time frame, technology associated with the various LSS functional components will advance to the point where they are obsolete. To take advantage of inevitable improvements in technology, the LSS should be constructed in a modular fashion. By adhering to this strategy, obsolete hardware and software components can be replaced without adversely impacting the overall operation of the system.</p>

Applicable 10,CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1002(a) The Licensing Support System is an electronic information management system containing the documentary material of the DOE and its contractors, and the documentary material of all other parties, interested governmental participants and potential parties and their contractors. Access to the Licensing Support System by the parties, interested governmental participants, and potential parties provides the document discovery in the proceeding. The Licensing Support System provides for the electronic transmission of filings by the parties during the high-level waste proceeding, and orders and decisions of the Commission and Commission adjudicatory boards related to the proceeding.</p>	<p>[LSS1-002] The LSS shall adhere to established government and/or industry hardware and software standards.</p>	<p>As discussed previously, the LSS will be in operation for a considerable period of time. This time frame is on the order of 100 years based upon the current program approach. It is obvious with the current rate of change in technology, that no computer application can be designed to operate effectively over such a long life-cycle. Both hardware and software advancements will render any existing system obsolete on the order of every 5-10 years. To ensure that the LSS remains compatible and reasonably consistent with the technology of the time, it is essential that the LSS design adhere to open hardware and software standards.</p>

Applicable 10 CFR Part 2 Subpart J Citations	Level 1 Requirement	Comments
<p>§2.1002(a) The Licensing Support System is an electronic information management system containing the documentary material of the DOE and its contractors, and the documentary material of all other parties, interested governmental participants and potential parties and their contractors. Access to the Licensing Support System by the parties, interested governmental participants, and potential parties provides the document discovery in the proceeding. The Licensing Support System provides for the electronic transmission of filings by the parties during the high-level waste proceeding, and orders and decisions of the Commission and Commission adjudicatory boards related to the proceeding.</p> <p>§2.1013(c)(1) All filings in the adjudicatory proceeding on the license application to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter shall be transmitted electronically by the submitter to the Presiding Officer, parties, the LSS Administrator, and the Secretary, according to established format requirements. Parties and interested governmental participants will be required to use a password security code for the electronic transmission of these documents.</p>	<p>[LSS1-003] The LSS shall provide an electronic mail (E-mail) function to facilitate communications between authorized E-mail users. This function shall allow E-mail users to transmit and receive electronic documents (e.g. motions, filings, orders, decisions, etc.). Each E-mail user shall have a corresponding electronic mailbox to receive and store electronic correspondences.</p>	<p>The electronic mail function will facilitate written communication during the licensing hearings. Therefore, it is essential that the mail system enable users to send messages to other users and send/attach documents with their messages.</p>

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10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1003(a)(1) Subject to the exclusions in §2.1005 of this subpart and paragraphs (c) and (d) of this section, each potential party, interested governmental participant or party, with the exception of the DOE and the NRC, shall submit to the LSS Administrator--Subject to paragraph (a)(3) of this section, an ASCII file, an image, and a bibliographic header, reasonably contemporaneous with its creation or acquisition, for all documentary material (including circulated drafts but excluding preliminary drafts) generated by, or at the direction of, or acquired by, a potential party, interested governmental participant, or party after the date on which such potential party, interested governmental participant or party is given access to the Licensing Support System.</p> <p>§2.1003(b)(1) Subject to the exclusions in §2.1005 of this subpart, and subject to paragraphs (c) and (d) of this section, the DOE and the NRC shall submit to the LSS Administrator--An ASCII file, an image, and a bibliographic header, reasonably contemporaneous with its creation or acquisition, for all documentary material (including circulated drafts but excluding preliminary drafts) generated by, or at the direction of, or acquired by, the DOE or the NRC after the date on which the Licensing Support System is available for access.</p>	<p>[LSS1-004] The LSS shall be capable of accepting electronically formatted and transmitted document information in the following combinations: a) Bibliographic header and digital image b) Bibliographic header, digital image, standard text representation c) Bibliographic header only</p>	<p>It is anticipated that the LSS Administrator will receive the required document information in electronic form from one or more parties to the licensing hearing. Therefore, functionality is specified to ensure that the LSS can accept information in an electronic form.</p>

Applicable 10, CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1003(a)(1) Subject to the exclusions in §2.1005 of this subpart and paragraphs (c) and (d) of this section, each potential party, interested governmental participant or party, with the exception of the DOE and the NRC, shall submit to the LSS Administrator--Subject to paragraph (a)(3) of this section, an ASCII file, an image, and a bibliographic header, reasonably contemporaneous with its creation or acquisition, for all documentary material (including circulated drafts but excluding preliminary drafts) generated by, or at the direction of, or acquired by, a potential party, interested governmental participant, or party after the date on which such potential party, interested governmental participant or party is given access to the Licensing Support System.</p> <p>§2.1003(b)(1) Subject to the exclusions in §2.1005 of this subpart, and subject to paragraphs (c) and (d) of this section, the DOE and the NRC shall submit to the LSS Administrator--An ASCII file, an image, and a bibliographic header, reasonably contemporaneous with its creation or acquisition, for all documentary material (including circulated drafts but excluding preliminary drafts) generated by, or at the direction of, or acquired by, the DOE or the NRC after the date on which the Licensing Support System is available for access.</p>	<p>[LSS1-005] The LSS shall provide the capability to recognize characters from the digital image of a document and convert these characters into a standard text representation of the document. This optical character recognition function shall achieve character recognition accuracies that are consistent with the accuracies achievable with the best commercial products available at the time of the LSS system design.</p>	<p>Section 2.1003 requires LSS participants to submit a text representation of each document, if appropriate. If a digital version of document is not available, then the document must be either retyped, or digitally scanned and processed by optical character recognition (OCR) software in order to generate a standard text representation of the document. Because of the large volume of data expected to be processed and loaded into the LSS, automation of the text conversion process is necessary.</p> <p>It is noted that Subpart J does not explicitly require the LSS to include OCR capabilities since each LSS Participant is expected to provide standard text files as part of their document submissions. However, this function will be necessary in order to meet the material submission requirements. It is included here for completeness.</p>

Applicable 10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1003(c)(1) Each potential party, interested governmental participant, or party shall submit, subject to the claims of privilege in §2.1006, an image and a bibliographic header, in a time frame to be established by the access protocols under §2.1011(d)(10) of this subpart, for all graphic oriented documentary material. Graphic-oriented documentary material includes, raw data, computer runs, computer programs and codes, field notes, laboratory notes, maps, diagrams and photographs which have been printed, scripted, hand written or otherwise displayed in any hard copy form and which, while capable of being captured in electronic image by a digital scanning device, may be captured and submitted to the LSS Administrator in any form of image. Text embedded within these documents need not be separately entered in searchable full text. Such graphic-oriented documents may include: Calibration procedures, logs, guidelines, data and discrepancies; Gauge, meter and computer settings; Probe locations; Logging intervals and rates; Data logs in whatever form captured; Text data sheets; Equations and sampling rates; Sensor data and procedures; Data Descriptions; Field and laboratory notebooks; Analog computer, meter or other device print-outs; Digital computer print-outs; Photographs; Graphs, plots, strip charts, sketches; Descriptive material related to the information above.</p>	<p>[LSS1-006] The LSS shall have the capability to create a digital image of each page of a document from a paper copy of the page.</p>	<p>According to §2.1001, an image is defined as a "...visual likeness of a document, presented on a paper copy, microform, or a bit-map on optical or magnetic media." This requirement intentionally excludes the need for creating a digital image directly from microform. Instead, it is assumed that all document images residing on microfilm will be first be copied to paper, and a digital image of the document will then be created from the paper copy. This process will ensure that the intent of the rule is retained while eliminating redundant and potentially costly LSS functionality.</p>

Applicable 10,CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1003(c)(2) Each potential party, interested governmental participant, or party, in a time frame to be established by the access protocols under §2.1011(d)(10) of this subpart, shall submit, subject to the claims of privilege in §2.1006, only a bibliographic header for each item of documentary material that is not suitable for entry into the Licensing Support System in image or searchable full text. The header shall include all required fields and shall sufficiently describe the information and references to related information and access protocols. Whenever any documentary material is transferred to some other media, a new header shall be supplied. Any documentary material for which a header only has been supplied to the system shall be made available to any other party, potential party or interested governmental participant through the access protocols determined by the LSS Administrator under §2.1011(d)(10) or through entry upon land for inspection and other purposes pursuant to §2.1020.</p>	<p>[LSS1-007] Documentary material not suitable for imaging and conversion to a standard text file shall be identified with a header that includes a reference to the storage location of the material. This reference shall be descriptive enough for users to identify the location of the material and how to access the material.</p>	<p>This requirement will impact the manner in which documents are processed and the type of fields required in a document header. It is included here because it could have an impact on system design.</p>

Applicable 10,CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1004(a) Within sixty days after a document has been entered into the Licensing Support System by the LSS Administrator during the pre-license application phase, and within five days after a document has been entered into the Licensing Support System by the LSS Administrator after the license application has been docketed, the submitter shall make reasonable efforts to verify that the document has been entered correctly, and shall notify the LSS Administrator of any errors in entry.</p>	<p>[LSS1-008] The LSS shall include a function that allows a document submitter to verify that document information entered into the LSS database is identical to the document information submitted to the LSS Administrator.</p>	<p>In order to satisfy this requirement, it is essential that a document submitter have a tool that allows him to verify that information stored in the LSS database is the same information provided to the LSS Administrator. Because of the large volume of information expected to be stored in the LSS, an automated tool might be necessary to minimize human involvement in the verification process.</p>

Applicable 10, CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1004(b)(3) The LSS Administrator shall ensure that the bibliographic header for the original document specifies that a corrected version is also in the Licensing Support System.</p> <p>§2.1004(c)(2) The LSS Administrator shall ensure that the bibliographic header for the original document specifies that revisions have been entered into the Licensing Support System.</p>	<p>[LSS1-009] The LSS shall provide a function to allow the LSS Administrator to alert users that subsequent revisions to a document exist.</p>	<p>The intent of the Subpart J citations is to make the user aware that revisions to a document are available in the LSS database. Subpart J suggests accomplishing this task by editing the header associated with the original document to indicate that revisions exist. Unfortunately, if the header resides on optical disk or some other read-only medium, then the original headers cannot be modified. Therefore, in order to prevent the language of the rule from eliminating specific LSS implementation options, the requirement for editing the headers of the original documents is restated to capture the original intent of the rule, but without constraining system design.</p>

Applicable 10 CFR Part 2 Subpart J Citations	Level 1 Requirement	Comments
<p>§2.1007(a)(1) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of DOE, shall be provided at the headquarters of DOE, and at all DOE Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository.</p> <p>§2.1007(a)(2) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of NRC, shall be provided at the headquarters Public Document Room of NRC, and at all NRC Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository, and at the NRC Regional Offices, including the Uranium Recovery Field Office in Denver, Colorado.</p> <p>§2.1007(a)(3) The access terminals specified in paragraphs (a)(1) and (a)(2) of this section shall include terminals at Las Vegas, Nevada; Reno, Nevada; Carson City, Nevada; Nye County, Nevada; and Lincoln County, Nevada.</p>	<p>[LSS1-010] The LSS shall be accessible by the public from the following locations as a minimum:</p> <ul style="list-style-type: none"> - DOE Headquarters, Washington DC - DOE Project Office, Las Vegas NV - NRC Headquarters, White Flint, MD - NRC Region 1 Office, King of Prussia, PA - NRC Region 2 Office, Atlanta, GA - NRC Region 3 Office, Glenn Ellyn, IL - NRC Region 4 Office, Arlington, TX - NRC Uranium Recovery Field Office, Denver, CO - Las Vegas, NV - Reno, NV - Carson City, NV - Nye County, NV - Lincoln County, NV 	<p>The applicable Subpart J citations list the generic location for public access to the LSS. This requirement simply states the location of these facilities as they exist at the time of writing. This requirement can be revised if locations are added or deleted although the requirement is written to allow for a greater number of access locations without modification.</p> <p>It might also be noted that the word "terminal" is conspicuously absent from the requirement. As discussed in Section 2.3, the word terminal implies a specific type of equipment to some readers and could unnecessarily imply constraints on LSS implementation options.</p>

Applicable 10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1007(a)(1) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of DOE, shall be provided at the headquarters of DOE, and at all DOE Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository.</p> <p>§2.1007(a)(2) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of NRC, shall be provided at the headquarters Public Document Room of NRC, and at all NRC Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository, and at the NRC Regional Offices, including the Uranium Recovery Field Office in Denver, Colorado.</p> <p>§2.1007(a)(4) The headers specified in paragraphs (a)(1) and (a)(2) of this section shall be available at the same time that those headers are made available to the potential parties, parties, and interested governmental participants.</p> <p>§2.1007(a)(5) Public access to the searchable full text and images of all the documents in the Licensing Support System, not privileged under §2.1006, shall be provided by the LSS Administrator at all the locations specified in paragraphs (a)(1) and (a)(2) of this section after a notice of hearing has been issued pursuant to §2.101(f)(8) or §2.105(a)(5) on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area.</p>	<p>[LSS1-011] The LSS shall provide the public with one of two search and retrieval modes depending upon whether a notice of hearing on the high-level waste license application has been issued:</p> <p><i>Prior to notice</i> - Full-text search of each field in the bibliographic headers and retrieval of the header and associated image.</p> <p><i>After notice is issued</i> - same as above <u>plus</u> full-text search of the standard text files.</p> <p>At the DOE's discretion and given concurrence of the LSS Advisory Review Panel, the latter search mode can be provided to the public prior to the hearing notice.</p>	<p>See Section 2.3 for a discussion of the issue.</p> <p>It is noted that LSS Participants (i.e. potential parties, interested government participants, and parties) will have access to full-text search regardless of whether the hearing notice has been issued. Therefore, the dual access mode only applies to non-LSS Participants (i.e. the public).</p>

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Applicable 10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1007(a)(1) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of DOE, shall be provided at the headquarters of DOE, and at all DOE Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository.</p> <p>§2.1007(a)(2) Terminals for access to full headers for all documents in the Licensing Support System during the pre-license application phase, and images of the non-privileged documents of NRC, shall be provided at the headquarters Public Document Room of NRC, and at all NRC Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository, and at the NRC Regional Offices, including the Uranium Recovery Field Office in Denver, Colorado.</p> <p>§2.1007(a)(4) The headers specified in paragraphs (a)(1) and (a)(2) of this section shall be available at the same time that those headers are made available to the potential parties, parties, and interested governmental participants.</p>	<p>[LSS1-012] The LSS shall be capable of electronically storing and retrieving the bibliographic header related to each document in the system.</p>	<p>This requirement addresses one of the basic functions of any database system--storing and retrieving information pertaining to a record.</p>

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Applicable 10, CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1007(a)(5) Public access to the searchable full text and images of all the documents in the Licensing Support System, not privileged under §2.1006, shall be provided by the LSS Administrator at all the locations specified in paragraphs (a)(1) and (a)(2) of this section after a notice of hearing has been issued pursuant to §2.101(f)(8) or §2.105(a)(5) on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area.</p> <p>§2.1007(c)(1) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--Full text search capability through dial-up access from remote locations at the requestor's expense;</p>	<p>[LSS1-013] The LSS shall be capable of electronically storing the standard text representation associated with each page in a document</p>	<p>This requirement ensures that standard text files can be stored and available within the LSS for full-text search and retrieval of headers and images. Although it is not specifically required by Subpart J, the text associated with a document could be made available as well since it will already reside in the system.</p>

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Applicable 10, CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1007(a)(5) Public access to the searchable full text and images of all the documents in the Licensing Support System, not privileged under §2.1006, shall be provided by the LSS Administrator at all the locations specified in paragraphs (a)(1) and (a)(2) of this section after a notice of hearing has been issued pursuant to §2.101(f)(8) or §2.105(a)(5) on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area.</p> <p>§2.1007(c)(2) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner-- Image access at remote locations at the requestor's expense;</p>	<p>[LSS1-014] The LSS shall be capable of electronically storing and retrieving the digital image associated with each page in a document.</p>	<p>This requirement addresses one of the basic functions of the LSS--storing and retrieving document images.</p>

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Applicable 10,CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1007(c)(1) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--Full text search capability through dial-up access from remote locations at the requestor's expense;</p>	<p>[LSS1-015] The LSS shall be accessible by potential parties, interested governmental parties, and parties from locations other than those listed in requirement [LSS1-010] at the requester's expense.</p>	
<p>§2.1007(c)(2) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--Image access at remote locations at the requestor's expense;</p>	<p>[LSS1-016] Potential parties, interested governmental parties, and parties who access the LSS from locations other than those listed in requirement [LSS1-010] shall be provided access to images at the requester's expense.</p>	
<p>§2.1007(c)(3) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--The capability to electronically request a paper copy of a document at the time of search;</p>	<p>[LSS1-017] Potential parties, interested governmental parties, and parties who access the LSS from locations other than those listed in requirement [LSS1-010] shall be capable of electronically requesting a paper copy of a document at the time of search.</p>	

Applicable 10; CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1011(d)(7) The LSS Administrator shall be responsible for the management and administration of the Licensing Support System, including the responsibility to--Ensure LSS availability and the integrity of the LSS data base;</p>	<p>[LSS1-018] The system shall provide the necessary hardware and/or software to ensure the integrity and availability of the LSS database.</p>	<p>Hardware and/or software tools are typically used by a system administrator to make routine backups of data and to enhance the efficiency of the database. These and other tools effectively ensure the integrity and availability of a database.</p>
<p>§2.1011(d)(9) The LSS Administrator shall be responsible for the management and administration of the Licensing Support System, including the responsibility to--Maintain security for the Licensing Support System data base, including assigning user password security codes;</p>	<p>[LSS1-019] The system shall provide the necessary hardware and/or software to ensure the security of the LSS database. The system shall be capable of providing users various levels of read/write access.</p>	

Applicable 10, CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1011(d)(11) The LSS Administrator shall be responsible for the management and administration of the Licensing Support System, including the responsibility to--Maintain the thesaurus and authority tables for the Licensing Support System;</p>	<p>[LSS1-020] The LSS shall include a function that allows the LSS Administrator to construct and maintain a thesaurus.</p>	<p>A thesaurus can be used during document searches to associate search words with related words included in the thesaurus. The thesaurus can be used to expanded queries to include searches on related words as well as the words entered in the query.</p>
<p>§2.1011(d)(11) The LSS Administrator shall be responsible for the management and administration of the Licensing Support System, including the responsibility to--Maintain the thesaurus and authority tables for the Licensing Support System;</p>	<p>[LSS1-021] The LSS shall include a function for the LSS Administrator to construct and maintain authority tables.</p>	<p>Authority tables are used to restrict the vocabulary entered in select header fields. By restricting the vocabulary, words, names, etc. are entered in a consistent manner thereby eliminating variations of the same word, name, etc.</p>

Applicable 10 CFR Part 2 Subpart J Citation	Level 1 Requirement	Comments
<p>§2.1011(f)(2)(v) The responsibilities of the LSS Advisory Review Panel shall include advice on-- Reasonable requirements for headers, the control of duplication, retrieval, display, image delivery, query response, and "user friendly" design;</p>	<p>[LSS1-022] The LSS shall provide a graphical user interface (GUI) for all LSS access locations.</p>	<p>Graphical user interfaces have essentially replaced traditional command line interfaces and are in use by virtually all potential LSS users. GUIs are intended to enhance the usability of software by providing a more visual interaction with the computer. Therefore, to ensure that the LSS is as "intuitive and user friendly" as possible, the LSS user interface should be implemented in GUI environment.</p>
<p>§2.1011(f)(2)(v) The responsibilities of the LSS Advisory Review Panel shall include advice on-- Reasonable requirements for headers, the control of duplication, retrieval, display, image delivery, query response, and "user friendly" design;</p>	<p>[LSS1-023] The LSS shall provide a function that assists the LSS Administrator in identifying duplicate documents.</p>	<p>The LSS Administrator is responsible for loading the LSS with documents provided by DOE, NRC, and all other parties to the licensing hearing. Even if the document streams submitted by each party are free of duplicate documents, it is likely that duplicate documents will exist when the streams are combined. Therefore, in order to minimize the number of duplicate documents in the system, the LSS Administrator must have a tool to help identify duplicate documents.</p>

Applicable 10 CFR Part 2 Subpart J Citations	Level 1 Requirement	Comments
<p>§2.1013(c)(1) All filings in the adjudicatory proceeding on the license application to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter shall be transmitted electronically by the submitter to the Presiding Officer, parties, the LSS Administrator, and the Secretary, according to established format requirements. Parties and interested governmental participants will be required to use a password security code for the electronic transmission of these documents.</p>	<p>[LSS1-024] The E-mail function shall provide password protection for all documents transmitted electronically.</p>	
<p>§2.1013(c)(3) Service upon a party or interested governmental participant is completed when the sender receives electronic acknowledgment ("delivery receipt") that the electronic submission has been placed in the recipient's electronic mailbox.</p> <p>§2.1013(c)(4)(i) Proof of service, stating the name and address of the person on whom served and the manner and date of service, shall be shown for each document filed, by--Electronic acknowledgment ("delivery receipt");</p>	<p>[LSS1-025] The E-mail function shall provide for an electronic acknowledgement that mail has been delivered to the recipient's electronic mailbox. The acknowledgement shall include as a minimum, the name and address of the recipient and the date the electronic mail was delivered.</p>	<p>Gateways that link various electronic mail systems together are becoming common as popularity with the Internet grows. If an E-mail user accesses the LSS via a gateway that does not allow receipt notices to "jump" the gateway, then the delivery receipt need only indicate the date the message was delivered to the recipients's gateway.</p>

Applicable 10,CFR Part 2 Subpart J Citations	Level 1 Requirement	Comments
<p data-bbox="205 269 310 298">§2.1017</p> <p data-bbox="205 305 932 899">In computing any period of time, the day of the act, event, or default after which the designated period of time begins to run is not included. The last day of the period so computed is included unless it is a Saturday, Sunday, or legal holiday at the place where the action or event is to occur, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, nor holiday. Whenever a party, potential party, or interested governmental participant, has the right or is required to do some act within a prescribed period after the service of a notice or other document upon it, one day shall be added to the prescribed period. If the Licensing Support System is unavailable for more than four access hours of any day that would be counted in the computation of time, that day will not be counted in the computation of time.</p>	<p data-bbox="968 269 1121 298">[LSS1-026]</p> <p data-bbox="968 305 1436 448">The LSS shall be designed so that system availability meets industry averages at the time of LSS system design.</p>	<p data-bbox="1467 269 1881 743">The intent of the LSS is facilitate document discovery during the high-level waste hearings and help the NRC meet the three-year license review period required in the Nuclear Waste Policy Act. This requirement is included to ensure that the time saved during the licensing hearings from use of the LSS is not significantly impacted by poor availability of the system.</p>

4. REFERENCES

1. Science Application International Corporation, "Licensing Support System Systems-Level Requirements Document", Revision 5.0, December 12, 1990.
2. TRW Environmental Safety Systems Inc., "Evaluation of Licensing Support System Options", Revision 0, January 16, 1995.

ATTACHMENT E

**Civilian Radioactive Waste
Management System**

Management & Operating
Contractor



TRW Environmental Safety
Systems Inc.

Removing Technology Constraints from 10 CFR 2 Subpart J

**Preston Junkin, OCRWM M&O
Briefing to the LSSARP
March 22, 23, 1995**

- **Some technical language in the rule is unnecessarily specific as to implementation.**
 - Specifies design based on then-current technology, not requirements
- **Minor changes to the language will give DOE the ability to produce a better system at a lower cost and with less technical and schedule risk.**
 - Better for the end-users, better for the waste fund

- **Technology has changed dramatically since the rule was written. Examples:**
 - **Modern client-server architectures, CD ROM, SGML, Graphical User Interface (GUI) and associated development tools.**
- **Language reflects “then-current” technology rather than implementation-independent requirements**

History, Continued

- **DOE briefed LSSARP on technology constraints issue 10/5/93**
 - **Well received, but no decision to date**

Purpose of Today's Update

- **Provide update on technology constraining language in the rule.**
- **Solicit on-the-record acceptance of recommendation to remove technology-constraining language from 10 CFR 2.**

This will allow DOE to proceed with the LSS requirements document without these constraints.

Why is a Change Better for All Parties?

- **Rapidly changing technology dictates that design issues not be codified - requirements should be stated in technology-neutral language.**
- **Constraining the LSS design to older technology will result in a less “user friendly” system. Example: “Terminals” implies use of character-based “dumb terminals” vs. graphical user interface (GUI) running on work stations.**

Why is a Change Better for All Parties?

- **Loss of flexibility in design options can result in a more costly system and a longer development schedule.**
 - **Commercial Off the Shelf (COTS) systems integration and reuse is the fastest and least expensive approach to achieving an LSS**
 - **Requires flexibility as to detailed implementation and design.**

What Would the Recommended Changes Mean?

- These language changes would not mean that the LSSARP is dictating a different design (use of CD's, client-server, SGML, etc.)
 - These are design decisions, not requirements.
- Changes would mean that the rule is silent as to the implementation details, and instead is specifying requirements.
 - Result is that the “door is open” for the best solution, based on current technology.

Specific Recommendations

- 1. Change references to “dial-up access” to specify “remote access.”**

Rationale: Opens the door for CD library distribution and/or high-band width network access.

- 2. Change references to “ASCII” to “searchable text files”**

Rationale: Opens the door for use of mark-up languages such as SGML, which preserve formatting/font information.

Specific Recommendations, Continued

3. Replace the word “terminal” with “work station”

Rationale: Avoids implication of a “dumb terminal”/mainframe application, opens the door to client/server applications.

4. Remove reference to “optical or magnetic media”

Rationale: Media type is a design decision - new technologies could emerge during the LSS system life cycle.

Specific Recommendations, Continued

5. Remove requirements for signed paper copies from rule

Rationale: Rule is inconsistent in requiring an electronic environment and electronic filings but dictating “one signed paper copy”.

6. Formally embrace electronic mechanisms for the “signing” of filings and other documents

– Rationale: Failure to formally accept electronic mechanisms will result in a dual, redundant work flow involving electronic and paper copies.

Recommendation

DOE recommends that the LSSARP go on record as recommending that NRC modify the rule to:

- Remove technology-constraining language as described in this briefing, and**
- Advise DOE to write the LSS requirements document accordingly.**

ATTACHMENT F

LSSARP MEETING

LSS SCHEDULE

Fielden Dickerson
March 22-23, 1995

Short-Term Planning and Scheduling

- Identification of the LSS Option
- Phase 2 Functional Requirements
- Analysis of Benefits and Costs (build-buy)
- Preparations for OCRWM RMS Reprocessing
 - Headers
 - Inclusion/Exclusion templates
- Funding Process for LSS Operations
 - Mechanics
 - Institutional Approval
- Near-and Mid-Term Implementation Plans

Short-Term Planning and Scheduling (cont)

- **Site for LSS Operations**
 - Decision/Affirmation
 - Implementation including Funding Mechanism
- **NRC-DOE Memorandum of Understanding
(per Supplementary Info)**
- **Proceed with Rule Changes**

ATTACHMENT G

**LSSARP MEETING
MARCH 22 & 23, 1995:
TECHNICAL WORKING GROUP**

INTRODUCE TWG MEMBERS

LSSARP TWG NOW HAS A GROUP INTERNET ADDRESS. MAIL CAN BE SENT TO: ..

LSSTWG@ISRI.UNLV.EDU

PRESENT CHARTER AND PRIORITIES

REPORT ON PARTICIPANTS COMMITMENTS DOCUMENT

REPORT ON LSS FUNCTIONAL REQUIREMENTS DOCUMENT REVIEW

LSS FACILITY SITING STATUS AND RECOMMENDATIONS

TWG NEXT MEETING APRIL 17 & 18 IN DENVER CO (Tentative).

ATTACHMENT H

March 1, 1995

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ATTACHMENT I

**LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL (LSSARP)
TECHNICAL WORKING GROUP (TWG)
CHARTER
MARCH 22, 1995**

The LSSARP Technical Working Group (TWG) is organized as a subcommittee of the LSS Advisory Review Panel to facilitate the technical understanding of Panel members on topics concerning LSS design, development and operation. Upon the request of the Panel, the Technical Working Group will provide assistance in identifying, gathering information on, and explaining the technical aspects of topics under consideration by the Panel. The Technical Working Group will report on its activities at Panel meetings.

ATTACHMENT J

**TECHNICAL WORKING GROUP (TWG)
PRIORITIES
MARCH 22, 1995**

- o Review LSS design documents as they become available, beginning with the "systems-level requirements" document.
- o Interface with the DOE records management team, LSS design team, and the LSSARP Header Working Group to prepare a joint briefing for the LSSARP on an agreeable and comprehensive number of fields to be defined in the header of an LSS record.
- o Additional areas to be addressed will be identified by the LSSARP on a case by case basis.

ATTACHMENT K

LSS Field Definition Summary Table

Kirk Balcolm
LSS Header Working Group
March 22 - 23, 1995

LSS Field Definition Summary Table

This table presents the set of logical data entities proposed by the Header Working Group as the substantive information to be captured in the Bibliographic Header for each LSS Record. Each column presents one logical field or a set logically related fields. If a logical set of fields had more than two related fields, a repeating group was formed with a group name followed by a colon (i.e., Publication Info:). In some cases a repeating group has been identified, but the contents have not yet been determined. Below is an explanation of each column starting with column two:

- 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 direction 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; Optional = provided at discretion of participant)
- 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.

LSS Field Definition Summary

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
LSS Accession Number	N	Mandatory	N	N	NA	Generated by LSS.
Participant Accession Number	Mandatory	N	Y	N	NA	
Title	Either Title or Created Title is Mandatory	N	N**	N	Y	Title and Created Title are searchable as one field.
Author	Either Author or Author Organization is Mandatory	N	Y	TBD	N	Need full Name?
Author Organization		N	Y	Y	Y	
Electronic Signature	Optional	N	Y	TBD	NA	
Document Date	Mandatory	N	N	N	NA	

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
Document Number	Required	N	Y	N	NA	
Version	Required	N	Y	N	Y	
Access Control Information	Required	N	Y	Y	NA	This will include copyright. Default value is "Public." Other categories need to be defined.
Related Documents	Required	Y	Y	Y	NA	Related Record Number(s) supplied by Participants will be converted to LSS Accession Number(s).
Related Record Code	Required	Y	Y	Y	NA	

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
Special Class	Required	N	Y	Y	Y	
Abstract	Optional	N	N**	N	Y	Considered unnecessary field - deletion recommended.
Package Number	Required	Y	Y	N	NA	
Document Type	Mandatory	Optional	Y	Y	Y	Includes package types...
Identifiers	Optional	Optional	Y	N	Y	
Comments	Optional	Optional	N**	N	Y	
Sponsoring Organization	Optional	N	Y	Y	Y	Considered unnecessary field - deletion recommended.
Media	Required	N	Y	Y	NA	
QA Record	Mandatory	N	N	Y	NA	

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
Traceability Number	Required	Required	Y	N	N	
Traceability Code	Required	Required	Y	Y	NA	
Keywords	Optional	Optional	Y	N	N	Participant use.
Electronic Image Reference Info:	Required	Required	-	-	-	Electronic image info supplied by Participant to be converted to LSS reference info.
Number of Images	N	Mandatory	N	N	N	System generated.
Electronic Image Location ID	N	Mandatory	TBD	N	N	System generated.
Searchable Text Reference Info:	Required	Required	-	-	-	Contents TBD

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
Physical Unit Location Reference Info:	Required	Required	-	-	-	Contents TBD
Addressee	Required	N	Y	TBD	N	Includes distribution list.
Addressee Organization	Required	N	Y	Y	Y	
Administrative and Process Tracking Fields: LSS Record Housekeeping Info: - Date Received at LSS - Date Available in LSS	N	Y	-	-	-	Contents TBD

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
<ul style="list-style-type: none"> - Date/time Loaded into LSS - Date/time of Last Modification - LSS Indexer ID - Station ID - QC ID - Subject & Abstract Cataloger ID - Cataloging QC ID - Processing Stage Status - Verification ID 						

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

LSS Field Definition Summary (Continued)

Field Name	Data Submitted By Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Text Search	Comments/Issues
- Change Tracking Log						
LSS Audit Info: (Contents TBD)	N	Required	-	-	-	

License Process Information - Related LSS Table							
Original LSS Field Name 1 or New Candidate Field Name (*)	LSS/InfoSTREAMS Field Name	Data Submitted by Participant	Data Supplied by LSS System or LSSA	Multi-Value	Controlled Authority List	Free Text Search	Comments/Issues
	(Contents TBD)						

Legend:

- Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined.
- ** Only one variable length text field. Multiple entries appended just to previous text.

ATTACHMENT L

HEADER WORKING GROUP

Issue

There is a question about the need for header records to contain both Descriptor and Identifier fields and the additional issue as to whether either of these fields will be necessary given the retrieval capabilities of newly developing text retrieval software.

Background

The LSS header record has contained two fields to provide subject term access since the earliest days of the LSS Prototype effort (October, 1989) and in the earliest header record structures promulgated by the LSS ARP Header Committee. One field, Descriptors, was to contain the controlled vocabulary as presented in the LSS Thesaurus. The LSS Thesaurus is formally recognized in 10 CFR 2, Subpart J, where its maintenance is assigned to the LSS Administrator. The other field, Identifiers, was intended to serve two purposes. First, it was a field that could be used by participants to include unique terms not found in the LSS Thesaurus which may have been assigned by a principal investigator or may have been generated in the participant's own vocabulary management scheme (since the intent was that nothing would preclude participants from using the LSS as their own system of records). The second use was that the contents of this field would be scrutinized routinely by those charged with maintaining the Thesaurus. When candidate terms showed up in this field in sufficient numbers, the Thesaurus maintenance staff would consider those terms as candidates for addition to the Thesaurus. If the term were added to the Thesaurus, software would move postings from the Identifier field and replace them in the Descriptor field with the approved Thesaurus term. For searching purposes, the LSS embedded thesaurus module would present the structured Descriptor field with full reference and look-up features. For terms not found in the Descriptor field, the LSS would canvass the terms in the Identifier field either as a field search or as part of a search against the title, abstract, identifiers, and perhaps comments field.

A critical use of descriptors and identifiers was that they were to be a method of quickly honing down the size of the database into small subsets before users began searching of the full text. This was considered critical because users who invoked full text searches of the entire holdings of the LSS database would bog down the LSS response time performance. These concerns were based on the findings from the LSS prototype and subsequent system performance modeling which are documented in the LSS Search and Image Design Document, Volume II, (SAIC, 1990).

Developments

The Department of Energy has requested that the LSS header record structure be reexamined in light of current technology and because it views cataloging for LSS requirements to be too costly. The elements of current technology that are raising questions relate to the new generation of text retrieval products. Text retrieval software (text engines) uses increasingly sophisticated approaches to performing their jobs. Newer products are building in features such as natural

language interfaces and synonym search capabilities that address many of the cost issues of Thesaurus maintenance, and user interface issues. These two features mean that a user would not need to know approved terms when entering a search because the software has been trained to recognize synonym and hierarchical relationships of terms typed in by the user in an unstructured query. Software interprets the user's request, puts it in proper command language syntax, and propagates additional terms that are pertinent to the topic being searched. The other aspect of DOE's concern is, in essence, "Why have (costly) humans assign terms when the text retrieval software will compensate?"

Proposed Approach

In light of the developments noted above, and in order to achieve cost savings, the Header Working Group recommends that serious consideration be given to replacing the thesaurus functionality in the LSS with state-of-the-art text retrieval software. If accepted, under this proposal participants will place all their keywords into a single field on their submitter header record. Those keywords do not need to be terms found in the LSS Thesaurus although if one chose to assign those keywords, one could do so. DOE, for example, might include parametric terms found within the header records from their technical databases including ATDT as assigned by the principal investigator. Pending a decision by the LSSA (discussed below) a thesaurus may or may not be implemented in the LSS. If the LSS does contain a thesaurus, when any participant record is submitted to the LSSA, the terms in this field are bounced against the LSS thesaurus and software determines if there is an exact match or a preferred "USE" term. The Descriptors field may then be propagated by software into the most current version of the thesaurus. If there is no need for a thesaurus, then the contents of this field are then available to search by the text engine just as would any other word found in the context of the document. From a lexicographic point of view, the terms assigned by a principal investigator as a topic or parameter may never be specifically mentioned in the text, so this field, when searched by a newer generation text engine, augments the text engine's heuristic approach to content/topic retrieval. Participant assignment of terms is not mandatory but encouraged. Participants would index one field labeled as "Identifiers" rather than two. Another optional field has been proposed for addition that would allow participants to include their own notational/identification types of information and meet the intention of the rule that the LSS could be used by participants as their system of records.

Contingencies

The Header Working Group recommends that the decision to implement a thesaurus not be an arbitrary one. The Header Working Group recommends that, before any final decision is made whether text engines can compensate for structured vocabulary control, the Department of Energy fully examine the ramifications in a professional and robust manner. This examination should be conducted as part of the LSS design activities and be completed before the ARP gives consensus approval to the proposed approach. This study, which should be undertaken and completed as quickly as possible, should provide an analysis of precision and recall on a controlled document collection sample. The study should examine the impact of providing users with limited descriptive information (e.g., only the document title) when they choose to view primarily/only truncated versions of a bibliographic header. It should identify how the lack of

subject fields may impact users' ability to determine what the document is really about, how this impacts the ability to select responsive documents, and, how this may impact the frequency that users call up larger volumes of text and images to compensate for not fully knowing the subject of the document. This study should also validate that existing technologies can be used to filter submitter assigned terms against a structured thesaurus vocabulary and that software can actually propagate the contents of the Descriptor field as described above. Finally, this study should document proposed system response time, precision and recall performance at scale and present a retrieval concept of operations (covering partitioning, subset creation, etc.) and performance specifications that can be incorporated into the LSS acquisition specifications.

Should the study demonstrate that precision, recall, and response times do not adequately compensate for the loss of thesaurus functionality, the LSS ARP should confirm via consensus direction that participant records must include adequate fielded information to allow the implementation of the thesaurus functionality. If the approach is feasible, the LSSA following consensus guidance of the LSS ARP will require that the attributes of new text engines which compensate for structured vocabularies be included in the functional requirements for the design and implementation of the LSS.

Approval of such an approach will require modification to 10 CFR 2, Subpart J where tasks are called out for the LSSA to maintain the thesaurus.

ATTACHMENT M

**OFFICE OF
THE INSPECTOR GENERAL**

**U.S. NUCLEAR
REGULATORY COMMISSION**

NRC NEEDS TO PROVIDE
STRONG DIRECTION FOR THE
LICENSING SUPPORT SYSTEM

OIG/95A-01 March 17, 1995

AUDIT REPORT



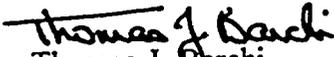


UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

March 17, 1995

OFFICE OF THE
INSPECTOR GENERAL

MEMORANDUM TO: James M. Taylor
Executive Director for Operations

FROM: 
Thomas J. Barchi
Assistant Inspector General for Audits

SUBJECT: NRC NEEDS TO PROVIDE STRONG DIRECTION FOR THE
LICENSING SUPPORT SYSTEM

Attached is the Office of the Inspector General's report entitled, "NRC Needs to Provide Strong Direction for the Licensing Support System."

On March 13, 1995, the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support (DEDO) responded to our draft report. The DEDO agreed with our findings and recommendations and provided an action plan for implementing the recommendations.

Attachment:
As stated

cc: H. Thompson, EDO
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D. Rathbun, OCA
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REPORT SYNOPSIS

The Nuclear Waste Policy Act of 1982 requires the U.S. Nuclear Regulatory Commission (NRC) to approve or disapprove the construction of a high-level waste repository within 3 to 4 years of receiving a Department of Energy (DOE) construction license application. To meet this deadline, NRC enacted a negotiated rule requiring the development of an electronic information management system, called the Licensing Support System (LSS). As planned, the LSS would greatly reduce the amount of time necessary for discovery during the license hearing proceedings. The rule requires NRC to operate and maintain the system and DOE to design and develop it.

The LSS program has stalled over the past 5 years primarily due to delays in the DOE license application schedule, personnel changes in DOE and NRC, changes in program direction, and lack of agreement over funding. Many of these delays may be attributed to lack of a clear definition and agreement on the roles and responsibilities both between and within DOE and NRC. As a result, only 6 years remain in which to develop and implement a LSS prior to the scheduled repository license application date of 2001. This is the same time period that existed in 1989 when DOE originally planned to submit its license application in 1995.

Because NRC is mandated to conduct a timely licensing proceeding, the agency needs to take a strong, aggressive leadership role to ensure this mandate is met. We believe it is crucial that the LSS not interfere with the critical pathway of the license application. Therefore, we recommended that NRC: (1) work with DOE to develop a formal agreement on key issues; (2) resolve key internal management issues; and, (3) develop a contingency plan to resolve potential interagency issues that are not resolved after a reasonable period of time.

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INTRODUCTION

The Office of the Inspector General (OIG) has completed an audit of the U.S. Nuclear Regulatory Commission's (NRC) effort to set up a Licensing Support System (LSS) according to the Code of Federal Regulations¹. This effort is a joint responsibility of NRC and the Department of Energy (DOE). DOE is responsible for designing and developing the LSS, while NRC is responsible for operating and maintaining the system.

The objective of our audit was to determine the status of the LSS and to identify any issues that may be affecting its development. Appendix I contains a detailed description of our objectives, scope, and methodology.

BACKGROUND

The Nuclear Waste Policy Act of 1982 (NWPA) mandates DOE to construct, operate, and permanently close a high-level nuclear waste (HLW) storage and disposal facility. The NWPA² requires NRC to issue a final decision on the issuance of a construction authorization for the HLW repository, in accordance with applicable laws. This must be done within three years after DOE submits its construction license application. A one year extension is possible for justifiable cause. If NRC determines that these deadlines cannot be met, NRC must report the expected delay and its reasons to Congress.

NRC's past experience indicates that meeting this deadline will be very difficult. On average, NRC took five years to complete a typical reactor operating license hearing. In highly contested cases, NRC needed up to nine years to license a power reactor. The repository licensing will also likely be a highly contested case involving a one-of-a-kind facility, which will add to the complexity of the hearing.

¹Code of Federal Regulations, Title 10, Part 2, Subpart J

²Nuclear Waste Policy Act of 1982, Section 114d

Historically, traditional document discovery³ processes have occupied 30-50% of the hearing time for reactor operating licenses. NRC believes that documentary material needed for the repository hearing will be at least several times greater than that of a typical reactor case. Current estimates indicate that parties to the licensing hearing will generate about 18 million pages of discoverable material by the time DOE submits its license application.

Therefore, NRC initiated measures to streamline the licensing process, especially regarding the discovery phase. This was done to meet the statutory schedule and to provide for an effective license application review by all parties. One of these measures was the development of an electronic information management system, known as the LSS.

NRC established procedures for use of the LSS through negotiated rulemaking. The negotiations included NRC, DOE, the State of Nevada, Nevada local Governments, the National Congress of American Indians, a coalition of environmental groups, and a coalition of nuclear power industry groups. Although there was not a consensus, most of the participants agreed to the final version of the rule. The final rule established the basic procedures for licensing the repository, including the use of the LSS. It also called for the establishment of a Licensing Support System Advisory Review Panel (LSSARP) that would be made up of the same participant groups which negotiated the rule.

NRC issued the LSS rule on April 14, 1989, and amended it on March 28, 1991. The rule defines the characteristics of the LSS and establishes specific conditions for its use. Under the rule, DOE is responsible for design, development, and installation of the LSS. NRC is responsible for providing an LSS Administrator (LSSA). The LSSA is responsible for: (1) system administration; (2) overseeing DOE's design, development, and installation of the LSS; (3) enforcing the

³In accordance with the Code of Federal Regulations Title 10, Part 2.740 et. seq., *discovery* is a legal process used in agency proceedings which enables parties to obtain information and documents regarding any matter, not privileged, which is relevant to the subject matter involved in the proceeding. Discovery includes depositions, that is transcribed oral examination under oath; written interrogatories, which are questions posed by one party to be answered by an opposing party; requests for production of documents or things or permission to enter upon land for inspection; and requests for admission.

standards for document submission by LSS participants; (4) ensuring the integrity of the LSS database; and (5) operating and maintaining the system.

The LSS will contain all the data supporting DOE's license application and all NRC and other-party generated documents potentially relevant to the licensing proceeding. DOE is expected to generate approximately 85 percent of the documents placed in the LSS. All documents will be placed into the LSS using a standardized electronic format. All parties will then have access to this system. This will eliminate the time-consuming physical copying and onsite review of documents because the data will be readily available through access to the LSS.

Through implementation of the LSS, NRC intends to:

- facilitate discovery by providing comprehensive and easy access to potentially relevant licensing information;
- establish the information base for the licensing proceeding, to the extent practicable, before the DOE license application is submitted and the three year statutory time period begins;
- facilitate review of the relevant licensing information by all parties and eventually the boards through the provision, to the extent practicable, of full text search capability;
- reduce the time associated with the physical submission of motions and other documents associated with the licensing proceeding by providing for the electronic transmission of these documents.

FINDINGS

We found that NRC needs to provide strong direction on LSS issues to prevent unnecessary and costly delays in approving DOE's construction authorization for the HLW repository. Since its inception, the LSS program has suffered setbacks and delays that have significantly slowed its progress.

The LSS is on a time critical path for ensuring NRC's consideration of DOE's HLW repository application within the mandated period. Therefore, the timely resolution of issues and development of the LSS system are critical. We found that key interagency issues between NRC and DOE remain unresolved. NRC and

DOE have recently taken positive steps toward resolving some of these issues; however, the solutions are still in a preliminary stage of development and have not yet been formally agreed to.

Additionally, NRC needs to address and resolve several key intra-agency issues. We believe the LSSA must provide strong, effective leadership. He must also provide proper direction to ensure that longstanding management issues are resolved and the LSS is ready when needed.

THE LSS HAS BEEN PLAGUED WITH SETBACKS AND DELAYS

The schedule for implementing the LSS has suffered many delays during which the direction of the LSS program has undergone numerous changes. Appendix II identifies significant events of the LSS program. Many events have occurred since NRC issued the LSS rule: (1) the repository application submission schedule has slipped six years, (2) there have been several changes in the LSS development schedule, and (3) NRC and DOE have had many communication exchanges on program and budget responsibilities for the LSS without lasting results.

Early Program Delays and Budgetary Concerns

In December 1989, DOE revised its repository program schedule and extended its anticipated license application submittal date from 1995 to 2001. Shortly after, DOE's Office of Civilian Radioactive Waste Management (OCRWM) likewise extended the LSS development schedule.

During most of 1990, the LSSA made several unsuccessful attempts to establish a formal agreement with DOE to transfer responsibility for the design and development of the LSS to NRC. The Commission was concerned that continued delays in completing these steps of the LSS program would prevent NRC from meeting its congressional mandate. NRC also intended for DOE to retain budget responsibility for the entire LSS program, which DOE eventually agreed to, contingent upon concurrence from the Office of Management and Budget (OMB).

OMB budget examiners made it clear to NRC and DOE staff that they strongly opposed such a split for the LSS. In the fall of 1990, OMB told DOE to remove all LSS development funds from its budget. They also informed DOE that LSS funding should not be in DOE's budget, but in NRC's, once it was appropriate to proceed with development. The budget examiners' position was that program and budget responsibilities could not be split between two Federal agencies.

In early 1991, NRC tried to verify with DOE its understanding that DOE was not going to design and develop the LSS. NRC also asked DOE to describe the extent to which DOE would support the future costs of the LSS program. However, DOE never directly responded to these inquiries. As a result, in mid-1991, the LSSA recommended that NRC assume LSS development responsibilities under existing design functionality and schedule requirements.

Introduction of INFOSTREAMS

While the NRC was considering this recommendation, DOE announced an OCRWM initiative to develop an internal automated information system capability. DOE would use this system, called INFOSTREAMS, instead of the LSS to capture⁴ DOE's LSS material according to LSS document processing standards. OCRWM would perform most INFOSTREAMS processing for its own internal purposes, regardless of LSS requirements. The system would also have document storage and retrieval capabilities similar to those planned for the LSS.

Later in 1991, the NRC and DOE formed a joint DOE/NRC Technical Working Group on the LSS. One purpose of the group was to examine the design, development, implementation, and operational aspects of the LSS. Another purpose was to search for ways to reduce the overall costs of the LSS, which are reimbursed from the Nuclear Waste Fund.⁵

The group was to focus specifically on the benefits of using INFOSTREAMS and its developed software in reducing LSS developmental and operational costs. The working group prepared draft recommendations in early 1992; however, DOE objected to completing them until NRC and DOE resolved the broader issues pertaining to LSS program and budget responsibilities.

As a result, NRC staff prepared recommendations on LSS program and budget responsibilities. The staff recommended that NRC develop the LSS as an information storage and dissemination system and then operate and maintain it.

⁴Capturing a document means converting it into a predefined electronic format.

⁵The NWPA requires owners and generators of high-level nuclear waste, primarily utilities operating nuclear power plants, to pay fees into the Nuclear Waste Fund. This fund is included in the Federal budget and may be used only for activities associated with waste disposal.

They recommended that DOE and NRC share the costs equally. They also recommended that DOE capture all LSS material. The NRC Commissioners did not approve these recommendations.

The Commission noted that when they approved the staff proposal in 1988 to have the NRC administer the LSS, they stipulated that DOE must pay for all costs associated with the LSS, including the costs of operation and maintenance. The Commission then noted that it was not prepared to depart from that condition. Instead, the Commissioners requested that the staff examine additional alternatives that would expand DOE program and budget responsibilities for the LSS. Additionally, the staff was to evaluate alternatives for the organizational and reporting relationships for the LSS Administrator's staff and examine options for funding NRC's share of the LSS responsibilities.

Transfer of Operation and Maintenance Responsibilities to DOE

By 1993, NRC and DOE still could not agree upon program and budget responsibilities for the LSS. This issue, and the emergence of INFOSTREAMS, caused NRC Commissioners to question the need for NRC to have operational responsibilities for the LSS. NRC staff pointed out that a rule change would be required to make DOE responsible for the operation and maintenance of the system. However, this proposal was unacceptable to many of the LSSARP members. They perceived that such a change would not give NRC the control during operation and maintenance of the system that was intended when the rule was negotiated.

To overcome this objection, NRC and DOE developed an alternative proposal. NRC's LSSA would serve as the Contracting Officer's Technical Representative for DOE's operation and maintenance contract for the system once it was designed and developed. However, by the end of 1994, DOE found that they could not support such an arrangement.

A New Arrangement is Proposed

In the December 1994 LSSARP meeting, DOE announced that it was no longer utilizing INFOSTREAMS for the LSS. Instead, DOE said it was considering use of a suite of software called the Licensing Data Management System (LDMS) as the basis for the LSS. DOE has been developing the LDMS since March 1994.

However, the extent to which DOE will use the LDMS remains uncertain, as DOE is currently performing a "make" versus "buy" analysis on the LSS⁶.

In the same LSSARP meeting, DOE staff offered a new alternative to resolve operational and budgetary issues. In this alternative, NRC and DOE would negotiate and formalize an interagency agreement on the LSS. This agreement would also provide for DOE to request appropriations for LSS operation and maintenance costs. NRC would then draw against a separate DOE account established for this purpose. An OMB examiner indicated that this arrangement would be acceptable as long as both parties were in agreement.

Under this proposal, the LSSA would fulfill NRC's responsibilities for operating and maintaining the LSS; however, DOE would obtain funding for these responsibilities. Although not yet formalized, NRC expects that the appropriated funds will be charged against DOE's budget cap, rather than NRC's. At the time we completed our field work, however, DOE had not yet gained management approval for this alternative.

DOE and NRC Organizational Changes

NRC and DOE have both undergone internal organizational changes that have affected the direction and schedule for the LSS. In late 1992, the Commission approved the staff's recommendation that NRC reconstitute the staff of the Office of the Licensing Support System Administrator to the Office of Information Resources Management (IRM). They also recommended that the staff report to a new IRM Deputy Director/LSSA.

In 1993, a Presidential Executive Order called for a four percent reduction in full-time equivalents (FTEs) and a fourteen percent reduction in administrative costs. In response, NRC postponed most of the agency's activity on the LSS during fiscal years 1994 and 1995. NRC also agreed to reduce staff resources for the LSS to one FTE and entirely cut LSS program support funding for those years.

Changes in DOE's repository program have also affected the LSS program. In 1994, DOE began a revised program approach for the entire repository program, which included a reorganization of OCRWM. In early 1994, DOE transferred responsibility for the design and development of the LSS from OCRWM Headquarters to the Yucca Mountain Site Characterization Office (YMSCO).

⁶An analysis to determine whether DOE should build the system itself or put together a system comprised of off-the-shelf components.

Due to this transfer, YMSCO began a reevaluation of the LSS concept and implementation requirements. Additionally, the DOE staff with whom the LSSA had been working were no longer responsible for LSS matters. Virtually all lines of communication between the LSSA and DOE on LSS issues were severed.

In May 1994, while attempting to clarify the situation regarding INFOSTREAMS and reestablish working arrangements with DOE, the LSSA initiated contact with DOE management. However, DOE did not substantively respond to the LSSA's inquiries. The NRC Chairman sent a letter to DOE in June 1994 requesting details on management of and technologies to be used for the LSS. In preparation for the September 1994 LSSARP meeting, the LSSA and YMSCO staff resumed communication. However, DOE did not officially respond to the Chairman's letter until January 1995.

KEY INTERAGENCY ISSUES HAVE GONE UNRESOLVED

Due to the splitting up of LSS responsibilities, it is essential that NRC closely coordinate its activities with DOE. NRC recognized this and, in the supplementary information to the LSS rule, said it expected to develop a Memorandum of Understanding (MOU) with DOE. The MOU would be consistent with the requirements of the rule on the design and development of the LSS. However, to date, all attempts to reach such an agreement have failed.

NRC has not yet reached a resolution with DOE on the issue of when the LSS will be available to potential users. The LSS must be substantially loaded and fully available for use by all LSS participants for a reasonable period before DOE submits its license application. This is necessary to support the technical review of the application materials and the hearing discovery process as envisioned in the LSS rule.

NRC, however, did not set up specific timetables in the rule. Supplementary information to the LSS rule states that the Commission anticipates that LSS participants will have access to the LSS well before DOE submits the license application. Additionally, the rule implies that the database must be fully loaded six months before DOE submits its license application under Subpart J.

Although broadly defined in the rule, NRC has not come to an agreement with DOE on the details of the respective roles of each agency for the LSS. Specifically, NRC has not come to an agreement with DOE on the issue of who

will capture and load⁷ LSS documents into the system. Additionally, NRC has not specifically defined the role it will play as overseer of the design and development phase.

Another unresolved issue concerns funding for the LSS. As previously pointed out, before issuance of the LSS rule, the Commission stated that DOE must pay for all costs associated with the LSS, including operation and maintenance. This was so that NRC would not have to spend any of its budget appropriation for these expenses. The Commission directed the NRC staff to formalize this funding arrangement in an agreement with DOE.

To date, NRC has not reached a formal agreement with DOE on this issue. Additionally, NRC issued the LSS rule without ever getting such an agreement. Since then, the funding issue has been the subject of much debate. Although NRC and DOE have made several recommendations to resolve the issue of funding for the LSS, none to date have resulted in a formal agreement between the two agencies.

Another unresolved issue is the technical requirements regarding the functions, features, and technology for the LSS. With the move of DOE responsibility for the LSS program to the YMSCO in early 1994, a new DOE staff began work on development of the LSS. As a result, DOE initiated a reevaluation of the entire LSS concept. DOE contractors considered six options representing a full range of LSS operational concepts. To date, DOE has not yet decided upon which option to employ.

NRC and DOE have been attempting to resolve issues mainly through the use of the LSSARP. This group's charter is to provide advice to the DOE and the LSSA on fundamental issues of the LSS. During LSSARP meetings, proposals to resolve these issues have surfaced. However, there are several key interagency issues that have not been resolved. To avoid further setbacks and delays in developing and implementing the LSS, the NRC needs to take the lead in reaching a formal resolution with DOE on these issues through a means such as an MOU or an interagency agreement.

⁷While "capture" indicates converting a document into an electronic format, "load" indicates the act of placing the captured documents into the LSS.

KEY INTRA-AGENCY REQUIREMENTS HAVE GONE UNRESOLVED

Within NRC, there are various groups that have LSS responsibilities. For example, IRM contains the LSSA, who is responsible for operating and maintaining the system. The Office of Nuclear Material Safety and Safeguards (NMSS) is responsible for necessary planning to meet the licensing time frame for the repository and will be a primary user of the LSS. Labat-Anderson/Price Waterhouse are NRC contractors and have performed many tasks for the LSSA. NRC's Federally Funded Research and Development Center (FFRDC), the Center for Nuclear Waste Regulatory Analysis, has also performed some tasks for the LSS. Other groups which are involved with the LSS include the Atomic Safety and Licensing Board Panel and the Offices of the General Counsel, the Secretary, and Commission Appellate Adjudication.

All offices of the NRC, including its contractor and its FFRDC, could potentially have documents that will need loading into the LSS. As a result, NRC needs to ensure that all of these groups have clearly delineated roles and responsibilities toward the LSS. NRC also needs to ensure that each group carries out these responsibilities in a timely manner. However, these are not now consistently being accomplished.

According to DOE and other sources, the LSS rule broadly defines the requirements for an LSS. NRC needs to determine its specific requirements for the LSS. Many of these requirements are enumerated in NRC Manual Chapter 0109, "Organization and Function, Office of Licensing Support System Administrator." However, the extent to which this guidance is being followed is unclear, since an agency spokesperson for the LSS was not aware of the contents of this Manual Chapter.

Any determination of internal requirements should include the needs of NMSS as the primary user of the LSS. NRC also needs to determine milestone dates for LSS loading and operation. NRC needs to determine what internal documents are relevant for input into the LSS and then begin segregating and formatting those documents. Additionally, NRC needs to ensure that it has adequate internal funding for all of these and other intra-agency goals. One NRC Commissioner noted that NRC needs to fully determine the budgetary and FTE commitments needed.

NRC is working towards resolution of some of these intra-agency issues. However, much more needs to be done before DOE turns over the system to NRC for operation and maintenance. NRC needs to ensure that all offices are fully

informed as to their roles and responsibilities with regard to the LSS. Additionally, NRC needs to ensure that LSSA responsibilities are met, including those outlined in NRC Manual Chapter 0109. It is important that these issues are addressed in a timely manner to help ensure that repository licensing actions by NRC are not unnecessarily delayed.

LSS IS ON A TIME CRITICAL PATH TO THE REPOSITORY CONSTRUCTION APPLICATION

Through the negotiated rulemaking for the LSS, DOE accepted the responsibility for designing and developing the LSS. At the time, DOE already had a system design and integration contractor that had begun working on an LSS. As a result, there was no practical alternative but to have DOE continue its developmental work. This was due to the tight time constraints imposed by the original HLW repository program schedule, which anticipated that DOE would submit its license application in 1995.

One senior NRC manager involved in licensing the repository believed that it would be unfortunate to have a license application ready, but not be able to process it due to the incompleteness of an LSS. One Commissioner also noted that although the delays that have occurred have not been all bad, it is time to "get back on track" and make the necessary decisions. This Commissioner stated that it is time to ensure that a firm commitment toward the LSS is in place.

The time for designing and developing an LSS is short if the system is to be ready for DOE's license application submittal by the year 2001. A 1992 preliminary NRC/DOE report noted that it normally requires about five years to procure, develop, implement, and test a major automated system like the LSS. Therefore, if DOE were to begin this process today, the system would not be ready until the year 2000. The report also noted that if the system is not developed on a schedule that makes it available for database loading four to five years before the submission of the license application, it is unlikely that the estimated 18 million pages of relevant material would be in the LSS system by 2001.

Accordingly, implementing a timely LSS is contingent on a number of actions, including NRC leadership towards resolution of the issues previously discussed. If after a reasonable period of time NRC and DOE come to an impasse, or if development of the LSS stalls again, NRC should have a contingency plan ready. Otherwise, it is unlikely that an LSS will be ready in time to serve its intended

purpose. If this occurs, NRC will have wasted several years of effort and approximately \$4 million it has spent to date on an LSS.

CONCLUSIONS

The NWPA requires NRC to license the construction of a HLW repository within three to four years. To meet this deadline, NRC has enacted a rule requiring the development of a Licensing Support System before DOE submits its license application. However, that rule only requires NRC to operate and maintain the system. It requires DOE to design and develop the system. Therefore, if DOE does not meet its LSS requirements under the rule, NRC cannot meet its requirements. Furthermore, NRC would be unable to meet its congressional mandate for licensing of the repository.

The LSS program has stalled over the past five years primarily due to delays in the construction license application schedule, personnel changes in DOE and NRC, changes in program direction, and lack of agreement over funding. Many of these delays may be attributed to a lack of a clear definition and agreement on the roles and responsibilities both between and within DOE and NRC. As a result, only six years remain in which to develop and implement an LSS prior to the scheduled repository license application date of 2001. This is the same time period that existed in 1989 when the license application was scheduled for 1995.

Accordingly, because of NRC's key mandated role for a timely licensing proceeding, NRC needs to take a strong, aggressive leadership role. The LSSA must ensure the resolution of longstanding, unresolved issues, including the development of formal agreements with DOE in a timely manner to keep the LSS on schedule and meet NRC's mandate to issue a final decision on the repository construction license application within three years.

RECOMMENDATIONS

We believe it is crucial that the LSS not interfere with the critical pathway of the license application. Therefore, we are making the following recommendations.

To ensure that DOE and NRC understand and agree upon key interagency issues, the LSSA should:

- (1) Obtain a formal commitment from DOE in the form of an interagency agreement or MOU on key aspects of the LSS. At a minimum, such an agreement should include such items as the respective roles of each agency, funding, and the LSS timetable.

To ensure that NRC understands and resolves key intra-agency issues and requirements, the LSSA should:

- (2) Develop a management plan for Commission approval that minimally includes items such as the roles and responsibilities of NRC staff in different offices, contractor support responsibilities, and internal funding for the LSS.

If after a reasonable period of time, DOE and NRC can not agree on key issues such as funding and timing or DOE can not meet its LSS design and development responsibilities, the LSSA should:

- (3) Develop a contingency plan for implementation of the LSS, or reevaluate NRC's commitment to ensure that an LSS is available before submittal of DOE's license application.

AGENCY COMMENTS

On March 13, 1995, the Deputy Executive Director for Nuclear Materials Safety, Safeguards, and Operations Support (DEDO), responded to our draft report. He agreed with our recommendations. To ensure that NRC's effort is well-coordinated and focused, the DEDO said a Senior Management Team would be established to review the direction, roles, responsibilities, and user needs for the LSS. He noted, however, that because DOE's Civilian Radioactive Waste Management System Program plans are currently in flux on both the legislative and budgetary fronts that he doubted that DOE would be willing to sign a Memorandum of Understanding until these matters are resolved. Nonetheless, he agreed that NRC would provide a draft MOU to DOE by April 30. For the same reasons, he believed it was premature for NRC to develop a contingency plan at this time but agreed to do so at the appropriate juncture. The complete text of his comments are included as Appendix III.

OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of our audit was to determine the status of the Licensing Support System (LSS) and to determine the issues that affect the LSS. We conducted our audit between October and December of 1994 at NRC headquarters and in Las Vegas, Nevada.

To develop an understanding of the LSS, we interviewed officials from the Offices of Information Resources Management, the General Counsel, Nuclear Material Safety and Safeguards, the Controller, and the Commission. We also interviewed past officials from the former Office of Licensing Support System Administrator. In addition, to get an understanding of the role of the Department of Energy (DOE) in establishing an LSS, we interviewed officials from DOE's Office of Civilian Radioactive Waste Management at the Yucca Mountain Site Characterization Office.

In December 1994, we observed meetings of the Licensing Support System Advisory Review Panel and the Licensing Support System Internal Steering Committee. We also reviewed documents and regulations relating to the Licensing Support System from 1986 to the present.

We conducted our audit according to generally accepted Government auditing standards.

CHRONOLOGY OF SIGNIFICANT LSS EVENTS

- 1982 Nuclear Waste Policy Act (NWPA) requires the Nuclear Regulatory Commission (NRC) to license a geologic repository in 3 years, plus an additional year for cause.
- 02/86 First Department of Energy (DOE)/NRC Licensing Support System (LSS) interagency coordinating committee meeting.
- 02/87 NRC and DOE sign an Agreement in Principle to develop a LSS. DOE agrees to have the responsibility for designing and providing the LSS.
- 07/87 NRC proposes rulemaking on the submission and management of records and documents related to the licensing of a geologic repository for the disposal of high-level radioactive waste and establishment of an advisory committee for negotiated rulemaking.
- 11/88 Draft LSS rule published for comment.
- 01/89 NRC establishes an Office of LSS Administrator (LSSA).
- 05/89 Effective date of LSS rule.
- 07/89 Meeting among Office of Management and Budget (OMB) and NRC re: LSS Operation and Maintenance (O&M) budget responsibility.
- 08/89 Letter from Chairman, NRC to Director, OMB stating that beginning in Fiscal Year 1992 (FY 92), DOE should budget for LSSA's office and O&M of the LSS.
- 11/89 Letter from LSSA, NRC, to Special Assistant to the Secretary for DOE Waste Management proposing alternative schedule for LSS development and budget in order to preclude DOE's cancellation of all development work and procurement for the LSS for FYs 90, 91, and 92 due to budget pressures.

- 11/89 Letter from LSSA to Acting Director, Office of Civilian Radioactive Waste Management (OCRWM), DOE confirming their agreement on a revised LSS design and development program. DOE has agreed to fund the LSS with \$3.1M in FY 90 and \$5.6M in FY 91.
- 12/89 First meeting of the LSS Advisory Review Panel (LSSARP).
- 12/89 At NRC Commission Meeting, DOE revises its repository program schedule and extends the date for submitting its license application to NRC from 1995 to 2001.
- 02/90 Letter from Acting Director, OCRWM to LSSA. DOE states there will be no funds set aside in the DOE budget for procurement of LSS equipment in FY 91. Schedules for FY 92 and beyond will be need based. Preparation for a Request for Proposal for a turnkey system will take place in FY 91 with an award in FY 92, funding permitting.
- 04/90 Letter from Controller, NRC to Deputy Director, OCRWM forwarding draft Memorandum of Understanding (MOU) on budgeting and paying for the LSS.
- 04/90 Meeting between Controller, NRC and Deputy Director, OCRWM in which DOE states it will not agree to include the LSS O&M costs in its FY 92 budget.
- 05/90 Meeting among DOE and NRC to discuss funding and budgeting for LSS O&M costs. DOE agrees to reconsider their previous position and identifies the following as important factors: the inconsistency of a bifurcated budget approach, DOE's view that the program was proceeding at a much faster pace than it could defend to OMB, and that DOE would not consider it appropriate to include LSSA FTEs in their budget.
- 05/90 Letter from NRC to DOE re: budgeting alternatives and requesting DOE's position on funding for LSS O&M costs.
- 05/90 Letter from DOE to NRC re: budgeting alternatives for funding LSS O&M costs and stating that DOE will not have a clear position on the pace of the LSS until a position on the pace of the waste management program as a whole is established.

- 05/90 Meeting among NRC and DOE on LSS development schedule. DOE states that LSS activities may be put on hold for some time. NRC advocates continuing LSS development to have a fully functional pilot in FY 92.
- 07/90 Letter from LSSA to Director, OCRWM explaining his concerns with DOE's anticipated deferral of LSS development and recommending that a pilot system be installed for test and evaluation purposes.
- 07/90 Letter from Director, OCRWM to LSSA notifying NRC that DOE will not pursue LSS procurement activities in FY 91 and FY 92, but DOE does plan to have the first module for pilot testing implemented in FY 95.
- 07/90 Letter from Director, OCRWM to Chairman, NRC forwarding draft MOU identifying guiding principles for interface during development and implementation of LSS.
- 08/90 Letter from LSSA to Director, OCRWM explaining why work on the LSS should not be stopped at this time.
- 08/90 Meeting between LSSA and Director, OCRWM in which DOE agrees to continue with development of the LSS in FYs 91 and 92 with the goal of having a pilot system ready for test and evaluation in 1993.
- 10/90 Meeting among NRC and DOE to discuss future LSS program responsibilities. NRC proposes that NRC assume responsibility for entire LSS program and that DOE budget for the entire LSS program.
- 11/90 Meeting among OMB, DOE, and NRC. NRC proposes that NRC manage all LSS activities and that DOE budget for those activities and reimburse NRC. OMB staff will recommend to their management that no funding be included in DOE FY 92 budget for LSS.
- 12/90 DOE informs NRC that if NRC wants to go ahead at this time with the LSS, NRC will have to budget for it.
- 02/91 Letter from Chairman, NRC to Secretary, DOE asking DOE's intentions re: its LSS design and development responsibilities and the extent to which DOE is willing to help support the future costs of the LSS program.

- 04/91 Letter from Under Secretary of Energy to Associate Director of OMB requesting a meeting among OMB, DOE, and NRC to resolve LSS scheduling and budgeting issues.
- 05/91 Letter from Chairman, NRC to Associate Director, OMB requesting a meeting among OMB, DOE, and NRC to discuss the realities of the LSS development schedule and to resolve budgeting issues.
- 05/91 Letter from LSSA to Director, OCRWM forwarding a proposed schedule for acquisition, design, development, testing, and loading of the LSS if the NRC were to assume DOE's design and development responsibility.
- 06/91 Telephone conference between Chairman and LSSA, NRC and Under Secretary and Director of OCRWM, DOE. DOE agrees that (1) NRC should take over LSS design and development, (2) the LSSA's schedule was realistic, and (3) DOE will reimburse NRC for its share of LSS development and use. DOE also agrees to support this change to OMB.
- 06/91 Memo to NRC Commissioners from LSSA, providing alternatives addressing possible future directions for the LSS program and recommending that NRC assume LSS development responsibility under existing design, functionality and schedule requirements.
- 07/91 At an LSSARP Meeting, while the recommendation [discussed above] was still before the NRC Commission, DOE announces an OCRWM initiative that would result in an automated information system capability called INFOSTREAMS that could be used instead of LSS capture stations to capture DOE's LSS material.
- 09/91 Letter from Chairman, NRC to DOE, establishing a technical working group to re-examine the LSS design options to search for ways to reduce the overall costs of the LSS to the Nuclear Waste Fund and develop recommendations. The group is to focus specifically on benefits that could be derived by using INFOSTREAMS and its developed software to minimize LSS development and operational costs.

- 02/92 The working group prepares draft recommendations, but DOE objects to completing the group's recommendations until the broader issues surrounding LSS program and budget responsibilities are resolved.
- 05/92 NRC Commission Paper, SECY 92-195, seeking direction on how program and budget responsibilities might best be shared between NRC and DOE. Paper provides three alternatives and recommends that DOE capture its LSS material plus all non-DOE LSS material and that LSSA develops the LSS and then operates and maintains it.
- 09/92 NRC Commission does not approve recommendation in SECY 92-195. They request another Paper regarding (1) the reporting relationship of the LSSA, (2) alternatives of DOE being responsible for capturing all documents, NRC capturing all non-DOE documents, and DOE operating and maintaining the system as well as capturing all documents [including any rule changes that would be needed to do this], and (3) options for NRC funding of its LSS responsibilities.
- 10/92 NRC Commission Paper, SECY 92-361, which proposes changes in organizational and reporting relationships of the Office of the LSSA. Paper recommends that Commission establish a Deputy Director position in the Office of Information Resource Management (IRM) who would also be the LSSA.
- 11/92 Letter from Deputy Director, OCRWM to LSSA discussing INFOSTREAMS and reiterating concern about other parties objections to DOE's capturing their LSS materials.
- 11/92 NRC Commission approves recommendation in SECY 92-361.
- 11/92 LSSA's Office reconstituted into an organizational unit within Office of IRM. A new Deputy Director, IRM/LSSA position will be established.
- 04/93 NRC Commission Paper SECY 93-107 "LICENSING SUPPORT SYSTEM PROGRAM AND BUDGET RESPONSIBILITIES" provides analysis of three alternatives requested in 09/92. NRC recommends that the LSS rule be changed to task DOE with the responsibility for the capture of all LSS documents and for the

operation and maintenance of the LSS. The LSSA's role would be limited to oversight and quality assurance for the design and operation of the LSS and for the completeness and integrity of the LSS database.

- 06/93 NRC Commission approves, with exceptions, recommendations of SECY 93-107.
- 10/93 Meeting of the LSSARP to obtain their views on the recommended approach (discussed above). LSSARP members cannot support the recommended approach as they feel this gives DOE too much control over the system. NRC recommends a compromise approach whereby the DOE would operate and maintain the system and the LSSA will serve as the Contracting Officer's Technical Representative (COTR) over DOE's O&M contract on the LSS:
- 02/94 DOE LSS responsibility moves from DOE headquarters to Yucca Mountain Site Characterization Office.
- 05/94 DOE initiates a re-evaluation of the LSS concept and implementation requirements.
- 12/94 In an LSSARP meeting, DOE announces: (1) it is no longer pursuing INFOSTREAMS as a basis for the LSS, (2) it can no longer support the idea of LSSA as COTR, and (3) it proposes a new alternative for funding the LSS. In this alternative, NRC and DOE would negotiate and formalize an interagency agreement on the LSS. This agreement would also provide for DOE to request appropriations for LSS operation and maintenance costs. NRC would draw against a separate DOE account established for this purpose.

AGENCY COMMENTS ON DRAFT REPORT



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

March 13, 1995

MEMORANDUM TO: Thomas J. Barchi
Assistant Inspector General for Audits

FROM: Hugh L. Thompson, Jr.
Deputy Executive Director for Nuclear Materials
Safety, Safeguards, and Operations/Support

SUBJECT: DRAFT REPORT: NRC NEEDS TO PROVIDE STRONG
DIRECTION FOR THE LICENSING SUPPORT SYSTEM

This responds to your memorandum dated February 13, 1995, transmitting the draft subject audit report.

We found that the draft report was well formulated, technically correct, an accurate characterization of the chronology of events, and well balanced in representing issues in an objective manner.

As your report points out, the Licensing Support System (LSS) has a nine-year history of setbacks and delays in which little substantive progress has been achieved despite numerous efforts on the part of NRC senior level management to resolve LSS funding and programmatic responsibilities with OMB and DOE. Given that DOE's Civilian Radioactive Waste Management System program plans are in flux on both the legislative and budgetary fronts, with Congressional action expected during this session, we seriously doubt that DOE will be in a position to make a binding commitment to the Commission on the LSS to resolve these issues. In fact, passage of some legislation under consideration would result in a reassessment on the part of the Commission regarding the scope, timing or even need for a Licensing Support System. Given this situation, we submit the following comments.

Recommendation 1

Obtain a formal commitment from DOE in the form of an interagency agreement or Memorandum of Understanding (MOU) on key aspects of the LSS. At a minimum, such an agreement should include such items as the respective roles of each agency, funding, and the LSS timetable.

Response

Agree in principle. The Licensing Support System Administrator (LSSA) has initiated and is well along in the development of a draft MOU which will include the coverage recommended in the draft report. However, preliminary discussions indicate that NRC and DOE have differing views in several areas, necessitating negotiation between the two agencies. Even if they can reach agreement on the text of a MOU, it is unclear whether DOE management will be willing to sign a memorandum of understanding with the NRC until its high level waste management system program plans are settled on both the legislative and budgetary fronts.

Completion date for NRC providing an initial draft MOU to DOE: April 30, 1995.

Appendix III
NRC Needs to Provide Strong Direction for the LSS

Recommendation 2

Develop a management plan for Commission approval that minimally includes such items as the roles and responsibilities of NRC staff in different offices, contractor support responsibilities, and internal funding for the LSS.

Response

Agree. We have undertaken a review of the LSSA roles and responsibilities as outlined in Manual Chapter 9.9, and agree that it should be updated to reflect reorganizations that affected the former Office of the LSSA as well as other NRC entities. (2) We agree with the need for closer coordination and communication among the LSSA and the offices that will be directly involved with licensing the High Level Waste (HLW) repository. In order to ensure that the LSS effort is coordinated and focused, a Senior Management Team including the LSSA, NMSS, and OGC, will be established to review the direction, roles, and responsibilities, and user needs for the LSS. (3) We believe that the internal funding questions may be amenable to resolution in the above noted MOU, and we will use that vehicle to minimize the budget exposure of the Commission.

(1) Completion date for LSSA completing its draft revisions to Manual Chapter 9.9: June 16, 1995. (2) Completion date for establishing the Senior Management Team: March 20, 1995. (3) As noted in response to recommendation 1, completion date for NRC providing an initial date MOU to DOE: April 30, 1995.

Recommendation 3

Develop a contingency plan for implementation of the LSS, or reevaluate NRC's commitment to ensure that an LSS is available before submittal of DOE's license application.

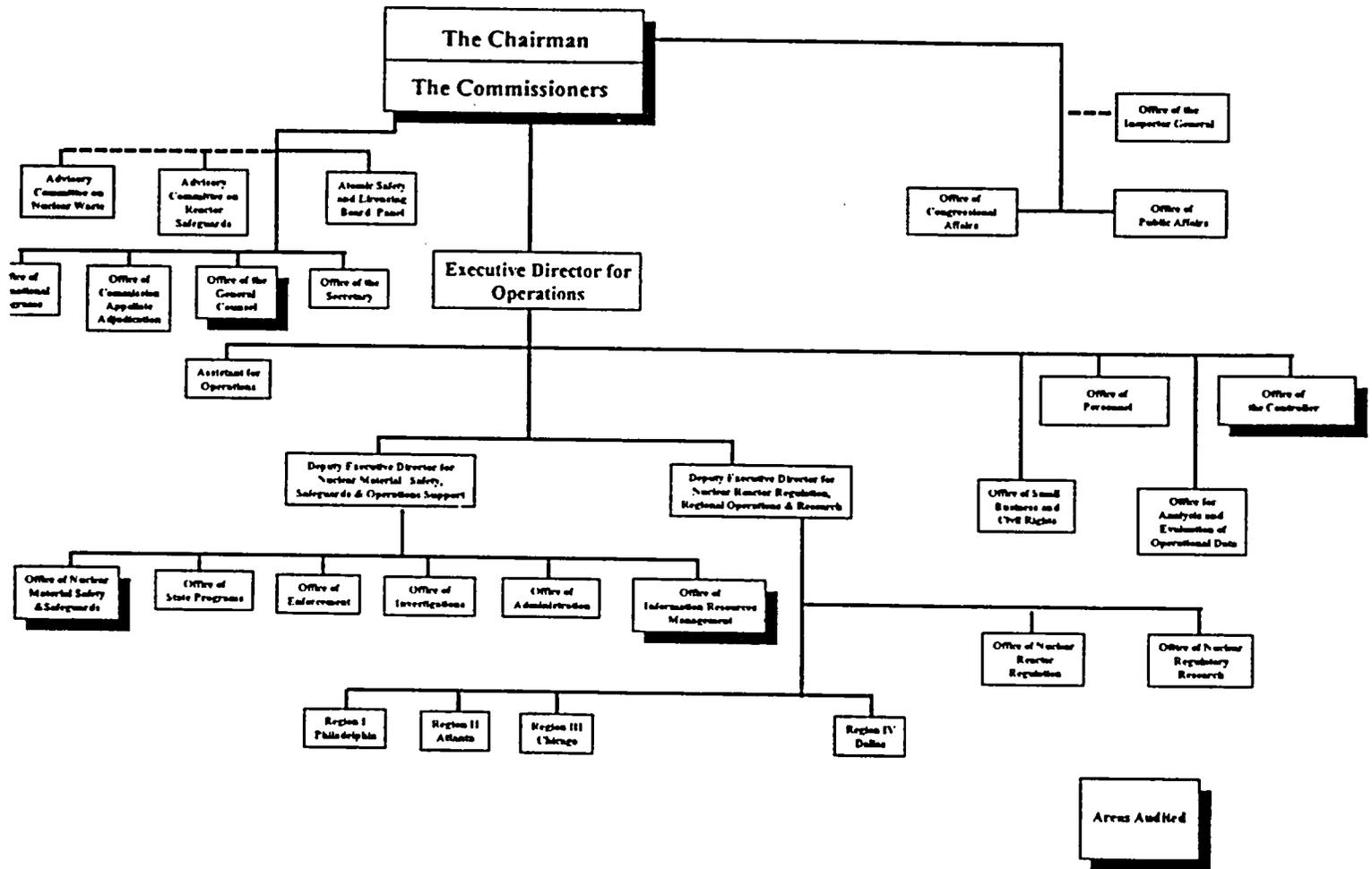
Response

Agree in principle. NRC and DOE must be able to recognize and acknowledge "triggering" events that presage a failure to execute. We can include such triggering events in our proposals for the MOU. However, given the uncertainty surrounding DOE Civilian Radioactive Waste Management System program plans due to pending legislative action, we believe that it is premature to develop a contingency plan for the LSS or re-evaluate NRC's commitment to ensure that an LSS is available before submittal of DOE's application.

Completion date: We are unable to determine a date for completion of recommendation 3 at this time. NRC senior management is closely following HLW legislative proposals and DOE actions affecting the schedule, funding, and prioritization of licensing a high-level waste repository, and will address this matter at an appropriate juncture.

cc: J. Taylor, EDO
J. Milhoan, DEDR
K. Cyr, OGC
R. Bernero, NMSS
R. Scroggins

U.S. NRC FUNCTIONAL ORGANIZATION CHART

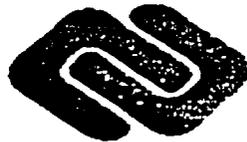


MAJOR CONTRIBUTORS TO THIS REPORT

Russell Irish, Senior Auditor

Katherine P. Black, Auditor

ATTACHMENT N



Clark County

Department of Comprehensive Planning Nuclear Waste Division

301 E CLARK AVE STE 870
PO BOX 831751
LAS VEGAS NV 89153-1751
(702) 455-5175

January 23, 1995

Mr Dan Graser
Office of Information Resources Management
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Dan,

At the December 12-13, 1994, Licensing Support System Advisory Review Panel (LSSARP), the attendees were invited to informally review and comment on the LSS Participants Commitments Document. The Clark County Nuclear Waste Division has reviewed the document and submits the attached comments for your consideration.

In performing this review we maintained the context that this was an informal review and our comments were being solicited to ensure a more comprehensive document when the first draft is issued. The comments are not intended to be critical of the author or sponsoring organization and are only intended as constructive. It is apparent a significant amount of time and effort went into generating this document and as a first draft it is quite effective. As an Affected Unit Of Local Government (AULG) and also a designated LSS Participant, the Clark County Nuclear Waste Division will also require a comprehensive review by the County Information Systems Department and the District Attorney's office prior to officially taking a position on these commitments.

Thank you for the opportunity to participate in the review and ultimate generation of this critical LSS document.

Sincerely,

Roger Hardwick
RH/r
m56irm.rh

CC: D. Bechtel
P. Blount
H. Kelman

COMMISSIONERS

Yvonne Adkinson Gates, Chairman • Paul J. Christensen, Vice-Chairman
Jay Eingham, Lorraine Hunt, Erin Kenny, Myrna Williams, Bruce L. Woodbury
Donald L. "Pat" Shelmy, County Manager

MEMORANDUM

Clark County Nuclear Waste Division

TO: DENNIS A. BECHTEL

FROM: HARRY KELMAN *Harry Kelman*

SUBJECT: COMMENTS ON LSS PARTICIPANT COMMITMENTS DOCUMENT

DATE: JANUARY 5, 1995

As you requested, I have reviewed the above-noted document. Reasonableness is in the eye of the beholder and therefore my comments align themselves more with resource requirements (or scarcities of these requirements), such as capital and labor. Since this is also a basic library system, I have touched upon input, control and security. I would also suggest that this report be reviewed by individuals representing ISD, GISMO and the District Attorney's Office prior to Clark County submitting comments.

Overall, I think the following major questions need to be addressed:

- A. WHO decides what gets entered or not entered into the system? I assume that no-one will want this responsibility, and therefore, on the conservative side, everything will get entered into the LSS. Based upon this assumption, the estimate of 13 - 20 million pages (most belonging to DOE) is very questionable, i.e., on the low side.
- B. Analytical data needs to be developed to determine resource requirements in terms of labor, capital, time and space requirements. Basic Industrial Engineering techniques or standards developed by professional organizations should be explored and agreed to in order to develop relative resource requirements.
- C. Security requirements between the data base, users and those providing input, etc. needs to be in place from both the receiving and sending ends of the system.
- D. WHO AND HOW will this entire system be funded, i.e., if Counties and Cities are LSS participants, will they receive (additional) funds? What about non-profit groups, environmental groups, etc.? What about others, such as TRIBES and other special interest groups?

Memorandum to Dennis Bechtel
 January 5, 1995
 Page 2

- E. There needs to be a positive incentive for doing the "right things right" rather than "citation for non-compliance".
- F. Standards or assumptions need to be supported and documented as realistic and/or attainable within existing technologies, i.e. are thresholds of 2%, 0.1% (standard derivative) realistic and/or attainable?

The following comments are by specific page and paragraph:

- i. What does cited for non-compliance mean?
- ii. Define LSSA or PO.
- iii. What is meant by sanctions?
- 1- 1 define all LSS participants
define all sources
- 1- 2 define DLO's; define all existing, any new and in a timely manner. These are nice esoteric terms and are needed, however, there should be positive incentives for causing these actions to happen.
- 2- 1 define all LSS participants
- 2- 2 The time frames, backlog recognition, due dates and words like "evenly submitted" "full capacity" are nice but meaningless unless resource allocations are attached, i.e. labor hour requirements, plant size, capital, space requirements, etc. If one is tying the full loading of the backlog twelve months, then one must assume extreme demands on front-end resource requirements during this critical period.
- 3- 2,3,4 Get commitment to Master Submission Plan before and then these sections can be eliminated, or develop a plan for exceptions to the standard.
- 4- 1 WHO AND HOW will material outside topical guidelines be addressed?
- 4- 3 "err on the side of submitting material" truly means the 13-20 million page estimate will be low. How and what is the additional resource requirement for each 1-5% error? What is an acceptable error rate?
- 4- 5 Last sentence is offensive and should be eliminated.
- 6- 1 WHO is developing the standard acceptable audit trail?
- 6- 4 Is 0.1% realistic?
- 7- 1 Nice measurement but is this meaningful?

Memorandum to Dennis Bechtel
January 5, 1995
Page 3

- 8- 1 Relies on two assumptions:
1. The Planned license application is fixed (i.e., does not change), and;
 2. Someone, somewhere is ready to receive all documents.
- 8- 4 This program is fixed to dates and not analytically developed standards for resource requirements. If you do not know how much you're going to do, resources available how can a chart like this be developed?
- 10- 1 What is meant by "granting access"?
- 10- 2 How were workdays (10) developed? Why the asterisk?
- 11- 3 Rationale could be two days, ten days, or fifteen days?
- 12- 1 Without some Industrial Engineering standard, how can volumes and workdays to acceptance be developed?
- 13- 6 Compliance is arbitrary.
- 14- 1 Define HLW.
- 14- 2 Conflicts with previous standard of ten days
- 14- 6 Arbitrary compliance.
- 15- 6 Violation of a Federal Law?
- 17- Who will train and pay for people to enter Header Preparation?
- 19- 1 Need consistency with "non-DOE participants", i.e. submit paper, or formatted digital, or do you care if some comes in both ways?
- 19- 4 How was the 1% standard developed?
- 20- 2 Is 99.8% accurate realistic?
- 20- 5 Is 1% and 90% acceptable and realistic?
- 22 How will someone know of corrections and/or changes?
Who will have authority to make/enter corrections/changes?
- 23- 4 What happens if you don't comply and/or is there to be some sort of appeal process?
- 24- 1 What is (a) provide access, (b) non-privileged material, (c) not suitable?
- 24- 3 Establish standard procedures.
- 24- 4 Who pays for training? How often? What is the source?
- 25- 5 Cost and source of funding unknown?
- 26- 2 Who is the "public?" Where will terminals be located (i.e., throughout the U.S., Washington D.C. only, etc.?)

Memorandum to Dennis Bechtel

January 5, 1995

Page 4

Note: From this point on, it is confusing as to who is responsible for the LSS (seems to be DOE); who the LSSA works for, i.e., DOE, outside agency; who the LSSARP is responsible to, etc., etc.

- 27-1 Will Congress fund DOE? What is the amount of dollars required?
- 27-2 Who will be responsible for the LSS? Is DOE, NRC, Library of Congress the appropriate agency?
- 28-2 Define LSSARP. These are also tasks without resource inputs, completion dates, inside or outside service provider, etc.
- 29-1 Same as above.
- 30-1 Same as above.
- 33-2 Define DOC MNMGT SYSTEM.
- 33-3 This assumes DOE will create a pilot system - might not DOE cause a contractor to create a pilot system?
- 35- Who will determine who the responsible agency will be? Does that agency elude public trust?
- 38- What are the resource requirements?

I hope that these comments provide assistance to you. If you have any questions, please contact me.

HK/rr

m07jan95.hk

cc: Phil Blount
Roger Hardwick

LANE
POWELL
SPEARS
LUBERSKY

January 30, 1995

Malachy R. Murphy

Arnold E. (Moe) Levin
Licensing Support System Administrator
Office Of Information Resources Management
U.S. Nuclear Regulatory Commission
Washington D.C. 20555

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A Partnership
Including
Professional
Corporations

Re: LSS Participants Commitments

Dear Moe:

I have completed my review of the LSS Participant Commitments document, made available to us at the last LSSARP meeting. I have two general comments, and several more specific ones, which are attached hereto.

My first recommended change I am sure you are already aware of. That is the need to completely rewrite Group 4 to reflect the recent Interagency Agreement and the fact of LSSA, rather than DOE, operation and maintenance of the LSS once it becomes operational. The commitments relating to design and development, which should remain with DOE, should, of course be separated from those related to operation and maintenance, which will be the LSSA's responsibility. John Hoyle tells me that this may have already been taken care of, by replacement pages which you have asked him to circulate to the ARP members.

Secondly, as you will be able to see from some of my detailed comments, I am concerned that the entire process laid out in the document may be more burdensome than necessary. Compliance should not be such a chore that the cost of participation in the LSS, in time and effort, outweigh its benefits. The purpose of the LSS is to avoid the burden and expense of hard-copy discovery. I would certainly hope that we don't replace that with an equally great administrative burden of compliance. This is particularly (and perhaps uniquely) the case, of course, for the small, non-DOE participants such as Nye County and the other affected local governments, Tribal interests, and even as yet unknown public intervenors.

These are the broad, general comments I have. I also have several detailed ones, as I indicated above, which are set out

Anchorage, AK
Los Angeles, CA
Mount Vernon, WA
Olympia, WA
Portland, OR
Seattle, WA

London, England
Tokyo, Japan

Arnold E. (Moe) Levin
January 30, 1995
Page 2

in the enclosure. They are important, and together prompt my general concern about the perhaps overly burdensome nature of many of the requirements.

Do I correctly assume that we will have another opportunity to discuss this document at the next LSSARP meeting in March?

With best personal regards.

Yours very truly,

LANE POWELL SPEARS LUBERSKY



Malachy R. Murphy
Regulatory & Licensing Advisor
Nye County NWRPO

Enclosure

cc: Les Bradshaw (w\enc)
Phil Niedzielski-Eichner (w\enc)
Lloyd Levy (w\enc)
Members, LSSARP (w\enc)

NYE COUNTY COMMENTS ON
LSS PARTICIPANT COMMITMENTS

■ Commitment 1.B calls for all participants to submit Material Submission Plans at least four years before the LSS is scheduled to be available. That may not be possible, at least if DOE accelerates development of the LSS to track the licensing schedule under the new Program Approach. Indeed the LSS could conceivably be available, at least on a limited basis, in less than four years from now. While four years makes sense for DOE, and perhaps the NRC, because of the amount of material they would need to submit, it is not at all necessary for the smaller, non-federal participants.

■ It will be difficult enough for DOE to comply with the 10 year projection requirement of the Processing Standard under Commitment 1.B. It will be impossible for the smaller participants to do so. Nor is that necessary. The majority of documents to be submitted by the smaller participants will be generated in reaction to DOE documents. This is always the case with entities whose function is oversight. The smaller participants cannot accurately predict what their own document production rate will be without having some idea, not only of what DOE will itself produce, but what DOE documents might say. An accurate inventory of "backlog" documents, perhaps eighteen months to two years before availability of the

LSS, coupled with annual projections of "contemporaneous" documents, should suffice for the smaller participants.

■ Submission of backlog documents by participants other than DOE and NRC 36 months prior to DOE's planned license application submission date is fine if the LSS is available by that date. This processing standard should contain some flexibility.

■ Commitment 1.D is too burdensome, at least for the smaller, non-federal participants. For these participants, including Nye County, most of the documents in their files will be screened out because they constitute routine, non-relevant correspondence, copies of DOE or NRC correspondence or documents, and similar material. A simple coding system, such as color coding, which could readily be checked in the course of an audit, should be sufficient.

■ Is Commitment 1.E inconsistent with the fourth Processing Standard under Commitment 1.B? Does this mean that submission of backlog material should be complete 12 months before DOE's planned license application submission date, or commenced by that date?

■ The Non-Compliance Reporting Threshold under Commitment 1.E should be rethought in light of DOE's Program Approach schedule. It may not be possible to meet those standards if the LSS is not available that much in advance of DOE's planned license application submission in 2001.

■ The note a page 11, under the Processing Standard for Commitment 1.F indicates that a standard "will be set later" for submission of highest priority backlog material if that becomes necessary. We believe that necessity is almost beyond question. Such a highest priority standard should be developed now, rather than later.

■ Nye County agrees entirely that all parties should timely submit exhibits to be tendered during the licensing hearing. However, control over that should properly be left to the Presiding Officer, rather than the LSSA. We would thus suggest adding language such as: "except for good cause shown, and with the permission of the Presiding Officer".

■ Commitment 3.K is to burdensome for the smaller, non-federal participants. See the comment above with respect to Commitment 1.D.

COMMENTS ON LICENSING SUPPORT SYSTEM (LSS)
PARTICIPANT COMMITMENTS DOCUMENT

Section
Numbers

Comment

1.A Commitment - Document Universe Identification

This section assumes a records system that has made no differentiation in its holdings between materials that may be licensing relevant and materials that are not. The U.S. Department of Energy (DOE) has used such a set of criteria based on 10 CFR 2, subpart J, in its records management system to determine which records to be computer indexed and microfilmed. Those records that have not been microfilmed and computer indexed are controlled by the Office of Civilian Radioactive Waste Management (OCRWM) Records Inventory and Disposition Schedule (RIDS).

The terms "potential LSS material," "backlog repository," and "generation/acquisition source" need to be clarified in order for DOE to properly respond to such a requirement. In addition, the document referenced in the footnote, *Format and Content of LSS Participant Compliance Program Plans*, has not been received by DOE.

Compliance Assessment Method

To ensure the credibility of the identification of a collection of records as being potential sources of LSS material or not, the LSSA should be the reviewing official, not the DLO of the organization whose records are being reviewed.

Such reviews and those done proactively must be controlled by all legal and statutory access privileges. This limitation should be incorporated into this document.

1.B Commitment - Material Submission Plans

The LSS is scheduled to be available in 1998. If Material Submission Plans are required to be submitted four years prior to LSS availability, we have already missed the deadline.

1.C The conditions, standards, and thresholds in this document and in 10 CFR 2, subpart J, for determining the scope of the records to be submitted to the LSS are not sufficiently precise to provide defensible grounds for making a decision to submit or not submit a record to the LSS. The criteria must be simplified. A recommended policy is to submit to the LSS all records generated or received by a participant organization that are relevant to the program subject to the exclusionary categories listed in section 2.1005 of 10 CFR 2, subpart J.

Two statements from section 1.C that lead to this policy are the rule of conservative submittal (i.e., when in doubt, send it in) and "...or that might lead to the discovery of information that is relevant..." In addition, using the criteria of this document, the program to track, document, explain, and audit the decision to exclude material imposes high standards and complex operational requirements that are not cost effective. Rather than set up the system to enforce these requirements, it is more cost effective to submit everything subject to the exclusions of the rule.

1.D If the policy adopted above in the comments on Section 1.C is adopted, the oversight activity described in this section can be significantly reduced.

1.E DOE backlog records will be indexed prior to their submittal to the LSS. We have been working to assure that our indexing fields are consistent with LSS requirements. Since it is estimated that DOE's contribution to the LSS represents 85% of the total, this should reduce the amount of time needed to load the LSS.

The Material Submission Plan requires the LSS participants to estimate volume ten years in advance starting four years before the LSSs establishment. A comparison of actual pages submitted against the estimate is certain to reveal discrepancies in the two numbers due to the length of time in the future for which the volume projections are being made. The usefulness of this exercise has to be questioned. Accurate projections cannot be made ten years in advance.

1.F The 10-day deadline is not reasonable. The time frame allowed should be evaluated based on workflow for each step and the cost factors to meet the schedule. Mail time, participant processing time, and mail time to the LSSA QA must all be included in such an evaluation.

Giving participants 10 days to send records to the LSSA QA for acceptance review but no specified deadline for LSSA QA to meet does not ensure that records will be available "reasonably contemporaneous" with their creation.

The time frames proposed by the LSSA are footnoted with the qualifier that the 10 working days does not include the work days in the LSSA QA Facility prior to acceptance. However, on page 12, the "Non-Compliance Reporting Threshold" states: "Non-compliance will be reported if too many of an LSS Participant's submissions/resubmissions (addressed above) are not accepted by the LSSA's QA Facility within the 10 day standard." This appears to be a direct conflict.

Rationale: The statement implies that processing periods exceeding 30 days result from malicious intent. In fact, they may result from legitimate situations such as surges in document volume or internal auditing activities. Recommend that the statement be deleted.

2.A Unitization guidance must be established soon so that DOE can incorporate it into their document processing for their records management system.

2.D 99.8% accurate ASCII text conversion is arbitrary and unattainable based on current technology. The standard should be based on retrieval rates rather than text conversion percentages.

The standard and rejection/resubmission thresholds are inconsistent and confusing. The standard is 99.8% per page. The threshold allows for something less than that for 1% of the pages submitted and allows a 90% text accuracy standard.

3.L It is assumed that the requirement for DOE to eliminate other parties' duplicates is removed since DOE will not manage or operate the LSS.

ATTACHMENT O

REVIEW OF LSSARP COMMENTS ON THE
LSS PARTICIPANT COMMITMENTS

ISSUES

ISSUE: The process laid out in the document may be more burdensome than necessary. The cost of participation in the LSS should not outweigh its benefits.	SOURCE: Nye County
RESPONSE: The <i>LSS Participant Commitments</i> is undergoing a thorough review to consider areas where burden can be reduced, and at the same time satisfy the LSS Rule. The issue of burden is important and will continue to be reviewed as the approach to LSS design and implementation is revised and updated. However, the LSSA's responsibility for the integrity of the LSS database [§2.1011(d)] will continue to be the primary factor in the development of the proposed commitments. The LSSA has identified the following areas where the proposed standards can accommodate a reduction in participant burden: Commitment 1.B - Material Submission Plans Commitment 1.C - Document Universe Screening Commitment 1.D - Accountability for Screened Materials Commitment 1.E - Backlog Submission	

<p>ISSUE: Commitment 1.A - Document Universe Identification - assumes a record system that has made no differentiation in its holdings between materials that may be licensing relevant and those that are not, unlike DOE's record system.</p> <p>Additionally, the DLO of the individual participant should not be the reviewing official for these requirements.</p>	<p>SOURCE: DOE</p>
<p>RESPONSE: Commitment 1.A makes no such assumption. The commitment asks each participant to identify the source (location) of record collections which may contain existing LSS documentary material (backlog). For DOE, one such source would certainly be the OCRWM Headquarters records system. Another source would be YMPO record holdings. Both would also be identified as sources of "contemporaneously generated" materials, which information is also requested by this commitment.</p> <p>Under this Commitment, the participant's DLO is given the responsibility to investigate and certify compliance with this commitment when such compliance is challenged by another participant. As stated in the Compliance Assessment Method, "the LSSA will perform on-site audits when deemed necessary to validate this certification". The terms of access privileges relative to LSSA audits of participants will be developed as an established protocol, which will be made an Appendix to the <i>LSS Participant Commitments</i> following review and comment by the LSSARP.</p>	

ISSUE: Commitment 1.B - Material Submission Plans - calls for all participants to submit Material Submission Plans 4 years before the LSS is available. Does this make sense considering the new DOE schedule for the LSS and the burden on the participants, particularly in view of the requested 10 year projection of documentary material submissions?

SOURCE: Nye County, DOE

RESPONSE: The timeframes described in Commitment 1.B were developed prior to DOE's development of its new program schedule for the LSS. If the LSS is to be available in 1999, the 4 year threshold cited above must be modified. The new schedule will be taken into account in revising certain of the commitments which are schedule dependent. Commitment 1.B remains a valid expression of the LSSA's need for planning information concerning what volumes of materials must be dealt with, and a reliable schedule of submissions upon which to base LSS operation and maintenance requirements.

The requirement for a ten year projection by each participant of its LSS material will be replaced by the requirement for each participant to give the LSSA (1) an estimate of its current backlog holdings, (2) an estimate of additional holdings in each of the next two years, and (3) an annually updated estimate of both thereafter.

ISSUE: (1.B) Non-federal participant submission of their backlog materials 36 months prior to DOE's planned license application date may not be possible if the LSS is not available by then.

SOURCE: Nye County

RESPONSE: As stated above, the timeframes stated in Commitment 1.B will be revised to take into account the new LSS program schedule. Non-federal participant backlog material that is not submitted in electronic form could still be submitted prior to the availability of the LSS, because it will have to be electronically processed by the LSSA. This processing could take place using a system set up for that purpose, which could be expanded for full LSS capture operation when the LSS is on-line.

ISSUE: Commitment 1.C - Document Universe Screening - The standards in this document and in 10 CFR Part 2, Subpart J for determining the scope of the records to be submitted to the LSS are not sufficiently precise to provide defensible grounds for making a decision to submit or not submit a record to the LSS.

Additionally, the tracking system required to "track, document, explain, and audit" include/exclude decisions is too burdensome and not cost-effective.

SOURCE: DOE

RESPONSE: The LSSA is currently examining, as a matter of policy, whether or not to audit participants for the accuracy of their relevancy screening. It is felt that each participant should be responsible for questioning whether another participant should have submitted allegedly relevant materials which are not present in the LSS. All disputes concerning the relevancy of materials will be resolved by the Pre-License Application Presiding Officer or the Presiding Officer, in accordance with § 2.1010 of the LSS Rule. The LSSA commits to ensuring that all documentary materials submitted for loading by participants will be accurately loaded.

DOE's proposal to submit all of its records relevant to the program without screening them for relevancy against the Topical Guidelines is under consideration by the LSSA. Issues such as database responsiveness and user satisfaction must be weighed against the cost benefit of such a proposal.

Whether or not DOE's proposal is accepted, the LSSA is considering that the detailed audit trail requirements of Commitment 1.D may not be necessary if the policy described in the first paragraph (not to audit participant relevancy determinations) is adopted.

ISSUE: Commitment 1.D - Accountability for Screened Materials - Maintaining the type of audit trail required by this commitment is too burdensome, at least for the non-federal participants.

SOURCE: Nye County, Clark County, DOE

RESPONSE: For the purposes of having an effective document processing program, participants should maintain an audit trail to track their documentary materials through in-house processing and submission to the LSS. The LSSA will audit how effectively a participant tracks the materials it processes and submits to the LSS. However, it will not be necessary to maintain information on materials determined not relevant, or to prepare a report of these materials for distribution to other participants (see also Commitment 3.K).

It may also be possible to simplify the requirements in this commitment depending on how the question of inclusion/exclusion is ultimately decided.

ISSUE: Is Commitment 1.E - Backlog Submission - inconsistent with the 4th processing standard under Commitment 1.B?

SOURCE: Nye County

RESPONSE: Both Commitment 1.B and Commitment 1.E state a requirement that all backlog materials must be submitted 12 months before DOE's planned license application date. This adds six months to the requirement found in §2.1003 of the LSS Rule. The additional six months was added by the LSSA to provide a longer period before license application when all backlog materials would be available on the LSS, thus facilitating review of all relevant materials. The fourth processing standard under Commitment 1.B states that the non-federal participants will begin the submission of their backlog no later than 36 months prior to DOE's planned license application date. As stated earlier, the timeframes contained in Commitments 1.B and 1.E will be revised in accordance with the new program schedule.

ISSUE: Commitment 1.F - Timely Submission/Resubmission - The 10 day deadline is not reasonable. Also, having no specified deadline for LSSA QA does not ensure that records will be available reasonably contemporaneous with their creation.

The timeframes proposed by the LSSA are footnoted with the qualifier that the 10 workdays does not include the workdays in the LSSA QA Facility prior to acceptance. Does this conflict with the Non-Compliance Reporting Threshold?

In the Rationale, the statement implies that processing periods exceeding 30 days result from malicious intent.

SOURCE: DOE

RESPONSE: The LSSA will consider revising the 10 day standard based on LSSARP input. The LSSA will minimize the processing time for materials in the QA Facility by setting appropriate submission standards, such as batch-size requirements. The only timing problem related to the LSSA QA Facility operations that is foreseen is the occasion where a batch of participant material is rejected for poor quality and must be reworked and resubmitted by that participant.

The time frames and the Non-Compliance Reporting Threshold are not in conflict. The Non-Compliance Reporting Threshold references the 10 day standard, not 10 days. Both the standard and the table in the Non-Compliance Reporting Threshold define "Workdays" as not including workdays in the LSSA QA Facility prior to acceptance.

In the Rationale, the sentence beginning "The threshold of not greater than 30 days..." will be deleted.

ISSUE: Commitment 1.F - Timely Submission/Resubmission - does not address the submission of highest priority backlog material. A standard for this type of material should be developed now.

SOURCE: Nye County

RESPONSE: The determination of whether a priority loading schedule should be established for backlog materials is a proper matter for discussion by the LSSARP. Priority loading under the current LSS program schedule may not be realistic, however, because the loading window is narrow. The issue of priority loading will require further consideration when the process of how and when the DOE materials will be loaded into the LSS is decided.

ISSUE: Commitment 1.H - Hearing Exhibits - Control over submission of exhibits should be positioned in the Presiding Officer, not the LSSA.

SOURCE: Nye County

RESPONSE: Under §2.1013, participants are required to electronically transmit a copy of all filings in the licensing proceedings to "the board(s), parties, the LSS Administrator, and the Secretary". The Presiding Officer has authority to control the submission of exhibits, but the LSSA also has the authority to require participants to submit exhibits for loading to the LSS in a manner that provides a reasonable period of review for the parties. The time period cited in Commitment 1.H was thought to be reasonable, but the LSSA will consider any recommendations made by the LSSARP.

ISSUE: Commitment 2.A - Unitization - Unitization guidance must be developed soon so that DOE can incorporate it into its document processing.

SOURCE: DOE

RESPONSE: It has always been the LSSA's intent to develop LSS document processing guidance in conjunction with both DOE and the LSSARP. DOE Headquarters developed a paper in 1989 that identified LSS unitization rules, and we feel that this paper, based on documented experience in the LSS prototype document collection processing, can become the foundation for the LSS unitization rules. The LSSA recommends that the subject of unitization rules, including the earlier DOE document, be referred to the LSSARP Header Workgroup for development.

ISSUE: Commitment 2.D - ASCII Text Preparation - The 99.8% standard for accuracy of ASCII text conversion is arbitrary and unattainable based on current technology.

SOURCE: Clark County, DOE

RESPONSE: The 99.8% standard was the result of the earlier LSS Prototype testing, and was the standard that DOE recommended, based on the assumption of human intervention (re-keying). Under that assumption, the standard is attainable. However, the LSSA would be willing to consider other recommendations in this area, pending DOE's LDMS (RDMS) system acceptance testing, the implementation of an LSS prototype, and in light of research and testing at UNLV concerning OCR accuracy.

ISSUE: Commitment 2.F - Amendments After Verification Period - How will a participant know of changes or corrections to LSS materials submitted by themselves or other participants?

SOURCE: Clark County

RESPONSE: The LSSA will be responsible for making changes/corrections to materials in the LSS, whether as a result of the LSSA QA Facility operations or corrections submitted by a participant under the requirements of §2.1004 of the LSS Rule. When changes/corrections to loaded LSS materials are made, the material will be "flagged" in its header to indicate the change.

ISSUE: Who will train and pay for people to perform header preparation activities?

SOURCE: Clark County

RESPONSE: The LSSA will provide training to participants in the following areas:

- technical assistance concerning preparation and submission of LSS documentary materials
- LSS user search and retrieval
- LSS user technical support (hotline)

The training would presumably take the form of "train-the-trainer" instructions. The commitments in Group 4 that make DOE responsible for LSS user training and support (Commitments 4.F.1 - 4.F.4) have been eliminated.

Each participant is responsible for the costs of its own document processing activities.

ISSUE: Security requirements need to be in place from both the receiving and sending ends of the system.

SOURCE: Clark County

RESPONSE: DOE, as part of the LSS system design, must deal with all the normal security requirements which are part of any federal system. The LSSA will also require additional security measures to see that the system is not corrupted, in accordance with his responsibility to ensure the integrity of the LSS. (§2.2011)

ISSUE: There should be a positive incentive for doing the right things, rather than "citation for non-compliance".

SOURCE: Clark County

RESPONSE: Successful implementation of the *LSS Participant Commitments* will ensure the usefulness of the LSS as a discovery database providing equal access for all participants and an effective substitute for the normal, time-consuming discovery process.

ISSUE: Standards or assumptions need to be supported and documented as realistic and/or attainable within existing technologies.

SOURCE: Clark County

RESPONSE: Standards and thresholds were developed as "strawmen" through comparison with standards set by other federal agencies in litigation support efforts utilizing large document databases. The standards and thresholds are proposals for review and acceptance by the LSSARP, and are not intended to be implemented by fiat.

ISSUE: Definition of a number of terms in the document.	SOURCE: Clark County
RESPONSE: A Table of Definitions will be added to the document, which includes the questioned terms and any other terms that the LSSA has determined require amplification.	

ATTACHMENT P

DEFINITION OF TERMS AND LISTING OF ACRONYMS

backlog	LSS documentary material which was generated by, or at the direction of, or acquired by an LSS participant prior to the availability of the LSS (for NRC and DOE) or the granting of LSS access (for all other participants). (§ 2.1003)
backlog repository	A collection of records or other information under the control of an LSS participant or its contractors which contains backlog. These collections must be identified to the LSSA by a participant's Designated LSS Official.
cited for noncompliance	<p>An action taken by the LSSA in response to a participant's failure to act in accordance with its responsibilities under the LSS Rule. This includes the violation of standards established by the LSSA based on LSSA responsibilities under the LSS Rule. A citation for non-compliance will be reported to the Pre-License Application Presiding Officer or the Presiding Officer, as appropriate, and is a last recourse after prior efforts to address the shortcomings have failed. (§ 2.1012)</p> <p>A participant may appeal a citation for non-compliance to the Pre-License Application Presiding Officer or Presiding Officer, as appropriate.</p>
Designated LSS Official (DLO)	An official designated by each LSS participant as the LSS point-of-contact, who will be responsible for administering its LSS responsibilities and for certifying compliance with the <i>LSS Participant Commitments</i> . (§ 2.1009)
documentary material	Any material or other information that is relevant to, or likely to lead to the discovery of information that is relevant to, the licensing of the likely candidate site for a geologic repository. The scope of documentary material shall be guided by the topical guidelines in the applicable NRC Regulatory Guide. (§ 2.1001)

documentary material not suitable for entry into the LSS	Any documentary material that is not available in either image or full-text format, e.g., a soil sample. Such material is to be described in the LSS by means of a sufficiently descriptive bibliographic header, which will contain information about how to access the material. (§ 2.1003)
generation/acquisition source	Any organizational unit of an LSS participant, e.g., offices, branches, departments, that has program responsibility to either create or acquire potentially relevant LSS material and any of its contractors that may produce or acquire potentially relevant LSS material.
granting of access to the LSS	Section 2.1008 of the LSS Rule sets forth the procedures for a potential party to petition for access to the LSS. The Pre-License Application Presiding Officer (PAPO) will rule on all such petitions for access. In order to gain access, the participant must agree to comply with all orders of the PAPO and all LSS regulations.
high-level radioactive waste (HLW)	The most radioactive category of nuclear waste, e.g., spent fuel from nuclear power plants and the waste from defense activities. HLW usually decays or loses radioactivity rapidly. However, HLW also contains elements that decay very slowly and remain radioactive for thousands of years. (See 10 CFR Part 60, Subpart A, Section 60.2).
image	A visual likeness of a document presented on a paper copy, microform, or a bit-map on optical or magnetic media. (§ 2.1001)
LSS Administrator (LSSA)	The person within the U.S. Nuclear Regulatory Commission responsible for administration, management, and operation of the LSS. The LSSA shall not be in any organizational unit that either represents the NRC staff as a party to the high-level waste licensing proceeding or is a part of the management chain reporting to the Director of the Office of Nuclear Material Safety and Safeguards. The organizational unit within the NRC selected to be the LSSA shall not be considered to be a party to the proceeding. (§ 2.1001)

LSS Advisory Review Panel (LSSARP)	The LSSA established the LSSARP, whose members are responsible for providing advice to DOE on the design and development of the computer system necessary to implement the LSS and to the LSSA on the operation and maintenance of the LSS, in addition to other duties specified in § 2.1011 of the LSS Rule.
LSS participant, or participant	A party, potential party, or interested governmental participant to the HLW geologic repository licensing proceeding, as those terms are defined in § 2.1001 of the LSS Rule.
non-privileged material	Documentary material that is not identified by a participant as confidential, proprietary, or classified, and which must be submitted to the LSS. (See also Section 2.1006 of the Supplementary Information to the LSS Rule for a description of types of privileged materials.)
Pre-License Application Presiding Officer	One or more members of the Commission, or an atomic safety and licensing board, or a named officer who has been delegated final authority in the pre-license application phase with jurisdiction specified at the time of designation. (§ 2.1001)
Presiding Officer (PO)	One or more members of the Commission, or an Atomic Safety and Licensing Board, or a named officer who has been delegated final authority in the HLW proceeding after DOE's license application has been docketed. (§ 2.1001)
public	Any non-participants interested in the DOE licensing proceedings. Public access to the LSS will be provided by the LSSA at all locations specified in paragraphs (a)(1) and (a)(2) of Section 2.1007 of the LSS Rule, after a notice of hearing has been issued.
sanction	A penalty that the PAPO, the PO, or the Commission may impose on an LSS participant for misconduct, noncompliance, or failure to fulfill its obligations under the Rule. One such penalty, as stated in Section 2.1012 of the LSS Rule, is suspension or termination of access to the LSS.

ACRONYMS

ASCII	American Standard Code for Information Interchange
Commission	Nuclear Regulatory Commission
DLO	Designated LSS Official
DOE	Department of Energy
HLW	High-Level Radioactive Waste
LSS	Licensing Support System
LSSA	Licensing Support System Administrator
LSSARP	Licensing Support System Advisory Review Panel
NRC	Nuclear Regulatory Commission
O&M	Operations and Maintenance
PAPO	Pre-license Application Presiding Officer
PO	Presiding Officer
QA	Quality Assurance
QC	Quality Control

ATTACHMENT Q

INCLUSION / EXCLUSION CRITERIA

for

THE DEPARTMENT OF ENERGY'S

OFFICE of CIVILIAN RADIOACTIVE WASTE MANAGEMENT

RECORDS MANAGEMENT SYSTEM

**David Warriner
LSS ARP Meeting
March 23, 1995**

REQUIREMENTS

- **Federal Laws: 44 U.S. Code, Chapters 21, 29, 31, & 33**
- **Code of Federal Regulations: 36 CFR 12, Subchapter B
10 CFR 2, Subpart J**
- **Departmental Directives: Department of Energy Order 1324.5B
Records Management Program**
- **Office of Civilian Radioactive Waste Management (OCRWM)
Directives:
Quality Assurance Requirements and Description
DOE/RW-0333P
OCRWM Records Inventory and Disposition
Schedule (RIDS)**
- **Administrative and Implementing Procedures:
YAP-17.1Q, Records Management Requirements
and Responsibilities
QAAP 17.1, QA Records Management**

Inclusion / Exclusion Historical Development

- **Records Management Requirements and Responsibilities, DOE/RW-0194**
- **Yucca Mountain Project Records Management Administrative Procedure, Non-Record Criteria List**
- **OCRWM Inclusion/ Exclusion Criteria List, September 1992**
- **Nuclear Regulatory Commission Draft Regulatory Guide DG-3009, Topical Guidelines for the Licensing Support System, July 1993**
- **OCRWM Inclusion/Exclusion Selection Criteria List (Draft), October 1993**
- **Evaluation of Licensing Support System Options, January 1995**

CATEGORIES of DOE RECORDS

- 1. Non OCRWM Program Records**
- 2. OCRWM Program Records Excluded by 10 CFR 2, Subpart J**
- 3. OCRWM Program Records Included by 10 CFR 2, Subpart J**

Criteria for DOE Records to be submitted to the Licensing Support System

- 1. Does it contain information related to the OCRWM Program?**
- 2. Is it excluded by 10 CFR 2, subpart J, section 2.1003?**
- 3. If in doubt, include in the LSS.**

CLARIFICATION NEEDED

- **Official Notice Materials**
- **Reference Books and Text Books**
- **Confidential Financial Information - Included by section 2.1005, (e)**
- **Material Related to Budgets and Financial Management excluded by section 2.1005, (e)**
- **Administrative Records**
- **References..... that are Readily Available**

What does “Readily Available” mean?

- 1. Available in an OCRWM funded Technical Information Center**
- 2. Copyrighted (Public Domain)**
- 3. In the collection of a University Library**