



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

INFORMATION PAPER
ON
ABSTRACTING
IN THE
LICENSING SUPPORT SYSTEM

Office of the Licensing Support System Administrator

September 12, 1990

9408300267 940817
PDR ADVCM NACLSSAR
PDR

9408300267

September 12, 1990

LSSA INFORMATION PAPER ON ABSTRACTING IN THE LICENSING SUPPORT SYSTEM

I. PURPOSE OF THIS PAPER:

At the upcoming October, 1990 meeting of the NRC Licensing Support System Advisory Review Panel (LSSARP), the members are scheduled to continue the discussion on their recommendation to the LSS Administrator (LSSA) on the content of the LSS Header. One open item was the extent to which documents in the LSS should be abstracted. The purpose of this paper is to lay out information about abstracting which the LSSA believes should be taken into consideration by the LSSARP members as they examine this issue.

II. BACKGROUND:

During the March 1990 meeting of the LSSARP, a Technical Working Group was formed to prepare a draft recommendation for the fields for the LSS Bibliographic Header and Full Header. The Working Group met several times and prepared a report to the full LSSARP. The report recommended that abstracts be required only for documents and non-documents that will not be available in searchable full-text (i.e., those with either header only or header and image only). The report further recommended that the abstract field be optional for documents that will be available in searchable full-text. The Technical Working Group determined that the LSSARP should discuss the issue as to which LSS document types or groupings should be abstracted.

During the June 7, 1990 meeting, the LSSARP members agreed that abstracts were required for materials that will not be available in searchable full-text. They then discussed at length the need for an abstract for LSS documents that will be stored in searchable full-text. These discussions centered around cost versus benefit considerations. Differing points were made about:

- the need for any abstract in the header, given availability of full text,
- the sizable cost of abstracting, and
- whether only selected sets of documents might need to be abstracted and, if so, which sets.

No firm recommendation evolved. To focus the issue and to provide more definitive information about the cost implications of alternative abstracting scenarios, the LSSA offered to prepare an issue paper for the members to consider prior to the next LSSARP meeting in October. Since the June LSSARP meeting, the LSSA staff has reviewed existing information science studies related to this issue and gathered industry data on the costs of abstracting. The following is the result of that investigation, including a discussion of abstracting options and some alternatives to abstracting.

III. ABSTRACTING -- WHAT IS IT?

A. TYPES OF ABSTRACTING

In the Library/Information Science discipline, three types of abstracts have evolved. All are based on the human review and summarization of the content of a document. In order of increasing depth and coverage, they are:

- ANNOTATIVE -- A short description of the document which briefly describes the subject, usually limited to a few lines in length. This type of abstracting can be done by the same staff doing the bibliographic or descriptive cataloging.
- INDICATIVE -- A longer description than the annotative abstract, giving a more detailed summary of the document scope and content. These abstracts are traditionally about 200 words in length. This type of abstracting is usually done by professional indexers/abstracters having subject matter background and/or experience. The documents are usually reviewed once both for the assignment of subject terms and for the development of the abstract.
- INFORMATIVE -- The most substantive type of abstracting which includes not only indicative information but also summarizes the findings, answers, or data in the document. Such abstracts often eliminate the need to obtain or read the entire document. The length varies based on depth of document content. As with the indicative abstract, this type of abstracting is also done by professional indexers/abstracters having subject matter background and/or experience.

However, unlike the Indicative Abstracts, this type of abstracting may or may not be done by the same staff that are subject indexing the documents. If not, then another staff resource is required.

It is obviously more expensive as one moves from annotative to informative abstracting because of the additional time and higher level of expertise involved in reviewing the document and composing the abstract. Section IV and Appendix A. contain more information on the cost of abstracting.

B. ABSTRACTING IN THE LSS ENVIRONMENT

Given that the LSS Title/Description field is intended to contain (a) the titles of formal publications or (b) a brief description of less formal or untitled documents, all LSS documents will have annotative-type abstracts. This makes the assumption that titles of publications are somewhat descriptive of content. Therefore, annotative abstracting is not considered from a benefit-costs perspective in this issue paper.

Also, in the opinion of the LSSA, the LSS should not attempt under any scenario to provide informative abstracts because (1) the costs are excessively high and (2) such treatment of LSS documents is unwarranted given the availability of the document text on-line. The LSS abstract would only be intended as a search aid, not as a surrogate for the document itself, which is often the case with systems providing informative abstracts.

Therefore, in discussing the pros and cons of abstracts in the LSS environment, this paper assumes that any abstracts would be of the indicative type.

C. BENEFITS OF INDICATIVE ABSTRACTS

The following is a list of the potential or reputed benefits of having an abstract field in a full-text database. Where applicable, we have included a summary of the information gained from relevant research studies. It should be noted that no specifically applicable research has been found that directly speaks to the benefits/costs of abstracts in a full-text database having keyterms and header data, such as will be the case with the LSS.

1. IMPROVED PRECISION -- The presence and use of abstracts may improve the precision of subject/content searches because it is assumed that if a word or phrase is in the abstract, then it is probably a primary topic of the document. This

precision is gained by limiting word/phrase searches to the abstract field, either initially or after retrieving a document set via search of full-text or other parameters.

There is a current on-going debate in the information science literature about the benefits and power of full-text database software as compared to traditional systems that have only bibliographic (fielded) data, subject indexing, and abstracting. Most of this debate centers around the balance of "recall" versus "precision" capabilities. The attached articles are representative of the discussions and data surrounding this debate (see Attachments #1 through #5).

It is known that in striving to achieve the greatest recall (retrieval of all relevant documents), the precision (retrieval of only relevant documents) of search results suffers. This axiom is applicable to all types of information systems, ranging from bibliographic only to full-text systems. However, the degradation of precision to assure greatest recall is magnified in large full-text systems, especially for collections on a narrow and/or homogeneous topic, such as the HLW LSS. This problem will be further exacerbated in the LSS environment of decision support and litigation support where knowledge of all relevant materials appears more to be essential.

In a 1986 article (Attachment #1), Gerald Salton summarizes the results of several related studies. Simplistically presented, the precision/recall performance of different access methods can be drawn from two of the studies. These data support the belief that searching the abstracts can significantly improve recall (as compared to searching the full-text alone without) a significant loss in precision.

	<u>Recall Ratios*</u>	<u>Precision Ratios*</u>
Searching the:		
a. Text of Abstract	0.78	0.63
b. Controlled Descriptors		
Subject Indexing	0.56	0.74
c. Full Document Text	0.20	0.75

* Recall Ratio is number of retrieved relevant documents as percentage of all of the relevant documents in the database.

Precision Ratio is the number of retrieved relevant documents as percentage of all retrieved documents

As indicated in line b. above, the recall ratios are better if one has controlled subject terms to search as well as the full-text, without any significant loss of precision. Subject indexing will be done in the LSS.

2. RELEVANCY REVIEW -- Abstracts provide a summary of the entire document. Therefore, browsing the abstracts of a retrieved set of documents can aid in determining the usefulness of the document and the context in which the subject is treated without having to roam around in the text.

Also, abstracts can be very helpful when reviewing document listings or bibliographies in hardcopy away from the LSS workstation. This would be the case when LSS search specialists or intermediaries, e.g. librarians, research assistants, and paralegals, are performing searches in response to "client" requests. In one study, the presence of an abstract reduced the number of "missed documents" -- documents judged as not relevant by a review of the titles only, but which were subsequently determined as relevant after a review of the abstracts (Attachment #6).

3. COST SAVINGS -- Abstracts can potentially reduce the need for printing hardcopy of documents if a review of the abstract is sufficient for the searcher to determine the relevancy of the document for his/her needs.
4. TIME SAVINGS -- Abstracts can reduce on-line time if, as above, review of the abstracts negates the need to browse/read the full-text.

D. LIMITATIONS:

1. Abstracts are only as good as the abstracter. They are subjective, whether it be the author's characterization of his/her work or the abstracter's interpretation of the author's work.
2. Abstracts do not improve recall of subject/content searches in a full-text database if the abstract does not contain different terminology from the text. Different terminology that could improve recall might be more generic, more specific, synonyms, or the translation of jargon.
3. Abstracting only certain document types/categories places a burden on the user to know when abstracting was done and when it was not. Otherwise, users could unknowingly formulate search strategies that would provide false results. For

example, if all documents in a collection are not abstracted, then searches limited to the abstract field will automatically exclude non-abstracted documents and thereby possibly exclude relevant materials from the resulting hitlist.

IV. COSTS OF ABSTRACTING

A. AVERAGE COST PER ABSTRACT

The LSSA collected abstracting cost and productivity information from six companies that perform abstracting services. The information provided by respondents varied in terms of assumptions, such as variations in the size of documents, the QC reviewers/supervision ratios, and scope of abstracting. It was therefore difficult to normalize the data. However, there was not such a disparity in the data that some useful figures could not be compiled. The assumptions used for this paper are listed in the Table below and Appendix A.

Data was also provided by SAIC, based on their experience in the LSS prototype cataloging efforts. Their data show abstracting times of about seven (7) minutes per document based on a sample of 47 documents, each averaging 48 pages. Unfortunately, the SAIC timing estimates did not include a quality control review. Also, it was uncertain whether these times consistently included the actual review and analysis of the document scope and content before the composition and keying of the abstract.

B. ESTIMATED COSTS IN THE LSS

The following table presents the estimated costs of abstracting LSS documents by document type. The figures on the number of documents are extrapolations from recent SAIC re-evaluations of the size of the LSS database (see Attachment #7). The estimated number of pages in this SAIC report was divided by nine (9) to develop an estimated number of documents. The figure of nine (9) pages per document was selected because this was the size of the average document in the DOE Nevada RIS collection, which will contribute the vast majority of documents to the LSS.

The distribution of the estimated number of documents by major document types is based on recent figures from the three major HLW document collection: DOE's RIS systems in Las Vegas and at DOE Headquarters and the NRC's NUDOCS system.

Even though the figures in the table below are just gross estimates and may differ from the actual volume/costs experienced in the future; these figures are based on the best available data. For the purposes of this paper, they do provide the LSSARP members with a significantly improved basis for decision making.

Table 1. ESTIMATED COSTS OF ABSTRACTING IN THE LSS
(Numbers of Documents & Dollars in thousands)

<u>Cumulative Document Counts and Costs by Specified Year</u>						
LSS DOCUMENT COLLECTION BY DOCUMENT TYPE	BY 1995		BY 2000		BY 2005	
	NO. OF DOCMNTS	EST. COSTS	NO. OF DOCMNTS	EST. COSTS	NO. OF DOCMNTS	EST. COSTS
TOTAL	1,278	\$33,179	2,296	\$59,595	3,759	\$97,581
CORRESPONDENCE (64%)						
3 doc/hour	818	\$17,996	1,469	\$32,318	2,406	\$52,932
PUBLICATIONS/ REPORTS (23%)						
2 doc/hour	294	\$9,700	528	\$17,427	864	\$28,512
LEGAL & OTHER DOCUMENTS (13%)						
2 doc/hour	166	\$5,483	299	\$9,850	489	\$16,137

Assumptions:

1. A fully loaded rate of \$66.00 per hour. This includes the costs of labor (abstracters, quality control reviewers, and supervisors), G&A, overhead, and fee. Abstracting work activities include reading documents, composing abstracts, keying in the abstracts, and performing quality control and supervision.
2. A production rate of two abstracts developed and reviewed per hour (\$66.00 divided by 2 = \$33/abstract) was used for the Publications/Reports and Legal/Other Document categories. This is the production figure used by the National Federation of Indexers and Abstracters for 200 word indicative abstracts. For correspondence with typically fewer pages than the other two categories, a production rate of three per hour was used (\$66.00 divided by 3 = \$22/abstract).
3. While it is acknowledged that a portion of the LSS documents, particularly formal publications, will have an abstract or summary within the body of the document, no cost reduction was factored into this table. This decision was based on responses of the surveyed abstracting companies. They were reluctant to reduce estimates even if documents contained abstracts, due to the time required to verify the quality of the existing abstract and to edit as required for consistency of coverage with other abstracts. This decision was also supported in the timing tests performed by SAIC in their prototype. Also, no adjustment was made to acknowledge that some documents, such as transmittal correspondence, would not warrant abstracting, given that an annotative summary would be contained in the Title/Description field.

V. ALTERNATIVES TO ABSTRACTING

Section III.C presented the potential benefits of having abstracts in the LSS. This section highlights some of the LSS features currently specified in the SAIC draft LSS Search and Image Design Document which will provide some of the same benefits of abstracting without the continuing costs of abstracting. These software features, if not part of the off-the-shelf database package, can be developed at a finite, one time cost. This section also discusses some other features that could increase precision and recall.

A. CURRENT DOE LSS DESIGN FEATURES

1. Header Field Analysis: After a searcher has developed a hitlist of documents based on his/her search statement, this optional feature, if invoked, would present to the user a computed table of the frequency of occurrences of values for any specified Controlled Vocabulary Header Field. This shows the distribution of Descriptors, Sponsoring Organizations, Author Organizations, etc. within their hitlist.

For example, given the best known search strategy, the user creates a hitlist of 230 documents on boreholes and volcanic rocks. The user then requests the Header Analysis feature, using the Descriptor field. The LSS system would then present a listing of all Descriptors used to describe the 230 and show the number of documents having each descriptor, in decreasing frequency order. The table would look something like:

This query found 230 units.
Header Analysis on Descriptor Field:

<u>Descriptors</u>	<u>Frequency</u>
Fractures	47
Fractures (Geologic)	43
Topopah Springs Member	39
Boreholes	36
Drill Cores	30
Stratigraphy	25
:	
:	
:	
Volcanic Rocks	11
Structural Geology	10
Strain (Geology)	4

The user could use this information about their hitlist to select parameters of greatest or least interest to refine the search statement and create a query with greater precision. For example,

the searcher might now want to broaden the search to include all documents on Topopah Springs Member while also excluding documents on Stratigraphy and Strain.

2. Ranking Retrieved Documents Based on Selected Term Frequency: This LSS feature will allow the user to rank and display the documents in his/her hitlist in decreasing order according to density of selected ASCII-text words in the text. Density is defined as the number of times a relevant words or phrases appear in the document as a percentage of the total number of words in the document. For example, the words abstracts, abstracted, abstracting, and abstracters are repeated about 140 times in this 4,000 word paper. This represents 3.5% of all words in this paper. The percentage would be even greater if "stop" words (such as a, the, were, most, in, etc.) were excluded from the total word count. This process will present the hitlist in an order which provides the most relevant documents first on the assumption that if the specified words are repeated frequently in the document, that is a major topic covered in the document.

B. POTENTIAL LSS DESIGN FEATURES

The following are search and retrieval software features that are not currently in the DOE design. These features may warrant further investigation, given the costs of abstracting, the concern of excessively large hitlists, and the problems of low recall and low precision in large text databases.

1.a. Automatic Abstracting -- There are current software packages that purport to scan existing text and present the contents into an abstract-like summary. Such a software feature could be used to add a summary to the LSS header record for presentation to searchers and reviewers of bibliographies to enhance their determination of the relevance of documents retrieved. This would potentially provide the benefits of: (a) reducing the orders for non-relevant documents or (b) finding relevant documents that might have judged non-relevant upon review of the bibliographic information only.

1.b. Optional Extensive Bibliography Format -- LSS users could have the option of ordering the "first" ASCII page of each document in their hitlist to be printed along with a header bibliographic listing. Such a feature would have the same benefits as Automatic Abstracting, described above.

2. Sophisticated Ranking Algorithms -- Over the past several years, the information science literature has contained many articles about research to improve text search results using a variety of statistical and lexical analysis methods. Basically, these are centered on the clustering of related or synonymous terms

and word patterns. Attachments #4 and #8 are examples of such techniques. The capabilities of such software enhancements to improve recall and precision will be carefully monitored. As features become proven, they could be incorporated into the LSS design over the life of the system.

VI. PROS & CONS OF DIFFERENT OPTIONS FOR ABSTRACTING:

A. ALL DOCUMENTS

- PROS: ▶ Consistency and simplicity
- CONS: ▶ Prohibitively Expensive
- ▶ Not warranted for traditional 'correspondence' given:
- ▶ use of Title/Description Field which will provide short annotative summary for relevancy review.
 - ▶ full-text search capability
 - ▶ multiple other access points in the header fields for content/subject searches of all documents, such as descriptors, identifier, project/special class fields etc.

B. ALL NON-CORRESPONDENCE-TYPE DOCUMENTS - "everything but .." Exclude letters, memos, telephone conversation reports...

B.1 Abstract all non-correspondence regardless of how long or short the document.

- PROS: ▶ Less expensive than Option VI.A.
- CONS: ▶ Somewhat wasteful given that some "short" documents do not warrant such treatment.

B.2 Abstract only non-correspondence over a certain page count.

- PROS: ▶ Less expensive than VI.B.1.

- ▶ Increased benefits of relevancy review and precision
- CONS:
- ▶ Selection of document size cutoff is arbitrary and subject to debate.
 - ▶ Searchers are very unlikely to keep this arbitrary rule in mind. Therefore, if they limit their searches to the Abstract Field for precision, then they could unknowingly exclude whole sets of documents and get erroneous search results.

C. ABSTRACT ONLY SPECIFIC DOCUMENT TYPES.

C.1 For All Documents Coded as Specified Document Types -- Pick up Abstracts/Summaries as available within documents or compose and add if not.

- PROS:
- ▶ Less Subjective or arbitrary in the selected universe than VI.B.2.
 - ▶ Much less expensive because of smaller universe of documents to be abstracted.
 - ▶ Most understandable alternative to most, if not all, searchers. Therefore least likely to be misused in searching.
- CONS:
- ▶ Still somewhat subjective in that the assignment of Document Type codes is somewhat subjective.
 - ▶ Inconsistent treatment of abstracts and therefore varying quality if abstracts drawn from the text are not strictly reviewed for consistency with LSS abstracting standards.

C.2 Only Store Abstracts in Headers for Documents which have author-generated Abstracts/Summaries available in the text which can be "grabbed" and put in header as searchable full-text.

- PROS:
- ▶ The least expensive alternative while still allowing searching of this text because submitter's preparation staff and/or LSSA staff do not have to compose and enter the abstract.

- ▶ The abstract listed in bibliographies will assist the reviewer in determining the potential relevance of documents retrieved.
- CONS:
- ▶ Universe of documents which contain abstracts for searching and for presentation is totally random. This does not appear to be a viable option because searchers could not use these randomly existing abstracts with any reliability for identifying relevant documents.
 - ▶ Subjective in determining if document contains text which could be used as an abstract.
 - ▶ Inconsistent treatment of abstracts and therefore varying quality if abstracts drawn from the text are not strictly reviewed for consistency.

C.3 Only Store Abstracts in Headers for Documents which have author-generated Abstracts/Summaries available in the text which can be "grabbed" and put in header but not allow this Abstract field to be searchable.

- PROS:
- ▶ The least expensive alternative. A minimal cost to transfer and store the pre-existing text in the header in a non-searchable field.
 - ▶ The abstract listed in bibliographies will assist the reviewer in determining the potential relevance of documents retrieved.
 - ▶ By not allowing searches to be limited to Abstract Field in this option, it prevents users from unknowingly eliminating potentially relevant sets of documents.
- CONS:
- ▶ This option presents a design issue to be solved because the abstracts in LSS header records that describe documents or data that are not stored in searchable full-text would have to be made searchable.

VII. CURRENT LSSA STAFF VIEW:

The LSSA staff believes strongly that manually prepared abstracts should not be created for inclusion in the Licensing Support System

in searchable text for those documents that are already stored in searchable full-text due to the substantial costs projected for abstracting in comparison to the benefits. Although there is the potential for low recall and precision ratios in large text databases, abstracting is not the only remedy. The other access points in the LSS header fields and the software features specified in the current LSS design will greatly enhance to searchers ability to create useful sets of documents. Also, the LSSA staff will continue to work with DOE in investigating additional software tools to increase performance and will recommend the development of such software if it is a cost-effective approach.

The LSSA staff does believe that the text of abstracts that already exist in documents should be captured in the Full LSS Header. This would be in a non-searchable field to be used for presentation and relevance review only, (Option C.3) above. This assumes the design issue can be solved related to the need to search abstracts for those documents/data not stored in searchable text.

SUMMARY OF INDUSTRY SURVEY OF ABSTRACTING COSTS

APPENDIX A

DIRECT HOURLY LABOR RATES	COMPANY A	COMPANY B	COMPANY C	COMPANY D	COMPANY E	COMPANY F	NFAIS
ABSTRACTERS	\$13.50 - 18.00	\$25.00	\$10.00 - 15.00	Unit Charge	nr	\$12.00	\$13.50
QUALITY CONTROL REVIEWERS	nr	\$25.00	nr	"	nr	nr	nr
SUPERVISORS	\$30.00	\$25.00	nr	"	nr	nr	nr
RATIO OF QC PERSONNEL TO ABSTRACTERS	1:2	1:5	nr	1:3	1:4	nr	1:4
RATIO OF SUPERVISORS TO ABSTRACTERS	1:20	1:15	nr	1:15	Same Person as QC	nr	nr
UNIT CHARGE PER ABSTRACT	nr	\$58.50	nr	\$33.29	\$16.77	nr	nr
TIME TO PRODUCE AN INDICATIVE ABSTRACT	20 Pages of doc. per hour	135 mins/ document	nr	49 mins/ 35 page document	37 mins/ 12.5 page document	nr	30 mins/ document

NOTES: nr = not reported

NFAIS = National Federation of Abstracters and Indexers

CALCULATIONS OF FULLY LOADED HOURLY RATEAverage Direct Hourly Rate:

Abstracters	=	\$15.75
QC Personnel	=	20.00
Supervisors	=	27.00

Ratio of QC Personnel to
Abstracters = 1:3.5

Ratio of Supervisors to
Abstracters = 1:15

<u>Abstractor's hourly rate</u>	\$15.75	
+ portion of QC rate	<u>5.71</u>	(\$20 hourly rate for QC personnel divided by 3.5)
	\$21.46	
 + portion of Sup.rate	<u>1.80</u>	(\$27 hourly rate for Supervisors divided by 15)
	\$23.26	
+ Overhead (120%)	<u>27.91</u>	
	\$51.17	
+ G & A (20%)	<u>10.23</u>	
	\$61.40	
+ Fee/profit (8%)	<u>4.91</u>	
	\$66.31	=== Fully loaded hourly rate for abstracting services.

ATTACHMENTS

- #1 Salton, Gerald. "Another Look at Automatic Text-Retrieval Systems." Communication of the ACM 29(7). 648-656. July 1986.
- #2 Blair, David C. and M.E. Maron. "An Evaluation of Retrieval Effectiveness for a Full-Text Document-Retrieval System." Communications of the ACM 28(3). 289-299. March 1985.
- #3 Tenopir, Carol. "Contributions of Value Added Fields and Full-Text Searching in Full-Text Databases." Proceedings of the National On-Line Meeting - 1985. Medford NJ: Learned Information, Inc., 1985. pp. 463-470.
- #4 Ro, Jung Soon. "An Evaluation of the Applicability of Ranking Algorithms to Improve the Effectiveness of Full-Text Retrieval. I. On the Effectiveness of Full-Text Retrieval." Journal of the American Society for Information Science. 39 (2), 73-78. 1988.
- #5 A. Jordan, John S. Letter to the Editor, Journal of the American Society for Information Science (JASIS) 40(3), 362-363. 1989
B. Lancaster, F.W. Letter to the Editor, JASIS 40(3), 362. 1989.
- #6 Saracevic, Tefko. "Comparative Effects of Titles, Abstracts, and Full Texts on Relevance Judgements." Proceedings of the American Society for Information Science. Vol. 6 Oct.1-4, 1969. pp. 293-299.
- #7 Science Applications International Corporation. Licensing Support System, Revised Data Scope Analysis. Draft. dated August 28, 1990.
- #8 Deerwater, Scott et. al. "Indexing by Latent Semantic Analysis" Journal of the American Society for Information Science 41(6): 391-407. 1990.

APPLICABILITY OF APPROVED HEADER FIELDS TO THE SUBMISSION AND RETRIEVAL OF TECHNICAL DATA

	Particularly Applicable	Text- Searchable	Free-Form (Uncontrolled Entry)
BY PARTICIPANT			
Accession Number	Access Code		
Submitter Center	Storage Location		
Submitter Page Count			
Title/Description	X	X	X
Author	Name of Contact		
Author Organization	X	X	
Addressee			
Addressee Organization		X	
Document Date			
Document/Report Number			
Document Condition			
Edition/Version		X	
Event Date, Code	X		
Protected Status			
Related Documents			X
Special Class		X	
Abstract/Summary	X	X	X
BY PARTICIPANT OR LSSA:			
Document Type	Form of Data	X	
Sponsoring Organization	X	X	
Copyee			
Copyee Organization		X	
Publication Data		X	
Descriptors (Thesaurus)	X	X	
OPTIONAL:			
Identifiers	X	X	X
Comments	X	X	X
BY LSSA:			
LSS Accession Number			
Number of Images			
Pointers	X		

LICENSING SUPPORT SYSTEM FUNCTIONAL DESIGN

PRESENTATION

TO

ADVISORY REVIEW PANEL

OCTOBER 10, 1990



Science Applications International Corporation

COMBINATIONS

SEARCH & IMAGE

CAPTURE SYSTEM



Science Applications International Corporation

LSS DEVELOPMENT LIFE CYCLE

NEEDS ANALYSIS

- Preliminary Needs Analysis
- Preliminary Data Scope Analysis
- Conceptual Design Analysis
- Benefit-Cost Analysis
- Concept Feasibility Analysis

PROTOTYPE TEST BED

- Prototype Test Report

REQUIREMENTS DEFINITION

- System-Level Requirements Document

SYSTEM DESIGN

- Capture System
- Search & Image System
- Communication

IMPLEMENTATION

- Specification Document(s)
- Detailed Design
- Software
 - Purchased
 - Developed
- Hardware
- Integrated System

OPERATION

- Full System Operation

SAIC

Science Applications International Corporation

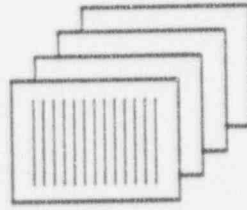
KEY CONCEPTS

UNIT

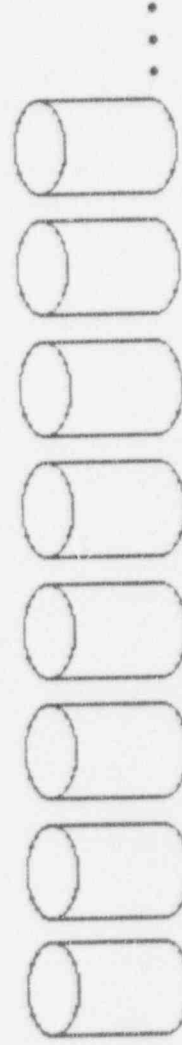
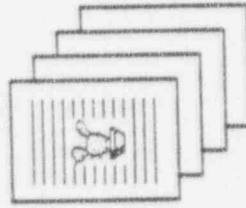
Header



ASCII Text



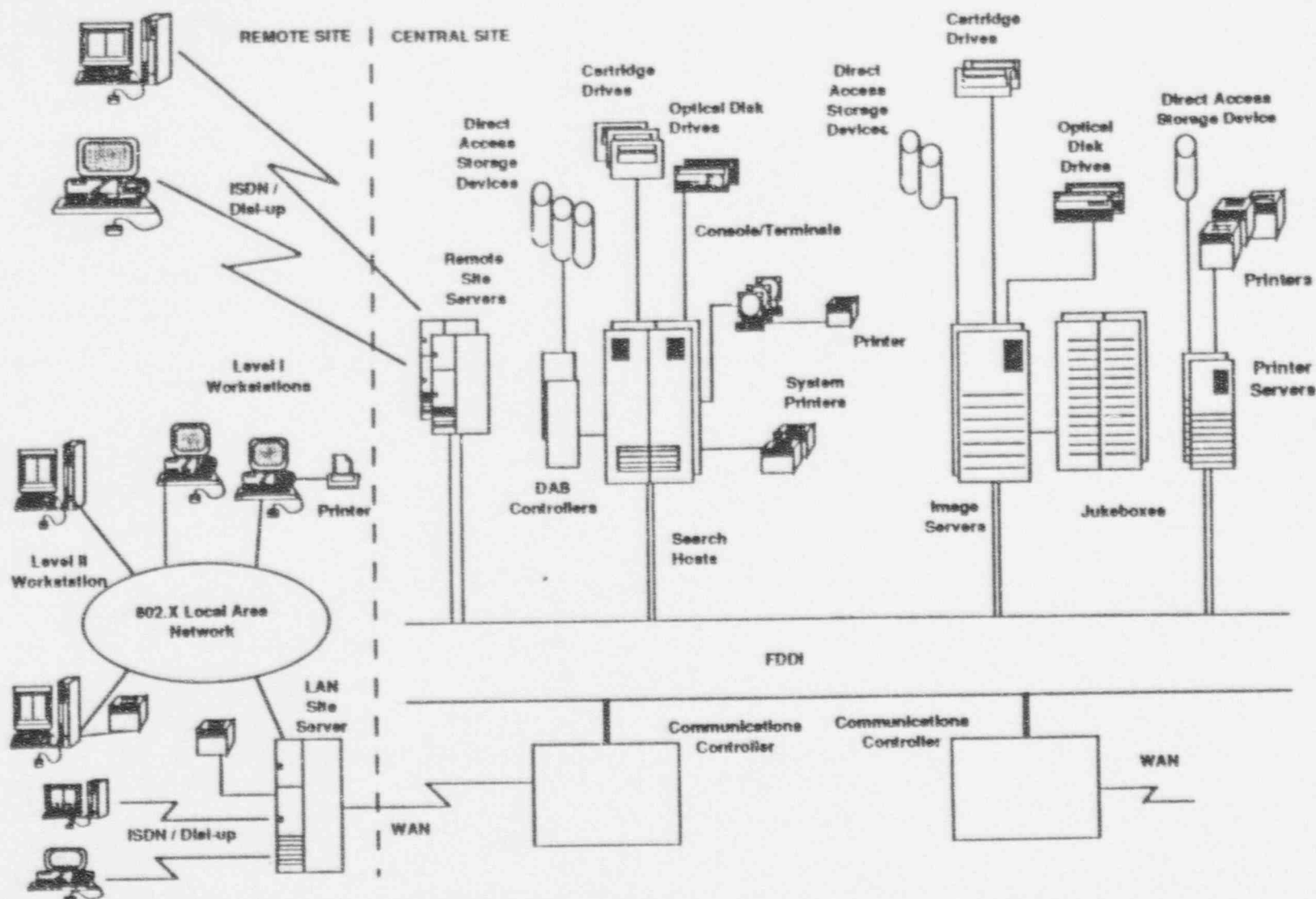
Images



PARTITIONS

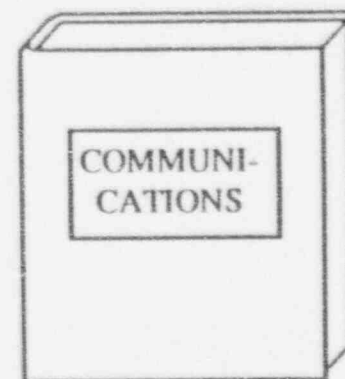
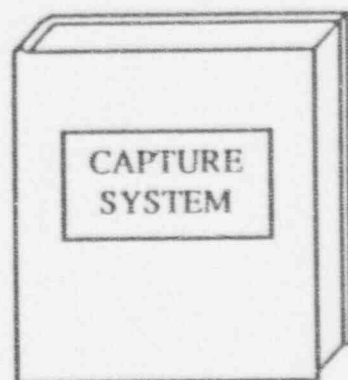
SAIC

Science Applications International Corporation



LSS SEARCH & IMAGE HARDWARE ARCHITECTURE

DESIGN DOCUMENT



SAIC

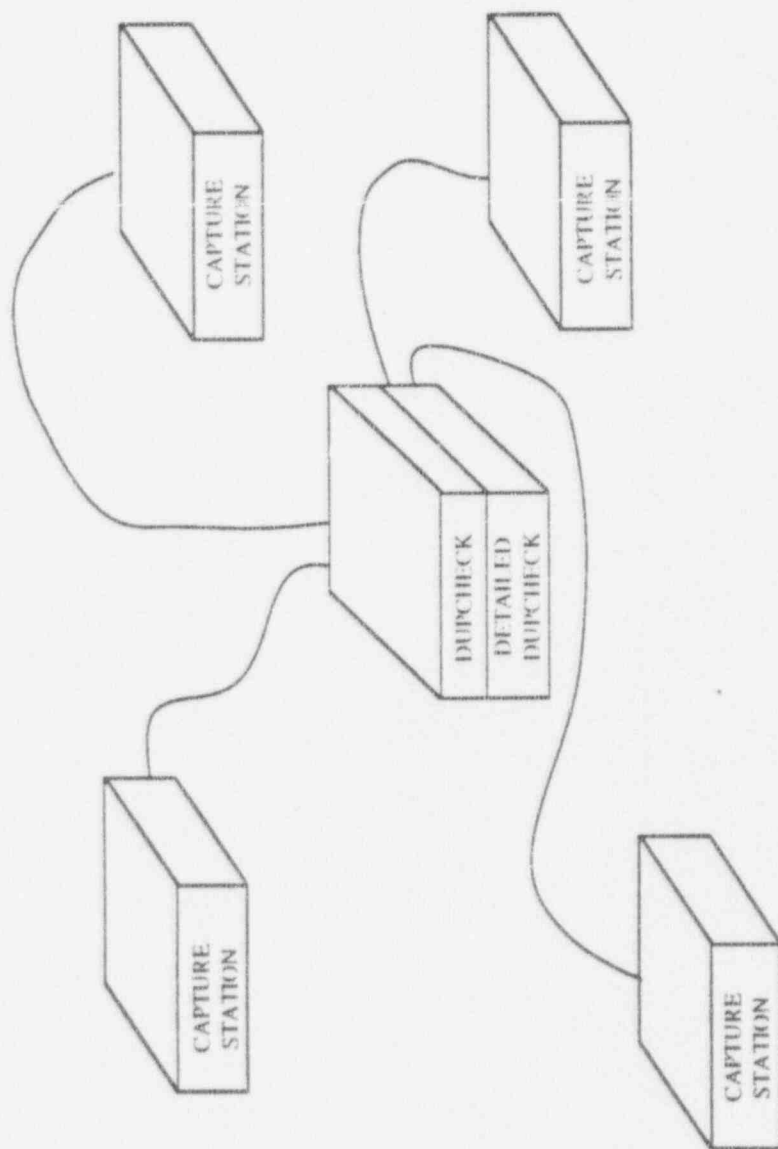
Science Applications International Corporation

LSS CAPTURE SYSTEM



Science Applications International Corporation

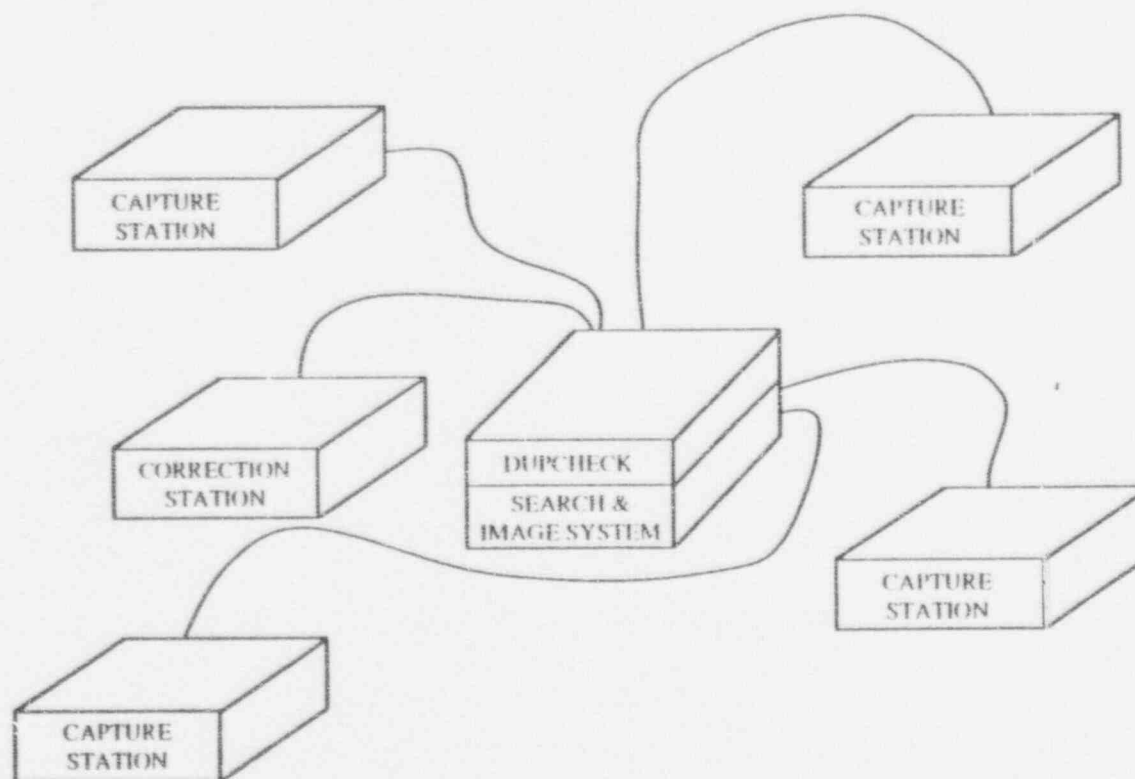
CAPTURE SYSTEM (Initial)



SAIC

Science Applications International Corporation

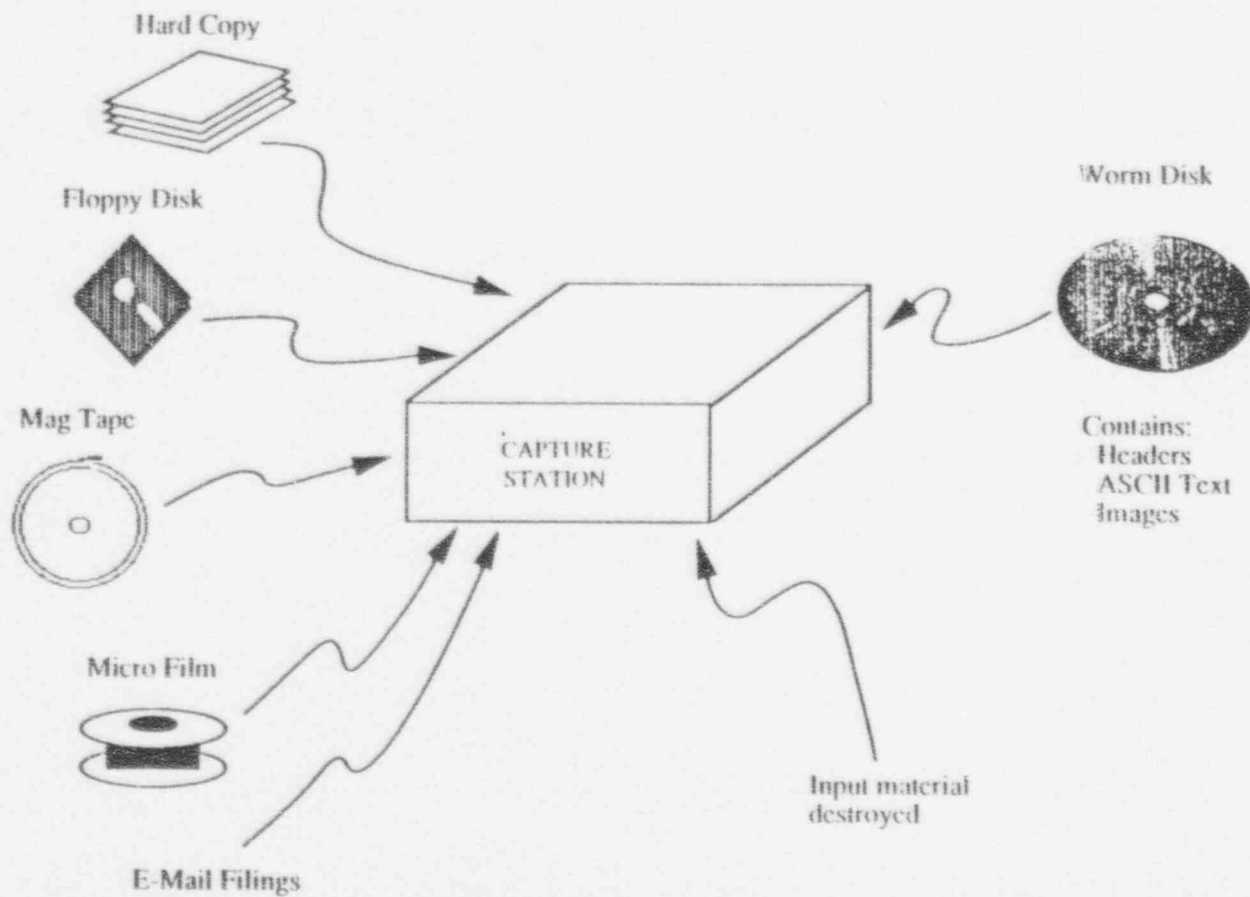
CAPTURE SYSTEM (After Search/Image System Operation)



SAIC

Science Applications International Corporation

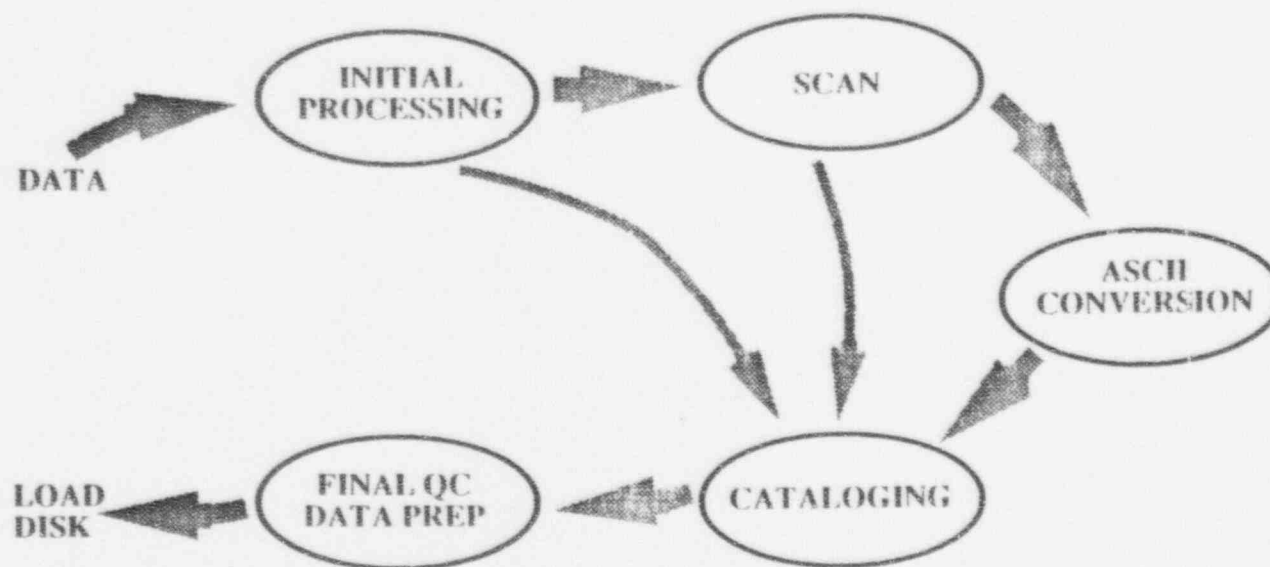
CAPTURE STATION



SAIC

Science Applications International Corporation

CAPTURE STATION PROCESSES



SAIC

Science Applications International Corporation

INITIAL PROCESSING

- Receive boxes, packages, envelopes, etc.
- Log into receiving database
- Check for readability/conformance
- Reject non-conforming material
- Microfilm print to paper
- Subdivide into "units"
- Assign accession number
- Apply barcode to each number
- Process E-Mail filings
- Verify/enter submitter header data
- Automated initial duplicate check
- Detailed dupcheck if warranted



Science Applications International Corporation

SCAN

- Electronic image from hard copy on page basis
- Pages tracked individually by barcodes
- Images compressed and stored
- Electronic images created for E-Mail filings



Science Applications International Corporation

ASCII CONVERSION

- Process decision based on image quality
 - OCR and edit
 - Rekey (large jobs subcontracted)
- Resultant quality 99.8% (2 errors per 1000 characters)
- LSS spell dictionaries maintained by LSSA
- Quality Control check



Science Applications International Corporation

CATALOGING

- Completes header fields
- Cataloging tools
 - Images printed to hard copy
 - Thesaurus
 - Controlled vocabularies
 - Previously completed headers
 - Indexed text and word counts
- Quality control check
- Thesaurus and controlled vocabularies under LSSA



Science Applications International Corporation

FINAL QC / DATA PREP

- **Verify headers/image/ASCII text**
- **ASCII text pages correspond to image pages**
- **Organize data**
- **Write to load disks for transmittal to search & image system and archive**



Science Applications International Corporation

PROCESS CONTROL

- Controls process flow
- Provides process archive record



Science Applications International Corporation

CORRECTION STATION

- Provides for correction to header/image/text before record is "locked"
- Uses archived load disk to create complete corrected record
- Creates new load disk



Science Applications International Corporation

LSS
SEARCH & IMAGE



Science Applications International Corporation

MAJOR DESIGN PARAMETERS

# USERS	472 Registered	260 On-Line Peak Load	
USER LOCATIONS	Washington DC Area <u>216</u>	Nevada <u>157</u>	Other <u>99</u>
DATA BASE SIZE	42 Million Pages	1.5 Million Documents	
HARD COPY DISTRIBUTION	Peak Demand	10 Million Pages a Year	
2 TYPES OF WORKSTATIONS			
Level I	No Image Capability		
Level II	Image Capability		



Science Applications International Corporation

PRIMARY FUNCTIONS

QUERY BUILD

PRINT

SEARCH AIDS

DATABASE LOAD

RESULTS ANALYSIS

SYSTEMS
ADMINISTRATION

DISPLAY



Science Applications International Corporation

QUERY BUILD

WINDOWS & PICKLISTS

TYPE-IN



Science Applications International Corporation

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
		Search Definition <hr/> In Partition(s): <hr/> Search for: <hr/> <hr/> <hr/> <hr/>			<input type="button" value="Logic Tools"/> <input type="button" value="And"/> <input type="button" value="Or"/> <input type="button" value="Not"/> <input type="button" value="()"/>	<input type="button" value="Search Aids"/>	
		<input type="button" value="Erase Search Definition"/>	<input type="button" value="Results Analysis"/>		<input type="button" value="Start Search"/>		
Search # Search Statement Used			Partition	Units Found			

Setup	Search	Display	Print	Clipboard	Save	Exit	Help
<ul style="list-style-type: none"> Partitions Selection Preference Display Settings Result Set List Format Header Field Display Side By Side Tutorial Help Novice User Interface 	Search Definition In Partition(s): <u> D, F, I </u> Search for: _____		Logic Tools: <input type="radio"/> And <input type="radio"/> Or <input type="radio"/> Not <input type="radio"/> ()		<input type="button" value="Search Aids"/>		
<input type="button" value="Start Search"/>		<input type="button" value="Results Analysis"/>					
Search # Search Statement Used		Units Found					

CANCEL	Partition Selection	OK
--------	---------------------	----

Partitions are by type of unit and by date. The current selections are shown below. To search other partitions, select one or more from each column. (☒ = Selected, ☐ = Not Selected)

<input type="radio"/> Partition A	<input type="radio"/> Partition F
<input type="radio"/> Partition B	<input type="radio"/> Partition G
<input type="radio"/> Partition C	<input type="radio"/> Partition H
<input checked="" type="radio"/> Partition D	<input checked="" type="radio"/> Partition I
<input checked="" type="radio"/> Partition E	<input type="radio"/> Partition J

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

Print from ISS #

Retrieve by ISS #

Retrieve Saved Search

Text Term Search

Header Field Search

Title

Author Organization

Descriptors (Thesaurus)

Document Date

Abstract/Summary

Author Name

Other Header Fields

Search Definition

In Partition(s): A, B, C

Search for: ((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC))

Logic Tools: ☐ And ☐ Or ☐ Not ☐ () ☐ Search Aids

CANCEL

Author Search

OK

1 Select term(s) from the list below. You can reposition on the list by typing one or more letters (for example, typing V moves the list to the first term that starts with V). The numbers show the occurrences within the current partitions.

Aaronson, A	2
Aaronson, AB	0
Aaronson, AJ	0
Aaronson, BR	6
Aaronson, JW	3
Aaronson, R	3
Aaronson, RC	12
Abbey, AD	0
Abbey, RW	1
Abbey, W	3

2 To use more than one term, join them by selecting a Logic Tool:

(☒ = Selected, ☐ = Not Selected)

Logic Tools:

☐ And

☒ Or

☐ Not

☐ (

☐)

Search AUTH for: Aaronson, R OR Aaronson, RC

Start Search

Results Analysis

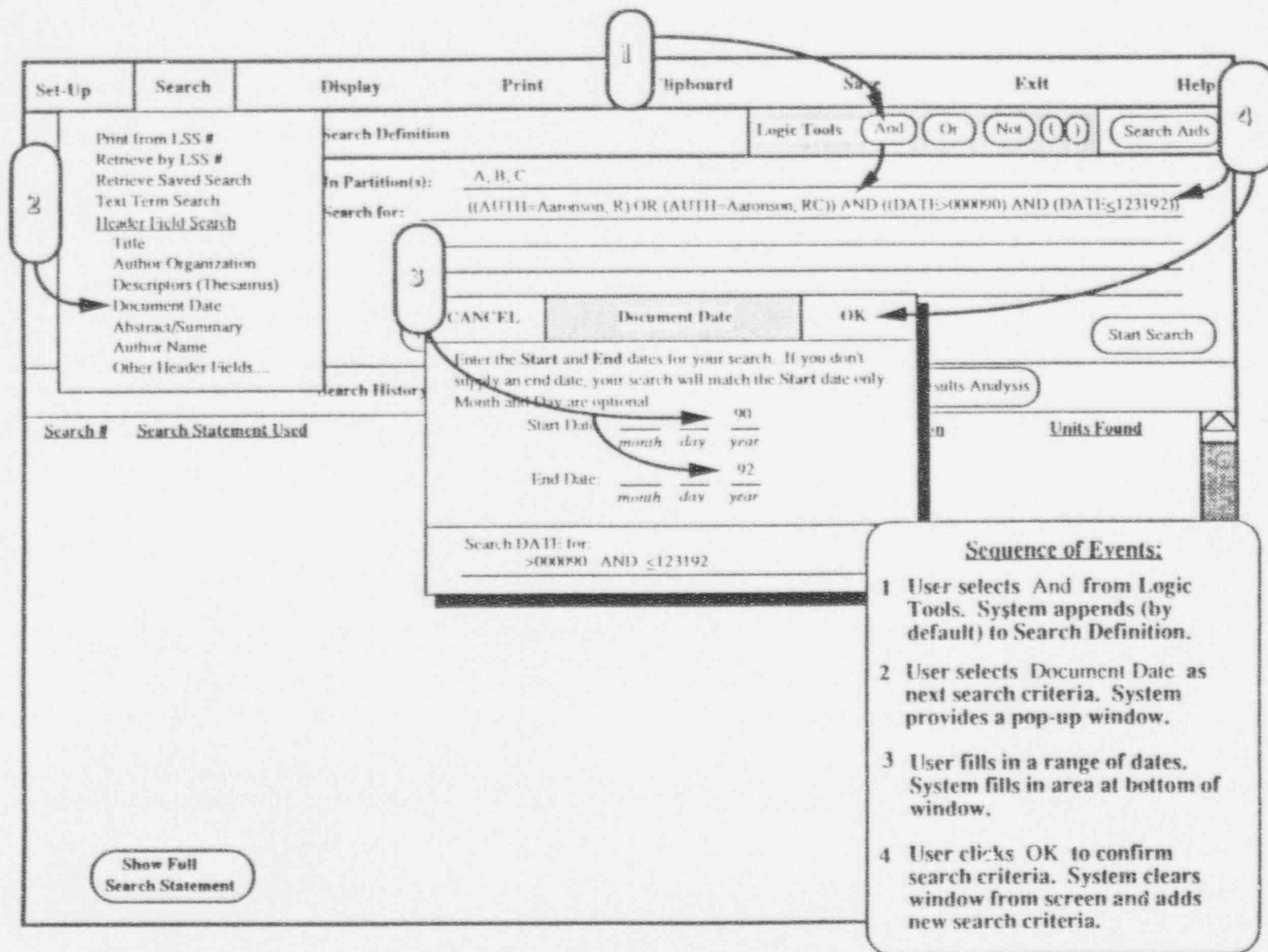
Units Found

Search # Search Statement

Show Full Search Statement

Sequence of Events:

- 1 User selects Author Name as search criteria. System provides pop-up window.
- 2 User selects name from picklist. System shows name at bottom of window.
- 3 User selects second name from picklist. System supplies default OR and adds to bottom of window.
- 4 User clicks OK. Window disappears, selected search criteria added to search string.



Set-Up

Search

Display

Print

Clipboard

Save

Exit

Help

Search Definition

Logic Tools

And

Or

Not

()

Search And's

In Partition(s):

A, B, C

Search for:

((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE<123192))

Erase Search Definition

Search Status

Partition: C

% Completed

0

50

100

Stop This Search Now

Start Search

Search History

Results Analysis

Search #	Search Statement Used	Partition	Units Found
1	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE<123192))	A	23
2	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE<123192))	B	80
3	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE<123192))	C	198
		All Partitions	301

Show Full Search Statement

Sequence of Events

- 1 User clicks Start Search when satisfied with search string definition. System provides status window to advise of progress and provide option to stop search.
- 2 System displays results as each partition search is completed.

SEARCH AIDS

THESAURUS

LIKE-UNIT SEARCH

WORD SEARCH WITHIN UNIT

NEAR SPELL

RETRIEVAL OF RELATED DOCUMENTS

SAIC

Science Applications International Corporation

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
Search Definition				Logic Tools: And Or Not () Search Aids			
In Partiton(s): _____ Search for: <u>POINT = CENTER (NG)</u> _____ _____ _____				<div style="border: 1px solid black; padding: 5px;"> Thesaurus Alphabetical Hierarchic Listing Key Words In Context Listing ➔ Near Spell Descriptor Profile Search Text Search within Unit Related Documents </div>			
Erase Search Definition							
Search History							
<u>Search #</u>	<u>Search Statement Used</u>	<u>Partition</u>		<u>Units Found</u>			
Show Full Search Statement							

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Page ____ of ____ Unit 3 of 88 in Results Set Search Aids

Title: NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste

DOCN 000002346
 LSSN PT00138600
 TITL NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste
 DTYP Technical Report
 DATE 19840500
 Document/Report Number
 1 CN DE-AC04-76D
 2 RN SAND83-1166
 Author Name
 1 Dennis, AW
 2 O'Brien, PD
 3 Mulkin, R
 4 Frostenson, JC
 Author Name/Organization
 1 Dennis, AW / SNL
 2 O'Brien, PD / SNL
 3 Mulkin, R / LATA
 4 Frostenson, JC / LATA
 Author Organizations
 1 SNL
 2 LATA
 Sponsoring Agency
 1 DOE
 Project
 1 NNWSI
 Major Location
 1 Yucca Mountain
 PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Descriptor Profile Search
OK

These are the Descriptors from the current unit. You can delete one or more before starting a search. When the list is as you want it, click OK to begin the search.

- ☒ Transuranic Waste
- ☒ Radioactive Waste Processing
- ☒ Radioactive Waste Package
- ☒ Retrieval Of Waste
- ☒ Emplacement
- ☒ Spent Fuel
- ☒ Casks

Thesaurus

Alphabetical

Hierarchical Listing

Key Words In Context Listing

Near Spell

▶ Descriptor Profile Search

Text Search within Unit

Related Documents

Previous Occurrence
Next Occurrence

Previous Page
Page Forward/Backward by X
Go to Page
Next Page

Previous Unit
Next Unit

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Pag. ____ of ____ Unit 3 of 88 in Rec

Title: NNWSI Repository
Emplacing, and R

DOCN 00000234
LSSN PT0013860
TITL NNWSI R
Emplacing, and
DTYP Technical
DATE 19840500
Document/Report
1 CN DE-AC64
2 RN SAND83-
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, J
Author Name/Or
1 Dennis, AW /
2 O'Brien, PD /
3 Mulkin, R / L
4 Frostenson, J
Author Organiza
1 SNL
2 LATA
Sponsoring Agenc
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Text Search Within Unit
OK

1 Type the term(s) to search the full ASCII text of the current unit for.
You can include wild card/truncation characters:
 * matches anything to the end of the word - volcan* matches
 volcano, volcanistic, volcanoes, etc.
 # matches one character only - fault# matches faults and faulty, but
 not fault or faulting.

2 Insert Logic and Proximity as you type, or select and insert them
 from the panels: (☒ = Selected, ☐ = Not Selected)

Logic Tools:

☐ And ☐ (

☒ Or ☐)

☐ Not

Proximity Tools:

☒ Next To

☐ Within 5 Words

☐ Same Sentence

☐ Same Paragraph

Search full ASCII text of this unit for:

Thesaurus

Alphabetical

Hierarchic Listing

Key Words In Context Listing

Near Spell

Descriptor Profile Search

▶ Text Search within Unit

Related Documents

Previous
Occurrence

Next
Occurrence

Previous
Page

Page Forward/
Backward by X

Go to
Page

Next
Page

Previous
Unit

Next
Unit

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Page ____ of ____ Unit 3 of 88 in Rec

Title: NNWSI Repository
Emplacing, and R

DOCN 00000234
LSSN PT0013860
TITL NNWSI Re
Emplacing, and
DTYP Technical
DATE 19840500
Document/Report
1 CN DE-AC04
2 RN SAND83-
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, JC
Author Name/Org
1 Dennis, AW /
2 O'Brien, PD /
3 Mulkin, R / L
4 Frostenson, JC
Author Organizat
1 SNL
2 LATA
Sponsoring Agenc
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Related Documents
OK

You can retrieve units related to your current unit in any of the ways listed below. Select one:

(☒ = Selected, ☐ = Not Selected)

- ☐ Units attached to the current unit
- ☐ Units to which the current unit is attached
- ☐ Units which correct this unit
- ☐ Units corrected by this unit
- ☐ Units which comment on this unit
- ☐ Units which this unit comments on
- ☐ Units to which this unit belongs
- ☐ Units which belong to this unit
- ☐ Units which are part of this package
- ☐ Earlier versions of this unit
- ☐ Later versions of this unit

Thesaurus

Alphabetical

Hierarchic Listing

Key Words In Context Listing

Near Spell

Descriptor Profile Search

Text Search within Unit

➤ Related Documents

Previous
Occurrence

Next
Occurrence

Previous
Page

Page Forward/
Backward by X

Go to
Page

Next
Page

Previous
Unit

Next
Unit

RESULTS ANALYSIS

ANALYZE HEADER FIELDS

COMPUTE RESULT SET RANK ORDER

SORT RESULT SET

MERGE RESULT SET



Science Applications International Corporation

HEADER FIELD TABLE

Example Descriptor Frequency Table

This query found 922 units.

Descriptor term occurrence in this result set are:

<u>DESCRIPTOR</u>	<u>FREQUENCY</u>
Fractures	47
Fractures (Geologic)	43
Topopah Springs Member	39
Boreholes	36
Drill Cores	30
Stratigraphy	25
Welded Tuff	24
Paintbrush Tuff	22
Faults	19
Seismic Effects	16
Crater Flat Tuff	15
Geophysical Surveys	12
Seismic Surveys	12
Volcanic Rocks	11
Structural Geology	10
Strain (Geologic)	4



Science Applications International Corporation

RESULT SET DISPLAY

This Query found 922 units.

This display is in WORD DENSITY order.

Selected words: NUCLEAR, WASTE, CONTAINMENT

1 of 922

TITL: Preliminary Interpretations of Geologic Results Obtained
from Boreholes UE25a-4, -5, -6, and -7, Yucca Mountain,
Nevada Test Site

DATE: 19800000

AUTH: Spengler, RW; Rosenblum, JG

AUOG: USGS; USGS



Science Applications International Corporation

TITLE SORT

This Query found 922 units.

This display is SORTED on TITL

1 of 922

TITL: Aftershocks of the Benham Nuclear Explosion

DATE: 19691200

AUTH: Hamilton, RM; Healy, JH

AUOG: USGS; USGS

2 of 922

TITL: Analysis of Gaseous-Phase Stable and Radioactive Isotopes
in the Unsaturated Zone, Yucca Mountain, Nevada

DATE: 19850000

AUTH: Yano, IC; Haas, HH; Weeks, EP; Thorstenson, DC

AUOG: USGS; SMU; USGS; USGS



Science Applications International Corporation

DISPLAY

RESULT SETS

HEADERS

TEXT

IMAGES



Science Applications International Corporation

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
		<div style="border: 1px solid black; padding: 5px;"> Result Set List Headers - All Fields Headers - Selected Fields Full Text of Unit Image Side By Side Sort Order Format Change... </div>			Logic Tools And Or Not () Search Aids		
<div style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">Erase Search Definition</div>			<div style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">Start Search</div>				
<div style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">Search History</div>						<div style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">Results Analysis</div>	
Search #	Search Statement Used	Partition	Units Found				
1	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE≤123192))	A	23				
2	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE≤123192))	B	80				
3	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>000000) AND (DATE≤123192))	C	43				
4		All	146				
<div style="border: 1px solid black; border-radius: 15px; padding: 5px 20px; display: inline-block;">Show Full Search Statement</div>							

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help								
Search Definition					Logic Tools: And Or Not () Search Aids										
In Partition(s):															
<div style="display: flex; justify-content: space-between; align-items: center;"><div><input type="checkbox"/> EXIT</div><div>Result Set List</div></div>															
<div style="border: 1px solid black; padding: 10px; margin-top: 10px;"><p>* Unit 1 of 192 in Result Set 1</p><p><u>TITLE:</u> Stratigraphic and Structural Relations of Volcanic Rocks in Drill Holes USW GU-3 and USW G-3, Yucca Mountain, Nye County, Nevada</p><p><u>DATE:</u> 19840000</p><table style="width: 100%;"><tr><td style="width: 50%;"><u>AUTH:</u> Scott, RB</td><td style="width: 50%;"><u>AUOG:</u> USGS</td></tr><tr><td>Castellano, M</td><td>Fenix & Scisson</td></tr></table></div>								<u>AUTH:</u> Scott, RB	<u>AUOG:</u> USGS	Castellano, M	Fenix & Scisson				
<u>AUTH:</u> Scott, RB	<u>AUOG:</u> USGS														
Castellano, M	Fenix & Scisson														
<div style="border: 1px solid black; padding: 10px; margin-top: 10px;"><p>* Unit 2 of 192 in Result Set 1</p><p><u>TITLE:</u> Stratigraphic and Structural Characteristics Volcanic Rocks in Core Hole USW G-4, Yucca Mountain, Nye County, Nevada</p><p><u>DATE:</u> 19840000</p><table style="width: 100%;"><tr><td style="width: 50%;"><u>AUTH:</u> Spengler, RW</td><td style="width: 50%;"><u>AUOG:</u> USGS</td></tr><tr><td>Chornack, MP</td><td>Fenix & Scisson</td></tr><tr><td>Muller, DC</td><td>USGS</td></tr><tr><td>Kibler, JE</td><td>USGS</td></tr></table></div>								<u>AUTH:</u> Spengler, RW	<u>AUOG:</u> USGS	Chornack, MP	Fenix & Scisson	Muller, DC	USGS	Kibler, JE	USGS
<u>AUTH:</u> Spengler, RW	<u>AUOG:</u> USGS														
Chornack, MP	Fenix & Scisson														
Muller, DC	USGS														
Kibler, JE	USGS														
<div style="border: 1px solid black; padding: 10px; margin-top: 10px;"><p>* Unit 3 of 192 in Result Set 1</p><p><u>TITLE:</u> Stratigraphy and Structure of Volcanic Rocks in Drill Hole USW G-1, Yucca Mountain, Nye County, Nevada</p><p><u>DATE:</u> 19810000</p><table style="width: 100%;"><tr><td style="width: 50%;"><u>AUTH:</u> Spengler, RW</td><td style="width: 50%;"><u>AUOG:</u> USGS</td></tr><tr><td>Byers, FM</td><td>USGS</td></tr><tr><td>Warner, JB</td><td>Fenix & Scisson</td></tr></table></div>								<u>AUTH:</u> Spengler, RW	<u>AUOG:</u> USGS	Byers, FM	USGS	Warner, JB	Fenix & Scisson		
<u>AUTH:</u> Spengler, RW	<u>AUOG:</u> USGS														
Byers, FM	USGS														
Warner, JB	Fenix & Scisson														
<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">Show Full Search Statement</div>															

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
DISPLAY: Headers - All		Page ____ of ____	Unit <u>3</u> of <u>88</u> in Results Set _____		Search Aids		
<p>Title: NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste</p> <p>DGCN 000002346 LSSN PT00138600 TITL NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste DTYP Technical Reports DATE 19840500 Document/Report Number 1 CN DE-AC04-76DP00789 2 RN SAND83-1166 Author Name 1 Dennis, AW 2 O'Brien, PD 3 Mulkin, R 4 Frostenson, JC Author Name/Organization 1 Dennis, AW / SNL 2 O'Brien, PD / SNL 3 Mulkin, R / LATA 4 Frostenson, JC / LATA Author Organizations 1 SNL 2 LATA Sponsoring Agency 1 DOE Project 1 NNWSI Major Location 1 Yucca Mountain PUBD Albuquerque NM: Sandia National Laboratories; 5/84.</p>							
Previous Occurrence		Next Occurrence	Previous Page	Page Forward/Backward by X	Go to Page	Next Page	Previous Unit
							Next Unit

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
DISPLAY: Full Text of Unit		Page <u>2</u> of <u>40</u>	Unit <u>3</u> of <u>88</u> in Results Set <u>1</u>		Search Aids		
<p>Title: ASTM Operational Procedures for Determination of Qualities of Rock and Soil- Aggregate Specimens</p> <p>ASTM (American Society for Testing and Materials), 1966. True Specific Gravity of Refractory Material by Water Immersion, Standard Test Method, Reapproved 1976, ASTM C 135-66, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1971. Linear Thermal Expansion of Rigid Solids With a Vitreous Silica Dilatometer, Standard Test Method, ASTM E 228-71, Philadelphia, Penn.</p> <p>ASTM (American Standard Test Methods), 1978. Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54 kg) Rammer and 18-in. (457 mm) Drop, Standard Test Methods, ANSI/ASTM D 1557-78, pp. 270-276.</p> <p>ASTM (American Society for Testing and Materials), 1979a. True Specific Gravity of Refractory Materials by Gas Comparison Pycnometer, Standard Test Method, ASTM C 604-79, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1979b. Unconfined Compressive Strength of Intact Rock Core Specimens, Standard Test Method, ANSI/ASTM D 2938-79, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1980a. Triaxial Compressive Strength of Undrained Rock Core Specimens Without Pore Pressure Measurements, Standard Test Method, ASTM D 2664-80, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1980b. Elastic Moduli of Intact Rock Core Specimens in Uniaxial Compression, Standard Test Method, ANSI/ASTM D 3148-80, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1981a. Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth), ASTM D 2922-81, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1981b. Splitting Tensile Strength of Intact Rock Core Specimens, Standard Test Method, ASTM D 3967-81, Philadelphia, Penn.</p> <p>2R-1 002</p>							
Previous Occurrence		Next Occurrence		Previous Page		Page Forward/Backward by X	
Go to Page		Next Page		Previous Unit		Next Unit	

Set-Up Search Display Print Clipboard Save Exit Help

DISPLAY: Side-by-Side Page ____ of ____ Unit 3 of 88 in Results Set _____

Search Aids

DOCN 000002346

LSSN PT00138600

TITLE NNWSI Repository Operational Procedures for
Receiving, Packaging, Emplacing, and Retrieving
High-Level and Transuranic Waste

DTVP Technical Reports

DATE 19840500

Document/Report Number

1 CN DE-AC04-76DP00789

2 RN SAND83-1166

Author Name

1 Dennis, AW

2 O'Brien, PD

3 Mulkin, R

4 Frostenson, JC

Author Name/Organization

1 Dennis, AW / SNL

2 O'Brien, PD / SNL

3 Mulkin, R / LATA

4 Frostenson, JC / LATA

Author Organizations

1 SNL

2 LATA

Sponsoring Agency

1 DOE

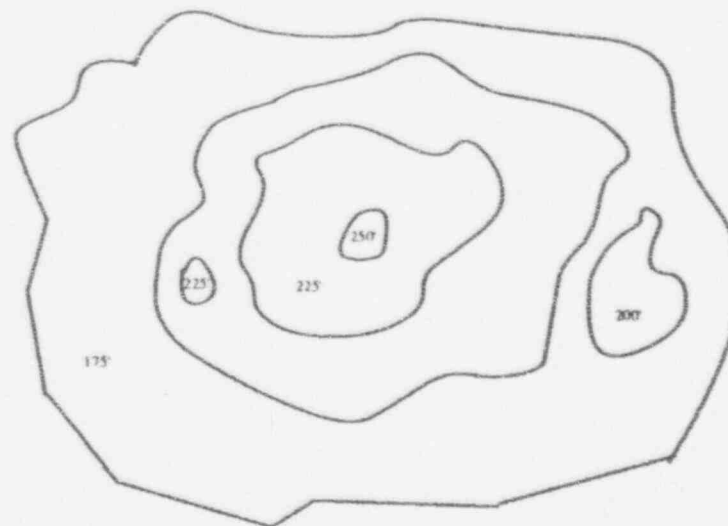
Project

1 NNWSI

Major Location

1 Yucca Mountain

PURD Albuquerque NM: Sandia National Laboratories; 5/84.



Previous
Occurrence

Next
Occurrence

Previous
Page

Page Forward/
Backward by X

Go to
Page

Next
Page

Previous
Unit

Next
Unit

Set-Up

Search

Display

Print

Clipboard

Save

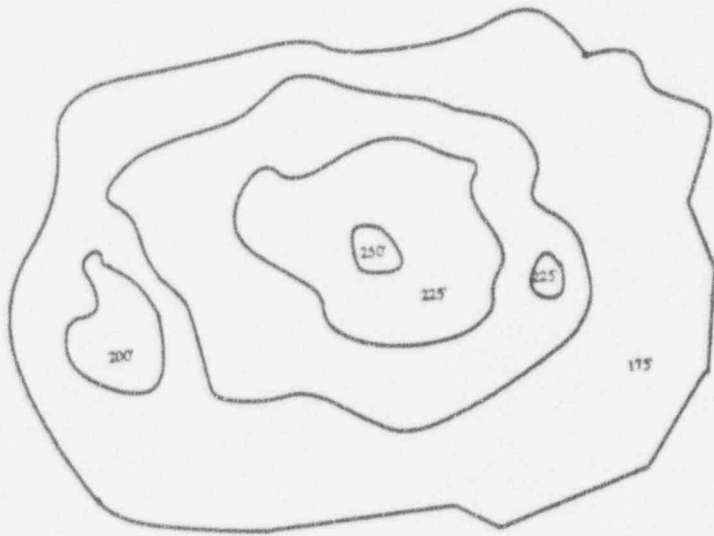
Exit

Help

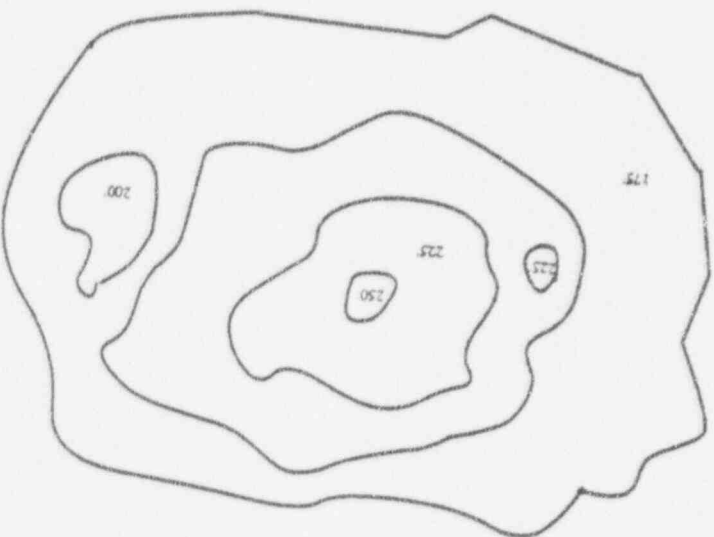
DISPLAY: Side-by-Side

Page 3 of 88 in Results Set

Search Aids



A contour map with an irregular outer boundary. Inside, there are four nested contour lines. The outermost line is labeled '175' at its bottom-right. Moving inward, the next line is labeled '200' at its top-left. The third line is labeled '225' at its bottom-right. The innermost, smallest contour is labeled '250' at its top.



A contour map identical to the one on the left. It features an irregular outer boundary and four nested contour lines labeled '175', '200', '225', and '250' from outermost to innermost.

Previous Occurrence

Next Occurrence

Previous Page

Page Forward/Backward by X

Go to Page

Next Page

Previous Unit

Next Unit

PRINT

LOCAL < 100 PAGES

REMOTE - PRINT, PACK, MAIL



Science Applications International Corporation

DATABASE LOAD

HEADERS & TEXT

IMAGE

**15,000 PAGES PER WEEK AT
PEAK**

45 MILLION CHARACTERS



Science Applications International Corporation

SYSTEM ADMINISTRATION

CAPTURE SYSTEM CONTROLLED VOCABULARIES MAINTENANCE

ANALYSIS & DISPLAY OF CAPTURE SYSTEM PRODUCTION REPORTS

OPERATIONAL CONFIGURATION MANAGEMENT TRACKING

USER PRIVILEGES & LIMITS TABLE MAINTENANCE

SYSTEM OPERATING PARAMETERS MAINTENANCE

DATA INTEGRITY CHECKING

DATA LOAD ADMINISTRATION

COMMUNICATION NETWORK MANAGEMENT



Science Applications International Corporation

HARDWARE ARCHITECTURE

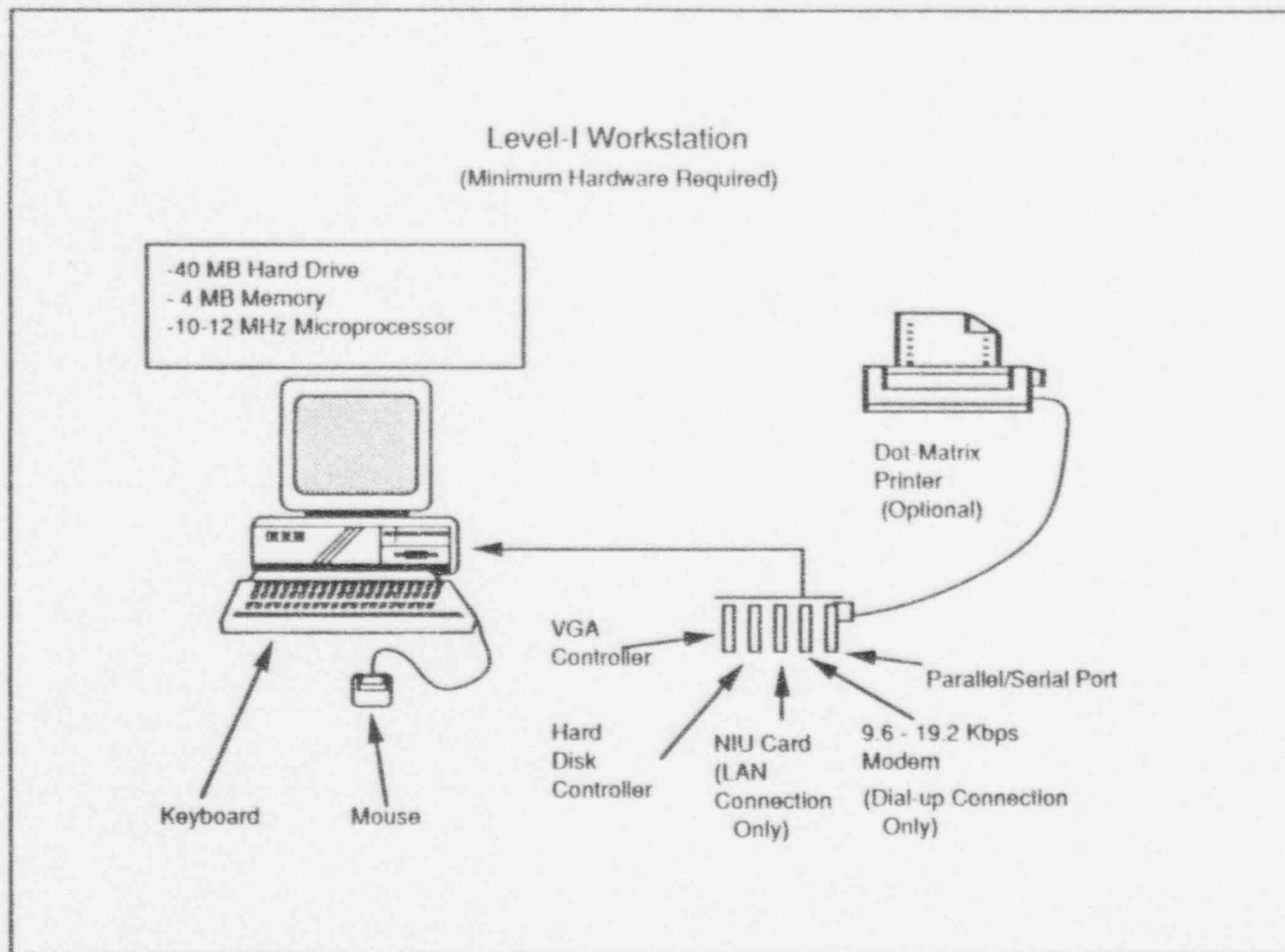
WORKSTATIONS

SEARCH

IMAGE

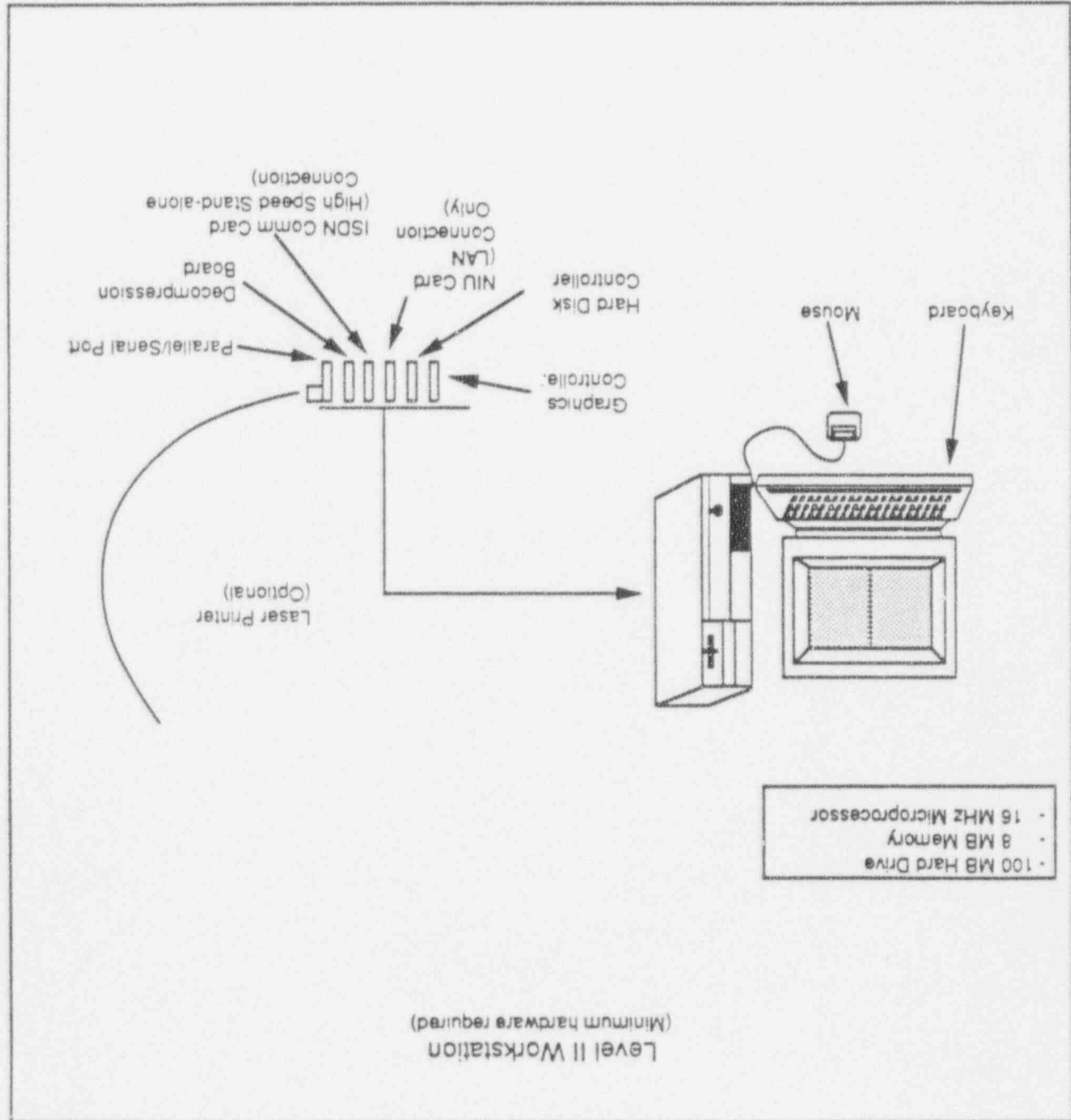


Science Applications International Corporation



LEVEL I WORKSTATION

LEVEL II WORKSTATION



LSS COMMUNICATIONS SYSTEM



Science Applications International Corporation



Science Applications International Corporation

TOPICS

- **COMMUNICATIONS DESIGN PROCESS OVERVIEW**
- **COMMUNICATIONS NETWORK ARCHITECTURE**
 - **NETWORK TOPOLOGY**
 - **MAJOR EQUIPMENT COMPONENTS**



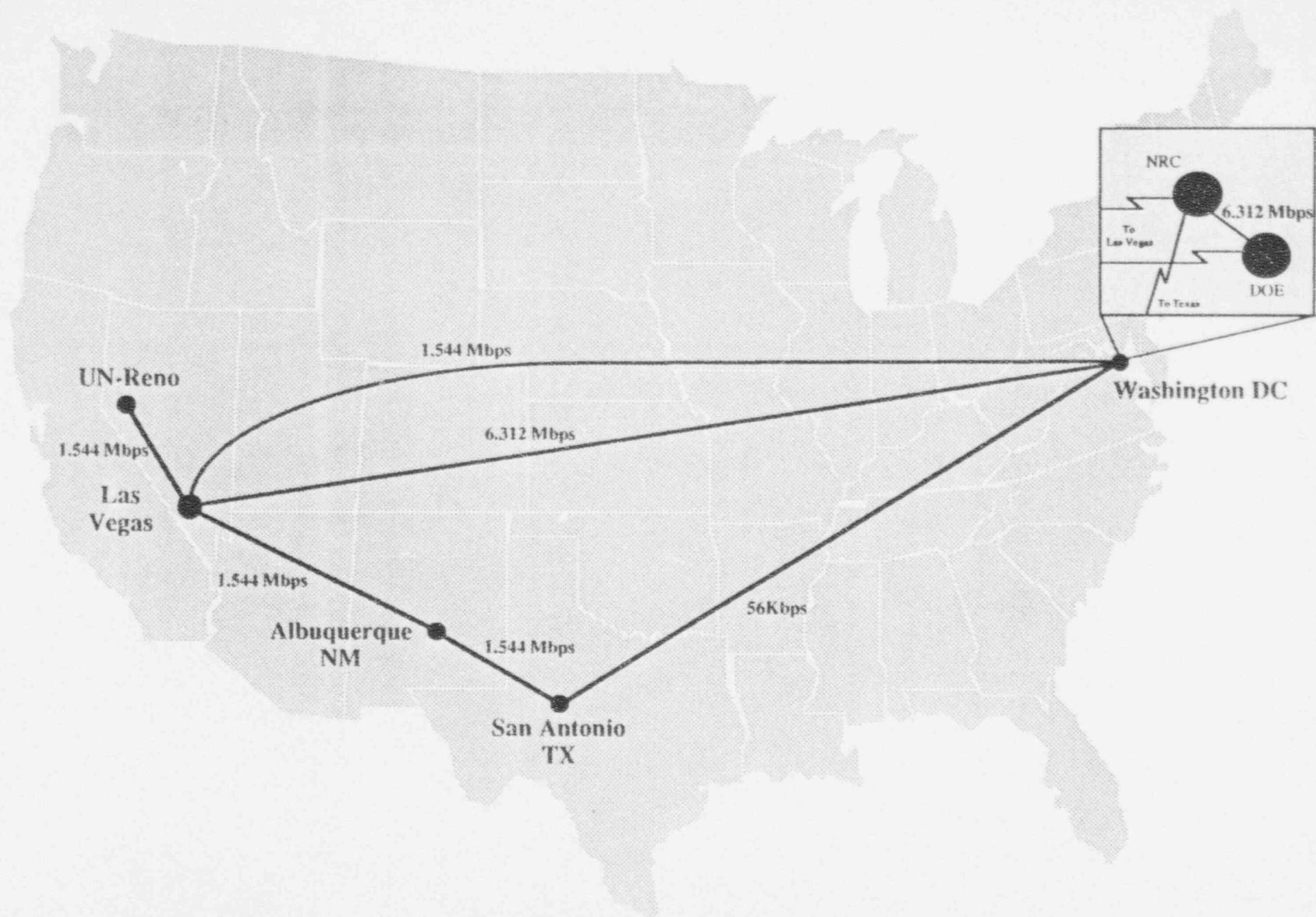
Science Applications International Corporation

LSS COMMUNICATIONS DESIGN

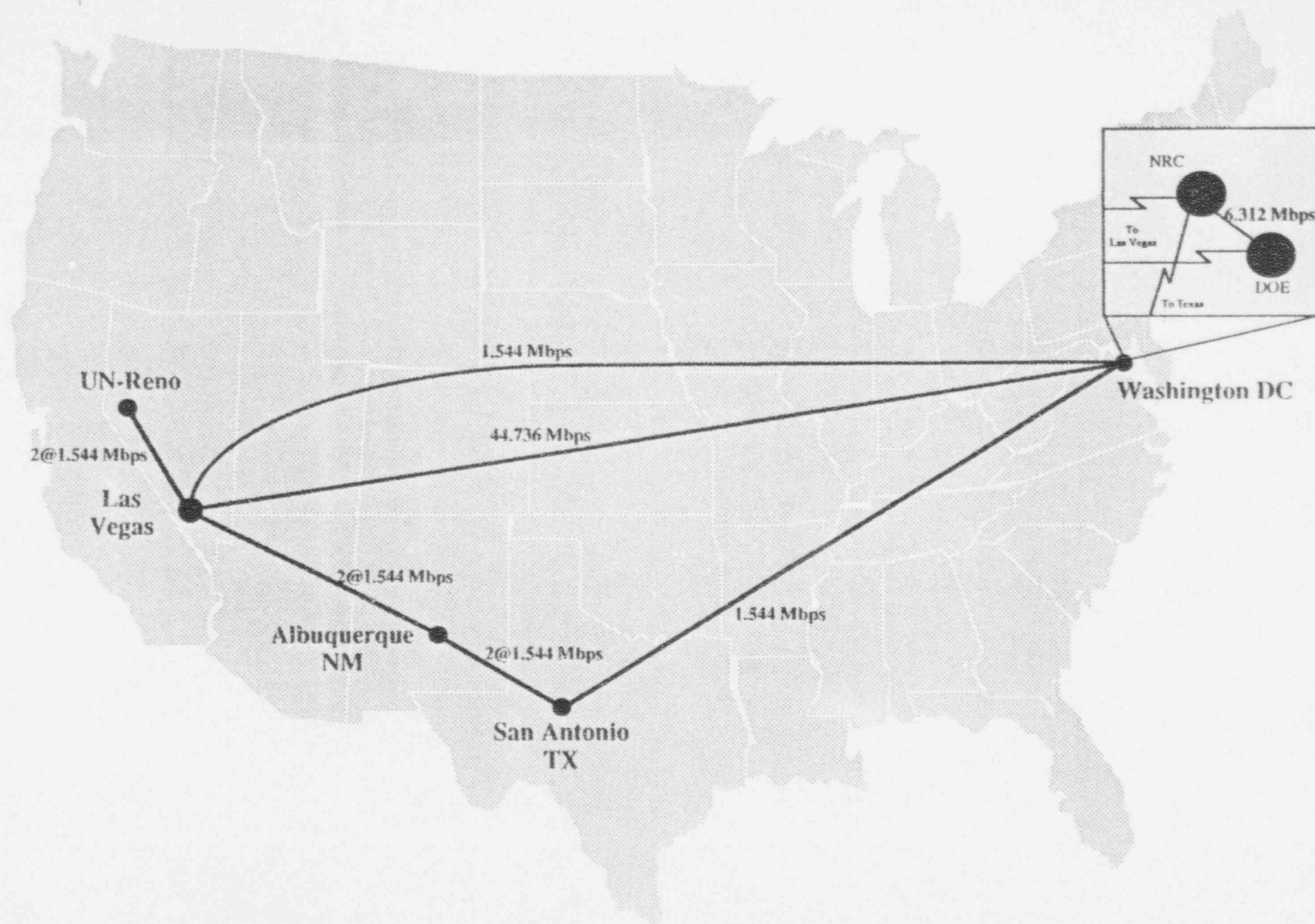
- **BASED UPON ANALYSIS OF EXPECTED GEOGRAPHIC DISTRIBUTION OF LSS USERS**
- **UTILIZED NETWORK MODELING TOOL TO OPTIMIZE COMMUNICATION CIRCUIT LOADING AND BANDWIDTH**
 - **5 Sec avg comm. response time**
- **GOSIP-COMPLIANT ARCHITECTURE**
- **EQUIPMENT AND SERVICES SPECIFIED AVAILABLE IN THE 1995 TIMEFRAME**
- **PROVIDE LOCAL IMPLEMENTATION ALTERNATIVES**

LSS USER AND WORKSTATION DISTRIBUTION

Location	Number of Users	Pre-Licensing Phase		Post-Licensing Phase	
		Type I Workstations	Type II Workstations	Type I Workstations	Type II Workstations
Greater Washington DC Area					
NRC, White Flint, Maryland	103	16	35	0	52
NRC, White Flint, MD PDR	3	3	0	0	3
DOE-Forrestal	53	8	18	0	27
DOE-Forrestal PDR	3	3	0	0	3
M&O contractors in DC area	46	7	16	0	23
SW Research Ext, Arlington, Va	6	1	2	0	3
LSS External Interveners: DC	1	0	1	0	1
LSS External Interveners: N. Virginia	1	0	1	0	1
Nevada					
DOE-OCWRM Las Vegas	56	9	19	0	28
Las Vegas: DOE NVOO PDR	3	3	0	0	3
Las Vegas: DOE NTS	10	2	3	0	5
Carson City: State of Nevada	3	0	1	0	2
Carson City: NRC PDR	3	3	0	0	3
Lincoln County PDR	3	3	0	0	3
University of Nevada-Reno PDR	3	3	0	0	3
Nye County: PDR	3	3	0	0	3
University of Nevada-Las Vegas PDR	3	3	0	0	3
NRC Field Office, Las Vegas	1	1	0	0	1
Yucca Mtn: DOE PDR at Meadow Mall	3	3	0	0	3
Yucca Mtn Project Office: DOE	2	0	1	0	1
Yucca Mtn Project Office: SAIC	12	2	4	0	6
DOE M&O Contractors Las Vegas	46	7	16	0	23
LSS External Interveners: Reno 1	1	0	1	0	1
LSS External Interveners: Reno 2	1	0	1	0	1
LSS External Interveners: Carson City 1	1	0	1	0	1
LSS External Interveners: Carson City 2	1	0	1	0	1
LSS External Interveners: Las Vegas 1	1	0	1	0	1
LSS External Interveners: Las Vegas 2	1	0	1	0	1
Texas					
San Antonio: SW Research Institute	42	7	14	0	21
Arlington: NRC Region Office	1	1	0	0	1
Other					
King of Prussia, PA: NRC Region Office	1	1	0	0	1
Atlanta, GA: NRC Region Office	1	1	0	0	1
Glen Ellyn, IL: NRC Region Office	1	1	0	0	1
Walnut Creek, CA: NRC Region Office	1	1	0	0	1
NRC Field Office, Denver, CO PDR	1	1	0	0	1
U.S Geological Survey, Denver	1	0	1	0	1
Los Alamos National Lab, New Mexico	20	3	7	0	10
Sandia National Lab, Albuquerque, NM	15	2	5	0	8
Lawrence Livermore National Lab, CA	10	2	3	0	5
Idaho Falls, Idaho	1	0	1	0	1
Chicago, Illinois	1	0	1	0	1
Olympia, Washington	1	0	1	0	1
Columbus, Ohio	1	0	1	0	1
Hanford/Richland, Washington	1	0	1	0	1
SUBTOTAL	472	101	159	0	260



**FIGURE 5-3 LSS BACKBONE NETWORK CONNECTIVITY
FOR THE PRE-LICENSING PHASE**



**FIGURE 5-4 LSS BACKBONE NETWORK CONNECTIVITY
FOR THE POST LICENSING PHASE**



Science Applications International Corporation

MAJOR COMPONENTS

USER TYPE

COMPONENTS

SINGLE WORKSTATION

MODEM, ISDN TERMINAL
ADAPTER

MULTIPLE WORKSTATIONS

LAN/WAN BRIDGE/BROUTER,
MUX, MODEM, CSU/DSU

BACKBONE NETWORK

ROUTER, FDDI, BRIDGE,
ISDN

OVERVIEW

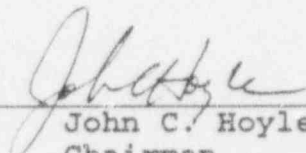
- I. EXISTING INTERIM TOPICAL GUIDELINES
- II. DEVELOPMENT OF DRAFT REGULATORY GUIDE - TOPICAL GUIDELINES
- III. REVISION TO THE INTERIM TOPICAL GUIDELINES
- IV. TOPICS INCLUDED IN THE DRAFT REGULATORY GUIDE
- V. NEXT STEPS



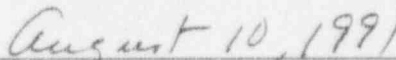
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CERTIFICATION
MINUTES OF FIFTH MEETING OF THE
LSS ADVISORY REVIEW PANEL

I certify that the attached minutes of the Meeting of the LSS
Advisory Review Panel, held on July 17, 1991 are accurate
to the best of my knowledge and belief.



John C. Hoyle
Chairman



Date

MINUTES

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL MEETING

JULY 17, 1991

BETHESDA, MARYLAND

The fifth meeting of the Licensing Support System Advisory Review Panel (LSSARP) took place on July 17, 1991, in Bethesda, Maryland.

Members of the LSSARP present were:

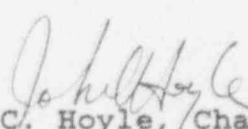
John Hoyle, Chairman, NRC
Barbara Cerny, DOE
Corrine Macaluso, DOE
Kirk Balcom, State of Nevada
Engelbrecht von Tiesenhausen, Clark County, Nevada
Jason Pitts, Lincoln County, Nevada
Peter Cummings, City of Las Vegas, Nevada
Elgie Holstein, Nye County, Nevada
Felix Killar, Nuclear Industry
David Copenhafer, US Securities and Exchange Commission

Enclosed are:

1. Meeting Agenda
2. Federal Register Notice Announcing Meeting
3. Attendance List
4. 8/9/91 Report on Meeting of LSS Advisory Review Panel
5. Index to Meeting Transcript
6. Transcript and Material Presented at Meeting

The meeting was open and attended by members of the public.*

This transcript has not been corrected or edited and it may contain inaccuracies.


John C. Hoyle, Chairman
LSS Advisory Review Panel

* Attendance list is attached.

ENCLOSURE 1

AGENDA

LSS ADVISORY REVIEW PANEL MEETING

JULY 17, 1991

9:00	Administrative Issues (J. Hoyle)
9:30	LSSA's Proposed LSS Development Schedule (L. Scattolini)
10:15	Break
10:30	LSSA's Procurement Strategy and Approach -- Use of SAIC Deliverables (see J. Hoyle ltr to LSSARP members, dtd 4/12/91) (J. Shields)
11:15	Information Management Within DOE and Its Relationship to the LSS (B. Cerny)
12:15	Lunch
1:30	LSSA's Quality Management Approach (L. Donnelly)
2:15	LSSA's Automated Project Management System (J. Shields)
3:00	Break
3:15	Finalization of Header Working Group Recommendations (K. Balcom)
	Update on Revised Topical Guidelines (J. Hoyle)
	Update on Technical Data (E. Shelburne)
	Adjourn

ENCLOSURE 2

Medicine Department and went to the nursing station on the floor of the patient with the lung problem. The physician did not inform the nursing staff that he was about to administer a therapeutic dosage to one of their patients and went to the lung patient's room. There, he asked the patient his name and verified the name on the wrist band but did not cross check the patient number on the wrist band with the patient number on the request form. The physician completed the request form and returned the patient folder to the nurses' station. Within five minutes of the administration of the radiopharmaceutical, the nurses discovered the error and informed the physician and the Radiation Safety Officer. The licensee decided to administer a thyroid blocking agent of 1000 milligrams of potassium iodide immediately, with three subsequent doses of 1000 milligrams each given at four hour intervals.

The licensee determined that the thyroid of the patient received an uptake of between 80 and 100 microcuries of iodine-131 which would give a dose of between 112 and 140 rads. An NRC medical consultant, who reviewed the event, concurred with these figures. The licensee advised the NRC that no adverse effects were anticipated during the lifetime of the patient as a result of the misadministration.

Cause or Causes—The causes were attributed to failure to follow the hospital protocol of checking the patient identification number, and failure to inform the head nurse of the floor of the therapeutic procedure, prior to administration.

Actions Taken to Prevent Recurrence

Licensee—The licensee's planned corrective action includes establishing a check list that must be completed by individuals administering therapeutic dosages. The check list will require that the person administering the dosage to check, as a minimum, the type of radiopharmaceutical to be administered, the activity of the dosage, the name of the patient, and the patient number. It will also require notification of the nursing staff that one of their patients is undergoing radiopharmaceutical therapy. Other actions include changing the computer program so that all of the information is printed out on the patient list, and reinstruction to personnel regarding patient verification procedures.

NRC—On April 1, 1991, a Region I inspector conducted a special inspection of the circumstances surrounding this misadministration. The inspection report

was forwarded to the licensee on April 17, 1991. No violations of regulatory requirements were identified. The licensee's corrective actions are considered satisfactory.

Dated at Rockville, MD this 24th day of June 1991.

For The Nuclear Regulatory Commission
Samuel J. Chalk

Secretary of the Commission

[FR Doc. 91-15601 Filed 6-20-91; 8:45 am]

BILLING CODE 7590-01-M

Licensing Support System Advisory Review Panel Meeting

Notice is hereby given pursuant to the Federal Advisory Committee Act of October 6, 1972 (Pub. L. 94-463, 86 Stat. 770-776), that the Licensing Support System Advisory Review Panel (LSSARP) will hold a meeting on July 1, 1991. The meeting will convene at 9 a.m. in the fifth floor hearing room, East West Tower's Building (West Tower), 4350 East West Highway, Bethesda, Maryland. The Nuclear Regulatory Commission (NRC) established the LSSARP to provide advice and recommendations to the NRC and to the Department of Energy (DOE) on topics, issues, and activities related to the design, development, and operation of an electronic information management system known as the Licensing Support System (LSS). This system is being designed to contain information relevant to the Commission's future licensing proceeding for a geologic repository for the disposal of high-level radioactive waste (HLW).

The agenda for the meeting, at which the Committee will receive several briefings by the Office of the Licensing Support System Administrator (LSSA), is as follows:

Agenda

LSS Advisory Review Panel Meeting July 17, 1991

- 9:00 Administrative Issues
- 9:30 LSSA's Proposed LSS Development Schedule
- 10:45 LSSA's Procurement Strategy and Approach—Use of SAIC Deliverables
- 1:30 LSSA's Quality Management Approach
- 2:15 LSSA's Automated Project Management System
- 3:15 Finalization of Header Working Group Recommendations
- Update on Revised Topical Guidelines
- Update on Technical Data
- 5:00 Adjourn

The meeting will be open to the public. Interested persons may make oral presentations to the Panel or file

written statements. Requests for oral presentations should be made to the contact person listed below as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for oral statements.

For further information regarding this matter, contact Marilee Rood, Office of the LSS Administrator, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone 301-492-4003.

Dated at Rockville, Maryland, this 25th day of June 1991.

For the Nuclear Regulatory Commission
John C. Hoyle

Advisory Committee Management Officer

[FR Doc. 91-15602 Filed 6-28-91; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-029]

Yankee Atomic Electric Co.; Yankee (Rowe) Nuclear Power Station, Receipt of Petition Under 10 CFR 2.206

Notice is hereby given that the Director, Office of Nuclear Reactor Regulation, acknowledges receipt of a petition filed jointly by the Union of Concerned Scientists and the New England Coalition on Nuclear Pollution pursuant to 10 CFR 2.206 for emergency enforcement action against Yankee Atomic Electric Company's Yankee Rowe Nuclear Power Plant.

The petition seeks the immediate shutdown of the Yankee Rowe Nuclear Power Plant which the petitioners allege are operating in violation of the Nuclear Regulatory Commission's standards for pressure vessel integrity. For the reasons discussed in a letter to Diane Curran from Thomas E. Murley, dated June 25, 1991, the request for immediate relief has been denied.

A decision concerning this petition will be addressed in a final decision in the near future.

A copy of the petition is available for public inspection in the Commission's Public Document Room, located in the Gelman Building, 2120 L Street, NW., Washington, DC 20555.

Dated at Rockville, Maryland, this 25th day of June, 1991.

For the Nuclear Regulatory Commission
Thomas E. Murley

Director, Office of Nuclear Reactor Regulation

[FR Doc. 91-15603 Filed 6-28-91; 8:45 am]

BILLING CODE 7590-01-M

ENCLOSURE 3

ATTENDANCE LIST

LSS Advisory Review Panel Meeting, July 17, 1991

Panel Members

U.S. Nuclear Regulatory Commission

John C. Hoyle, Chairman

U.S. Department of Energy

Barbara Cerny
Colinne Macaluso

State of Nevada

Kirk Balcom

Local Government - Site

Elgie Holstein

Local Government - Adjacent

Engelbrecht von Tiesenhausen
Jason Pitts
Peter Cummings

Nuclear Industry

Felix Killar

U.S. Securities and Exchange Commission

David Copenhafer

Others

Lloyd Donnelly, NRC/LSSA
F. X. Cameron, NRC/LSSA
Marilee Rood, NRC/LSSA
Lynn Scattolini, NRC/LSSA
Betsy Shelburne, NRC/LSSA
Jim Shields, NRC/LSSA
Kathryn Winsberg, NRC/OGC
Gerald Cranford, NRC/IRM
Ken Datillo, NRC/OC
Tom Heavey, NRC/OC
John Frye, NRC/ASLBP
Jack Whetstine, NRC/ASLBP
Giorgio Gnugnoli, NRC/ACNW
Phil Altomare, NRC/NMSS

Others. continued

Dan Graser, DOE
Jim Bresee, DOE
Ron Allen, Lincoln County, Nevada
Don Beard, Sherikon, Inc.
Robin Cohen, Next Computers, Inc.
Jim Francis, Computer Data Systems, Inc.
Sharon Goodman, KEI
Clarence Jones, KEI
Tom Nartker, UNLV/ISRI
Tony Neville, Labat/Anderson, Inc.
Victoria Reich, Nuclear Waste Technical Review Board
Bobby Savole, IRG/SAIC
Donna Sitterson, TRW, Inc.
Jim Smith, Government Computer News

ENCLOSURE 4



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

WM 1 1990

MEMORANDUM FOR: John C. Hoyle, Chairman
Licensing Support System Advisory
Review Panel

FROM: Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

SUBJECT: TOPICAL GUIDELINES FOR THE LICENSING SUPPORT SYSTEM

The purpose of this memorandum is to transmit the proposed revision of the interim topical guidelines for the Licensing Support System (LSS) to the LSS Advisory Review Panel (LSSARP) for consideration at the October 1990 LSSARP meeting. Enclosure 1 is the "Draft Regulatory Guide Topical Guidelines for the Licensing Support System" (Draft Regulatory Guide) which was prepared by the Nuclear Regulatory Commission (NRC) staff and the Office of the General Counsel (OGC). Enclosure 2 is a copy of the interim topical guidelines. Enclosure 3 is a document which describes the disposition of the three lists which comprised the interim topical guidelines. The Commission has reviewed the Draft Regulatory Guide and has given the staff permission to forward it to the LSSARP.

Please address any questions on the enclosed material to Mark Delligatti, the project manager for the revision of the LSS topical guidelines, at extension 20430.

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Enclosures: As stated

cc: RBrowning, HLWM STreby, OGC
LDonnelly, LSSA FCameron, LSSA
MSilberberg, RES JLinehan, HLPD

9007200322 52 pp

ENCLOSURE 1

DRAFT REGULATORY GUIDE
TOPICAL GUIDELINES FOR THE LICENSING SUPPORT SYSTEM

ABSTRACT

This Regulatory Guide sets forth the topical guidelines for the Licensing Support System established in the Rules of Practice in 10 CFR Part 2, Subpart J for the adjudicatory proceeding on the application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to 10 CFR Part 60.

INTRODUCTION

Subpart J of 10 CFR Part 2 (10 CFR 2.1000 to 2.1023) sets forth procedures for an adjudicatory proceeding on the application for a license to receive and possess high-level nuclear waste at a geologic repository under 10 CFR Part 60. Pursuant to these regulations, the Licensing Support System (LSS), an electronic information management system, is being designed and implemented to provide for the entry of and access to potentially relevant licensing information.

The topical guidelines define the scope of documentary material which should be included in the LSS. Interim topical guidelines, drafted by the High-Level Waste Licensing Support System Advisory Review Panel were adopted by the U.S. Nuclear Regulatory Commission (NRC) with the statement that the topical guidelines would later be revised and set forth as a regulatory guide by NRC staff (see 54 Fed. Reg. 14925 (1989)). The interim topical guidelines were partially modeled after the Environmental Assessments prepared in connection with the U.S. Department of Energy (DOE's) site selection process.

Document is defined in 10 CFR 2.1001 as "...any written, printed, recorded, magnetic, graphic matter, or other documentary material, regardless of form or characteristic." 10 CFR 2.1001 also defines documentary material as "...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 for a geologic repository. The scope of documentary material shall be guided by the topical guidelines in the applicable NRC regulatory guide." The form which this material might take is included in Appendix A, a non-exhaustive list of types of documents which may be included in the LSS.

This regulatory guide has been prepared using the interim topical guidelines in addition to the "Draft Format and Content Guide for the License Application for the High-Level Waste Repository" (FCRG), which sets forth the information that the NRC staff suggests should be submitted in the license application. Pursuant to section 114(f)(4) of the Nuclear Waste Policy Act of 1982 as amended, (42 U.S.C. 10134(f)(4)), the Commission is required "to the extent practicable," to adopt the environmental impact statement (EIS) prepared by DOE. The Commission's regulations have been amended to be in accord with this statutory provisions. See 10 CFR 51.26(c). Therefore, the environmental issues in the topical guidelines will be limited to those documents relevant to the Commission's adoption or modification of the DOE EIS.

1. Purpose of the Regulatory Guide

The purpose of this regulatory guide is to provide a list of the topics for which LSS participants should submit documentary materials for entry into the LSS under 10 CFR § 2.1003. The topical guidelines are designed to be broad enough to encompass all potential licensing issues. This regulatory guide will also be used by the Pre-License Application Licensing Board for evaluating petitions for access to the LSS during the pre-license application period under 10 CFR 2.1008.

This regulatory guide will not be used as the detailed topical index for documentary evidence contained in the LSS. Neither will it serve to determine the scope of contentions that may be offered in the application proceeding under 10 CFR 2.1014.

2. Use of the Regulatory Guide

To the extent practicable, the regulatory guide follows a repository systems-based format that conforms to the approach to be followed in other generic NRC licensing guidance documents for the high-level waste repository program.

Because the topical guidelines have been kept broad and at a fairly high level of detail, the user should consider each topic to be inclusive rather than exclusive. For instance, 10 CFR Part 60 Subpart J requires a performance confirmation program for the various components of the repository system. However, performance confirmation is not a topic in this regulatory guide. Rather, information which is pertinent to performance confirmation for any particular component of the repository system would be considered to fall under the particular topic which designates that particular system (performance confirmation relevant to geologic processes would be considered topical information under the appropriate heading for the Natural System). The topical guidelines are presented at between one and three levels of detail. Each guideline should be considered all inclusive with regard to all documents germane to that topic for the site. For example, much of the information which shall support the licensing proceedings will be based upon the use of methodologies, computer codes and models. It is appropriate for such information to be included in the LSS. As stated above, the FCRG sets forth the information that the NRC staff suggests should be submitted in the license application. The FCRG should be considered as another source of guidance regarding the types of information that could be included in the LSS.

TOPICAL GUIDELINES
FOR INCLUSION OF DOCUMENTS
IN THE LICENSING SUPPORT SYSTEM

I. General Information

1. General Facility Description
2. Basis for Licensing Authority
3. Schedules Relevant to the NRC/DOE Repository Programs
4. Any Publicly Available Information on Certification of Safeguards
5. Any Publicly Available Information on the Physical Security Plan
6. Site Characterization
7. License Specifications (those variables, conditions, or other items which DOE determines to be probable subjects of license specifications)
8. Information Relevant to NRC Findings Regarding Compliance with Statutes Other than: The Atomic Energy Act, as amended; the Energy Reorganization Act; and the Nuclear Waste Policy Act, as amended for example, e.g., The Endangered Species Act of 1973.
9. Information Relevant to NRC Adoption or Modification of the DOE Environmental Impact Statement

II. The Natural Systems of the Geologic Setting

1. Geologic System
 - a. Regional Geology
 - b. Regional Geology
 - c. Site Geology
 - d. Future Variations in Geologic Processes
2. Hydrologic System
 - a. Surface Water Hydrology
 - b. Regional Hydrogeology
 - c. Site Hydrogeology
3. Geochemical System
 - a. Regional Geochemistry
 - b. Site Geochemistry

3. Geochemical System
 - a. Regional Geochemistry
 - b. Site Geochemistry
4. Climatological and Meteorological Systems
 - a. Present Climate and Meteorology
 - b. Paleoclimatology
 - c. Future Climatic Variation
5. Integrated Natural System Response to the Maximum Design Thermal Loading
6. Processes and Events
(anticipated and unanticipated, potentially disruptive)
7. Effectiveness of Natural Barriers Against the Release of Radioactive Material to the Environment (Information relevant to the performance objective of 10 CFR 60.113)

III. Geologic Repository Operations Area (GROA): Physical Facilities

1. Surface Facilities
 - a. Waste Handling System/Building(s)/Equipment (Including Hot Cell)
 - b. On-Site Radioactive Waste Management System
 - c. Fire and Explosion Protection System(s)
 - d. Emergency Systems
 - e. Communication Systems
 - f. Utility Systems
 - g. Instrumentation and Control Systems
 - h. On-Site Transportation System
 - i. Ventilation System(s)
 - j. Operations Support System(s)
 - k. Plans for the Decommissioning System
 - l. Other Surface Systems
2. Shafts/Ramps
 - a. Waste Shaft/Ramp
 - b. Muck Shaft/Ramp
 - c. Ventilation Intake Shaft(s)
 - d. Ventilation Exhaust Shaft(s)
 - e. Men and Materials Shafts
 - f. Plans for the Decommissioning System
 - g. Other Shaft/Ramp Systems
3. Underground Facility
 - a. Excavation and Ground Support Systems
 - b. Muck Handling System
 - c. Ventilation System
 - d. Waste Emplacement System
 - e. Waste Retrieval System

- f. Emergency System(s)
 - g. Communication System
 - h. Operations Support System
 - i. Plans for the Decommissioning System
 - j. Other Underground Systems
- 4. Interface of Structures, Systems, and Components
 - 5. Retrievability of Waste
 - 6. Effectiveness of the GROA Against the Release of Radioactive Materials to the Environment (Information relevant to the performance objective of 10 CFR 60.111)

IV. Engineered Barrier Systems

- 1. Waste Package
- 2. Waste Form
- 3. Underground Facility
- 4. Engineered Barrier System Waste Package Emplacement Environment
- 5. Engineered Barrier System Alternate Design Features
- 6. Effectiveness of Engineered Barriers Against the Release of Radioactive Material to the Environment (Information relevant to the performance objective of 10 CFR 60.113).

V. Overall System Performance Assessment

- 1. Basic Approach
- 2. System Description
 - a. Conceptual Models
 - b. Processes and Events (Potentially Disruptive)
 - c. Processes and Events (Undisturbed Performance)
- 3. Cumulative Release of Radioactive Materials
 - a. Screening of Processes and Events
 - b. Scenario Development and Screening
 - c. Consequence Analyses: Estimates of Cumulative Releases
 - d. Probability Estimates
 - e. Model and Code Validation
- 4. Undisturbed Performance
 - a. Individual Protection Requirements
 - b. Groundwater Protection Requirements
 - c. Model and Code Validation

VI. Conduct of Repository Operations

1. Maintenance
2. Organization
3. Personnel
4. Records/Reports
5. Training Programs
6. Schedules
7. Identification of Operating Controls and Limits
8. Preservation of Records
9. Site Markers

VII. Land Ownership and Control

1. Plans for Restricting Controlled Area Access
 - a. Identification of Controlled Area
 - b. Identification of Existing Legal Interests
 - c. Identification of Legal Interests To Be Obtained
 - d. Water Rights
2. Plans for Regulating Land Use Outside the Controlled Area
 - a. Identification of Adjacent Areas of Concern
 - b. Identification of Existing Legal Interests
 - c. Identification of Legal Interests To Be Obtained
3. Plans for Regulating Land Use at the GRDA
4. Other Types of Legal Interests

VIII. Quality Assurance (QA) Records

1. QA Records for Site Characterization
2. QA Records for Design and Construction
3. QA Records including records covering Operations, Permanent Closure, Decontamination and Decommissioning
4. QA Records for all relevant research activities

IX. Emergency Planning

X. Radiation Protection

1. Ensuring that Radiation Exposures are As Low As Reasonably Achievable (ALARA)
2. Radiation Sources
3. Radiation Protection Design Features
4. Estimated Onsite Dose Assessment
5. Health Physics Program
6. Estimated Offsite Dose Assessment

XI. Any Alternatives Considered (e.g., design interpretations, models)

APPENDIX A

EXAMPLES OF CATEGORIES OF DOCUMENTS TO BE INCLUDED IN THE LICENSING SUPPORT SYSTEM

1. Technical Reports and Analyses by all participants (including those developed by contractors)
2. Quality Assurance Records
3. External Correspondence
4. Internal Memoranda
5. Meeting Minutes/Transcripts
6. Draft Documents on which a nonconcurrence has been registered
7. Congressional Questions and Answers (Q's and A's)
8. Other Documents (for a. through i. include data bases and references):
 - a. Draft and Final Environmental Assessment for the Site Characterized
 - b. Site Characterization Plan
 - c. Site Characterization Study Plans
 - d. Site Characterization Progress Reports
 - e. Issue Resolution Reports
 - f. License Application
 - g. Topical Reports, Data, and Data Analyses
 - h. The DOE Environmental Impact Statement
 - i. Recommendation Report to the President of the United States (Notice of Disapproval, if submitted)
 - j. Any Publicly Available Information on Rulemakings
 - k. Public and Agency Comments on Documents
 - l. Response to Comments
 - m. NRC Technical Positions
 - n. NRC Regulatory Guides
 - o. The DOE Project Decision Schedules
 - p. DOE Program Management Documents

ENCLOSURE 2

Day	Regulation (10 CFR)	Action
648		2nd Prehearing Conference Order rules on amended applications, sets any further discovery schedule and sets schedule for prefiled testimony and hearing.
658	2.1015(b)	Appeals from 2nd Prehearing Conference Order, w/ briefs.
668	2.1015(b)	Briefs in opposition to appeals.
698		AL order ruling on appeals from 2nd Prehearing Conference Order.
700	2.748 (set by LB)	Final motions for summary disposition.
720	2.748	Replies to final motions for summary disposition.
730	Supp intro	Discovery complete.
740		LB order on final motions for summary disposition.
750	2.1015(b)	Appeals from final summary disposition order, w/ briefs.
760	2.1015(b)	Evidentiary hearing begins. Briefs in opposition to appeals from final summary disposition orders.
780		AL order or appeals from final summary disposition orders.
850		Evidentiary hearing ends.
860	2.754(a)(1)	Applicant's proposed findings.
880	2.754(a)(2)	Other parties' initial NRC staff's proposed findings.
900	2.754(a)(2)	NRC staff's proposed findings.
905	2.754(a)(3)	Applicant's reply to proposed findings.
995	2.760	Initial decision.
1005	2.762(a), 2.1015(c), 2.768(d)	Stay motions to AL Notices of Appeal.
1015		Replies to stay motions.
1035	2.762(b)	AL ruling on stay motion.
1045	2.768(e)	Appellant's briefs.
1055		Stay motions to Commission.
1055	2.768(f)	Replies to stay motions.
1065	2.762(c)	Appellee's brief.
1075	2.762(c)	NRC staff brief.
1095	2.1020 Supp intro	Completion of HWSS and Commission supervisory review. Commission ruling on any stay motions, issuance of construction authorization. NRC's 3-year period tolled.
1105	2.763	One argument on appeals.
1165		Appeals Board decision.
1180	2.1015(a), 2.766(b)(1)	Petitions for Commission review.
1190	2.766(b)(3)	Replies to petitions.
1250		Commission decision.

Topical Guidelines

The following topical guidelines are to be used for identifying the documentary material that should be submitted by LSS participants for entry into the LSS under section 2.1003. The topical guidelines will also be used by the Pre-Licensing Application Licensing Board for evaluating petitions for access to the

LSS during the pre-license application phase under § 2.1008.

I. Categories of Documents

- Technical reports and analyses including those developed by contractors
- QA/QC records including qualification and training records
- External correspondence
- Internal memoranda
- Meeting minutes, including DOE/NRC meetings, Commission meetings
- Drafts (i.e., those submitted for decision beyond the first level of management or similar criterion)
- Congressional Q's & A's
- “Regulatory” documents related to HLW site selection and licensing, such as:
 - Draft and final environmental assessments
 - Site characterization plans
 - Site characterization study plans
 - Site characterization progress reports
 - Issue resolution reports
 - Rulemakings
 - Public and agency comments on documents
 - Response to public comments
 - Environmental Impact Statement, Comment Response Document, and related references
 - License Application (LA), LA data base, and related references
 - Topical reports, data, and data analysis
 - Recommendation Report to President
 - Notice of Disapproval, if submitted

II. General Topics

1. Any document pertaining to the location and potential of valuable natural resources, hydrology, geophysics, tectonics (including volcanism), geomorphology, seismic activity, atomic energy defense activities, proximity to water supplies, proximity to populations, the effect upon the rights of users of water, proximity to components of the National Park System, the National Wildlife Refuge System, the National Wildlife and Scenic River System, the National Wilderness Preservation System, or National Forest Lands, proximity to sites where high-level radioactive waste and spent nuclear fuel is generated or temporarily stored, spent fuel and nuclear waste transportation, safety factors involved in moving spent fuel or nuclear waste to a repository, the cost and impact of transporting spent fuel and nuclear waste to a repository site, the advantages of regional distribution in siting of repositories, and various

geologic media in which sites for repositories may be located.

2. Any document related to repository design, siting, construction, or operation, or the transportation of spent nuclear fuel and high-level nuclear waste, not categorized as an “excluded document”, generated by or in the possession of any contractor of the Department of Energy, the Nuclear Regulatory Commission, or any other party to the HLW licensing proceeding.

3. All documents related to the physical attributes of the Basin and Range Province of the continental United States.

4. Any document listing and/or considering any site or location other than Yucca Mountain as a possible location for a high level nuclear waste repository, or any alternative technology to deep geologic disposal.

5. Any document analyzing the effect of the development of a repository at Yucca Mountain on the rights of users of water in the Amargosa ground-water basin in Nevada.

6. Any document analyzing the health and safety implications to the people and environment of the transportation of spent fuel between locations where spent fuel is generated or stored and Yucca Mountain, Nevada, or any other site nominated for repository characterization on May 23, 1986, including, but not limited to:

- a. Any analysis of possible human error in the manufacture of spent fuel casks;
- b. Any analysis of the actual population density along all of any specific projected routes of travel;
- c. Any analysis of releases from any actual radioactive material transportation incidents;
- d. Any analysis of the emergency response time in any actual radioactive materials transportation incident;
- e. Any actual accident data on any specific projected routes of travel;
- f. Any calculations or projections on the probabilities of accidents on any specific projected routes of travel;
- g. Any data on the physical properties or containment capabilities of spent fuel casks which have been used or which are projected to be used at any hypothetical or actual projected repository;
- h. Any analysis of modeling of the containment capabilities of spent fuel casks under a stress scenario;
- i. Any analysis or comparison of spent fuel casks projected to be used against the spent fuel cask certification standards of the Nuclear Regulatory Commission;

i. Any analysis of the containment capabilities of spent fuel casks containing spent fuel which has been burned up over an extended period.

j. Any document analyzing or comparing Yucca Mountain, Nevada, with any other site in the same geohydrologic setting.

k. Any document relating to potential interference or incompatibility between a Yucca Mountain, Nevada, high-level nuclear waste repository and atomic energy activities at the Nevada Test Site and Nellis Air Force base.

l. Any document related to the land status, use or ownership of Yucca Mountain, Nevada.

10. Any document considering or analyzing the attributes or detriments of any engineered barrier upon the radionuclide isolation capability of Yucca Mountain, Nevada, or any other site considered.

11. Any document evaluating the effect of extended fuel burn-up on Yucca Mountain, Nevada's adequacy as a repository site for disposal of spent fuel or upon the design of any such theoretical repository.

12. Any document analyzing or investigating the potential for discharge or radionuclides into the Death Valley National Monument.

13. Any document analyzing the recharge of the underlying saturated zone or the hydroconductivity of the saturated zone at Yucca Mountain.

14. Any document containing any data or analysis of volcanism in the geologic setting of which Yucca Mountain is a part.

15. Any document containing any data or analysis of tectonic events at Yucca Mountain, or pertaining to the tectonic framework of the Yucca Mountain area or any document containing any data or analysis of faults with or without surface expression in the area of Yucca Mountain.

16. Any document containing instructions or other limitations on the scope of work to be performed by Department of Energy personnel or contractor's personnel.

17. Any document pertaining to prevention or control of human intrusion at the Yucca Mountain site.

III. Specific Topics

1. The Site

A. Location, General Appearance and Terrain, and Present Use

B. Geologic Conditions

1. Stratigraphy and volcanic history of the Yucca Mountain area

a. Caldera evolution and genesis of ash flows

b. Timber Mountain Tuff

c. Paintbrush Tuff

d. Tuffaceous beds of Calico Hills

e. Crater Flat Tuff

f. Older tuffs

g. Sedimentary units

h. Basalts

2. Structure

a. Seismicity

b. Energy and mineral resources

c. Energy resources

d. Metals

e. Nonmetals

f. Paleontology

g. Mineralogy

h. Geochemistry

i. Tectonics

a. Faulting

b. Stress

c. Uplift/subsidence

d. Volcanism

C. Hydrologic Conditions

1. Surface water

2. Ground water

a. Ground water movement

b. Ground water quality

3. Present and projected water use in the area

d. Groundwater resources

e. Climatology

f. Meteorology

D. Geochemistry

1. Rock chemistry of the overlying and underlying host units

2. Water chemistry of unsaturated or saturated zones

3. Alteration

4. Retardation and transport

E. Environmental Setting

1. Land use

a. Federal use

b. Agricultural

c. Grazing land

d. Cropland

e. Mining

f. Recreation

g. Private and commercial development

2. Terrestrial and aquatic ecosystems

a. Terrestrial vegetation

i. Larrea-Ambrosia

ii. Larrea-Ephedra or Larrea-Lycium

iii. Coleogyne

iv. Mixed transition

v. Grassland-burn site

b. Terrestrial wildlife

i. Mammals

ii. Birds

iii. Reptiles

c. Special-interest species

d. Aquatic ecosystems

3. Air quality and weather conditions: Air quality

4. Noise

5. Aesthetic resources

6. Archaeological, cultural, and historical resources

7. Radiological background

a. Monitoring programs

b. Dose assessment

F. Transportation

1. Highway infrastructure and current use

2. Railroad infrastructure and current use

C. Socioeconomic Conditions

1. Economic conditions

a. Nye County

b. Clark County

e. Lincoln County

d. Methodology

2. Population density and distribution

a. Populations of the State of Nevada

b. Population of Nye County

c. Population of Clark County

d. Population of Lincoln County

3. Community services

a. Housing

b. Education

c. Water supply

d. Waste-water treatment

e. Solid waste

f. Energy utilities

g. Public safety services

h. Medical and social services

i. Library facilities

j. Parks and recreation

4. Social conditions

a. Existing social organization and structure

i. Rural social organization and social structure

ii. Social organization and structure in urban Clark County

b. Culture and lifestyle

i. Rural culture

ii. Urban culture

c. Community attributes

d. Attitudes and perceptions toward the repository

5. Fiscal and governmental structure

2. Expected Effects of the Site Characterization Activities

A. Site Characterization Activities

1. Field studies

a. Exploratory drilling

b. Geophysical surveys

c. Geologic mapping

d. Standard operating procedures for reclamation of areas disturbed by field studies

e. Trenching

2. Exploratory shaft facility

a. Surface facilities

b. Exploratory shaft and underground workings

c. Secondary egress shaft

d. Exploratory shaft testing program

e. Final disposition

f. Standard operating procedures that would minimize potential environmental damage

3. Other studies

a. Geodetic surveys

b. Horizontal core drilling

c. Studies of past hydrologic conditions

d. Studies of tectonic, seismicity, and volcanism

e. Studies of seismicity induced by weapons testing

f. Field experiments in G-Tunnel facilities

g. Laboratory studies

h. Waste package design, testing, and analysis

B. Expected Effects of Site Characterization

1. Expected effects on the environment

a. Geology, hydrology, land use and surface soils

i. Geology

ii. Hydrology

iii. Land use

iv. Surface soils

b. Ecosystems

c. Air quality

d. Noise

e. Aesthetics

1. Archaeological, cultural, and historical resources
 2. Socioeconomic and transportation conditions
 - a. Economic conditions
 - i. Employment
 - ii. Materials
 - b. Population density and distribution
 - c. Community services
 - d. Social conditions
 - e. Fiscal and governmental structure
 - f. Transportation
 - g. Worker safety
 4. Irreversible and irretrievable commitment of resources
 - C. Alternative Site Characterization Activities
 2. Regional and Local Effects of Locating a Repository at the Site
 - A. The Repository
 1. Construction
 - a. The surface facilities
 - b. Access to the subsurface
 - c. The subsurface facilities
 - d. Other construction
 - i. Access route
 - ii. Railroad
 - iii. Mined rock banding and storage facilities
 - iv. Shafts and other facilities
 - e. Utilities
 2. Operations
 - a. Emplacement phase
 - i. Waste receipt
 - ii. Waste emplacement
 - b. Caretaker phase
 3. Retrievability
 4. Decommissioning and closure
 - a. Schedule and labor force
 - b. Material and resource requirements
 - B. Expected Effects on the Physical Environment
 1. Geologic impacts
 2. Hydrologic impacts
 3. Land use
 4. Ecosystems
 5. Air quality
 - a. Ambient air-quality regulations
 - b. Construction
 - c. Operations
 - d. Decommissioning and closure
 - e. Noise
 - f. Construction
 - a. Construction
 - b. Operations
 - c. Decommissioning and closure
 7. Aesthetic resources
 8. Archaeological, cultural, and historical resources
 9. Radiological effects
 - a. Construction
 - b. Operation
 - i. Worker exposure during normal operation
 - ii. Public exposure during normal operation
 - iii. Accidental exposure during operation
 - C. Expected Effects of Transportation Activities
 1. Transportation of people and materials
 - a. Highway impacts
 - i. Construction
 - ii. Operations
 - iii. Decommissioning
 - b. Railroad impacts
 2. Transportation of nuclear wastes
 - a. Shipment and routing nuclear waste shipments
1. National shipment and routing
 - ii. Regional shipment and routing
- b. Radiological impacts
 - i. National impacts
 - ii. Regional impacts
 - iii. Maximally exposed individual impacts
 - c. Nonradiological impacts
 - i. National impacts
 - ii. Regional impacts
 - d. Risk summary
 - i. National risk summary
 - ii. Regional risk summary
 - e. Costs of nuclear waste transportation
 - f. Emergency response
 - D. Expected Effects on Socioeconomic Conditions
 1. Economic conditions
 - a. Labor
 - b. Materials and resources
 - c. Cost
 - d. Income
 - e. Land use
 - f. Tourism
 2. Population density and distribution
 3. Community services
 - a. Housing
 - b. Education
 - c. Water supply
 - d. Waste-water treatment
 - e. Public safety services
 - f. Medical services
 - g. Transportation
 4. Social conditions
 - a. Social structure and social organization
 - i. Standard effects on social structure and social organization
 - ii. Special effects on social structure and social organization
 - b. Culture and lifestyle
 - c. Attitudes and perceptions
 5. Fiscal conditions and government structure
 4. Suitability of the Yucca Mountain Site for Site Characterization and for Development as a Repository
 - A. Suitability of the Yucca Mountain Site for Development as a Repository: Evaluation Against the Guidelines That Do Not Require Site Characterization
 1. Technical guidelines
 - a. Postclosure site ownership and control
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Evaluation and conclusion for the qualifying condition on the postclosure site ownership and control guidelines
 - b. Population density and distribution
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the population density and distribution guideline
 - c. Preclosure site ownership and control
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Evaluation and conclusion for the qualifying condition on the preclosure site ownership and control guideline
 - d. Meteorology
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - B. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the meteorology guideline
 - e. Offsite installations and operations
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the offsite installations operations guideline
 - f. Environmental quality
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the environmental quality guidelines
 - g. Socioeconomic impacts
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the socioeconomic guideline
 - h. Transportation
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the transportation guideline
 2. Preclosure System
 - a. Preclosure system: radiological safety
 - i. Data relevant to the evaluation
 - ii. Evaluation of the Yucca Mountain site
 - iii. Conclusion for the qualifying condition on the preclosure system guideline radiological safety
 - b. Preclosure system: environment, socioeconomic, and transportation
 - i. Data relevant to the evaluation
 - ii. Evaluation of the Yucca Mountain site
 - iii. Conclusion for the qualifying condition on the preclosure system guideline environment, socioeconomic, and transportation
 3. Postclosure technical
 - a. Geohydrology
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the postclosure geohydrology guideline
 - b. Geochemistry
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the postclosure geochemistry guideline
 - c. Rock characteristics
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the postclosure rock characteristics guideline
 - d. Climatic changes
 - i. Data relevant to the evaluation
 - ii. Favorable conditions

1. Potentially adverse conditions
 - a. Evaluation and conclusion for the climate and geology qualifying condition
2. Data relevant to the evaluation
 - a. Favorable conditions
 - b. Potentially adverse conditions
 - c. Disqualifying conditions
3. Evaluation and conclusion for the qualifying condition on the postclosure and dewatering guidelines
4. Tectonics
 - a. Data relevant to the evaluation
 - b. Favorable condition
 - c. Potentially adverse condition
 - d. Disqualifying condition
 - e. Evaluation and conclusion for the qualifying condition on the postclosure tectonics guideline
5. Human interference, natural resources and site ownership and control
 - a. Data relevant to the evaluation
 - i. Favorable conditions
 - ii. Potentially adverse conditions
 - iii. Disqualifying conditions
 - b. Evaluation and conclusion for the qualifying condition on the postclosure human interference and natural resources technical guideline
6. Postclosure system
 - a. Evaluation of the Yucca Mountain Site
 - i. Quantitative analysis
 - ii. Qualitative analysis
 - b. Summary and conclusion for the qualifying condition on the postclosure system guideline
7. Preclosure (Local)
 - a. Surface characteristics
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the postclosure surface characteristics guideline
 - b. Rock characteristics
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the postclosure rock characteristics guideline
 - c. Hydrology
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the postclosure hydrology guideline
 - d. Tectonics
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the postclosure tectonics guideline
 - e. Ease and cost of siting, construction, operation, and closure

- a. Data relevant to the evaluation
 - b. Breakdown
 - c. Conclusions for the qualifying condition on the ease and cost of siting, construction, operation, and closure guideline
7. Conclusions regarding suitability of the Yucca Mountain Site for site characterization
 - B. Performance Analyses
 1. Preclosure radiological safety assessments
 - a. Preclosure radiation protection standards
 - b. Methods for preclosure radiological assessments
 - i. Radiological assessment of construction activities
 - ii. Radiological assessment of normal operations
 - iii. Radiological assessment of accidental releases
 2. Preliminary analysis of postclosure performance
 - a. Subsystem description
 - i. Engineered barrier subsystem
 - ii. The natural barrier subsystem
 - b. Preliminary performance analyses of the major components of the system
 1. The waste package lifetime
 - ii. Release rate from the engineered barrier subsystem
 - c. Preliminary system performance description and analysis
 - d. Comparisons with regulatory performance objectives
 - e. Preliminary evaluation of disruptive events/disruptive natural processes
 - f. Conclusions
 - A. Transportation
 1. Regulations Related to Safeguards
 2. Safeguards
 3. Conclusion
 - B. Packaging
 1. Packaging design, testing, and analysis
 2. Types of packaging
 - a. Spent fuel
 - b. Casks for defense high-level waste and West Valley high-level waste
 - c. Casks for use from an NRS to the repository
 3. Possible future developments
 - a. Mode-specific regulations
 - b. Overweight truck casks
 - c. Rod consolidation
 - d. Advanced handling concepts
 - e. Combination storage/shipping casks
 - C. Potential Hazards of Transportation
 1. Potential consequences to an individual exposed to a maximum extent
 - a. Normal transport
 - b. Accidents
 2. Potential consequences to a large population from very severe transportation accidents
 - a. Risk assessment
 - i. Outline of method for estimating population risks
 - ii. Computational models and methods for population risks
 - iii. Changes to the analytical models and methods for population risks
 - d. Transportation scenarios evaluated for risk analysis
 - e. Assumptions about wastes
 - f. Operational considerations for use in risk analysis

8. Values for factors needed to calculate population risks
 - a. Results of population risk analyses
9. Uncertainties
 - a. Risks associated with defective cask construction, lack of quality assurance, inadequate maintenance and human error
- D. Cost Analyses
 1. Outline method
 2. Assumptions
 3. Models
 4. Cost estimates
 5. Limitations of results
- E. Barge Transport to Repository
- F. Effect of a Monitored Retrievable Storage Facility on Transportation Estimates
- G. Effect of Air-Reactor Rod Consolidation on Transportation Estimates
- H. Criteria for Applying Transportation Guideline
 1. DOE Responsibilities for Transportation Safety
 1. Prioritization
 2. Emergency response
 3. Insurance coverage for transportation accidents
 - J. Modal Mix
 1. Train shipments
 - a. Ordinary
 - b. Dedicated train
 2. Truck shipments
 - a. Legal weight
 - b. Overweight

Environmental Impact: Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this final rule.

Paperwork Reduction Act Statement

This rule does not contain information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.).

Regulatory Analysis

The DOE analysis of the costs and benefits of the LSS (U.S. Department of Energy, "Licensing Support System Benefit-Cost Analysis" (July, 1988) and companion DOE reports ("Preliminary Needs Analysis," "Preliminary Data Scope Analysis," and "Conceptual Design Analysis") are available for inspection in the NRC Public Document Room, 2020 L Street NW., Washington, DC. Single copies may be obtained from Francis X. Cameron, Office of General Counsel, U.S. Nuclear Regulatory Commission, Washington DC, 20555; Telephone: (301) 492-4823.

Regulatory Flexibility Analysis

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)),

ENCLOSURE 3

DISPOSITION OF THE INTERIM TOPICAL GUIDELINES

On April 14, 1989, the final rule amending the Nuclear Regulatory Commission's (NRC's) Rules of Practice in 10 CFR Part 2 for the adjudicatory proceeding on the application for a license to receive and possess high-level radioactive waste (HLW) at a geologic repository operations area, pursuant to 10 CFR Part 60, was published in the Federal Register [54FR14925 (1989)] under the title: "Submission and Management of Records and Documents Related to the Licensing of a Geologic Repository for the Disposal of High-Level Radioactive Waste." Topical guidelines identifying the information that should be submitted by the Licensing Support System (LSS) participants for entry into the LSS were recommended by all parties to the negotiated rulemaking. All of the recommendations were published as interim topical guidelines in the supplementary information on the rule, with the understanding that the list might be modified by the NRC after the rulemaking was completed. Subsequently, the NRC directed the staff to review, clarify, and modify the topical guidelines with the results being published as a regulatory guide. This document discusses the results of the NRC staff's review, clarification, and modification of the interim topical guidelines.

Three lists were included in the interim topical guidelines. The first list, "Categories of Documents" was retained (with some additions) and is Appendix A to the proposed "Draft Regulatory Guide Topical Guidelines for the Licensing Support System" (the draft regulatory guide). The second list was comprised of 17 general topics. The staff's disposition of each of these general topics is discussed later in this document. In summary, it is the staff's position that all information relevant to the licensing proceeding, which was requested in the second list, has been included in the draft regulatory guide. The third list was comprised of specific topics. It covers a broad range of material, including some that is well outside the scope of information that would be needed in the proceedings to license the HLW repository.

The information in the third list, which is outside the scope of what would be needed in the proceedings to license the HLW repository, generally deals with transportation and environmental issues. Requests for information on transportation of waste from reactor or temporary storage sites to the repository is clearly beyond the scope of the licensing requirements in 10 CFR Part 60. The Nuclear Waste Policy Act (NWPA) clearly states, in Sections 9 and 137, that it does not affect the regulation of transportation of spent nuclear fuel or high-level radioactive waste. The list of specific topics also includes requests for information on a range of environmental concerns which the staff assumes will have been resolved during the development and adoption by the U.S. Department of Energy (DOE) of the Environmental Impact Statement

(EIS) which must accompany an application to possess HLW at the repository. Therefore environmental information required to be included in the LSS has been limited to that information needed for NRC's adoption or modification of the DOE EIS.

The remaining information from the third list fell into two areas: information directly related to the repository systems defined in 10 CFR Part 60 (i.e; the natural, geologic repository operations area, and engineered barrier systems) and other topics described in 10 CFR Part 60 for which information is required in order for DOE to submit a complete license application (e.g., quality assurance, repository operations, etc.). Since the staff had recently completed a proposed "Draft Format and Content Regulatory Guide for the License Application for the High-Level Waste Repository" (FCRG), it was decided to develop the topical guidelines such that they would parallel the approach taken in this document. Therefore, the draft regulatory guide follows, as closely as practicable, the repository systems-based approach used in the FCRG. In cases where topical information crosses system boundaries in the FCRG, it has been redefined as a specific topic in the draft regulatory guide (e.g., Radiation Protection).

It should be noted that the FCRG contains an appendix that depicts the relationship of the 10 CFR Part 60 regulatory requirements to sections of the FCRG. Thus, the staff believed that patterning the topical guidelines after the FCRG would help ensure that the topical guidelines would be complete with regard to the information required for the HLW repository license application process.

In developing the topical guidelines included in the draft regulatory guide, the staff attempted to provide a list of the topics for which LSS participants should submit documentary materials for entry into the LSS under 10 CFR 2.1003. As revised, the topical guidelines are designed to be broad enough to encompass all potential licensing issues. Most of the guidelines include several subheadings. In these cases, the higher level guideline is meant to cover any more detailed item that falls under it. The topical guidelines will not be used as the detailed topical index for locating documents within the LSS. This function will be served by the document header, whose fields are being developed by the LSS Administrator, with guidance from the LSS Advisory Review Panel. If such a document is developed, it will be developed separately by the LSS Administrator. The topical guidelines have been kept broad. Each guideline is all-inclusive, with regard to all documents germane to that topic, for the site.

As discussed above, a list of 17 general topics was included in the interim topical guidelines. Listed below are the 17 general topics and the staff's response (R) to each one.

1. Any document pertaining to the location and potential of valuable natural resources, hydrology, geophysics, tectonics (including volcanism), geomorphology, seismic activity atomic energy defense activities, proximity to water supplies, proximity to populations, the effect upon the rights of users of water, proximity to components of the National Park System, the National Wildlife Refuge Systems, and the National Wildlife and Scenic River System, the National Wilderness Preservation System or National Forest Land, proximity to sites where high-level radioactive waste and spent nuclear fuel is generated or temporarily stored, spent fuel and nuclear waste transportation, safety factors involved in moving spent fuel or nuclear waste to repository, the cost and impact of transporting spent fuel and nuclear waste to a repository site, the advantages of regional distribution in siting of repositories, and various geologic media in which sites for repositories may be located.

- R. It is NRC's position that the LSS should be limited to information relevant to licensing of the HLW repository. Information relevant to: natural resources, hydrology, geophysics, tectonics, volcanism, geomorphology, and seismic activity are covered under Topic II. Natural Systems of the Geologic Setting. The relevance of the rest of the information described in this general topic would seem to be primarily to development and consideration of DOE's EIS. As stated on page one of the draft regulatory guide:

Pursuant to section 114(f)(4) of the Nuclear Waste Policy Act of 1982 as amended, (42 U.S.C. 10134(f)(4)), the Commission is required "to the extent practicable," to adopt the environmental impact statement (EIS) prepared by the Department of Energy (DOE). The Commission's regulations have been amended to be in accord with this statutory provision. See 10 CFR § 51.26(c). Therefore, the environmental issues in the topical guidelines will be limited to those documents relevant to the Commission's adoption or modification of the DOE EIS.

2. Any document related to repository design, siting, construction, or operation, or the transportation of spent nuclear fuel and high-level nuclear waste not categorized as an "excluded document," generated by or in the possession of any contractor of the Department of Energy, the Nuclear Regulatory Commission, or any other party to the HLW licensing proceeding.
- R. This general topic, with the exception of requirements for information on transportation which are beyond the scope of the LSS, is simply a requirement for all relevant information not considered to be excluded documents. Sections 9 and 137 of the NWPA state that it (the NWPA) does not affect regulation of transportation of spent nuclear fuel or high-level radioactive waste. Since the inclusion of all relevant information is a requirement for participation in the LSS and the licensing proceedings, this seems to be an unnecessary or redundant topic.

3. All documents related to the physical attributes of the Basin and Range Province of the continental United States.
- R. The Basin and Range Province basically encompasses the entire western part of the United States. 10 CFR Part 60 defines the geologic setting at a more appropriate level for repository licensing. The draft regulatory guide is based on the information requirements of 10 CFR Part 60. The topic which speaks to the Geologic Setting is Topic II. Natural Systems of the Geologic Setting.
4. Any document listing and/or considering any site or location other than Yucca Mountain as possible location for a high level nuclear waste repository, or any alternative technology to deep geologic disposal.
- R. The LSS will be used in the licensing proceedings for the site being proposed in DOE's license application. The topical guidelines have been written to be as generic as 10 CFR Part 60 is. Any relevance other sites might have had was removed by the amendments to the NWPA. The NRC staff could not see the relevance of information about alternative technology to deep geologic disposal to the HLW licensing process as defined in 10 CFR Part 60.
5. Any document analyzing the effect of the development of a repository at Yucca Mountain on the rights of users of water in the Amargosa groundwater basin in Nevada.
- R. The topic of water rights is included in the draft regulatory guide. Topic VII is Land Ownership and Control. Under this heading is subtopic 1d, Plans for Restricting Access to the Controlled Area-Water Rights. To the extent that questions of radionuclide transport would be appropriate for discussion in the license application, they would be covered in Topic II. Natural Systems of the Geologic Setting (II.2 Hydrologic System) and X. Radiation Protection (X.6 Estimated Offsite Dose Assessment). The draft regulatory guide makes it clear that each topic is to be considered all inclusive in terms of information required for the HLW licensing process. In addition, it is assumed that environmental issues relevant to the Amargosa groundwater basin will have been considered in the development of DOE's EIS.

6. Any document analyzing the health and safety implications to the people and environment of the transportation of spent fuel between locations where spent fuel is generated or stored and Yucca Mountain, Nevada, or any other site nominated for repository characterization on May 28, 1986, including, but not limited to:
- a. Any analysis of possible human error in the manufacture of spent fuel casks;
 - b. Any analysis of the actual population density along all of any specific projected routes of travel;
 - c. Any analysis of releases from any actual radioactive material transportation incidents;
 - d. Any analysis of the emergency response time in any actual radioactive materials transportation incident;
 - e. Any actual accident data on any specific projected routes of travel;
 - f. Any calculations or projections on the probabilities of accidents on any specific projected routes of travel;
 - g. Any data on the physical properties or containment capabilities of spent fuel are projected to be used at any any hypothetical or actual projected repository;
 - h. Any analysis of modeling of the containment capabilities of spent fuel casks under a stress scenario;
 - i. Any analysis or comparison of spent fuel casks projected to be used against the spent fuel cask certification standards of the Nuclear Regulatory Commission;
 - j. Any analysis of the containment capabilities of spent fuel casks containing spent fuel which has been burned up over an extended period.
- R. Transportation is beyond the scope of the licensing process for the HLW repository, as defined by 10 CFR Part 60 and the NWPA. Therefore, this topic has not been included in the draft regulatory guide.
7. Any document analyzing or comparing Yucca Mountain, Nevada, with any other site in the same geohydrologic setting.
- R. This topic was excluded because under the NWPA, as amended, no other site is to be considered concurrently.
8. Any document relating to potential interference or incompatibility between a Yucca Mountain, Nevada, high-level nuclear waste repository

and atomic energy activities at the Nevada Test Site and Nellis Air force base.

- R. It is the view of the NRC staff that this is primarily an issue which would be addressed in DOE's EIS. However, information about activities at Nellis Air Force Base or the Nevada Test Site which could affect the safety or performance of the repository would fall under several of the topics in the draft regulatory guide (e.g., II. Natural Systems of the Geologic Setting, III. Geologic Repository Operations Area, IV. Engineered Barrier Systems, VI. Conduct of Repository Operations, etc.).
9. Any document related to the land status, use or ownership of Yucca Mountain, Nevada.
- R. This is covered under Topic VIII. Land Ownership and Control.
10. Any document considering or analyzing the attributes or detriments of any engineered barrier upon the radionuclide isolation capability of Yucca Mountain, Nevada, or any other site considered.
- R. This would be covered under Topic IV. Engineered Barrier Systems for the site proposed in the application.
11. Any document evaluating the effect of extended fuel burn-up on Yucca Mountain, Nevada's adequacy as a repository site for disposal of spent fuel or upon the design of any such theoretical repository.
- R. Topic XI. is Any Alternatives Considered (e.g., design interpretations, models)
12. Any document analyzing or investigating the potential for discharge of radionuclides into the Death Valley National Monument.
- R. This topic would be addressed in DOE's EIS.
13. Any document analyzing the recharge of the underlying saturated zone or the hydroconductivity of the unsaturated zone at Yucca Mountain.
- R. This is covered under Topic II., Natural Systems of the Geologic Setting (II.2 Hydrologic System)
14. Any document containing any data or analysis of volcanism in the geologic setting of which Yucca Mountain is a part.
- R. This is covered in Topic II., Natural Systems of the Geologic Setting, (II.1 Geologic System).

15. Any document containing any data or analysis of tectonic events at Yucca Mountain, or pertaining to the tectonic framework of the Yucca Mountain area or any document containing any data or analysis of faults within or without surface expression in the area of Yucca Mountain.
- R. This is covered in Topic II., Natural Systems of the Geologic Setting, (II.1 Geologic System).
16. Any document containing instructions or other limitations on the scope of work to be performed by Department of Energy personnel or contractor's personnel.
- R. Appendix A to the draft regulatory guide contains a list of examples of categories of documents to be included in the LSS. Among the categories which apply here are: external correspondence, internal memoranda, and DOE program management documents. Specific documents would fall under various topical headings within the guide depending on subject matter.
17. Any document pertaining to prevention or control of human intrusion at the Yucca Mountain site.
- R. Depending on the focus of the document, it would fall under Topic I. General Information (I.5 Any Publicly Available Information on the Physical Security Plan); VI. Conduct of Repository Operations (VI.9 Site Markers); or VII Land Ownership and Control (passim).

OUTLINE OF PRESENTATION

BACKGROUND ON CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES (CNWRA)

OVERVIEW OF CNWRA PROJECT FOR LSSA

STATUS REPORT

- Visits made to:
 - Yucca Mountain Project Office (DOE)
 - State of Nevada
 - NRC (Washington, D. C.)
 - DOE (Washington, D. C.)
- Observations
- LSS Header Fields for Technical Data
- Issues

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

- CNWRA ESTABLISHED BY THE USNRC
 - Federally Funded Research and Development Center
 - Initial contract in October, 1987 with five year options
- PART OF SOUTHWEST RESEARCH INSTITUTE (SwRI),
SAN ANTONIO, TEXAS
 - Not-for-profit Research and Development in Engineering and Science
 - Over 2400 staff/\$190M gross annual income
 - Includes over 200 computer scientists and multiple computer labs

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES (CONT'D)

- CNWRA PROVIDES TECHNICAL ASSISTANCE/RESEARCH FOR NRC HLW PROGRAM
 - Systems Engineering and Integration
 - Geologic Setting, Engineered Barrier System, Repository Design for Construction and Operation, and Performance Assessment
 - Quality Assurance Program
 - Information Management and Technical Data Systems Development and Operations, including interface to NUDOCS and LSS

CNWRA PROJECT FOR LSSA

- Development of access protocols to LSS technical data
- Began work in June 1990
- LSSA letter to LSSARP members
- Fulfilling mandate of LSS Rule 2.1011 (d)(10) and 2.1003 (c)(1-3)

TASK OBJECTIVES

- Define technical data by category
- Identify organizations generating technical data
- Document existing/planned procedures for providing access to technical data
- Recommend a plan to assure access – including submission requirements and recommended header content
- Identify impacts of suggested plan – to encourage early problem resolution

APPROACH

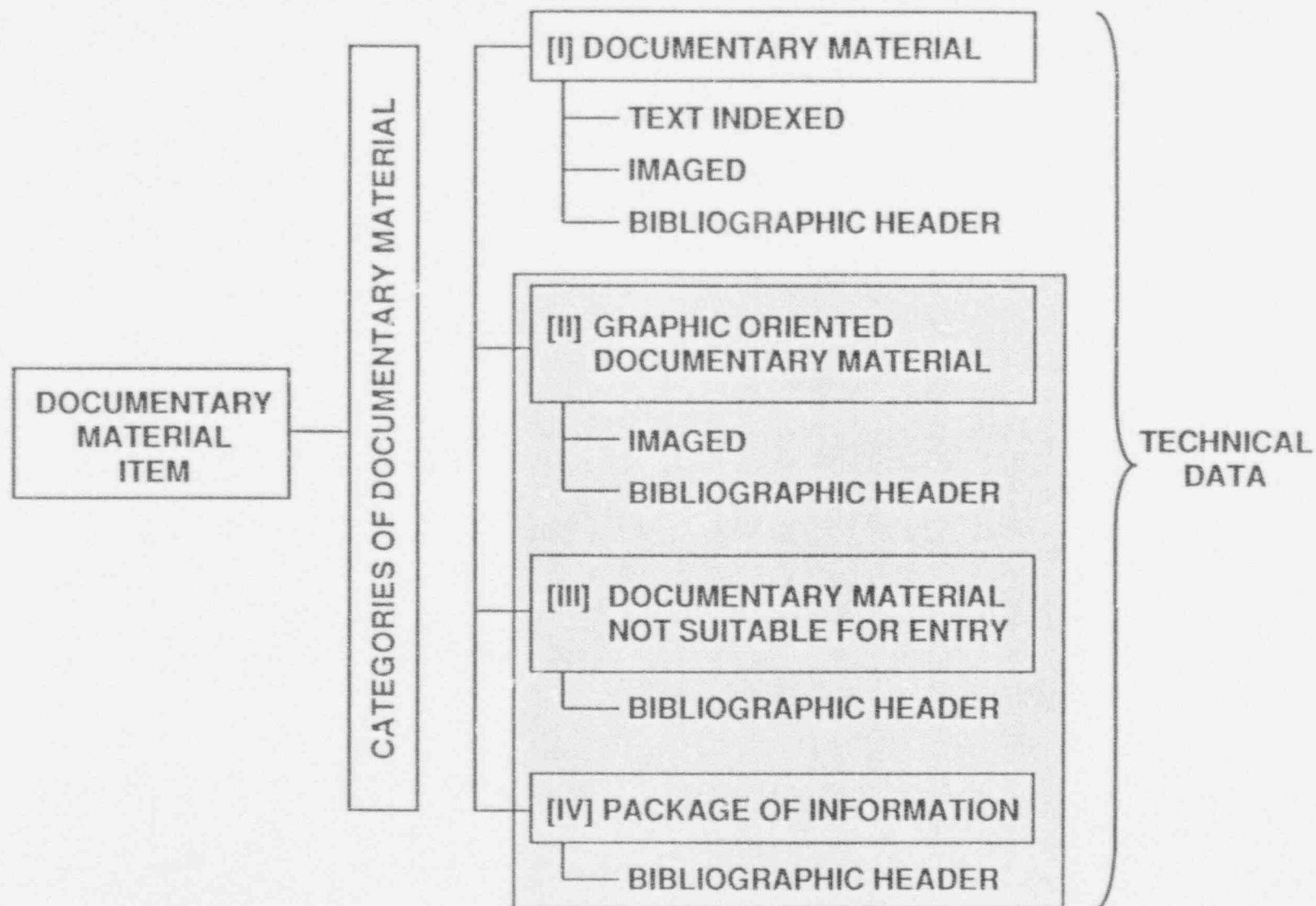
Examine background references and talk with knowledgeable LSS participants

Status report on initial work

TECHNICAL DATA

- For purposes of this Task, we've used the term "technical data" to mean documentary material which cannot be entered into the LSS in text-searchable form.
- In other words, it's the LSS material which can be found only with the help of a bibliographic header.
- If we refer to it in terms of media (rather than subject):
 - Some are imageable: graphics, tables, handwritten notes
 - Some are not: tapes, disks, cassettes, film, colored maps & photos, extra large maps.

CATEGORIES OF DOCUMENTARY MATERIAL DESCRIBED IN THE LSS RULE



DATA-RECORD PACKAGE

LSS Bibliographic Header
 Submitter
 Title
 Abstract
 Descriptors
 Identifiers
 Comments
 etc.

Table of Contents

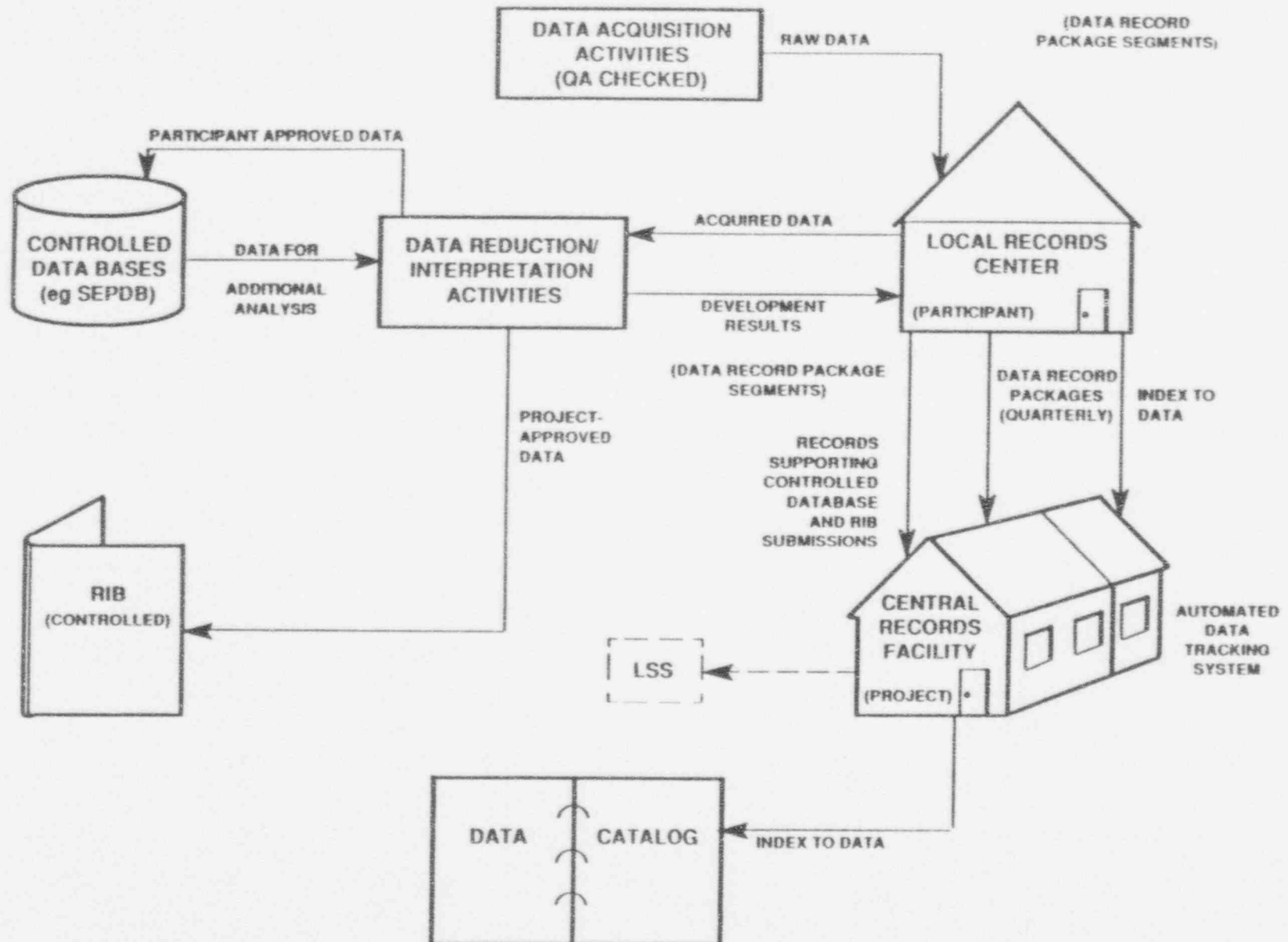
Weather Data Dump Record for: WX STA 2

INDIVIDUAL ITEM OF TECHNICAL DATA

Weather Data Dump Record for: WX STA 2

Date	Time (PET)	Dump From	To	Ascent Time Pat	Alt Error	Location
2/1/97	0600	4.39	4.4	1051	+0.0m	W. J. 6
2/1/97	1050	4.39	1051	1051	+0.0m	W. J. 6
2/1/97	1400	4.39	1401	1401	+0.0m	W. J. 6
2/1/97	1800	4.39	1801	1801	+0.0m	W. J. 6
2/1/97	2200	4.39	2201	2201	+0.0m	W. J. 6
2/2/97	0600	4.39	4.4	1051	+0.0m	W. J. 6
2/2/97	1050	4.39	1051	1051	+0.0m	W. J. 6
2/2/97	1400	4.39	1401	1401	+0.0m	W. J. 6
2/2/97	1800	4.39	1801	1801	+0.0m	W. J. 6
2/2/97	2200	4.39	2201	2201	+0.0m	W. J. 6
2/3/97	0600	4.39	4.4	1051	+0.0m	W. J. 6
2/3/97	1050	4.39	1051	1051	+0.0m	W. J. 6
2/3/97	1400	4.39	1401	1401	+0.0m	W. J. 6
2/3/97	1800	4.39	1801	1801	+0.0m	W. J. 6
2/3/97	2200	4.39	2201	2201	+0.0m	W. J. 6

SYSTEM OVERVIEW



YUCCA MOUNTAIN PROJECT OFFICE (DOE)

TECHNICAL DATA = ALL DATA RELATING TO ITS TECHNICAL ACTIVITIES

- YMPO project organizations submit their data within 45 days to nine local records centers (prime contractors).
- They forward it quarterly to YMPO Central Records Facility (CRF) in Data-Record Packages.
- Packages may include numeric data (e.g., SEPDB) and results from computer modeling and graphic-display systems.
- CRF uses automated Records Information System (RIS) and Automated Data Tracking System (ADTS) to monitor holdings.
- A comprehensive technical Data Catalog, a SEPDB report, and a summary description of analyzed technical data (RIB) are all produced quarterly.

YUCCA MOUNTAIN PROJECT OFFICE (DOE) (CONT'D)

- The backlog of technical data at local centers is now being incorporated into CRF holdings.
- YMPO technical data is currently available via written request to the YMPO, which promises timely response.
- When LSS loading begins, YMPO will:
 - Scan its Data-Record Packages to submit LSS images.
 - Create LSS headers for packages from existing RIS/ADTS headers.

STATE OF NEVADA

PRODUCTION:

- The Nuclear Waste Project Office (NWPO) and its contractors (University of Nevada and Nevada Bureau of Mines & Geology) have not produced any raw data, but may do so in the future.
- NWPO publishes formal technical reports containing graphic material.
- It safeguards, within associated packages, the handwritten/numeric/graphic "backup" data on which those reports were based.
- When LSS loading begins, NWPO will:
 - Scan its reports and associated backup-data packages to submit LSS images.
 - Create LSS headers for them.

STATE OF NEVADA (CONT'D)

NEEDS:

- Individual items of technical data which are not text searchable but are contained within a Data-Record Package do not require their own headers. A header for the package as a whole is sufficient.
- Technical data which cannot be scanned for entry into LSS (but will be identified in the LSS through a header) must be transferred from current storage locations to an LSSA-controlled records center – several months before HLW repository licensing proceeding begins, to assure timely access.

NRC (WASHINGTON, D.C.)

PRODUCTION:

- The NRC and its contractors have produced non-text-searchable material and will do so in the future.
- Currently, the NRC employs an automated records index (NUDOCS) to provide reference to its central record holdings
- When the LSS becomes operational, the NRC will submit its documents to the LSS through its Document Control Center.
- When LSS loading begins, the NRC will centrally:
 - Submit its non-text-searchable material to the LSSA for entry into the LSS, in accordance with procedures to be established by the LSSA.
 - Create LSS headers for its non-text-searchable material, in accordance with LSSA guidance.
- The location of non-text-searchable material which is also non-imageable will be identified in the header. A central NRC contact will be provided.

NRC (WASHINGTON, D.C.) (CONT'D)

NEEDS:

- The NRC is unable to comment on the adequacy of using a single header for each Data-Record Package as a whole without clarification of DOE procedures for creating a package, including composition and timing for submittal to the LSS.

DOE (WASHINGTON, D.C.)

PRODUCTION:

- The DOE does not expect to produce any significant amount of non-text-searchable material from its Washington, D.C. headquarters.
- Any such material that may be produced or that has been produced in the past will be entered into the LSS using a DOE capture station.

NEEDS:

- The DOE anticipates no extraordinary LSS access needs.

OBSERVATIONS

DEFINITION OF TECHNICAL DATA:

- No ambiguity perceived in the LSS Rule, but:
 - Certain issues must be resolved.
 - Clear implementing procedures are needed.
- Categorization is required:
 - To be sure none of it escapes proper LSS entry
 - To enable LSS users to find needed items through consistent entry/search terminology

OBSERVATIONS (CONT'D)

PRODUCTION OF TECHNICAL DATA:

- Primary producers:
 - DOE & contractors
 - NRC & contractors
- Some changes in existing plans/procedures/systems of the DOE and NRC may be necessary to accommodate LSS requirements with respect to technical data.

OBSERVATIONS (CONT'D)

ACCESS TO TECHNICAL DATA:

- Through bibliographic header.
- Imaged data will be viewed directly on the screen.
- Non-imaged data can be requested
- Each Data-Record Package will have:
 - A descriptive bibliographic header, with abstract
 - A viewable Table of Contents
 - Most pages viewable as images
 - Text-searchable pages (those without graphics)
- Viewable and text searchable:
 - Technical data summary (RIB)
 - Technical Data Catalog
 - Listing of available digital data on tape (SEPDB)

BIBLIOGRAPHIC HEADER FIELDS REQUIRED FOR DESCRIPTION AND RETRIEVAL OF TECHNICAL DATA/INFORMATION

- TITLE/DESCRIPTION
- ABSTRACT
- AUTHOR
- AUTHOR ORGANIZATION
- EVENT DATE/CODE
- DESCRIPTORS (SUBJECT)

- SEE LSS THESAURUS

- SPONSORING ORGANIZATION
- IDENTIFIERS
- COMMENTS

- REGULATORY CATEGORY

- DOCUMENT TYPE

- SEE DOCUMENT TYPE CODE LIST (DOE)
- ADDITIONS TO DOCUMENT TYPE LIST

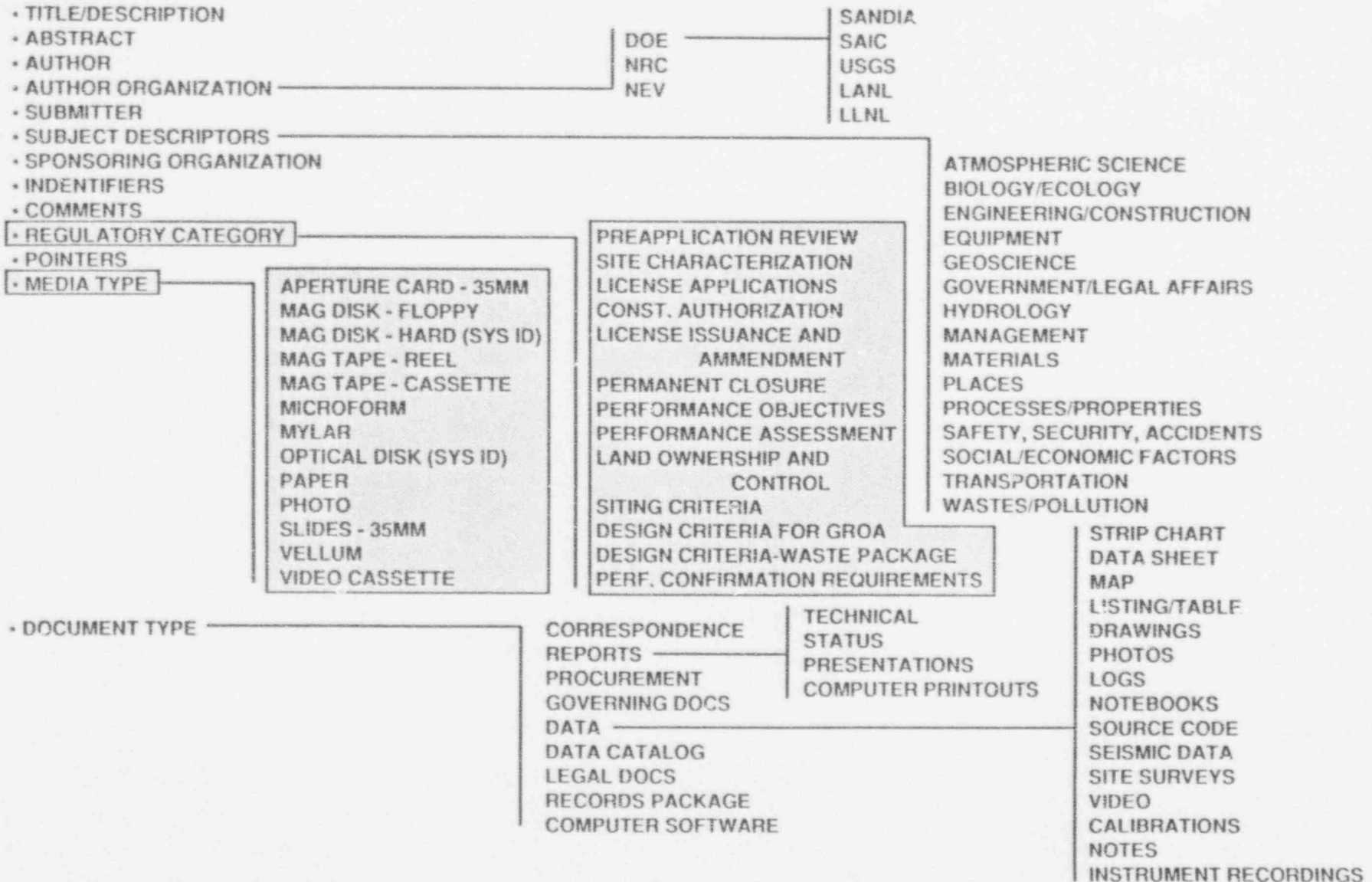
DATA BASE CATALOG
DATA CATALOG
DATA LISTING/TABLE

- MEDIA TYPE

- SEE MEDIA TYPE LIST (DOE)

- POINTERS
- SUBMITTER CENTER

BIBLIOGRAPHIC HEADER FIELDS REQUIRED FOR DESCRIPTION AND RETRIEVAL OF TECHNICAL DATA/INFORMATION



RELATIONSHIP BETWEEN TECHNICAL DATA CATEGORIZATION AND LSS HEADER FIELDS

CATEGORIZATION OF TECHNICAL DATA	RELATED LSS HEADER FIELDS	TEXT INDEXED
1. TECHNICAL SUBJECT	1. TITLE/DESCRIPTION 2. DESCRIPTORS (TECH. SUBJECT) 3. IDENTIFIERS 4. COMMENTS 5. ABSTRACT 6. DOCUMENT TYPE	Y Y Y Y Y Y
2. REGULATORY CATEGORY AREA OF REGULATORY CONCERN PER 10 CFR 60	1. REGULATORY CATEGORY (10 CFR 60) 2. TITLE/DESCRIPTION 3. DESCRIPTORS 4. IDENTIFIERS 5. COMMENTS 6. ABSTRACT	Y Y Y Y Y Y
3. DOCUMENT TYPE	1. DOCUMENT TYPE 2. MEDIA TYPE	Y Y
4. MEDIA TYPE	1. MEDIA TYPE 2. DOCUMENT TYPE	Y Y

ISSUES

HEADER CONTENT:

- How will currently approved fields be used? (title, abstract, descriptors, identifiers, comments, etc.)
- What fields must be added, if any?
 - Are submitter/sponsor fields sufficient for storage location of non-imaged material?
 - Can document-type field incorporate media?
 - Is a “regulatory category” field feasible?
 - Is a “qualified data” indication needed?

ISSUES (CONT'D)

DATA-RECORD PACKAGES:

- Timing of submission must be defined.
- How will non-imageable portions be individually stored?
- Table of Contents must be sufficiently descriptive.
 - Should it be text-searchable?
- Header must be thorough (abstract, descriptors, etc.)
- Should packages be made text-searchable insofar as possible?

ISSUES (CONT'D)

NON-IMAGEABLE CLASSES OF TECHNICAL DATA:

- Classes suggested:
 - Magnetic media
 - Film
 - Colored graphs, photos
 - Extra large maps
- Criteria: practicality, cost-effectiveness
- Access protocols needed

1990

1991

ACTIVITY

Jan

Mar

Aug

Sep

Nov

LSS Design & Development
SAIC Design Documents

Acquisition Support Documents

Request For Comment

Guidance & Standards

Header Guidance

Technical Data Recommendations

Facility Planning & Development
LSSA Facility Planning Issues Paper
SAIC Generic Facility Design

Access Planning
LSSA Access Issues Resolution Plan

Production Schedule

Draft Recommendation Approval: on Priority Document Loading Categories Schedule

Compliance Evaluation Program

LSSA Position Paper: Compliance Evaluation Strategy

Commission Approval of Compliance Evaluation Strategy

O&M Planning

1992

1993

ACTIVITY	March	April	November	August	September
LSS Design & Development		Request For Proposals	Contract Award	Install Equipment First Node	DOE Test & Acceptance
Guidance & Standards	Technical Data Guidance				
Facility Planning & Development					
Access Planning					
Production Schedule					
Compliance Evaluation Program				UNLV Facility Ready	
O&M Planning					

*representing the nuclear industry, DOE, site affected
local governments, adjacent affected local
governments, and the State of Nevada*

1. ~~Some~~ members of the Panel expressed concern that revision of the interim topical guidelines to exclude from the LSS environmental (including socio-economic) and transportation related documents was improper because it would thereby exclude information that might be relevant to issues in the NRC licensing proceeding. They are particularly concerned that, without the availability of environmental information in the LSS, they will be unable to provide independent comment to the NRC in the future on whether the NRC should adopt DOE's EIS. To exclude such information at this point in the process would be based on the presumption that it would not later be relevant to NRC's adoption of the EIS.
2. All members of the Panel (except NRC) strongly urged that if the NRC proposed to exclude such documents from the LSS, ~~(the NRC staff prepare a legal analysis supporting that exclusion and that)~~ *should* the decision to exclude such documents be made in a formal rulemaking proceeding rather than in a Reg Guide change so that a judicial determination can be obtained on the legality of such exclusion if appropriate.
3. Although the Panel did not attempt to reach a consensus on whether such exclusions were appropriate or legally supportable (and indeed some categories might be justifiable while others might not), all members of the Panel (except perhaps NRC) believe that a final agency decision, challengeable in court, should be made now so that the validity of the exclusions will not become an issue at a time when

the licensing process could be adversely affected by a determination that the exclusions were erroneous.

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: LSSARP Meeting

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Thursday, April 14, 1994

PAGES: 1 - 146

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

10/77

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: ISSAR Meeting

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Thursday, April 14, 1971

ANNALOUY & ASSOCIATES, LTD.

100 E. S. W. Suite 300
Westwood, UT 84001
(801) 73-3850

153W

1 UNITED STATES NUCLEAR REGULATORY COMMISSION
2 ATOMIC SAFETY AND LICENSING BOARD

3 ***

4 LSSARP MEETING

5 ***

6
7 Department of Energy
8 101 Convention Center Dr.
9 Las Vegas, Nevada

10
11 Thursday, April 14, 1994
12

13 The above-entitled meeting convened, pursuant to
14 notice, at 9:10 a.m.
15

16 BEFORE:

17 JOHN HOYLE,
18 NRC PANEL CHAIRMAN
19
20
21
22
23
24
25

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1612 K Street, N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

1 APPEARANCES:

2 KIRK BALCOM, Nevada

3 MALACHY MURPHY, Nye County

4 BRAD METTAM, Inyo County

5 PETE CUMMINGS, City of Las Vegas

6 ROBERT HOLDEN, NCAI

7 DENNIS BECHTEL, Clark County

8 JAY SILBERG, Nuclear Energy Institute

9 CORINNE MACALUSO, DOE

10 DAN GRASER, DOE

11 JOHN HOYLE, NRC

12 ARNOLD MOE LEVIN, NRC

13 CHIP CAMERON, NRC

14 TERRY QUIGLEY, NCAI

15 HARRY SWAINSTON, Nevada

16 MARYANN JONES, DOE

17 DAVID DRAPKIN, NRC

18 TONY NEVILLE, Labat-Anderson

19 MIKE BAUGHMAN

20 VIRGIL ROCHESTER

21

22

23

24

25

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1612 K Street, N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

P R O C E E D I N G S

[9:10 a.m.]

MR. HOYLE: Members of the panel, members of the public, I believe there's going to be a sign-in sheet that will be circulated very soon, so please sign up.

I welcome the opportunity to meet again with the LSS Advisory Review Panel. Our meeting is being conducted in accord with Federal Advisory Committee Act rules, since it is a federal advisory committee chartered to provide advice and recommendations to the Nuclear Regulatory Commission and the Department of Energy on matters concerning the licensing support system.

At this time I think I would like to go around the table and have the members of the panel introduce themselves. As I said, my name is John Hoyle. I'm from the Nuclear Regulatory Commission, and if I could start over here on my left with Kirk.

MR. BALCOM: Kirk Balcom, I represent the state of Nevada.

MR. MURPHY: Mal Murphy from Nye County.

MR. METTAM: Brad Mettam, Inyo County.

MR. CUMMINGS: Pete Cummings for the city of Las Vegas.

MR. QUIGLEY: Terry Quigley. I'm with the Oneida Tribe of Indians in Wisconsin.

1 MR. HOLDEN: And he's also with NCAI, National
2 Congress American Indians.

3 I'm Robert Holden, the Nuclear Waste Program
4 Director with NCAI.

5 MR. BECHTEL: Dennis Bechtel, Clark County,
6 Nevada.

7 MR. SILBERG: Jay Silberg from Shaw, Pittman,
8 Potts & Trowbridge representing the Nuclear Energy
9 Institute, which is the successor to the Edison Electric
10 Institute, EEIUA's program as well as Newmark & Anech. And
11 U.S. Council on Energy Awareness as well.

12 MS. MACALUSO: Corinne Macaluso, U.S. Department
13 of Energy.

14 MR. GRASER: Dan Graser, U.S. Department of
15 Energy.

16 MR. LEVIN: Arnold Levin. I go by the nickname
17 Moe. I'm with NRC, and I'm the LSSA.

18 MR. CAMERON: Chip Cameron. I'm with the office
19 of general counsel at the regulatory commission.

20 MR. HOYLE: Thank you very much. I do want to
21 remind everyone, particularly those that have microphones in
22 front of them, that that mike leads the feed into the tape
23 recorder for the court reporter today. The only mike that's
24 going into the P.A. system is this one up here. So we'll
25 try to have presentations made from up here, but when you do

1 comment and we have discussion later from the floor, if you
2 would speak up so that those in the back can hear, I'd
3 appreciate it.

4 Today's meeting is actually a follow-up of the
5 panel's last meeting, which was held in October here in Las
6 Vegas. At that meeting we had quite a bit on our plate,
7 since we hadn't met for over a year at that time, but we did
8 have an opportunity to obtain initial reactions and
9 expressions of concern on an approach that NRC had put forth
10 which would make DOE responsible for developing and also
11 operating the LSS using InfoSTREAM's designs and technology.
12 That preliminary discussion resulted in a February 18, 1994,
13 letter to the NRC chairmen and commissioners from the panel.
14 I had the able drafting assistance of Mr. Murphy on that
15 letter. I greatly appreciate that now.

16 That letter expressed the panel's reactions and
17 concerns and concluded that an additional meeting was going
18 to be necessary, one at which the panel would attempt to
19 reach a fuller understanding of the NRC role in maintaining
20 supervision and control of the LSS under this proposed
21 rearrangement.

22 To prepare for this meeting, the NRC team went
23 back and reviewed the October discussions which were very,
24 very useful. We then put together an information report to
25 the commission. In this report we tried to clarify and

1 expand on the mechanisms to be used by the NRC to maintain
2 control. The panel members received a copy of this from me.
3 It was designated SECY-94-081. I have a few extra copies of
4 that up here for those that would need it.

5 The LSS administrator and his team will brief us
6 on these mechanisms this morning. I have left the afternoon
7 open for panel discussion. I'm hopeful that the NRC
8 participants will be able to address fully the concerns of
9 the panel members and try to satisfy them to the extent
10 possible, knowing that some may have continuing concerns as
11 the LSS development moves forward. I welcome and encourage
12 discussion of any new creative options today.

13 By the end of the day, however, I would like to
14 see us, as a panel, come to closure on a recommendation to
15 the commission on this topic. If it is a consensus
16 recommendation, that's fine, if it isn't, that's fine too.
17 In any event, I would like enough guidance to put together a
18 letter to the commission so the commission will have the
19 panel's views as it deliberates its final decision.

20 Before I ask Mr. Levin to begin, do any members
21 wish to make any opening comments at this time?

22 Let me review the agenda also, Moe, before I get
23 started. We got a late start, so it's already coming up on
24 9:20. Moe will have a few introductory remarks, and then I
25 think introduce his briefing team, really. So we've allowed

1 enough time for that this morning and some preliminary
2 discussion. I don't know whether that will take us all the
3 way to noon or not, we'll see, and we'll take a break maybe
4 in about a half hour.

5 This afternoon, as I said, I've just left open for
6 panel discussion. We can move as fast or as slow as we feel
7 we need to. Tomorrow we'll have some more open discussion
8 in case we've thought of anything overnight that needs to be
9 brought out, and then Moe will make a presentation tomorrow
10 morning. Kirk Balcom will give us a report from the header
11 sub-group, which has done some work since our last meeting.
12 And Mal Murphy had sent us a letter regarding the use of the
13 LSS on a pilot project basis, and we'll give Mal some time
14 to talk about that and the panel enough time to talk about
15 it as well. And we'll end up tomorrow morning talking about
16 next steps for ourselves.

17 With that as background, then, let me introduce
18 Moe, as he likes to be called, Levin. Moe is the new LSS
19 administrator for NRC. I didn't bring along any curriculum
20 vitae, Moe. Maybe you'll tell us when you're up here where
21 you came from and how well you like the NRC. So why don't
22 we get started now.

23 MR. LEVIN: Morning. Hello. Where I came from.
24 My background is basically in data processing information
25 systems. I graduated with a degree basically in

1 information -- in business data processing, and then I
2 worked for the -- before coming into the NRC I worked for
3 about 23 years in the systems programming at the Bureau of
4 the Census. I came to NRC on October 18th of 1993. So
5 that's as much background as I care to go into. And my name
6 is Moe Levin. My middle name is not "as he likes to be
7 called." So I look forward to working with the panel in the
8 shaping of the technology that will be the LSS.

9 I think input from the panel as stakeholders in
10 the system or as representatives of the stakeholders in the
11 system is absolutely vital to the implementation of the
12 effect of LSS. As I said before, I became LSSA about one
13 week after the last panel meeting in October. Since then,
14 I've been working with our staff to consider your contents
15 on Alternative 3 as it was presented then and to strengthen
16 our position on exercise in NRC control over DOE's operation
17 of the LSS.

18 As John said, one of the main purposes of this
19 meeting is to continue the discussion on Alternative 3 and
20 report on what I believe is a program that will ensure that
21 the LSSA can certify the integrity and responsiveness of the
22 LSS as operated by DOE. I intend to approach my
23 relationship with DOE as operators of the LSS in the same
24 way I would with any organization that I contract for
25 services with. I view the DOE as a contractor to me, just

1 to operate the LSS. And to that end we've mapped out a
2 strategy that I think will currently define DOE's
3 responsibilities as operator of the LSS, provide the
4 procedures and tools that will allow the LSSA to monitor
5 DOE's performance in order to identify any operational
6 deficiencies and provide mechanisms that will allow
7 interested parties to be made aware of the status of LSS
8 operations in a timely manner and will identify problems as
9 they are uncovered, and we'll make sure that everyone knows
10 what steps are being taken to resolve them.

11 This strategy is outlined in the paper SECY-94-81,
12 and unless there are any questions, I'd like to get right
13 into a presentation by David Drapkin on the LSSA ~~auto~~^{audit}
14 program, which is the mechanism that will allow the LSSA to
15 monitor DOE's operation of the ISS. And if there are no
16 questions, David.

17 MR. DRAPKIN: Hi, everybody. I'm Dave Drapkin.
18 As a little extra, as a little side note, the last time that
19 we got together Gerald Cranford promised that he would not
20 be here at the next meeting. I want to point out that he
21 has kept his promise and he is not here. So it says
22 something about NRC credibility, we're rebuilding NRC
23 credibility.

24 Today -- I also should introduce Tony Neville
25 sitting down there, Labat-Anderson, Incorporated, he works

1 for and has worked with me in developing this presentation.
2 Feel free to interrupt at any time and ask questions,
3 comments, whatever.

4 Okay. Go on to the next slide. Okay. This
5 basically outlines what we're going to talk about this
6 morning. Talk about why I'm giving this presentation, how
7 the audit program fits into this compliance assessment
8 program which we talked about last time. What are the
9 goals; what are we trying to achieve with the audit program.
10 We'll give you kind of an overview of what we see the audit
11 program to be, show you the documents or discuss the
12 documents that are relevant to the audit program, many of
13 which you'll get a chance to comment on later as they get
14 closer to being completed.

15 Then we'll get into some more details about
16 auditing, what we plan to do including our methodology, some
17 activities, and finally some very, very rough ideas of what
18 the audit program is going to cost.

19 Okay. Any questions so far, what we're trying to
20 do? Okay.

21 Well, talking about the purpose of the
22 presentation, the main reason that we're here is to let you
23 know that we've really given a lot of thought to how we
24 would oversee and control and make sure that the LSS
25 operates properly in accordance with the rule, and that we

1 can make everyone feel comfortable that the LSSA is doing
2 his job.

3 Okay. Want to talk about the oversight and
4 control roles of the LSSA with respect to the DOE, design,
5 development, operation and maintenance of the LSS. Now one
6 thing I should point out is that most of this program has
7 nothing to do specifically with Alternative 3. Okay. There
8 are just a few places where we've added things. Most of the
9 program would have been in place under the old rule exactly
10 as it stood, so there's nothing -- and I'll just point out
11 where the additions have been made.

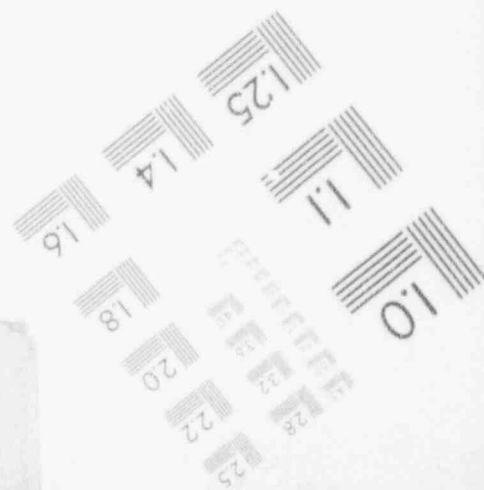
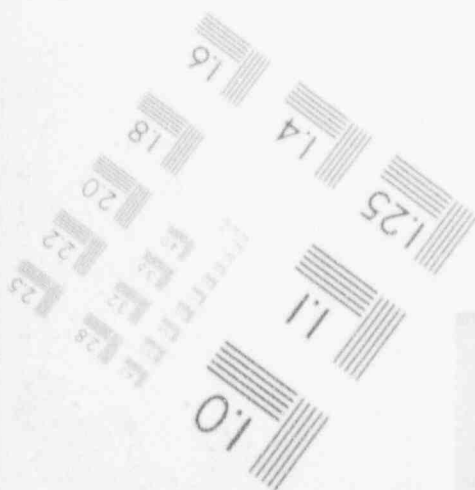
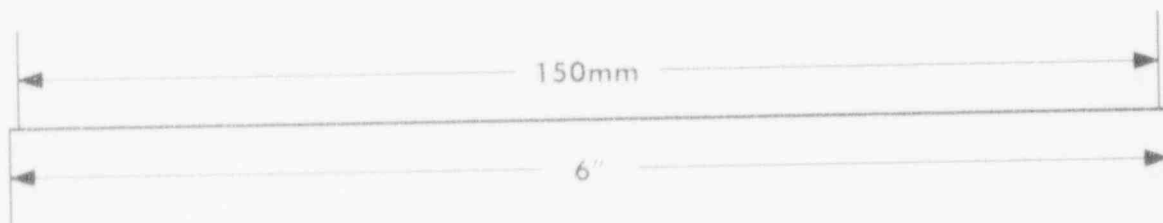
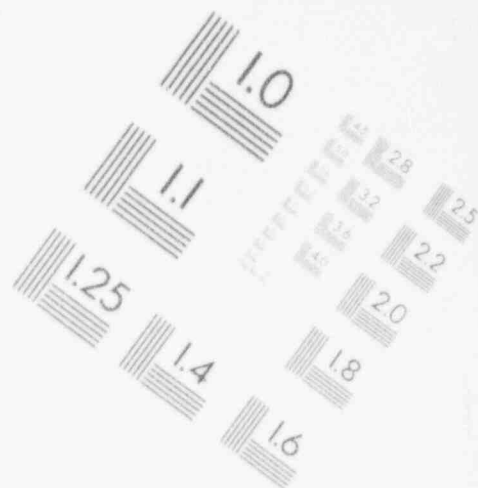
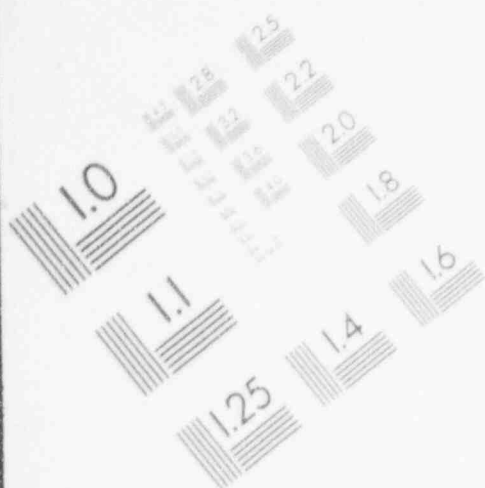
12 Okay. One addition that we've talked about is
13 including the advisory review panel, or at least some
14 members, in the audit process, and I'll show you as we go
15 along how that will occur, how we envision it to occur.

16 I'd also like to point out this is a proposal.
17 It's a plan that we've thought out. We've done tons of
18 paperwork and all kinds of good government stuff on it, but
19 it is not cast in stone or concrete or anything, especially
20 hard. We're looking for your thoughts on the matter as an
21 advisory review panel, known as the LSSA, is asking for your
22 advice. And he's told me to get up here and give you this
23 information so that you can give your advice.

24 Okay. The compliance assessment program, if you
25 will recall, is the overall program of the LSSA for ensuring

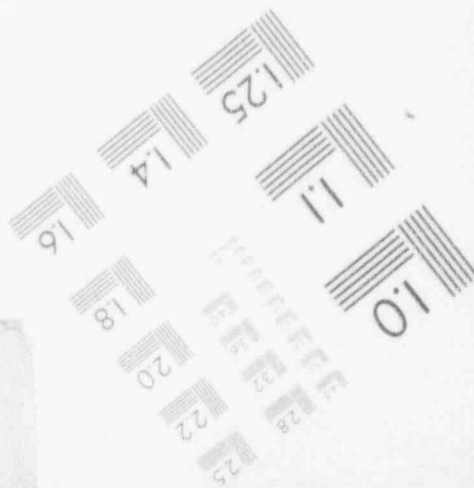
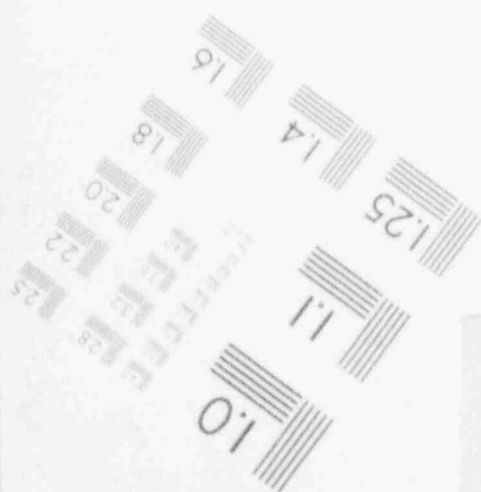
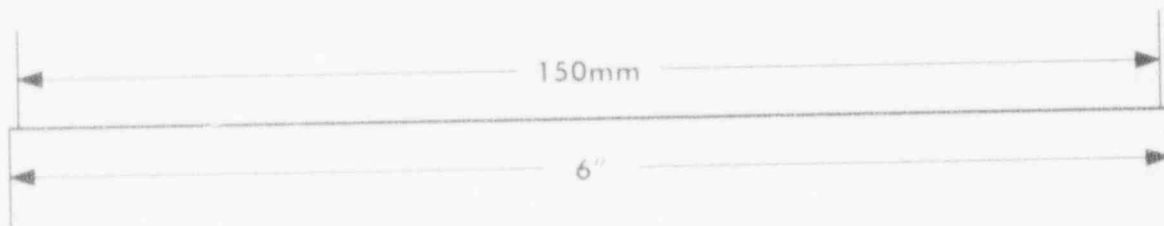
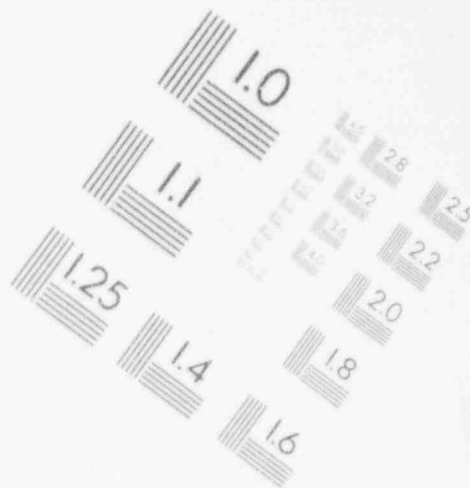
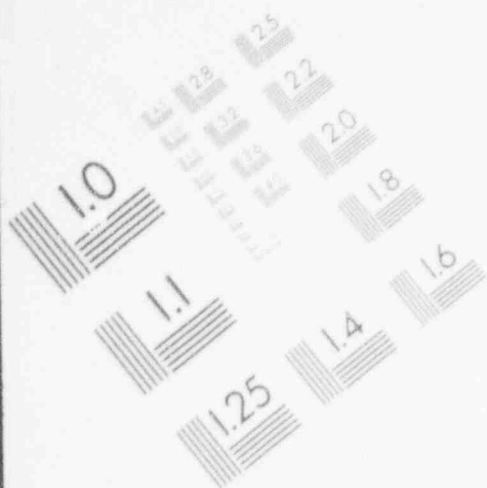
1

IMAGE EVALUATION
TEST TARGET (MT-3)



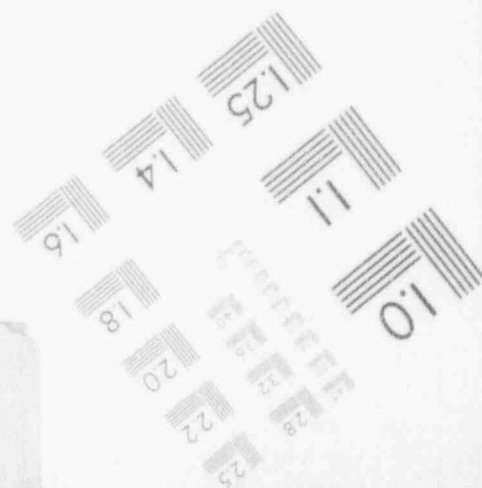
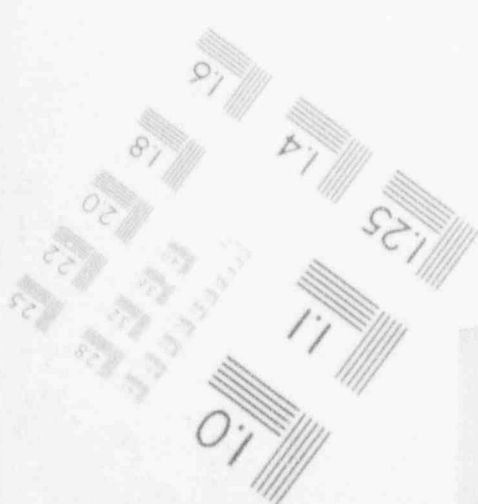
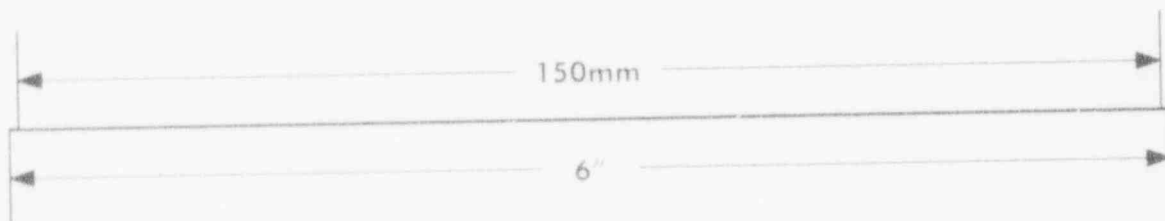
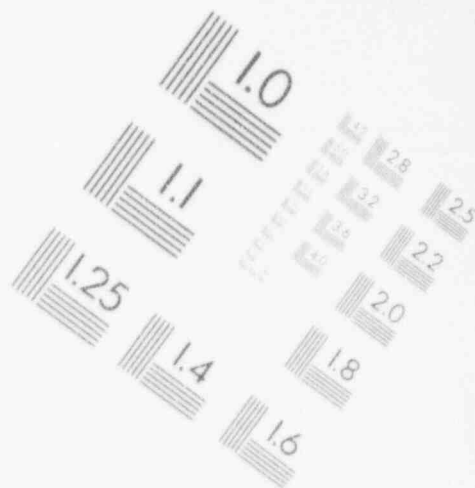
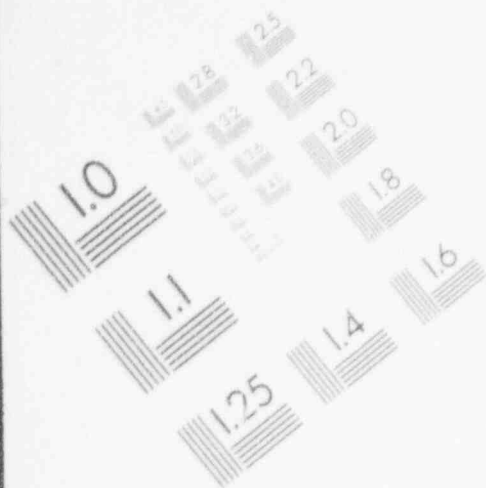
1

IMAGE EVALUATION
TEST TARGET (MT-3)



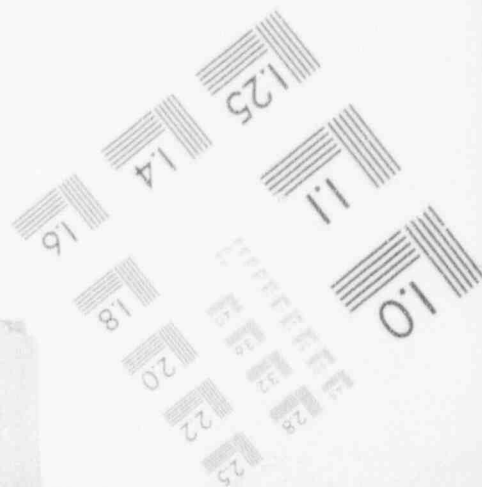
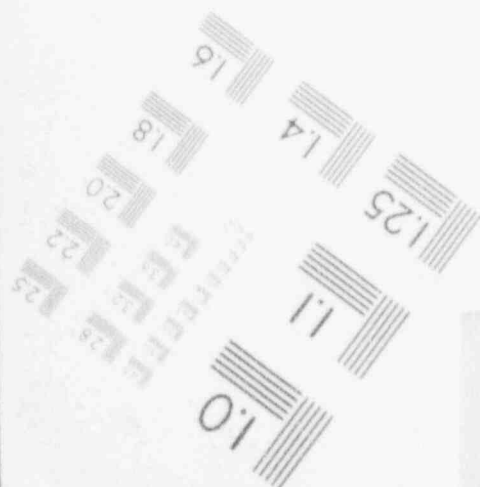
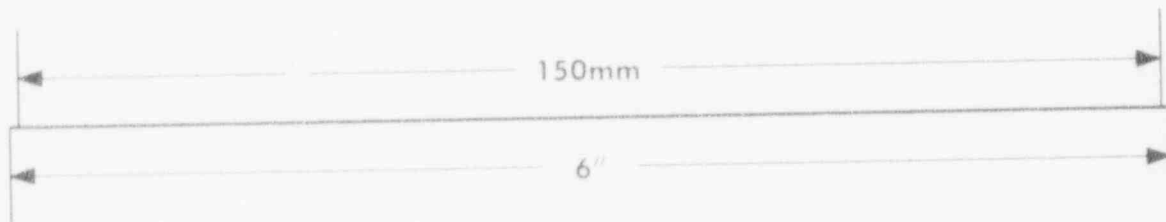
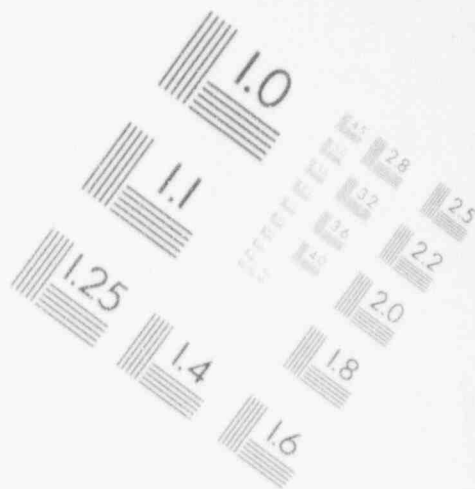
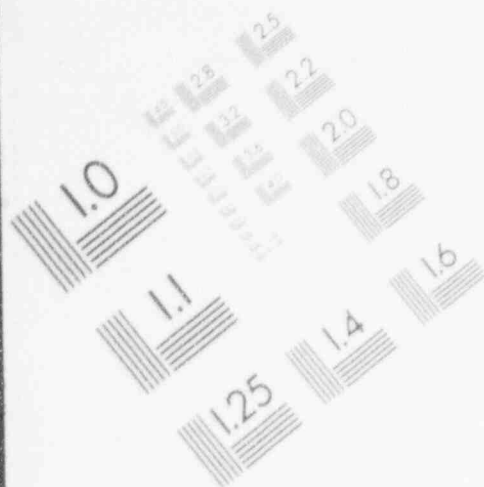
1

IMAGE EVALUATION
TEST TARGET (MT-3)



1

IMAGE EVALUATION
TEST TARGET (MT-3)



1 that not only DOE but also the participants comply with the
2 rule and whatever additional agreements we arrive at
3 associated with the rule.

4 Okay. The audit program is just a piece of that.

5 Okay. There's something that's going to exist
6 we're calling the LSS QA facility, which we envision at the
7 moment to be a computerized center with computerized hooks
8 into DOE's computers, run by the LSSA with LSSA contractors
9 independent of DOE, using our own software, taking chunks of
10 the database down for analysis, making sure that nothing is
11 changed, doing all those sorts of things. That ties in with
12 the audit program as well, but that's how we plan to look at
13 things, not through DOE-provided glasses, but we'll grind
14 our own lenses.

15 Okay. I don't see any more about that. So what
16 do we want -- why do we have an audit program? We want to
17 make sure that -- well, you can read this. Database
18 integrity is one issue. We want to make certain that the
19 database is not corrupted either by -- either for a
20 technical reason or for some nefarious reason or an accident
21 or anything, I want to make sure everything is correct.

22 I want to make sure that everyone is in compliance
23 with the LSS rule, and I want to talk about what we audit
24 against for a minute. Whenever there's an audit program,
25 you have to check or we have to check against some criteria.

1 Okay. Those criteria, or what we call the LSS participant
2 commitments, those commitments are a set of standards
3 against which we compare actions and implementation. So for
4 an example of a standard would be the quality of the
5 material scanned, that it's of a certain level. We'll talk
6 more about commitments. Also there's a handout which you'll
7 get after the presentation where you can see some examples
8 of commitments. Okay.

9 We want to provide LSSA oversight of DOE's
10 operation and maintenance. Okay. This is something new and
11 is associated with Alternative 3, in fact it eliminates a
12 problem for us. Prior to Alternative 3 the LSSA did the
13 operation and maintenance of the LSS, then who would audit
14 the LSSA? Creates a small problem, which we've now
15 eliminated since we have a good, solid independent auditing
16 group. And one of the jobs of the LSSA is to certify that
17 the participants are in compliance. Part of the input into
18 that certification process will be the audit reports.

19 And let's go on to page eight. Okay. Give you a
20 quick overview of the audit program. We're going to do
21 periodic audits of the LSS development. Now how often
22 that's going to occur, we haven't decided yet, but we'll
23 establish some periodicity to it and follow it up, write
24 audit reports, do all the usual stuff. Okay. Once we're
25 into the period of LSS operation, we'll be doing at least

1 semi-annual audits of DOE operation and maintenance. That
2 means that we'll have a major planned audit of DOE operation
3 and maintenance twice a year, and follow-up audits may occur
4 in-between and special audits may occur at any time. Okay.

5 We will also do audits of participant document
6 processing operations. I know no one wants to be audited,
7 but we want to make certain that the quality of the
8 information going into the LSS database is high, and to do
9 that, we have to audit everybody.

10 In addition, where there are problem areas, we
11 will focus on those areas and audit them whether they are
12 DOE problem areas or participant areas, and that includes
13 NRC as a participant.

14 MR. SILBERG: Okay. Could I interrupt you?

15 MR. DRAPKIN: Sure.

16 MR. SILBERG: The basis for these semi-annual
17 audits of each participant, how is that developed and is
18 that a hard-and-fast rule regardless of the number of
19 documents that a participant may have, some may have a lot,
20 some may have very little.

21 MR. DRAPKIN: Okay. They -- it certainly is not a
22 hard-and-fast rule. Clearly if there are -- an audit can be
23 a big thing or a little thing, okay. For someone with a lot
24 of documents and a lot of information going in, it's going
25 to be a big thing. For someone with relatively few

1 documents, an organization with relatively few documents
2 that are being submitted, it could be -- it could possibly
3 be a phone call, as little as that. Simply want to -- we'll
4 make the audit fit the situation, okay, but we have to give
5 Moe the ability to feel confident that the data going in --
6 to tell you that the data going in is correct and complete
7 as it can be.

8 Jay, did that answer your question? Okay.

9 MR. BECHTEL: Excuse me.

10 MR. DRAPKIN: Yes.

11 MR. BECHTEL: This computerized access that you
12 described before, is that considered to be part of the audit
13 process or is that something that's kind of a randomly
14 occurring or --

15 MR. DRAPKIN: No, that's part --

16 MR. BECHTEL: How does that work?

17 MR. DRAPKIN: Okay. Let me answer it in two
18 parts. Part one is the quality assurance facility or
19 quality, that is part of the LSSA's compliance assessment
20 program in general. It is not specific to audit.

21 MR. BECHTEL: Uh-huh.

22 MR. DRAPKIN: But it also is used for auditing
23 purposes, so there will be certain -- we don't want to rely
24 on someone else's computing facility to check things out.
25 Okay. So yes, it's part of the audit process, but it's also

1 part of other things. Did that answer your question?

2 MR. BECHTEL: Well --

3 MR. DRAPKIN: Go ahead. Ask it --

4 MR. BECHTEL: No, I'm just trying to -- maybe
5 later on if you get into a little more detail --

6 MR. DRAPKIN: Yeah. Just picture a room full
7 of --

8 MR. BECHTEL: Interested to see how it works
9 and --

10 MR. DRAPKIN: -- full of folks with PC's --

11 MR. BECHTEL: Yeah.

12 MR. DRAPKIN: -- and one of the things that they
13 do is, hey, let's take a sample of documents submitted on --
14 in January and let's see how the quality shapes up. Let's
15 just run it through a series of tests. I don't know what
16 the tests are going to be at this point. We're not to that
17 level of detail.

18 MR. BECHTEL: So it's sort of randomly, just --

19 MR. DRAPKIN: Yes. Well, in the sampling sort of
20 way. Not truly randomly but yes. Yeah. And that will be
21 an ongoing thing. It's not -- that is -- let me answer it
22 again in two parts. There will be continuous sampling and
23 testing. That's part of the LSSA quality assurance part of
24 the compliance assessment program. If we find a deficiency
25 or that there's a problem, it will be something that's done

1 as part of a follow-up audit or follow-up activities. It
2 can also be built into an audit, and I'll talk about how an
3 audit is created and what goes into planning that, and
4 you'll see how that -- it could be decided that we want to
5 include some automated access and analysis.

6 MR. LEVIN: Yeah. And I don't want to cut off any
7 discussion of this during this meeting. I just want to say
8 that everybody will have a chance to review, in as much
9 detail as you'd like, the full auditing program, so you'll
10 be able to comment on it in detail and give us your ideas
11 and everything. Okay.

12 MR. DRAPKIN: Okay. Let's go on to page 10 here.
13 Most of the bullets that I'm skipping over are reasonably
14 self-explanatory, and all that I would be able to do is read
15 them to you, and you could read them to yourselves. Okay.
16 The --

17 MR. MURPHY: Let me ask one question on page
18 nine --

19 MR. DRAPKIN: Sure.

20 MR. MURPHY: -- before you get to that.

21 MR. DRAPKIN: Sure.

22 MR. MURPHY: The LSSARP participation through
23 observation of LSSA audits --

24 MR. DRAPKIN: I want to talk about that --

25 MR. MURPHY: Okay.

1 MR. DRAPKIN: -- in more detail later. Okay.
2 This is an overview, and I'm going to talk about it in the
3 detail, we'll get to the detail part.

4 Okay. There's some documents that you should be
5 aware of, some documents, one of which is the LSS rule,
6 which I'm sure you know about. Second is the LSS
7 participant commitments. This is the key central document
8 to the compliance assessment program and to the audit
9 program. When the time comes, which hopefully will not be
10 too far into the future, when you're asked to review this
11 document, please, please, please pay special attention to
12 it, because it is this that establishes the criteria that
13 says -- that Moe can say, yes, we're in compliance or no we
14 are not. So -- and you'll see some examples of those, as I
15 said, in the handout I'll give at the end. Okay.

16 One of the things you'll be asked -- this is kind
17 of a rehash of what we talked about last time, as to
18 develop -- is compliance program plan for each participant,
19 and the LSSA will certify that and that will also be used as
20 a basis for the audit. The material submission plan, that
21 helps everyone plan how and in what order and when materials
22 will be added and entered into the LSS. Obviously we cannot
23 submit all the materials on one day. It's a multi-year
24 process, and it's one that we'll watch very closely to make
25 sure that documents are flowing in in the time frames that

1 we expect them to so that we're -- when we say the LSS is
2 completely loaded, it will be completely loaded.

3 MR. SILBERG: When you refer to, on page nine,
4 required participant reports, are these the kinds of things
5 you had in mind, program plan, the material submissions?

6 MR. DRAPKIN: Yes. Yes. Yes. Yes. Exactly. It
7 will be participant certifications. Tony, I draw a blank on
8 what those are. The only thing I can think about is you
9 certify, you specify designated LSS official --

10 MR. NEVILLE: Right.

11 MR. DRAPKIN: Okay.

12 MR. NEVILLE: LSSA --

13 MR. DRAPKIN: Yeah. And --

14 MR. NEVILLE: Other contact with general
15 administrative informations to facilitate the audit.

16 MR. DRAPKIN: Okay. Nothing exciting there.
17 Okay. There'll be some processing standards and guidance
18 documents, and you've all seen the topical guidelines
19 document already. Again we dive into more detail, or as I
20 like to say, we're pouring into the details here and
21 probably boring you as well. Hopefully not. But talk about
22 the commitments paper again.

23 Okay. Really said all there is to say about this.
24 And in the commitments on page 12 there are four different
25 kinds, or as we like to call them, groups of commitments.

1 Group one involves proper identification of the document
2 universe, proper relevancy screening and timely submission
3 of materials. This is a set of rules, set of agreements,
4 okay, that let us determine whether the documents you are
5 submitting are the correct ones, and you're not submitting
6 things that aren't relevant to the action at hand and that
7 things are being submitted on time. And this in essence
8 amounts to -- a commitment is in essence a contract between
9 you as a participant and the LSSA. Okay. You agree that
10 this is what you're going to do.

11 Okay. Yes. Oh, I'm sorry, Kenneth.

12 MR. KALMAN: You need me to speak in a microphone?
13 Ken Kalman, NRC. Jay. You skipped over slide 11, but on
14 this slide, "Define method of measuring participant
15 performance" --

16 MR. DRAPKIN: Correct.

17 MR. KALMAN: I was just wondering, at this point,
18 do you have any sort of basis that you're going to use what
19 is going to be NQA guidelines or anything?

20 MR. DRAPKIN: Let me address that a little bit
21 later.

22 MR. KALMAN: Okay. Thank you. That's important
23 to my group.

24 MR. DRAPKIN: Okay. What you'll see in the
25 handout later are some sample commitments which will answer

1 that question.

2 MR. HOYLE: Dave.

3 MR. DRAPKIN: Yes.

4 MR. HOYLE: Why don't you go through every slide
5 though, even if you just pause for a while to see if there
6 are any particular questions on each point.

7 MR. DRAPKIN: Sure. I'll be glad to do that.

8 MR. HOYLE: Don't pass over them entirely.

9 MR. DRAPKIN: Okay. What we did is prepared a
10 pretty comprehensive presentation to see how it was going,
11 but I'll be glad to stop and look at the slides you have to
12 read.

13 Okay. And so we were talking about the four areas
14 of LSS commitments.

15 MR. SILBERG: Before you take that off --

16 MR. DRAPKIN: Okay.

17 MR. SILBERG: -- is this document going to be
18 published for general comment or just circulated to the
19 LSSARP? Procedurally there may be folks who are going to
20 get involved in the LSS who are not around this table. They
21 may be groups that don't exist now, they may be groups that
22 decided not to participate.

23 MR. DRAPKIN: You're talking about the commitments
24 document.

25 MR. SILBERG: Yeah. You say the document will be

1 released for LSSARP review on the bottom of the preceding
2 slide.

3 MR. DRAPKIN: Well, it is our plan with all of our
4 documents, all of them to -- before we put the final staples
5 in them to give the LSSARP the opportunity to review that
6 document.

7 MR. SILBERG: Yeah. The question is, though, is
8 it going to get broader review.

9 MR. DRAPKIN: No, once that is completed, it
10 depends on the document. In this case I'm not sure whether
11 it should or not. The decision hasn't been made. Let me
12 ask Chip if he has a comment.

13 MR. CAMERON: Yeah. I think that David's
14 reference to ARP review is ARP review before we are
15 satisfied with the draft document that would then be
16 released for general public comment for exactly the reasons
17 that you identified, Jay.

18 MR. SILBERG: And this would be in the nature of a
19 new reg or a reg guide or something else?

20 MR. DRAPKIN: I'm not sure what format it would
21 take.

22 MR. CAMERON: I'm not exactly sure what form it
23 would take either. I suppose it could be in the form of a
24 reg guide or something else. If the panel has any
25 recommendations on that later on as to the most appropriate

1 vehicle, that would be helpful.

2 MR. SILBERG: I guess one of the questions is,
3 depending on how prescriptive the commitments are to make
4 them regulatory impositions in a sense as a precondition to
5 using the LSS, it may well be that those ought to be in
6 regulations. I don't know. It depends on how you frame the
7 commitments. If they're broad and they're capable of being
8 tailored to the individual case, then maybe that's not
9 necessary.

10 MR. DRAPKIN: Since this topic has come up, let me
11 just turn to the other handout. And we'll take a look at
12 the commitments.

13 MR. CAMERON: Now this would be -- while you're
14 doing that, David, this commitments document, as I
15 understand it, would not be the specific commitments that an
16 individual party would have made, but the generic document
17 that would guide the -- those commitments.

18 MR. DRAPKIN: Okay. If you take a look on page 12
19 of this new handout, again, this is a lot to read at the
20 moment. Just take a few minutes and look through page 12,
21 13 and 14, or 15 too, which gives you an example, an
22 illustrative example of each type of commitment that we're
23 talking about. And maybe that will help in understanding,
24 let's take a couple of minutes here and give you a chance to
25 read them and ask any questions you might have. These are

1 not necessarily real commitments, but they're examples of
2 what could be commitments.

3 MR. MURPHY: What is a DLO, David?

4 MR. DRAPKIN: DLO --

5 MR. MURPHY: Just remind me.

6 MR. DRAPKIN: -- is a designated LSS official. It
7 is the person in your organization to whom the LSSA
8 communicates. And if there's a problem, that's the person.

9 MR. CAMERON: And that's set forth at 2.1009.

10 MR. MURPHY: What?

11 MR. CAMERON: It's in 2.1009 of the rule.

12 MR. MURPHY: I knew that.

13 MR. SILBERG: Mal, you wrote that section.

14 MR. MURPHY: And the last time I read it too.

15 MR. DRAPKIN: We have a whole book of these things
16 that we've developed over the years, and we're currently
17 adding commitments related to operating -- DOE operating and
18 the operation and maintenance of the LSS. Other than that,
19 this document would've been in your hands already. We've
20 got this Alternative 3 business to deal with.

21 MR. MURPHY: I assume that, you know, for most of
22 us it's not going to be a problem to draft and submit an
23 acceptable LSS participant compliance plan because we're
24 doing that kind of stuff all the time, but for some of the
25 smaller latecomers like that Jay mentioned, public interest

1 groups or citizens activist groups or whatever, I assume
2 that the LSSA office will provide some assistance to those
3 folks and --

4 MR. DRAPKIN: You assume correctly.

5 MR. MURPHY: You know, up to, I suppose -- up to
6 and including even, you know, writing their plan for them.
7 Some of them are going to need that kind of help. They
8 won't --

9 MR. DRAPKIN: Yeah. Well, in some instances the
10 plan will be two sheets of paper.

11 MR. MURPHY: Right.

12 MR. DRAPKIN: We're not talking about major
13 documents. We don't want to introduce paperwork --

14 MR. MURPHY: Some of them aren't going to have any
15 documents at all, they're just going to come to the hearing
16 and complain.

17 MR. DRAPKIN: Right. In that case it's tell us
18 who your contact is and then you're done.

19 MR. MURPHY: Yeah.

20 MR. DRAPKIN: Does anyone need more time to look
21 over these commitments and talk about them? Okay. They
22 were designed to be read off line, but hopefully this
23 answers, Jay, the kind of questions that --

24 MR. SILBERG: I think this commitment may well be
25 the subject of a separate meeting at some point.

1 MR. DRAPKIN: Count on it. Yes. Yeah. That's
2 the heart of the entire program really.

3 Okay. Can we move along here? We can go back to
4 that if you want.

5 On page 12 we talked about the different kind of
6 commitments of which you have examples now. The new group
7 is group four, or at least partially I know are those DOE
8 commitments associated with the operation and maintenance of
9 LSS. And the document is organized by groups, so it's
10 fairly easy to see how -- you know, what types of
11 commitments, you know, your organization might need to -- or
12 would affect your organization. Now have the handout.

13 All right. Here we talk about the LSSA -- I'm
14 sorry, the LSSARP role in the audit process. The first step
15 in the audit process. I need to go a little bit away from
16 the slides here, is the creation of the audit management
17 team. And the audit management team consists of three
18 components. Three components or two? Anyway, three I
19 guess. The LSSA, the LSSA staff and the LSSARP. I guess
20 four, add another one, and the management of the LSSA audit
21 contractor. And this group will meet to determine what is
22 going to happen during this particular audit, whether it's
23 an audit of a participant or this is an audit of a DOE
24 function, whether it's the audit of an NRC function.

25 The goals of that audit will be set out and set

1 forth during this management team review and planning
2 session.

3 Now what will happen, practically, is I or Moe
4 will ask what members of the ARP are willing to commit their
5 time to the audit process. We'd like to have you involved,
6 probably on every one, but if everyone wants to, that's
7 fine, from the beginning of the audit through the end of the
8 audit. And the beginning is when we first start talking
9 about it. It's going to take some time. It's not the sort
10 of thing you're going to be able to sit back and review and
11 make some comments and be done. If you want to participate
12 in the audit, you are welcome to, we encourage you. We want
13 you to. The more brains, more viewpoints the better.

14 Once the management team is complete and set up,
15 turn the information over to the LSSA audit contractor who
16 then develops an audit plan, comes back to the management
17 team with the audit plan. The management team discusses it,
18 decides whether it's appropriate or not, and then sends the
19 LSSA audit contractor off to do the audit.

20 Now LSSA members and LSSARP members and LSSA staff
21 will accompany the audit team if they so desire, if it's
22 appropriate, as observers, because of -- well, for a number
23 of reasons, but most significant is procurement regulations
24 prohibit the contract -- the project officer, which would
25 probably be Moe or myself, from working directly with the

1 contractor. So we have to take an arm's-length view. So
2 once we've given them their instructions, we let them go do
3 their thing and then come back and report periodically,
4 that's when we have our input into the process. And that's
5 just the way it has to work. But we could be there and
6 observe, we can ask questions. We just can't give
7 direction.

8 MR. SILBERG: Why is it being done through a
9 contractor?

10 MR. DRAPKIN: We asked -- talked about this
11 question the last time. But I'll give you the standard
12 answer, we just don't have the staff to do it any other way.

13 MR. MURPHY: It's Clinton's 200,000 FTEs, or
14 250,000, whatever it is.

15 MR. SILBERG: Better we should hire a contractor.
16 We pay more than --

17 MR. MURPHY: What's that? What?

18 MR. SILBERG: Better we should hire contractors
19 and pay them more --

20 MR. MURPHY: Put more money into the American
21 economy that way.

22 MR. SILBERG: Right.

23 MR. DRAPKIN: Well, you can't both reduce
24 government and increase function at the same time.

25 MR. MURPHY: Put more of your client's money into

1 the American economy that way, I should say.

2 MR. SILBERG: And our clients' customers, i.e.
3 your money.

4 MR. DRAPKIN: And as you will see it at the very
5 end, the cost of this is practically free, so --

6 MR. MURPHY: Practically free?

7 MR. DRAPKIN: No. Not at all. Okay.

8 Anyway, the audit occurs and an audit report is
9 developed. The audit report is first reviewed with the
10 audit management team. Comments are made, any follow-up
11 that needs to be done at that point occurs before a
12 semi-final audit report is issued. Then there's a meeting
13 with the audited party to discuss the results and corrective
14 actions that can be taken and will be taken if there are
15 any. This information is added to the audit report. The
16 LSSA has the opportunity to write a comment on the audit, or
17 staff. The LSSARP members who have participated in the
18 audit will have an opportunity to write their opinions.
19 They can be dissenting opinions, whatever you want to say.
20 A little section in the format of the audit report that says
21 LSSARP comments, participant comments, meaning people who
22 participate in the management team effort. Yes.

23 MR. METTAM: Not right now, but could you flow
24 chart or diagram that process? This chart doesn't make it
25 clear --

1 MR. DRAPKIN: Yeah, I think we could do that.

2 MR. METTAM: -- that there would be involvement in
3 the planning of the audit, you know.

4 MR. DRAPKIN: I think we'll see one -- a slide
5 later on that does that.

6 MR. METTAM: Okay.

7 MR. DRAPKIN: I'll use those just to see if I've
8 skipped anything.

9 Once the final report is issued, and I guess that
10 report would be issued to the commission, if I'm not
11 mistaken. That's where the audit report goes. It goes from
12 the LSS administrator to the commission. The LSSA will have
13 opportunity to comment, but it will comment after the fact,
14 unless you have participated in the management process.
15 Otherwise we would never finish an audit. It would take too
16 long. And you can point out things that might go into the
17 planning for the next audit.

18 Okay. So there's a lot of room for interaction
19 there, and as much as you want. Okay. And if there are
20 follow-up audits that need to be made, they'll be made,
21 they'll be scheduled. And that information will also be in
22 the audit report, what follow-up activities are planned.

23 Now it may also be that we work in the surprise
24 audit mode for particular problem areas and we don't say
25 we're going to come in and audit, we just come in and do it.

1 Okay. Let's move on and see if there's anything
2 that I've missed.

3 Okay. Three basic types of audits: adequacy
4 audits, process audit, result audit. We'll talk about them
5 in just a second.

6 Okay. Take a moment and talk about statistical
7 sampling. In fact, in this particular case you can read
8 this, but Moe knows more about statistical sampling than I
9 ever will know, and maybe he'd like to say a couple of words
10 on it.

11 MR. LEVIN: Well, I just -- that's the Census
12 Bureau part of me. I had to deal with that all the time, so
13 I'm aware of the parameters and characteristics and
14 functionality of statistical sampling. I'm not a
15 statistician, but I know how to program it.

16 MR. DRAPKIN: We obviously can't check every
17 document. We can check a statistically valid sample. And
18 come up with reasonable and hopefully correct conclusions.
19 And that is part of the methodology that we'll be using, and
20 this slide discusses statistical sampling of that.

21 Okay. Three types of audits. We'll zip through
22 these real fast. The adequacy audit basically is -- and
23 from its title, is make sure that plans are adequate and
24 procedures are adequate to meet commitments and rule and all
25 the other documents that are involved. Process checks to

1 make sure that the plan implementations are being done
2 according to the plans.

3 Okay. Results, take a look to see that the end
4 product, as implemented through the plan, in fact turns out
5 to be what we hoped it would be. In some cases it might be
6 something like, we planned to submit 4,000 documents per
7 month of such and such quality. If we're only getting 2,000
8 through, even though the plan looked good, and the
9 implementation looked good, something was wrong, and needed
10 to be fixed.

11 Okay. Now this business that we're talking about
12 here is what I discussed before. The audit methodology and
13 planning, conducting the audit, reporting the results and
14 follow-up activities. We have a flow chart, as you
15 requested, that pretty much goes along with what I
16 discussed, with a few minor changes, which you can make in
17 your head. The thing that's interesting here is this is
18 what I would call a major audit. And the time frames here
19 are in weeks. This is something taking four weeks,
20 something taking five weeks, something taking six weeks.
21 That is for a major audit. A very, very minor audit might
22 take five days. Okay. We're looking at this, in this case
23 I think Tony, you did the estimating. This was a DOE audit.
24 Correct? An estimate.

25 MR. NEVILLE: I don't think we said three

1 particular participants, but it was of a large size.

2 MR. DRAPKIN: Okay. A large size which is most
3 likely DOE. I don't --

4 MR. MURPHY: Well, it has to be, because you've
5 got one week at each DOE site.

6 MR. DRAPKIN: Right.

7 MR. MURPHY: Clearly a DOE audit.

8 MR. DRAPKIN: Yeah. I believe that's where that
9 came from.

10 MR. SILBERG: How does this compare with the
11 resources that NRC devotes to vendor audits when they go out
12 and audit General Electric or Westinghouse or, you know, one
13 of the big non-licensees --

14 MR. DRAPKIN: I can't answer that. I don't know.

15 MR. SILBERG: I have the sense, and I, you know,
16 don't represent a lot of vendors, that this is a much, much
17 greater amount of resources devoted to this than would be
18 devoted to a typical vendor audit, even of a very large
19 vendor.

20 MR. DRAPKIN: I don't know. I'll be glad to get
21 back to you with an answer on this.

22 MR. SILBERG: It just seems to me that there may
23 be a disproportionate amount of effort that's being assumed
24 to go into this audit than is typical of other NRC
25 inspections, causes.

1 MR. DRAPKIN: Well, the reality here is that this
2 is a plan, just like any other plan. It has not been
3 implemented. It may turn out that we don't need to put
4 these kind of resources into play. And if that's true,
5 we'll reduce them. We're not going to overkill the
6 situation. Just not going to do that. But we want to make
7 sure that you understand that we're not going to let things
8 slip.

9 Okay. We're prepared to do the job all the way
10 down to the last T being crossed and the last I being
11 dotted. We're prepared to commit the resources to do that
12 and commit the energy to do that. You know, if it's not
13 necessary to go that far, then we won't, but that's
14 something that I think we would discuss with the ARP members
15 before we changed anything. Other questions on this
16 particular topic?

17 Let's see if there's anything else in the flow
18 chart. Yeah. That's actually the audit process itself,
19 doesn't involve the formation of the management team, that
20 flow chart doesn't. Did that deal with your question or
21 not?

22 MR. METTAM: This chart doesn't really show some
23 of the loops that you were describing. For example you
24 talked about the contractor developed the audit plan then
25 that audit plan would be reviewed by the LSSA and the

1 LSSARP, you know, so there are some iterations going on
2 here --

3 MR. DRAPKIN: Yes, well we --

4 MR. METTAM: -- that don't show.

5 MR. DRAPKIN: You're correct. We couldn't put
6 everything on one slide, otherwise we just -- it's crowded
7 enough as it is. Yes. That's why I talked about it rather
8 than going to this.

9 MR. METTAM: Okay.

10 MR. DRAPKIN: But yeah, that's the way it --

11 MR. METTAM: Yeah. This flow chart basically
12 shows two points of contact with the LSSARP, one for the
13 audit observation, one's a review of the report.

14 MR. DRAPKIN: Right. This basically picks up at
15 the point where we have a completed -- in contracting terms
16 what we would be doing is developing a task order, statement
17 of work for the contractor. That's what the management team
18 is doing. And when that is issued that's when this chart
19 takes off.

20 MR. SILBERG: Is there a reason that the audit
21 report goes to the commission? And by "commission," do you
22 mean the commissioners or Bob Bernero or --

23 MR. DRAPKIN: I mean the commissioners.

24 MR. SILBERG: What's the reason why it would go to
25 the commissioners, since I don't think that's done anywhere

1 else in the NRC inspection and audit process.

2 MR. LEVIN: It's a proposal just to show that it's
3 at the highest levels and to make sure that it's visible at
4 the highest level possible.

5 MR. CAMERON: And it may be that then the LSS
6 administrator would submit a twice-a-year report summarizing
7 a number of audits and attach those audits for the
8 commission's information.

9 MR. DRAPKIN: Yeah. In fact the LSSA does, at the
10 moment, submit a semi-annual report to the commission, has
11 for some time.

12 MR. BALCOM: Do I read this right, that this is
13 four weeks to plan the audit, one week to perform the audit
14 and then reports come after that?

15 MR. DRAPKIN: Let me see.

16 MR. SILBERG: Well, there are five one-week audits
17 assumed in this chart. One at each of assumed five DOE
18 facilities.

19 MR. BALCOM: It says four weeks to the left of the
20 second box and then it says, audit contractor conducts
21 audit.

22 MR. DRAPKIN: Joe, can you address that?

23 MR. BALCOM: Or is it more like one week of
24 planning and --

25 MR. SPEICHER: Let me explain something there,

1 that's --

2 MR. DRAPKIN: Yeah, Joe Speicher.

3 MR. SPEICHER: Joe Speicher with Labat-Anderson.
4 The time frames up there talk about an overall time frame.
5 That four weeks is not a full-time effort for this
6 particular group of four people, and it's envisioned to be
7 like 50 percent effort over four weeks planning the audit,
8 which would be obviously acted into two weeks to plan the
9 five audits full-time. But the idea is that these audit
10 personnel will be doing other things than just specifically
11 DOE audits. They'll be looking at audits of other
12 participants.

13 So the thought is that it's a 50 percent effort
14 for the first four weeks of planning, a 50 percent effort
15 the six weeks to prepare the report, review the material.
16 The actual one week per site is actual full-time audit
17 activity.

18 MR. DRAPKIN: Did that answer your question?

19 MR. BALCOM: Yeah.

20 MR. DRAPKIN: Okay. Okay. Audit planning, those
21 are the steps. I'm not going to read them to you. The
22 audit has a beginning, a middle and an end. It's like --

23 MR. BECHTEL: How do you determine which audit
24 you're going to proceed with?

25 MR. DRAPKIN: I'm sorry?

1 MR. BECHTEL: How do you determine which audit
2 you're going to proceed with when taking the audit?

3 MR. DRAPKIN: It's a good question. It's not one
4 that we've really addressed in detail yet, but we have to
5 prepare internally within the LSSA shop activity plans for
6 the year, and that's how we will decide what are the planned
7 audits for the year. We'll sit down and we can certainly
8 discuss it with the ARP, if you'd like, and decide what are
9 our planned audits for this coming year, or maybe for the
10 next two years. That may be stretching it, or six-month
11 period. I'm not sure what the right interval is.

12 But there will also be audits that are unplanned,
13 things that -- we get calls saying, "Hey, my materials are
14 not getting into the LSS in a timely fashion." That's going
15 to trigger an audit or an investigation if you'd like. And
16 so those will be ad hoc sorts of things that will happen all
17 the time, trouble-shooting, fire-fighting activities.
18 There's a question in the back? No. Ken.

19 MR. KALMAN: Yeah. So when you do the audits at
20 this point, you envision what I would call vertical slice,
21 for example, you know, did State of Nevada submit this
22 particular document in accordance with procedures, did the
23 administrative cooperate into the system, is that the way it
24 would go?

25 MR. DRAPKIN: Right. Right.

1 MR. SILBERG: Is the reason that this audit
2 process is being planned unique to the LSS as opposed to
3 using the experience that NRC has developed over, you know,
4 decades in inspecting and auditing licensees because this is
5 a unique situation --

6 MR. DRAPKIN: It is --

7 MR. SILBERG: -- or are there lessons to be
8 learned from the kinds of audits that regularly get carried
9 out by NRC?

10 MR. DRAPKIN: Let me answer that a couple of ways,
11 then I'll still add something. One, the LSS is being viewed
12 as a unique activity, almost an experiment in licensing.

13 MR. SILBERG: I think I said that a couple of
14 years ago.

15 MR. DRAPKIN: Yes, yes. But in terms of the NRC
16 itself, we have an internal steering committee that meets to
17 discuss these things, which includes members of material
18 group and reactor group to throw in their experiences and
19 lessons learned from their quality assurance and audit
20 activities. So past experience is not being ignored, and
21 it's certainly being worked in, but it is being treated as
22 kind of a unique thing as well.

23 Within the NRC organization, the LSSA is semi
24 autonomous. The NRC is itself a participant and will be
25 audited, so we have to keep a little bit of arm's length

1 from NRC as well.

2 Moe, do you have anything to add to that? Did
3 that answer your question? Okay.

4 When we report -- the reporting of results will
5 track the entire audit process in detail. Give a general
6 description of the audit scope and objectives, discuss the
7 process, what we found out, what conclusions have been
8 drawn, and we'll have the opportunity for the LSSARP
9 representative or representatives to add their input,
10 specifically and separately or through the group into the
11 report, but there will be the ability to write a separate
12 opinion, or multiple separate opinions of the audit.

13 Follow-up activities, if there's a deficiency,
14 there has to be corrective action planned. It will also --
15 follow-up will also -- or problems found will also determine
16 to some extent the focus of the next audit as to the person
17 or for that participant.

18 And the last bullet, if there isn't corrective
19 action taken, and we sort of assume everybody's working in
20 good faith with respect to this, then some kind of
21 enforcement action will have to occur. I'm not going to
22 talk about enforcement action, Chip is going to talk about
23 enforcement action or somebody else will. But I'm not going
24 to.

25 Specific auditing activities --

1 MR. HOYLE: David, excuse me.

2 MR. DRAPKIN: Yes.

3 MR. HOYLE: Is this a good spot to stop and take a
4 break?

5 MR. DRAPKIN: We're almost finished.

6 MR. HOYLE: Okay.

7 MR. DRAPKIN: We've got half a dozen more slides.

8 The specific auditing activities, there's a little
9 chart here that shows who will audit and what we'll audit
10 about them. And you can take a look at that and ask if you
11 have any questions. I think this one is self-explanatory.

12 On slide number 27 we talked about some specific
13 auditing activities. I probably touched on most of these
14 already. Review and approval of system requirements before
15 implementation. That one involves the LSS design, make sure
16 that requirements of the LSS include the requirements of the
17 LSSA for auditing, for hooks, for our computer sneak-a-peak
18 system, whatever you'd like to call it, includes early LSSA
19 participation during the systems planning.

20 Okay. And LSS -- yes.

21 MR. BALCOM: In figure three and four --

22 MR. DRAPKIN: Okay. Got mine.

23 MR. BALCOM: -- minor point.

24 MR. DRAPKIN: Sure.

25 MR. BALCOM: That LSSA will audit -- down where it

1 says "DOE Documentary Material Processing Operations." How
2 about non-documentary materials, technical data, reports.

3 MR. DRAPKIN: I don't have an answer to that right
4 at the moment. Can I get back to you on that one?

5 MR. CAMERON: I think to the extent that the whole
6 technical data issue is wrapped up in the integrity of the
7 LSS, that we would have to audit.

8 MR. DRAPKIN: Yeah. But exactly how we're going
9 to do it --

10 MR. BALCOM: Or we could add in here documentary
11 and non-documentary material.

12 MR. DRAPKIN: Sure.

13 MR. GRASER: Well, the definition of documentary
14 material in the rules, it's the --

15 MR. CAMERON: Includes everything.

16 MR. GRASER: -- you know, things. Yes.

17 MR. BALCOM: That's what I was looking for.

18 MR. DRAPKIN: Okay. So the statement stands. So
19 it was correct to ask that. Kirk, are you okay on that?

20 MR. SILBERG: Has there -- any thought been given
21 to adopting a resident inspector-type oversight as opposed
22 to this audit oversight?

23 MR. DRAPKIN: Yes. We spent quite a bit of time
24 discussing having resident auditors, or however you'd like
25 to call it, resident inspectors, and the problem with that,

1 and I've run into it through my career, I've worked as
2 contractor, and whenever I find myself -- whenever I tell
3 myself, before I came to work for NRC, for any extended
4 period of time at a contract site, I began to identify a lot
5 more with where I was working than for whom I was working,
6 and with respect to auditors, I don't want that to happen.
7 And that's pretty consistent through, you know, in my
8 experience and in the experience of many of the people I've
9 worked with.

10 MR. SILBERG: And that's a problem that the
11 commission has. Be careful about that.

12 MR. CAMERON: Yeah, I wouldn't want that to carry
13 over too much into the fact that we have NRC on-site
14 residents in terms of repository technical program and the
15 state and the local governments also do, and it may be
16 more -- I don't know, Jay, if you were referring to the use
17 of an on-site resident inspector in terms of the DOE design
18 or the document compliance aspect --

19 MR. SILBERG: Well, both.

20 MR. CAMERON: -- of it, but I think David's point
21 is obviously one that has to be taken into account. But I
22 think that the NRC is still open, obviously is open to
23 suggestions from the panel about the use of that particular
24 technique, either to increase the verification or perhaps to
25 save some resources also.

1 MR. DRAPKIN: Well, let me also add that this
2 situation occurs when contractors are put into place rather
3 than employees. So an NRC employee performing the same job,
4 I feel a lot more comfortable with than an NRC contractor
5 who doesn't have any loyalty to the NRC at all.

6 MR. CAMERON: And I think you were suggesting an
7 NRC employee.

8 MR. SILBERG: Yeah. I mean, it might be that
9 instead of having, you know, a bit contractor team that
10 swoops down on a site for a week at a time, maybe have, you
11 know, one person who is, you know, dedicated to auditing the
12 entire DOE program. And he may be headquartered in Nevada
13 and then takes a week trip down to headquarters to do, you
14 know, an inspection there.

15 MR. DRAPKIN: That's a valid suggestion, and it is
16 not -- it occurs to me that it is not necessarily in
17 conflict with the audit team approach either, where we can
18 have an on-site person who handles the day-to-day activities
19 and the big detailed audit, which one person just isn't
20 going to be able to handle.

21 MR. SILBERG: I guess I wouldn't want to have --
22 well, what I'm suggesting is you have the ongoing day-to-day
23 inspection, and maybe you don't need the cosmic, you know,
24 SWAT team descending on you.

25 MR. DRAPKIN: We'll take a look at it and see what

1 we think. We'll let you know.

2 MR. SILBERG: That just might be a lot more
3 economic.

4 MR. LEVIN: And something else we were thinking
5 about is also a -- maybe doing a lot of the auditing by
6 remote monitoring, which has some advantages also, having
7 hooks into the system so that we can almost, in a real-time
8 fashion, monitor what's going on, the document loading
9 matching against schedules and things like that, and if we
10 get into things -- that type of an operation might even
11 lessen our need for the cosmic-type swooping down auditing.

12 MR. SILBERG: My concern when I saw the last
13 version of the compliance assessment program was it looked
14 like a tremendous amount of overkill to me. I think we
15 still -- I get a sense, not being a QA person but, you know,
16 we're using elephants here to inspect mice, and maybe we
17 just don't need that much. You can do it at a much lower
18 level and still have the kind of efficiency and oversight
19 you need, if someone is there, you know, essentially every
20 day.

21 MR. LEVIN: Like David said before, we are
22 committed to doing whatever is necessary, as far as
23 auditing, as little or as much, to make sure that everybody
24 has confidence in the LSS. So that's going to be the key,
25 how much do we have to do to ensure the integrity to

1 everybody's satisfaction as much as we can. So we've
2 started off being very aggressive. We started off looking
3 at it to see what we -- the best we could possibly do, and
4 if it turns out not to have a big pay off or not to be
5 practical, we can always back off from that.

6 MR. SILBERG: The problem I have is once you set
7 that kind of, you know, ceiling it becomes the floor and NRC
8 rarely, you know, is able to extract itself from those
9 initial kind of commitments so --

10 MR. LEVIN: Okay. What --

11 MR. SILBERG: -- I would urge you not to
12 overcommit by saying, well, it can't be more than this, so
13 we'll gradually cut back, because usually it turns out to be
14 that and then add-ons.

15 MR. LEVIN: Remember, that's why we want -- or I
16 want all of your input before this whole thing is finalized.
17 Those are the -- exactly the type of comments and type of
18 discussion I hope this will generate.

19 MR. DRAPKIN: The people that need to be satisfied
20 that the LSS is a trustworthy vehicle, you are the people.
21 If you are satisfied with a less expensive audit program,
22 that will be fine. We can talk about that as time goes on.

23 MR. HOYLE: Question, David. What remedies would
24 a participant have, say he disagreed with an audit in some
25 substantial respect, is there a remedy, judicial review at

1 some point or is there an additional remedy built into the
2 system?

3 MR. DRAPKIN: You mean enforcing?

4 MR. HOYLE: Yeah, for instance DOE is putting in
5 documents that we think are fugitive or have no place, or
6 they are not putting in documents that we think are very
7 relevant and -- but then we can't get anybody to agree with
8 it in terms of the LSS administrator.

9 MR. DRAPKIN: Okay. The commitments we'll discuss
10 in detail what is and what is not relevant. If an audit
11 turns up the fact that irrelevant documents are being
12 submitted or relevant documents are not being submitted,
13 then that will constitute a deficiency. Be written up
14 formally, signed off by the LSS administrator, discussed
15 with the participant to determine what remedial action
16 they're going to take and if they're not going to take
17 appropriate remedial action to fix that problem, then the
18 enforcement mechanism will take place.

19 MR. SILBERG: I think Harry's question though is
20 supposing the participant thinks for example the DOE isn't
21 doing its job and the audit hasn't picked it up or it
22 hasn't -- or it's between audits, what rights or remedies
23 does say the state of Nevada have?

24 MR. CAMERON: I think that the rule provides, in
25 terms of document compliance requirements, the -- what used

1 to be known as the free license application licensing board
2 which may just be a presiding officer. Disputes like that
3 can be brought before the prelicense application licensing
4 board, and of course if it was after the license application
5 was filed before the hearing was called, the hearing
6 licensing board.

7 MR. DRAPKIN: Before this mechanism, go jumping
8 in, I would hope to just pick up the telephone and call Moe
9 and say, "Hey, I think there's a problem," and Moe will say,
10 "Okay, we'll look into it and get back to you," and then
11 that's an example of how an ad hoc audit might come into
12 play.

13 MR. SWAINSTON: Let me give you a concrete
14 example --

15 MR. DRAPKIN: Okay.

16 MR. SWAINSTON: -- of what we're dealing with
17 here.

18 Last year we filed a suit against the NRC, a PA
19 and POE to take the depositions of 27 scientists that had
20 review authority over the Szymanski theory. And there was a
21 real reason for us to do that. Obviously if we've got a
22 licensing proceeding that isn't going to occur until 2000,
23 and you know, whatever, these people are not going to be
24 available. Their recollection of whatever they did in terms
25 of these reviews simply won't have any credibility at all at

1 that point in time. In fact, they probably won't be able to
2 recall at all. We wanted to do those depositions now in
3 order to provide those depositions to the LSS system so that
4 they would be available as the best evidence of their
5 participation at some point in time.

6 The Department of Energy -- well, I should say the
7 Department of Justice on behalf of the NRC and the DOE, went
8 into court and said a number of things. One is, you can't
9 do deposition for a future administrative proceeding and the
10 court agreed with it. The justice department said you can't
11 even do depositions at the time of the proceeding. So all
12 of this basically is of no merit. The judge agreed with all
13 this, incidentally not having even read the documentation
14 that was submitted.

15 The point is, can we go forward with say the
16 depositions of our own people and expect to have them
17 submitted into the LSS system? DOE will take the position
18 that, no, those -- you can't submit those. When we sue DOE
19 we'll have the same set of attorneys representing both DOE
20 and the NRC because it will be the justice department, and
21 our documents are going to be basically excluded and what --
22 the whole point of all this is that we're here in a kind of
23 a trust relationship, not only to ourselves, but to the
24 American people to see that this job is done right. And if
25 there are no remedies to assure that the proper facts, best

1 evidence is put into this record, why have the rule at all?

2 MR. CAMERON: Harry, if I could just respond to
3 that. The LSS rule would not come into play in determining
4 the initial question of whether a deposition should be taken
5 or not taken; in other words, referring to what the
6 Department of Justice argument was. But if there is a
7 deposition taken that's relevant to the licensing
8 proceeding, I don't think that that would be excluded from
9 entry into the LSS. So --

10 MR. SILBERG: If you have a document that fits the
11 relevancy standards, whether it's a, you know, statement
12 taken under oath or a report or a letter, it would go in
13 like any other relevant document that you have. So I don't
14 see a problem with it in terms of documents that you're
15 creating. I think your problem in the lawsuit was you
16 couldn't force DOE or other witnesses to sit down and be
17 deposed. And I think the Court was correct and, you know,
18 the NRC rules are clear, you don't start discovery until the
19 proceeding starts in terms of taking depositions and that
20 kind of stuff. That's really a different question. Your
21 problem in terms of creating your own documents is really
22 within your control.

23 MR. SWAINSTON: Okay. Let's say I despite Gerry
24 Szymanski and he laid on the record and also the other
25 officials or the other people he works with on this problem,

1 and we provide say half a dozen depositions, DOE says,
2 "We're not going to submit those to the system because they
3 have no credibility; these witnesses were not subject to
4 cross-examination; we did not participate in the deposition,
5 and as a consequence we simply are not going to submit that
6 into the system."

7 MR. CAMERON: Harry --

8 MR. SWAINSTON: What is our remedy?

9 MR. CAMERON: Well, your remedy in that case is to
10 go first to the ^{PRG -} ~~free~~ license application licensing board who
11 clearly has the authority to rule on -- exactly on matters
12 like that. Arguments as to credibility is going to take
13 place in the licensing proceeding in terms of the
14 credibility of the evidence. But in terms of whether the
15 document is relevant and therefore should be entered into
16 the licensing report system any related issues of privilege,
17 et cetera, that's -- hopefully it's going to be fairly
18 straightforward, and there is a remedy in the rule for
19 parties to bring those types of disputes to the attention of
20 the prelicense application licensing board --

21 MR. MURPHY: But --

22 MR. SILBERG: You also have --

23 MR. MURPHY: Harry highlights the fundamental
24 nature of the problem we have with Alternative 3 that we
25 discussed at great length in October, and we're going to

1 continue to discuss here today and tomorrow I guess, and
2 that is who has control and direction of the LSS. And
3 forget about the Szymanski problem and credibility and all
4 that, whether it's a deposition or any other document. If
5 DOE -- if the state of Nevada submits a document to the LSS,
6 and DOE for some reason or other -- or Nye County submits
7 one, if Brad submits one or the tribe submits one and DOE,
8 for whatever reason says, "This is not documentary material
9 or this is not relevant," or whatever, we need to have a
10 system -- and Nye County cannot agree to a system which will
11 not allow Moe as the LSS administrator to pick up the phone
12 and say, "Put that document in the system and do it now,
13 today. Not wait until the next six-month audit is presented
14 to the commission" -- we need a system, we need a rule which
15 will allow Moe to pick up the phone and say, "Dan, put the
16 document in now. I'm going to have my sneak-and-peak people
17 check on you in 10 minutes, and I want to see that
18 document."

19 MR. CAMERON: Yeah, and that's raising --

20 MR. MURPHY: And if the system won't allow Moe to
21 do that --

22 MR. CAMERON: I agree with you.

23 MR. MURPHY: -- we can't agree to it.

24 MR. CAMERON: Now, I totally agree with you.

25 Okay. And that's what this whole audit program in terms of

1 DOE's design development --

2 MR. MURPHY: But that's not in these documents
3 yet. You've got operation.

4 You're going to need to express that clearly
5 somehow, because it's not in this presentation that the LSS
6 administrator is going to have -- not audit authority, but
7 directional authority to pick up the phone or write a memo
8 and say, do it and do it now.

9 MR. DRAPKIN: I'll explain to you where that is
10 going to.

11 MR. MURPHY: Okay.

12 MR. DRAPKIN: And that will be -- it could
13 conceivably be in the rule.

14 MR. MURPHY: I think it is in the rule. That's
15 why I don't like --

16 MR. DRAPKIN: And I -- but, but --

17 MR. MURPHY: -- Alternative 3.

18 MR. CAMERON: But I would also say in regard to
19 that, I know that this is one of what we want to prevent,
20 but I would hope that DOE in terms of capturing documents
21 and loading the system is not going to be -- DOE's not going
22 to be sitting there saying, "This document isn't relevant
23 and so we're not going to put it into the system.

24 MR. SILBERG: The only issues I can think where
25 there would really be a disagreement that would have to go

1 to a pre-licensing licensing board would be a privilege
2 question. Everything else, I mean who cares if another
3 document goes in. You've already got --

4 MR. MURPHY: Well, but that's not the point, Jay.

5 MR. SILBERG: 18 trillion pages.

6 MR. MURPHY: The point is that the NRC is asking
7 us to depart from the bargain we -- that we've got in the
8 LSS rule, they're asking us to give up part of our bargain.
9 And I don't think Dan's going to throw a Szymanski
10 deposition back in Harry's face and say, "I'm not going to
11 put that in." I don't have that fear. But the hypothetical
12 exists, you know, and Harry's point brings up the very
13 concern we have, who is going to run this system.

14 MR. DRAPKIN: Mal, I think that you've pointed out
15 a hole that needs to be plugged, and we have several
16 vehicles to plug that hole, and it will be plugged.

17 MR. LEVIN: Number one, I agree, DOE should not
18 make any decisions whatsoever --

19 MR. GRASER: Or be placed in the role.

20 MR. LEVIN: Or be placed in the role --

21 MR. MURPHY: Yeah, I mean Dan doesn't want to be
22 in that role any more than I want him there.

23 MR. LEVIN: Right. Remember I said that I view,
24 in this relationship with DOE, they are a contractor to me.
25 They don't make decisions, they carry out orders. I should

1 be in control. If there's any problems with that, if
2 anybody discovers a problem, I can be called. The LSSA can
3 be called, and I'll directly look into it. It's like if I
4 get an indication that any contractor is not performing
5 according to the contract, I will take action. We will try
6 to be a little more explicit in that, especially in the
7 commitments document, we will be detailing on your
8 commitments, or the commitments of the participants, what
9 are the documents and the types of documents that are
10 supposed to be submitted. And that's where that will be
11 detailed. DOE should make no judgment calls whatsoever,
12 period.

13 MR. CAMERON: And let's try to keep things -- a
14 couple of things separate too. Okay. DOE has its
15 obligations as a -- as the license applicant as a potential
16 party to put documents into the system, just like every
17 potential party has that obligation. And what we're talking
18 about here is DOE's obligation and responsibilities as being
19 the operator and maintainer of the system. And it
20 doesn't -- I'm not saying that there's any implications
21 about what DOE should do or should not do there, but I think
22 it just helps to try to keep these individual
23 responsibilities separate in terms of how this should be
24 addressed.

25 MR. SWAINSTON: I'm going to just make one more

1 statement then I'm going to let this go. All of this is
2 fine and good, you know, NRC can say, "We're going to
3 control DOE with a tight fist." But when it comes to
4 litigation, NRC gets rolled on DOE's behalf, and that's what
5 happened in this litigation. NRC, in my estimation,
6 should've gone into that case and agreed the depositions
7 were very appropriate of these scientists, but their
8 position became that of the DOE, and it also now is the
9 position of the court. Sometime down in the future we're
10 going to have the same situation. I anticipate it. And if
11 the justice department argues on behalf of the NRC a
12 position which is DOE's position, then what is the meaning
13 of all this? I mean, we can make a lot of grandiose
14 statements of how we're going to force DOE to do this or
15 that or the other, but unless there's some teeth in any of
16 this, it means nothing.

17 MR. CAMERON: Well, Harry, I guess again in that
18 context of the decision about subjecting an NRC staff person
19 to a deposition, although that may be -- is an important
20 issue, obviously, I don't see how it's relevant to the LSS
21 rule at this point in time.

22 MR. SWAINSTON: I'm not talking about NRC staff
23 people being subject to depositions, what I'm talking about
24 is to what extent is the NRC going to manage and operate
25 this system in a way that the rule contemplates.

1 MR. DRAPKIN: Let me make a few comments on this
2 that follow up on the SECY paper that was -- that you
3 mentioned, received earlier. There were three aspects to
4 that paper. The last point was the development of a
5 memorandum of understanding between the Department of Energy
6 and NRC, specifically the LSSA and these issues that now
7 brings up and you bring up need to be clearly stated. And I
8 don't think -- it doesn't sound as though it's going to be a
9 hard issue to resolve.

10 MR. CAMERON: Yeah. I guess I would just say,
11 Harry, please don't make a connection between what the
12 Department of Justice argued on behalf of the government in
13 terms of these depositions with how the NRC is trying to
14 implement the LSS rule and ensure that everything is done
15 correctly.

16 MR. SWAINSTON: Chip, the bottom line is that we
17 have to face the reality of the situation. We wanted to do
18 27 depositions of scientists that had -- they were
19 percipient witnesses, of what they did. They knew the kind
20 of data that the consultant -- they knew the kind of other
21 people that they talked to, they knew just exactly what
22 participation they had in this process of review. We cannot
23 do that. We cannot get those depositions presently into the
24 LSS system.

25 MR. CAMERON: Because they don't exist basically.

1 MR. SWAINSTON: We cannot get a court order which
2 would authorize us to do that. We can't just call up a
3 particular scientist and say, "We're going to schedule your
4 deposition for two weeks from now." We cannot do that
5 without a court order. DOE's participation in that lawsuit
6 is part of what prevented us from achieving that. Now that
7 is totally inconsistent with a system that is going to be
8 filled with all of the relevant evidence that is going to be
9 necessary for a licensing.

10 MR. CAMERON: But the LSS is not designed to
11 develop what should be relevant evidence. In other words,
12 the LSS doesn't have anything to do with whether DOE should
13 go out and do more testing on the site, for example. And I
14 guess I don't -- I see what general problem you're raising,
15 but -- in terms of the Department of Justice arguing against
16 the depositions, but I guess I don't make the connection.

17 MR. SWAINSTON: If the bottom line is both bad for
18 the state of Nevada and bad for the licensing proceeding,
19 and it's bad because DOE has asserted undue influence on the
20 NRC, even through the justice department or directly, then
21 everybody loses, I think.

22 MR. CAMERON: Well that -- I don't know about that
23 point, but I think that your point is more directed at the
24 technical side of the NRC and DOE programs than it is in
25 terms of information management side. I don't know if

1 anybody else has any other things they want to add on that.

2 MR. BECHTEL: When we originally set this whole
3 thing up, I think the, trying to recall back, the intent was
4 to try to have some kind of an impartial agency manage a
5 system that's turned out to be a very controversial project.
6 And the intent was to have the NRC as an oversight body do
7 that, and I think what I'm sort of wrestling with is the
8 fact that we're kind of guessing what might happen and, you
9 know, we've got some possible assurances that audits could
10 take care of potential problems that may affect all of us,
11 but we're all -- we're kind of guessing. And I don't think
12 we really know what would happen. Not that Dan would do
13 anything necessarily maliciously, but I mean perhaps
14 inadvertently it would hurt the case of affected counties or
15 the state of Nevada. And I think the biggest point in my
16 mind is that this is kind of a perceptual issue, that DOE is
17 in the process of characterizing a site, and it's also
18 managing the information that will be used to determine
19 whether the site is suitable or not.

20 And I -- my fundamental concern is that, one,
21 we're deviating from the original rule that said that NRC
22 was going to manage the system, and two, we're just kind of
23 after the fact trying to determine whether in fact the
24 information being entered is done properly, and I don't know
25 how we can all do that. It's such a complex system, there's

1 so much information involved that it's beyond all of us I
2 think to audit. I mean I just -- I think that from the
3 perspective of Clark County, that we agreed on NRC managing
4 the system, and I think anything that deviates from that
5 kind of is counter to, you know, how we see the system
6 operating properly. So I -- that's my concern.

7 MR. CAMERON: Well, I think that the whole intent
8 of the audit program here is to demonstrate that in real
9 time problems are going to be prevented, and if there are
10 problems that they're going to be corrected, and the stance
11 between the NRC and the DOE here as Moe has aptly
12 characterized it, is between -- is looking at DOE as a
13 contractor to us in this situation so that we would have
14 complete control over what happens in that context. And I
15 guess that we would just ask you to think about some of the
16 proposals that are being presented here and see if that
17 makes you feel better about whether mistakes are going to be
18 prevented or skulduggery or whatever you're concerned about.

19 MR. DRAPKIN: We believe that we can audit DOE to
20 the point where you are comfortable with the result. If
21 there is some specific area that we're not looking at and
22 have missed, please, please, please, comment on it, let us
23 know, and we will address it. And any area that anybody
24 comes up with, we will add it to the program until it is as
25 solid as it can be.

1 MR. LEVIN: And the audit program would exist
2 whether DOE was running the system or whether I contracted
3 with somebody in the private sector. I have to have the
4 same audit program to ensure the integrity, certify the
5 integrity of the system --

6 MR. DRAPKIN: And operations and --

7 MR. LEVIN: So that -- actually the audit program
8 would exist no matter which way we go, from a systems
9 perspective.

10 MR. DRAPKIN: Just to add a little more difficulty
11 under the old way, because we would be auditing ourselves
12 kind of indirectly. I don't think that's a good idea.

13 MR. MURPHY: Well, but there's always us,
14 remember. That's one of the things the LSSARP was designed
15 to do when we wrote the original rule, was to keep you on it
16 and --

17 MR. DRAPKIN: That's true.

18 MR. CAMERON: And would still apply to this new
19 configuration.

20 MR. DRAPKIN: Absolutely. Absolutely. We're
21 almost done with this. I want to get done and then we can
22 have our break. We were talking about -- let's review. We
23 were talking about the specific auditing activities that
24 we'd be doing and gave some examples. I'll try and pick out
25 ones from the list that are interesting. It doesn't turn

1 out that any of these are interesting but -- maybe it's
2 true, but it's still funny, and besides, we've already
3 talked about them.

4 On page 28 we talk about those specific activities
5 that involve the design, development and operation and
6 maintenance of the LSS. And they include periodic audits of
7 LSS development. That we would do anyway, has nothing to do
8 with Alternative 3, because DOE was always going to develop
9 the LSS. Semi-annual audits of DOE operation and
10 maintenance once the LSS is in place. If you just take out
11 the word -- the three letters "D-O-E" we would've done that
12 anyway.

13 Okay. Something -- this is ongoing monitoring,
14 LSS availability and functionality by the LSSA QA facility.
15 That's a computerized facility not within -- let us say
16 within LSSA space, and it's on -- and we will certainly use
17 the audit results. If the results are not good, then Moe
18 will not certify that DOE is in compliance with the
19 requirements of the rule. Okay.

20 Now we have another -- on page 29 we have a
21 wonderful, wonderful chart. I sound like Lawrence Welk.
22 That talks about the participant LSS-related program
23 management, the things that the participant will be involved
24 in or will be involved in now with respect to audits,
25 identification of potential sources of documentary material,

1 if there is anything of wonder.

2 Okay. I want to talk a little bit about staffing,
3 because this is an issue that's a little touchy. I believe
4 in the rule, I believe in all of the documents we've
5 developed so far, we have discussed the fact that the LSSA,
6 as part of your compliance plan, you have to discuss what
7 staff you're going to commit and what training they're going
8 to have. All that we're really after here is to make sure
9 that you are willing to commit the resources necessary to
10 meet your commitments, whether you're DOE, NRC or anybody
11 else. We're not going to look at the resumes of people and
12 say, "No, send this person off for a course in document
13 management or things on that detailed level." We're not
14 going to tell you how to run your organizations or even try.
15 That's one thing I did want to bring up here.

16 The next page, just read down the list here and
17 take a few minutes. Okay. There's nothing here that we
18 haven't discussed already.

19 Okay. On the next page, as we did discuss
20 earlier, audits of non-DOE participants would be smaller in
21 scope generally than DOE audits. They would be in scope
22 appropriate to that participant and what their level of
23 document submission and use of the LSS. Somebody could be a
24 very low submitter of documentation but could be a very
25 heavy user of the LSS. So we have to make sure everything

1 is just right. See if there's anything else here. As we
2 said before, prior to the final stamp of approval on an
3 audit report, a remedial action plan would be included, and
4 we'd want to make sure that the LSSA through its
5 representative of the audit management team, have the
6 opportunity to review that before it became final.

7 And frequency of audits could be increased or
8 decreased, depending on what we find, and the same thing
9 with size of audits. We'll write the audit contract in such
10 a way that these things are not -- that we have the freedom
11 to make things small or large in accordance to the need that
12 we find.

13 MR. MURPHY: Where does the six non-DOE
14 participant entities come from? It's more than that.

15 MR. DRAPKIN: It's more than that. This is
16 probably taken from an old number. There will be more than
17 that. However many non-DOE participant entities there are.

18 All right. Last real slide talks about cost.
19 These are based on some pretty general and not particularly
20 current assumptions. We haven't really worked with -- it's
21 the best we can do at the moment, but it is an estimate.
22 Joe probably knows more about the cost issues than I do, so
23 if you have questions about those, and I'm sure you will,
24 fire away. We'll let Joe or Tony answer those.

25 MR. SILBERG: What's your estimate of the cost of

1 the QA facility? Think that was -- sorry, that was
2 presented at the last meeting we had in October, and the
3 estimate, as I recall it, was somewhere in the neighborhood
4 of about 1.2 or 1.3 million per year.

5 MR. SPEICHER: Operating cost?

6 MR. SILBERG: Yeah. I don't know if we have those
7 documents with us this time, so I think that's -- as I
8 recall was about 1.2, 1.3 million per year for the QA
9 facility.

10 MR. DRAPKIN: And any other questions? Last
11 slide. Usually when Johnny Carson said last envelope
12 everybody applauded and stuff. Last slide.

13 [Applause.]

14 MR. DRAPKIN: Thank you, thank you. Anyway, if
15 you have any comments, I'd appreciate them. You can call me
16 or submit them in writing. If there's anyone who did not
17 receive copies of the handouts and needs them, please see
18 me. I'll make sure that they get sent to you. Are there
19 any other questions? How long a break did you want to do,
20 John, or did you want to talk before?

21 Okay. If there are no other questions, I'm going
22 to thank you very much.

23 MR. SILBERG: David, is there a more formal
24 write-up on the program?

25 MR. DRAPKIN: Yes.

1 MR. SILBERG: Is that going to be distributed or
2 do we not want to see it?

3 MR. DRAPKIN: No, no, no. You do want to see it,
4 and what we're trying to do is get this business of
5 Alternative 3 settled one way or the other so that we know
6 what to write.

7 MR. SILBERG: Okay. Because it's hard. I mean
8 you want comments in a month, but the program isn't ready,
9 you know, distributed.

10 MR. DRAPKIN: Well, comments on the presentation,
11 ideas, holes that you see.

12 MR. SILBERG: Oh, okay.

13 MR. DRAPKIN: Obviously you'll get a chance to
14 comment in detail on the program. You have a -- there's
15 always a document this thick. It describes it. I can't --
16 thank you very much for your attention.

17 MR. HOYLE: All right. David, thank you very
18 much. It's 10 minutes to 11:00. Why don't we take a
19 15-minute break at this point, and then let's talk as soon
20 as we come back about how we would like to proceed.

21 [Recess from 10:50 a.m. to 11:20 a.m.]

22 MR. HOYLE: Let's see if we can't just start it
23 again. I think there are a few more people back in the
24 outer room there. But we've already gone over our break
25 time. It's now 11:20. Let me ask the NRC administrator,

1 have you finished your presentation that you had planned to
2 give?

3 MR. DRAPKIN: Yes.

4 MR. HOYLE: Okay. Nothing further. Chip, do you
5 have anything further to add at this point before we kind of
6 open up for discussion?

7 MR. CAMERON: No.

8 MR. HOYLE: Okay. We heard this morning, I think,
9 but we know where the challenge is that we need to address
10 in our discussion, and that is, what does the words "NRC
11 control" really mean? Have you heard elements of a program
12 that is going to produce -- that are going to produce a
13 situation where there will be a willingness to let DOE
14 operate the database and let NRC control it through the
15 tentacles that it establishes into that database and into
16 the program?

17 We're here in 1994 looking at a rule that was
18 agreed to after a long, long deliberation period by many of
19 you here at the table, and some that aren't to establish an
20 agreed-upon LSS development operation program which had NRC
21 as the ultimate operator. DOE was to design, develop, test
22 the system and then turn it over to NRC. This was 1987,
23 '88, '89 time frame.

24 Things have happened since then. The DOE program
25 has had delays in it. The InfoSTREAM's development has come

1 to be. The fast track that we thought we were on in 1989
2 became a very -- a slow track. And we're now trying to see
3 where we are on that track and what really does make sense
4 at this point in time, 1994, with the backdrop of the
5 agreements that you all had made before. And that you don't
6 want to back away from, that they were hard-fought
7 agreements.

8 So we really have to talk about what we heard
9 today in terms of an audit program; audit programs can be
10 very superficial. We've probably all seen that type, but
11 what we heard here today is that there is -- that these are
12 not going to be superficial audits. They're going to be
13 very serious, very in-depth audits. They're going to be
14 reported up the line as far as the commission. The
15 commission is very interested in making sure that they --
16 the NRC is in control of this database, even though it's
17 being operated by DOE. And we want to figure out a way to
18 get that message out clear and firm so that people who are
19 not in this room who are concerned about DOE/NRC joint
20 operations can think about it and decide whether they should
21 continue to be concerned or whether their concerns have been
22 lessened. So I guess I got Chip waving at me. Go ahead
23 Chip.

24 MR. CAMERON: I just wanted to say hello, that's
25 why I'm -- no. I --

1 MR. MURPHY: He really wants to say that he's got
2 to get out of here by noon because he's got a pony to bet
3 on.

4 MR. CAMERON: Okay. I don't need to note that Mal
5 Murphy said that. I just wanted to point out that in
6 addition to the substantive aspects of the audit program
7 that were talked about, in the latest commission paper, the
8 94-081 we also proposed a memorandum of understanding
9 between NRC and DOE to try to make these commitments, NRC
10 control, et cetera, et cetera, more visible and stronger so
11 that I would just note that for people who haven't focused
12 on that yet.

13 MR. HOYLE: Okay. Thanks, Chip. Maybe we --
14 maybe someone would want to talk about that later on. Let
15 me do two things of an administrative nature before we start
16 talking that I should've done earlier. One is to recognize
17 that Harry Swainston has joined us. Harry is the deputy
18 attorney general of the state of Nevada, and we welcome
19 Harry to the meeting today, and thank you for contributing
20 already.

21 We have circulated an attendance list. I'm not
22 sure where it ended up but -- okay. If anyone has not
23 signed it, please do so. It's on the table near the door.
24 And we'll have that taken care of.

25 Well, I'm open for panel discussion at this time

1 as to whether we want to proceed a little bit this morning
2 further. Now 11:30 almost and then we have the afternoon
3 devoted to this topic. Everyone's in agreement I guess
4 already.

5 MR. MURPHY: I want to hear -- I don't know. I
6 mean it doesn't have to be now, if what you're suggesting is
7 that we break early for lunch, because we will have all
8 afternoon, but I'm curious to see how Moe's statement this
9 morning that DOE will be merely his contractor and that he
10 will in fact run the LSS system squares with what we heard
11 in the presentation on the audit and what Alternative 3
12 actually says, and as far as I know that hasn't changed yet
13 internally within the NRC.

14 In particular -- and I see contrasting language
15 just even in the report or the material that we were shown
16 this morning. In one place it talks about LSSA's control
17 and in another place it talks about LSSA's oversight, and
18 the two are entirely different animals, in my judgment at
19 least. But more fundamentally, I want to hear how what the
20 NRC is proposing squares with the language that we
21 negotiated and the commission adopted in 2.1011, and that is
22 that the LSS shall be administered by the LSS administrator
23 and that -- this was just as important or perhaps almost as
24 important as the rest of it, that the 2.1011(C)(1) where it
25 says, "LSS shall not be a part of any computer system that

1 is controlled by any party, interested governmental
2 participant or potential party, including DOE and its
3 contractor, or that is physically located on the premises of
4 any party." That's -- if you're going to -- unless we can
5 somehow satisfy those requirements, you're going to probably
6 have to go ahead without the concurrence of some people at
7 the table and some of the local governments, and I think the
8 State, because it seems to me what you're proposing
9 absolutely requires an amendment to the LSS rule, and it's
10 an amendment that we are not prepared to agree with at this
11 time.

12 MR. HOYLE: Well, yes, it does, would require
13 amendment of the rule. I guess what you're saying is the
14 rule is not open to amendment at this time.

15 MR. MURPHY: Well, any rule is open to amendment,
16 I suppose, consistent with, you know, the administrative
17 procedures act and all that kind of stuff.

18 MR. HOYLE: Right. I mean as far as you're
19 concerned.

20 MR. MURPHY: Yeah. I mean, as far as I'm
21 concerned the NRC has already violated its own rule today by
22 not pushing toward the implementation of the requirements
23 that the system be administered by the LSS administrator and
24 that it not be located within DOE's physical buildings.

25 MR. HOYLE: Well, I think that's why we're here

1 today. The commission has proposed an alternate approach
2 and wants to hear again, after more thorough discussion of
3 the subject, what this committee believes that it should do.
4 It's looking for your advice and your recommendation. It is
5 a serious proposal the commission has put forth in light of
6 circumstances of today.

7 MR. MURPHY: What circumstances have changed which
8 precludes the implementation of the rule as written? I
9 don't understand that.

10 MR. HOYLE: I'm not sure that there's any
11 circumstances that's changed that would preclude the rule
12 from being carried out as written.

13 MR. MURPHY: Which makes the rule from being --
14 which makes the implementation of the rule as written less
15 wise today than it was in 1988 or '89 when it was originally
16 adopted. And again, just like I said, in October, John, I
17 realize that I'm putting you in kind of a difficult position
18 because I understand that this is not the staff's preferred
19 approach, that this is something that, to be quite frank,
20 has been shoved on the NRC staffs and -- throat by the
21 commission. That's my understanding, at least, and the
22 staff would've preferred to implement the approach that we
23 negotiated in 1988 and '89.

24 MR. HOYLE: Well, I don't agree with that
25 statement, Mal. I think that the relook at whether there

1 could be some cost avoidance was something that needed to be
2 done whether the staff would prefer to do -- to not save
3 money to go ahead with it the way it was. I guess that's
4 another issue, but the point is, a hard look was made to see
5 whether there could be some cost savings in light of
6 InfoSTREAM's having been developed, and in light of the
7 need, in this atmosphere, tight money atmosphere, to see if
8 something seriously could be done. If only a few dollars
9 would be saved, we wouldn't be here today.

10 MR. MURPHY: Well, but where are we going to save
11 money just because InfoSTREAM -- I mean DOE could continue
12 to develop and implement InfoSTREAMs and at the appropriate
13 time, as called for by the rule, turn the system over to the
14 NRC, turn it over to the LSSA. I don't see where we're
15 going to save any money by doing it the way Alternative 3
16 proposes than otherwise. Now the NRC may save any money,
17 but that's not what I think we should be talking about. The
18 nuclear waste fund isn't going to spend a dime less this way
19 than it would otherwise, I don't think. I don't see it,
20 anyway.

21 MR. HOYLE: Well, I think as contemplated by the
22 rule, NRC -- well, when the rule was developed, I didn't
23 think there was contemplated a combined computer system that
24 would just build on something that DOE already had.

25 MR. MURPHY: No, I disagree with you entirely,

1 John. Again, 2.1011 specifically says, "Nothing in the
2 subparts shall preclude DOE, NRC or any other party,
3 potential party or interested governmental participant from
4 using the licensing support system computer facility for a
5 records management system for documentary material
6 independent of the licensing support system."

7 We did contemplate that and we discussed it at
8 some length during the LSS negotiations, specifically the
9 notion that DOE -- that it would be wasteful for DOE to
10 develop two totally independent stand-alone systems, one to
11 manage its own internal documents and one for the LSS. It
12 was -- there was precisely contemplated that they would use
13 the same system for both, but the LSS part of it would be
14 turned over to the LSSA to manage and control.

15 MR. HOYLE: Well, you may be right. I guess in
16 those days I was thinking that the fast track was the LSS
17 and that it would be developed and then perhaps it would be
18 able to be used by DOE as its own document --

19 MR. MURPHY: Well, that's true. I --

20 MR. HOYLE: -- management system. I think we've
21 gotten turned around in the last five years.

22 MR. MURPHY: Yeah. It being turned around is
23 irrelevant to the ultimate issue, as far as I'm concerned,
24 whether or not you develop InfoSTREAMs first and turn it
25 into the LSS or develop the LSS first and then let DOE use

1 it for its own internal records management is, you know, one
2 or -- you know, that's the same, as far as I'm concerned.
3 The issue is who gets to run the thing and where is it going
4 to be located.

5 MR. HOYLE: Well, clearly we're talking about some
6 rule changes. If it's going to be operated, located in DOE,
7 but I guess we ought to be talking about your first point,
8 you know, expand on what does it mean to Moe, what does it
9 mean to NRC to have DOE operating as contractor. And how
10 does that square with the concepts that were in the LSS
11 rule. And yes, there is specific wording in the LSS rule,
12 some of which was I guess very carefully crafted, and maybe
13 some of the crafters are in the room, but there are also
14 concepts there, and I think we're talking about concepts
15 here today. So I guess I need to ask Moe whether you want
16 to take that on now, or Chip, or what's -- how do you think
17 we ought to proceed?

18 MR. CAMERON: Why, I think that we do need to
19 address the first two points that Mal brought up, is this
20 consistent, is Moe's statement about treating DOE as a
21 contractor, and this is something not only for MOE to
22 address but also for Dan to talk about in terms of how the
23 statements square. But is it consistent with the audit
24 program and is it consistent with Alternative 3. I think
25 that we can address those.

1 Alternative 3 is a proposal, and even though the
2 statement that Moe made, our current thinking on this may
3 not be entirely consistent with Alternative 3, the whole
4 purpose of talking to the advisory review panel is to see
5 what changes might need to be made to Alternative 3 to have
6 it be an acceptable vehicle.

7 In terms of how it squares with the language in
8 2.1101, I think the commission paper that went up, and as
9 John stated, it isn't consistent in terms of DOE having
10 nothing to do with the day-to-day operation of the system,
11 because obviously they are going to be in charge of the
12 day-to-day operation of the system, albeit under our
13 control, and I guess that in trying to answer the first two
14 points that you raised, Mal, is what we're trying to find
15 out is if there's some way that we can get to an agreement,
16 even though it's not the most ideal situation, that would
17 allow us to go forward with implementing the LSS.

18 And I guess that's what my concern is, is that
19 Alternative 3, to me, is the vehicle for moving forward at
20 this point as opposed to being mired down in what we've been
21 mired down in for the last four or five years making no
22 progress on the LSS. And I would like to see us move
23 forward with it.

24 Does anybody else on the -- do you want to respond
25 to Mel's points now, or do you want to think about it and

1 talk about it after lunch or --

2 MR. LEVIN: I'd like to talk about it after lunch.
3 I'd also like to hear if there are any -- what the rest of
4 the panel has to say, because I think there are some valid
5 points there and they should be discussed, no doubt about
6 it.

7 MR. DRAPKIN: It may be useful to review how we
8 came to Alternative 3. I realize we did that at the last
9 meeting, but what were the motivating forces behind that so
10 that everybody understands that somebody just didn't sit
11 down in an office one day and for no reason decide to do
12 Alternative 3 or to Alternative 3.

13 MR. SILBERG: I think DOE also ought to address
14 Mel's question about why doesn't DOE develop InfoSTREAMs and
15 then turn it over.

16 MR. SWAINSTON: That's a good point. You know, I
17 think what we're talking about here is we're talking about
18 hardware and we're talking about software. Besides that,
19 this hardware every two or three years, as I understand it,
20 with innovation and so forth, the previous three years'
21 equipment becomes obsolete. So I can't imagine how much
22 savings that the NRC is going to save, or DOE on the nuclear
23 waste fund, because the cost of the equipment is going to be
24 the same, regardless. The cost of developing the software
25 is probably for the most part already absorbed. I can't

1 believe that, you know, the software is that difficult. Why
2 the design just simply can't be turned over with the money
3 to acquire the equipment to the NRC, I can't understand why
4 that's really a problem. Is there anybody that can respond
5 to that?

6 MR. LEVIN: Let's hold on. I'd like to hear what
7 the panel has to say and then break for lunch so we can
8 actually discuss this --

9 MR. SILBERG: Chip, maybe you ought to --

10 MR. LEVIN: -- intelligently.

11 MR. SILBERG: -- make a list on the board of some
12 of these points, and let's just get all --

13 MR. LEVIN: Exactly.

14 MR. SILBERG: -- the points out on the table.
15 Then after lunch we can just go back and discuss them one by
16 one.

17 MR. LEVIN: I agree.

18 MR. SWAINSTON: I have another point, as long as
19 I've got the floor here. We went through -- you know, I
20 think it's been characterized, a very unique activity. And
21 experiment in licensing I think was also a terminology that
22 was thrown out there. And after a couple of years, we came
23 up with this rule, and I think it's a good rule. I think
24 Chip probably deserves as much credit as anybody for
25 actually finalizing this rule, but we all agreed to it. It

1 was done through a negotiation process.

2 MR. SILBERG: All but one.

3 MR. SWAINSTON: Well, all except for -- but I
4 think it's very critical to recall that and to remember
5 that. Right after the rule was promulgated we lost
6 either -- at least one environmentalist, because the NRC
7 modified the rule with respect to the way participants have
8 to submit their positions and intervene. I don't recall
9 just exactly the nature or the wording of the rule is, but
10 the environmentalists are not here at this table today.
11 They felt that we broke faith with them and they're
12 basically -- have nothing to do with this committee. We --
13 or if the NRC modifies the rule again, I think probably, at
14 least speaking for the state of Nevada, the state will
15 challenge, in court, the entire rule in an attempt to have
16 it set aside.

17 Now that may sound, you know, like a saber
18 rattling and so forth, but I've been authorized to make that
19 statement, and I think probably it's one that the state will
20 stick to. And keeping with that, I think we'll probably
21 bring along with us as many of the other participants as we
22 possibly can.

23 And it's more than just this particular rule that
24 may be in jeopardy. It may be the experiment in this unique
25 activity that's in jeopardy as well. Negotiated rule making

1 may never work again if this is the way participants are
2 jeopardized after the rule is once promulgated.

3 MR. MURPHY: Well, I think that's already
4 happening, Harry, and I think Chip is probably more aware of
5 that than anybody else in the room, that old BRC thing
6 didn't come apart, Chip, because the environmentalists were
7 unwilling to participate and negotiate in rule making.

8 MR. CAMERON: Well, that was one factor in that.

9 MR. MURPHY: Because of the experience they had
10 from the NRC after this rule was adopted?

11 MR. CAMERON: That was one factor in people not
12 coming to the table. But it's a lot more complicated than
13 that, but --

14 MR. MURPHY: Right.

15 MR. CAMERON: -- that was at least offered by
16 several people as the reason. This is great. They write on
17 the board. I can't ignore all this.

18 MR. SILBERG: It's true that the rule may change.
19 The purpose of this meeting, though, is to see if there's --
20 if there can be an agreement as to what it would take to
21 satisfy everyone that that change is worthwhile and
22 acceptable and is balanced by whatever audit mechanisms,
23 compliance mechanisms, control mechanisms DOE and NRC think
24 that they can put together, but that's enough to satisfy
25 you. I think that's the issue.

1 MR. SWAINSTON: Well, we've heard that before,
2 Jay. In the other vernacular it's, "Trust us, we won't go
3 if it isn't safe." And right now I think probably most
4 people in this room realize that the Senator Johnston on
5 behalf of the DOE will move to try to create an MRS to Yucca
6 Mountain. I mean, it's just -- we probably will never use
7 the LSS system for the purpose that it was originally
8 intended. It might be used in licensing an MRS if he's
9 successful, but you know, a lot of this is just the realm of
10 a prototype activity that might have some value to future
11 participants, but this rule may not ever be used for its
12 purpose.

13 MR. SILBERG: All of that is true, but I don't
14 think that takes away from the usefulness of seeing whether
15 there is a common ground on, you know, a change which allows
16 a more sensible, from an economic standpoint, data
17 processing system, but giving you the protections that you
18 think are necessary that the system will work in an
19 even-handed manner.

20 MR SWAINSTON: Yeah, but how can you even talk to
21 us about protections when we had the 1987 screw Nevada one,
22 about 1992 we had another one. In '94 we'll have a third
23 one. What -- you know, what is the meaning of protections?
24 Why can you --

25 MR. SILBERG: That's a different arena, and we

1 can't play that question here because, you know, you don't
2 have Bennett Johnson in the middle to throw darts at or
3 whoever. We're really talking about something else. If we
4 want to expand the discussion to get into those kinds of
5 questions, you know, then we can have a nice discussion, but
6 it's not going to get us anywhere. And I'm happy to have
7 that discussion, but I think that's really beyond the scope
8 of what we've been trying to do here. It may be that
9 it's -- you know, that there isn't a common ground. You
10 know, the last time we had the negotiator rule making we
11 didn't have a common ground either, and the NRC went ahead
12 and published the proposed rule.

13 But it's worth the effort. We made the effort the
14 last time, you made the effort the last time. I think it's
15 worth making the effort now. If we can reach closure on it,
16 fine, if we can't, you know, we'll move ahead, and if NRC
17 wants to amend the rule, they'll amend the rule. If Nevada
18 wants to challenge the rule, you know, Nevada will challenge
19 the rule.

20 MR. SWAINSTON: Well, you know, I've always felt
21 that Nevada has participated in this whole process in good
22 faith. Kirk has represented us in a very capable manner in
23 trying to help develop --

24 MR. SILBERG: Yeah, and there's no dispute about
25 that. There's no question about that.

1 MR. SWAINSTON: But, you know, the bottom line is
2 that the major negotiating point that we finally decided on
3 was the control and management of the system. If that's
4 taken away from us, then certainly -- I mean, you know, I've
5 already said it, we're not going to agree to it. Then NRC
6 takes it away from us anyway, we will do whatever we can to
7 bring the old rule in. I mean it's just flat -- you know,
8 that's the way it is because that isn't what we negotiated
9 to begin with.

10 MR. BALCOM: I'd like to explore too, as an
11 assumption, if there isn't a possibility of an Alternative 4
12 and, you know, if your original concern was cost avoidance,
13 to see if some of the cost avoidance issues haven't changed
14 since the working group met in terms of looking at the
15 transfer of InfoSTREAM's technology to NRC at some point, is
16 it yet another cost figure, and to see if that's feasible or
17 if indeed there is a policy issues to put there that I
18 certainly, you know, wouldn't know about with NRC.

19 MR. HOYLE: Brad.

20 MR. METTAM: One of the things that Mal said,
21 talked about the difference in oversight and control, and
22 I'd like to hear a little more about that, especially as it
23 relates to SECY-94-081, section B that talks about NRC
24 management authority seems to be written to make it very
25 clear that there are really no enforceable sanctions that

1 the NRC has against the Department of Energy, which tends to
2 go against the contractor concept. In section two and again
3 in section three it talks about there are, you know, no
4 immediately enforceable sanctions against the Department of
5 Energy should they be found not to be doing the system the
6 way it's supposed to be done. That's not the way you would
7 write a contract with a contractor certainly. I'd like to
8 hear a discussion of that.

9 MR. SILBERG: As you recall, the ultimate sanction
10 for the LSS system in the worst case, which is there
11 wouldn't be an LSS system, was we would go back to the other
12 licensing system, the subpart G as opposed to the subpart J
13 rules, and that -- you know, that is your ultimate sanction.
14 Presumably the NRC, if it were dissatisfied with DOE's
15 performance as a contractor, could hold another one of these
16 meetings three years from now and say, it's not working, you
17 know, we're going to pull the plug on this, we're going to
18 change the rule again. I mean, there is that kind of
19 sanction, and the ultimate sanction which is still in the
20 rule is you don't use subpart J.

21 MR. METTAM: Well, I agree, you know, the ultimate
22 threat is, you know, which has become somewhat shopworn, is
23 that, you know, we don't have any control over you, but if
24 you don't do what we ask, we won't give you a license
25 somewhere down the road. But, you know, it's been used to

1 the point where I don't really know how much weight it has
2 anymore, you know.

3 MR. SILBERG: Well, we're waiting to see that
4 license application.

5 MR. MURPHY: And to see what it's for.

6 MR. SILBERG: Right.

7 MR. MURPHY: You know, just to put Brad's point
8 another way, if in fact -- and I don't see these in the
9 documents, and Brad pointed out the SECY 94-081 language,
10 but if in fact we can agree on something which still allows
11 Moe to pick up the phone and say, "Do it and do it now,"
12 that's different than what's written in the documents, and
13 it's different than calling -- you know, I want him to be
14 the LSS administrator, not the LSS auditor. That's what the
15 A should stand for in LSSA. And what we've heard so far is
16 that he's going to turn into the LSS auditor.

17 MR. CAMERON: You know, that's an important point
18 you bring up that I think people should focus on here, is
19 that those types of changes to what's been presently
20 proposed can be incorporated and brought back to the
21 commission, and particularly through the MOU process,
22 specifying details of those types of arrangements, because
23 we talk about enforcement sanctions. I think you have to
24 read that broadly, too, in terms of what does it take to
25 make sure that someone is going to respond to deficiencies

1 that are identified? It doesn't always have to be that
2 you're going to be able to fine them, for example. There
3 may be other ways to put an "enforceable" scheme together,
4 and including the fact of not what you do with the license
5 application -- well, including what you do when the license
6 application is filed, there may be certain things that the
7 panel think should be included in this Alternative 3 related
8 to that that would give them some assurance in this regard.
9 And I think all of these suggestions, I mean ultimately it
10 may be that the panel takes the position that we don't want
11 the rule to be changed at all, and we're going to stand by
12 that or it may be that we come up with some suggestions, a
13 number of suggestions like that that may make it more
14 feasible.

15 MR. HOYLE: Any other suggestions for discussion
16 this afternoon? Looks like a plateful.

17 MR. SILBERG: I think we ought -- I would also
18 pose a question to Harry. I think Mal has kind of
19 identified what his position is. I haven't heard anything,
20 Harry, from you that would indicate there is any middle
21 ground. Your position basically is if you change the rule,
22 you know, we'll go to court. Is there any description of
23 NRC control oversight, compliance, assessment, whatever you
24 want to call it, that might, you know, make the state of
25 Nevada happy or at least not unhappy?

1 MR. SWAINSTON: Well, not as to this particular
2 Alternative 3. If it had to do with some other rule change,
3 I'm sure that there would be middle grounds that we could
4 work out, but this goes really to the heart of the matter.
5 We do not trust DOE. That's, you know, the sum and
6 substance of it.

7 I've identified earlier this morning kind of
8 influence that DOE is capable of asserting against NRC
9 either directly or indirectly, and I can anticipate that
10 that will happen in the future, and we will be frustrated
11 then as we are now in attempting to do anything about it.
12 And why should we agree to that? Why should we capitulate
13 on everything that's important to us? Why should there be a
14 middle ground, I would ask you the question back, why should
15 we identify it?

16 MR. SILBERG: Because if you can accomplish the
17 financial savings that have been outlined --

18 MR. SWAINSTON: But the financial savings aren't
19 of any interest to us. It might be an interest to you, but
20 you didn't even sign on to this rule. And this is
21 something -- this is a rule that you didn't even agree with
22 because of the financial considerations.

23 MR. SILBERG: Well, you want to know our position.
24 My position is that there are two sides to the story.
25 There's a benefit to making the change to Alternative 3,

1 which is basically that we can do things probably quicker
2 and probably save a fair amount of money. The cost from
3 your standpoint is it involves -- it may involve changes
4 from the way the rule is structured.

5 The question is are there things that can be done
6 that would make the changes to the wording of the rule
7 acceptable, maybe by other changes to the rule like, you
8 know, some kind of oversight process or something else. If
9 there are no other changes that can be made, you know, is
10 there an Alternative 4 or 5, or is Nevada's position, you
11 know, "Hell no, and we'll see you in court." Which is fine.
12 I mean, I can understand that. Just may be something you
13 can answer after lunch.

14 MR. SWAINSTON: Well, I --

15 MR. SILBERG: Maybe you can answer it now.

16 MR. SWAINSTON: I'll defer it till after lunch,
17 but you know, I think our position is stated, and I think
18 it's pretty much unwavering on this point.

19 MR. SILBERG: Okay.

20 MR. CAMERON: I know, Harry, you've sat through --
21 as a lot of us did, through the negotiated rule-making
22 sessions and a lot of people had strong positions on various
23 aspects of it, and we all sat and listened, and I would just
24 hope that, at least in light of this afternoon's discussion
25 about what are the potential benefits would change, what can

1 we add to this to increase the control that -- just listen
2 with an open mind.

3 MR. SWAINSTON: Chip, no one has presented any
4 kind of cost figures, at least that I have seen.

5 MR. CAMERON: Well, I -- right, I think that we
6 talked about that at the last meeting, and they are in the
7 paper, but rather than having people try to dig through and
8 see what those are, after lunch the NRC will make a
9 presentation about what the cost savings are, what the
10 efficiencies are, what other benefits would result from
11 adoption of Alternative 3. And I think that has to be a
12 starting point, because you have to weigh that against the
13 change in the rule and then look at these proposals to
14 exercise control in light of that.

15 MR. SWAINSTON: Is there anybody who -- have I
16 captured what has changed since the rule was promulgated
17 that necessitates this change, this revision to the
18 framework? How does the audit program, how does Alternative
19 3 square with the NRC treating DOE as a contractor for
20 implementing the OSS? Why can't DOE develop InfoSTREAMS and
21 then turn it over to the NRC for operation? What are the
22 cost savings, if any, related to Alternative 3? What other
23 benefits are there from Alternative 3? What, at a minimum,
24 should be added to Alternative 3, the audit program that we
25 discussed to demonstrate NRC control, for example? And if

1 we do have this in the rule, I want to use this language of
2 Moe picking up the phone and calling Dan.

3 MR. LEVIN: What do I call him?

4 MR. CAMERON: Well, I like Moe picks up the phone
5 and directs Dan to whatever he says to you, do it. How
6 about Alternative 4, the one that Kirk talked about,
7 transfer of InfoSTREAM's technology to NRC, and obviously
8 that's related to 3. A lot of these are interrelated.
9 Doesn't the contractor analogy fall apart in that there are
10 no enforceable sanctions against DOE? Why should there even
11 be a middle ground here, which goes back to some of these
12 other points. Is there anything other than that?

13 MR. BECHTEL: John.

14 MR. HOYLE: Yes.

15 MR. BECHTEL: At the last meeting we had
16 discussion about just the topical guidelines itself, you
17 know, the content. Were you intending on discussing that
18 today? We sent a letter and we never really received a
19 reply on our concerns. I think Mal sent one as well.

20 MR. HOYLE: Right. Now I've been told by the NRC
21 staff that they have your comments and others and that
22 matter's still under review. They have not finalized that
23 new reg on topical guidelines. I don't think they were
24 prepared to make a presentation on it today. I can schedule
25 something like that for a future meeting.

1 MR. BECHTEL: Well, these have been discussed at
2 some point. That also was part of what we had, you know,
3 negotiated. So --

4 MR. SILBERG: I don't think the NRC has any real
5 problems with the suggested changes.

6 MR. HOYLE: Yeah, I don't either. There's nothing
7 that makes me think they do.

8 MR. BECHTEL: Well, we didn't receive a response,
9 so we don't know. So --

10 MR. HOYLE: All right. I'll take back the word
11 that you haven't received a response and see if you can get
12 one either as an interim or whatever. I think the staff
13 that was working on that has been working on something else.
14 I think they just haven't got --

15 MR. CAMERON: But they have analyzed the comments.
16 Okay. And I think that most of the comments were
17 incorporated into a new revision.

18 MR. BECHTEL: Okay. I guess the second item is
19 that we had some concerns about the system itself
20 InfoSTREAMs, and I understand there's going to be a
21 presentation tomorrow, and we'll have a chance to discuss
22 that?

23 MR. HOYLE: Yes.

24 MR. BECHTEL: Okay.

25 MR. HOYLE: Yes. You want to talk about status of

1 InfoSTREAMs tomorrow?

2 MR. GRASER: Yes.

3 MR. HOYLE: How much time does NRC need? How long
4 should the lunch break be, an hour? An hour, hour and a
5 half? Okay. Let's go back at 1:30. 1:30 please.

6 [Whereupon, at 12:02 p.m., the meeting was
7 recessed for lunch, to reconvene at 1:30 p.m., this same
8 day.]

9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

1 InfoSTREAMs tomorrow?

2 MR. GRASER: Yes.

3 MR. HOYLE: How much time does NRC need? How long
4 should the lunch break be, an hour? An hour, hour and a
5 half? Okay. Let's go back at 1:30. 1:30 please.

6 [Whereupon, at 12:02 p.m., the meeting was
7 recessed for lunch, to reconvene at 1:30 p.m., this same
8 day.]

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

AFTERNOON SESSION

[1:40 p.m.]

MR. HOYLE: During the lunch break, the NRC folks talked with one another and to DOE. I think we're ready to start the afternoon session by going through the points that were put on the board. Since Chip had the honor of writing them up there, he gets the honor to at least lead off.

MR. CAMERON: Okay. What I thought might be useful for our discussion would be to go through a little bit of the context of what's been going on over the past years and get to this first point about what's changed since we negotiated the rule. And then to have some of the NRC folks address the cost savings and other potential benefits that might result from Alternative 3.

Then to address the third issue, what could be added to Alternative 3 to fortify it. And I think that brings in a second question about the audit program that Mal posed. It also brings in Brad's question number eight about the contractor analogy.

And then lastly discuss what other alternatives are there, and this gets perhaps at some of the points that Harry Swainston was making.

We would like to concentrate on what it would take to fortify Alternative 3 to make it clear that the NRC is in control, but we also want to explore other options, and

1 obviously we want to focus on Alternative 3, because that's
2 the alternative that the commission wanted us to put before
3 the ARP as a proposal for further action.

4 As you all know, when we -- all the smoke, dust,
5 whatever, cleared from the negotiated rule making, the
6 proposed rule, the final rule, we came out with a rule that
7 had the Department of Energy designing and developing the
8 system, and that system would then be turned over to the LSS
9 administrator for operation and maintenance. Now in the
10 same time frame that we were conducting the rule making, the
11 commission had specified that the NRC would be the LSS
12 administrator, operate and maintain the system if the
13 department would fund operation and maintenance. And it
14 directed the NRC staff to negotiate a memorandum of
15 understanding, an MOU with the department to that effect.

16 We go to the next stage, then, where the
17 department schedule for the repository changed. At this
18 point I think DOE plans in terms of not only the OSS but the
19 technical program were sort of up in the air. There was
20 some budgetary problems at DOE. We weren't able to finalize
21 memorandum of understanding with the department on paying
22 for NRC's operation and maintenance costs for the LSS. Part
23 of that history involves the office of management and
24 budget. The office of management and budget said that they
25 would not approve any arrangement where one agency, that is

1 DOE, would pay for responsibilities that were within another
2 agency. In other words, the operation and maintenance of
3 the LSS. So now we were faced with the OMB roadblock at
4 that time to negotiating any MOU with DOE on the budget.
5 And later, this was in the last administration, the office
6 of management and budget, I believe, took the position that
7 not only shouldn't the operation and maintenance funds be in
8 DOE's budget, but that the NRC should be responsible for
9 design and development of the system also, which was
10 directly contrary to the provision of the rule.

11 The commission became concerned about having
12 adequate budgetary resources to properly implement the LSS.
13 Commission was concerned about whether we would have a
14 system there that would function effectively. As opposed to
15 looking to DOE for funds for operation and maintenance
16 because of DOE's greater funding capability. Now this
17 concern over budgetary resources for operation and
18 maintenance lead to an evaluation by the commission of the
19 overall cost effectiveness of the LSS. How could it be made
20 more cost effective? How could it be made more efficient?
21 What implications would any proposals for improving the cost
22 effectiveness have on the LSS functionality, including the
23 division of responsibility between DOE and NRC for the
24 system?

25 Moe is going to talk in a little bit more detail

1 about this in a little while, but basically I think that it
2 was realized that there would be millions of dollars saved
3 in not duplicating the technology for the capture of
4 documents. There would also be a greater efficiency in
5 terms of not having any transition between DOE contractors
6 on the design and development of the system and NRC
7 contractors who would take over operation and maintenance of
8 the system. Now I can't under emphasize that point, because
9 that can be a real nightmare, in terms of trying to do that
10 type of handle.

11 At the same time that all this was going on, the
12 whole InfoSTREAMs concept took off, bloomed and became more
13 of a reality. This history lead the commission to say,
14 let's look at an option, Alternative 3, that would not only
15 be cost effective, but it would really give us a realistic
16 chance of getting the LSS up and running. But at the same
17 time, let's make sure that the potential users of the system
18 are satisfied. Let's see what we can do to ensure that
19 they're comfortable with NRC control over DOE's operation
20 and maintenance of the system.

21 So this is where we are at this point. This is
22 what has changed since the LSS was negotiated. And we put a
23 lot of detail into the rule. But I mean, obviously, it was
24 difficult to foresee some of the implementation problems
25 that would be happening down the line.

1 At this point I think I'll ask Moe to talk about
2 some of the cost aspects of Alternative 3.

3 MR. LEVIN: Okay. Like you said, the whole --
4 looking at the costs was kind of before the idea of
5 combining it with InfoSTREAMs. And what that analysis
6 showed was that by not having to duplicate effort and
7 things, that there would be -- by moving it over to
8 InfoSTREAMs, we could realize a \$63 million cost avoidance
9 in the LSS budget of NRC. There is -- and then just the
10 natural logical savings of not having to have a duplicate
11 system and support duplicate systems, and as you said, the
12 handle. And so that's what lead -- that's without getting
13 into a lot of the details, you know, down to the actual sell
14 level of the spreadsheet, that's what's lead to the \$63
15 million number for cost avoidance. That's --

16 MR. CAMERON: Okay. I know that Moe and his staff
17 have been -- in working, talking during lunch and talking
18 with Corrie and Dan about improvements to fortify option
19 three, but before we get into some further proposals along
20 those lines, I'd open it up for panel discussion about the
21 history of this thing and some of the cost savings aspects
22 of it. Anybody have any comments? Harry.

23 MR. SWAINSTON: The history, of course, goes back
24 quite some time. But isn't the more recent history more
25 relevant to what we're considering than what went on several

1 years ago? For instance this \$63 million, that could change
2 drastically just in terms of going from a mainframe to a
3 different kind of system. I mean, if you're just going to
4 use a bunch of PC's, or whatever you're going to use, then
5 that's entirely different than a main -- supporting a
6 duplicate mainframe system.

7 MR. CAMERON: Well, I think that Dan or Moe, you
8 may want to talk about this. I'm not sure if the entire
9 \$63 million was related to the capture function.

10 MR. LEVIN: Okay. I think, if I remember
11 correctly, and if anybody knows more, fill in, that
12 \$63 million was just for illustrative purposes. It was
13 based on a guess of where the technology was then and what
14 the costs would be, but that wasn't a hard-and-fast number
15 that we expected to take to the bank, it was just to show
16 that there could be cost savings with the understanding
17 that, yeah, as technology changed, it could affect that.
18 And I think that's the way that those numbers were
19 portrayed, not as absolute values.

20 MR. DRAPKIN: The question was, was there enough
21 cost savings in an alternative approach to be worth
22 pursuing, and it turned out that it was. There were a bunch
23 of alternatives looked at, dozens probably that didn't
24 result in any significant cost savings.

25 MR. LEVIN: Dan.

1 MR. GRASER: Yeah. I'd also like to comment on
2 that, that yes indeed, a lot of the cost savings that were
3 identified in that drill were representative of what
4 technology was going to help us do in terms of document
5 capture. The document capture from all the estimates from
6 all the way back in 1988 have always been that the
7 predominant amount of money that was going to be spent on
8 this system was for the process of doing document intake,
9 conversion, full text and the whole nine yards. And a large
10 amount of that saving can be attributed to technology.

11 A lot of the cost savings that we identified from
12 the original design in 1990 for example, when we look at it
13 again, there were products available by 1992 and 1993 that
14 were now available as off-shelf products that in the
15 original SAIC design we anticipated having to develop that
16 software because it didn't exist at that time. As we move
17 forward, technology's going to continue to do this to us,
18 and in fact technology, the cost of storage, the cost of
19 disseminating the information, the telecommunications costs,
20 all of these costs are constantly driving down. I venture
21 to say if we looked at it a year from now, that we would say
22 technology has done this to us as well, it's driven down the
23 cost of whatever, you know, other piece of the system
24 happens to be.

25 That is an ongoing reality, and I think your

1 comment this morning was probably very conservative. The
2 state of hardware technology is changing a lot faster than
3 once every three years. It's -- software's going at a clip
4 of about six months right now. PC work stations are going
5 at a clip of every two or three months. It's -- in terms of
6 mainframes, yes, you can say that there is more
7 instructional power available on a smaller box for lower
8 cost than there was five years ago, and that's just the
9 effect of technology. And I think it's fair to say that,
10 you know, we can anticipate other impacts like that.

11 MR. CAMERON: Dan, isn't it true also that no
12 matter what technology you're using, that part of the
13 savings from Alternative 3 are going to result from NRC not
14 having to replicate the hardware and software for capture to
15 run a relatively small, a comparatively small amount of
16 documents through. So that even if the technology changes,
17 you're always going to have a cost savings by not having to
18 duplicate whatever that technology is.

19 MR. GRASER: Right. Because that has not been
20 fully utilized, there would not have been enough volume to
21 really go out and establish a separate capability for
22 relatively small volumes.

23 MR. BALCOM: It seems to me that that would argue
24 that there's less than a \$63 million cost avoidance, and
25 every year it might become increasingly less, and that as we

1 go -- as DOE especially goes to electronic capture
2 dissemination of documents that the dissemination to a
3 second system wouldn't be that big a deal or that expensive,
4 and that if the justification for keeping this within DOE is
5 based on cost avoidance, that every year seems to be less
6 and less reason for that to happen. And that maybe there
7 are other issues that NRC has about, you know, not wanting
8 to run a system. I wasn't at those working group meetings,
9 but, you know, I'm wondering if we're not playing with
10 different figures now instead of \$63 million and quite a bit
11 different figures.

12 MR. CAMERON: Well, I would I guess -- one of the
13 things is that -- I mean there's eventually the capture
14 process is going to be over, okay, and eventually there are
15 going to be a lot of documents that have just created
16 electronically that eliminate -- that ease the capture
17 problem. And I guess I don't know what part of the
18 63 million was attributable to loading, capturing the back
19 log, the hard copy that either never was created
20 electronically or it's been created electronically, and
21 because we have it, that it's just gone. Okay.

22 But there's also the idea of the problem in terms
23 of the transaction between contractors that was of concern
24 and could result in additional costs and/or a system that
25 doesn't really function effectively. Now I guess I would

1 ask the NRC whether outside of capture, the transition
2 problem, in terms of operation and maintenance of the
3 system, can you speak to the -- either the cost savings or
4 the efficiencies connected with Alternative 3 in that regard
5 versus the way it would be done under the way -- the rule
6 now?

7 MR. MURPHY: And while you're doing that, Moe, you
8 might keep in mind that for those of us in the state, local
9 governments, and I think the tribes, if you're talking about
10 saving money by not having the transition from one
11 contractor to another, after the horrendous hemorrhaging of
12 dollars out of the nuclear waste fund that we've all seen
13 DOE spend unnecessarily, in many people's judgments, in
14 transitioning into the M&O operation, were not going to be
15 overly impressed. That is not -- I can guarantee you right
16 now, is not going to be a sufficient reason for this local
17 government to agree to give up its bargain that we agreed to
18 in 1988. I think that is a completely phony issue.

19 MR. LEVIN: I guess from my understanding of this
20 whole cost avoidance issue and everything, what that really
21 lead to the idea of not building two systems and using the
22 InfoSTREAMs. I'm not sure, and I will admit right now that
23 things changed like we've said, I'm not sure that the cost
24 avoidance is still the driving force behind it. It may not
25 be. It's something we may have to look at, but I think from

1 a good -- just from a logical, rational systems viewpoint,
2 we should just have one system. But then that does it,
3 okay.

4 MP. MURPHY: That's true, and I don't think
5 anybody who was involved in the original negotiations, in my
6 memory at least, certainly anticipated on insisting that
7 there be two different separate stand-alone systems built,
8 one for DOE's internal use and one for the LSS with the
9 duplication of costs involved. Certainly I always
10 anticipated that DOE would build a system, that they could
11 also, at the same time, I remember sitting down over lunches
12 and dinners with Barbara Cerny on several occasions and
13 talking about this, that they would also be able to use for
14 their own internal purposes, and when the thing is up and
15 ready to go, and it's now an LSS, take it, turn it over to
16 Moe Levin and say, "Here it is, but this part of it we're
17 saving back here for our own internal purposes." Every -- I
18 think we all anticipated that.

19 MR. LEVIN: But then I would like to ask DOE
20 what -- if -- Dan, what problems he would foresee doing
21 that, of taking InfoSTREAMS and giving it to LSS for the
22 operating -- to the NRC for LSSA for operation and
23 maintenance.

24 MR. GRASER: Well, I'd just like to clarify, you
25 know, one of the aspects of the licensing support system

1 that I think is probably the aspect that Mal's referring to,
2 was the concept of having an LSS capture station, you know,
3 physically there, and when a document comes in, you process
4 that document one time, and when you process the document,
5 it meets the federal records requirement for us and we put
6 it on our machine, but it also meets an LSS requirement, and
7 you take it and you put it off to the LSS machine, which was
8 under the LSS administrator's management and control. So
9 the fact that you were not handling the documents twice or
10 covering them twice, I mean that was always anticipated, and
11 you are correct on that point.

12 Then when you start asking questions about, you
13 know, the reusability of InfoSTREAMs, again, you have to be
14 fairly precise about what you're talking about in the option
15 three scenario, that represented using DOE's existing intake
16 capabilities to process all of the collections of material
17 so that you would not have separately operating capture
18 stations simply because, as I said before, you wouldn't have
19 enough volume to support those activities, and we would want
20 to maximize throughput and just -- you have a mechanism that
21 does it, you just feed it all in.

22 The other aspect of option three then focused on
23 the reusability of InfoSTREAMs technologies, presuming there
24 were pieces of software that we had developed for
25 InfoSTREAMs that would not be applicable to meeting any LSS

1 requirement. And there were other pieces of code that were
2 going to develop that may have been 95 percent or 100
3 percent reusable. We went through the drill of identifying
4 which pieces of software, commercial products, developed
5 code, would have placed in meeting the LSS requirement. We
6 allocated those.

7 In terms of the hardware, I think the expectation
8 was that if we had a federal machine at the Department of
9 Energy that we were using very specifically to meet our
10 records management requirements, we would in some way want
11 to build a Chinese wall around that machine, and then
12 perhaps build additional machinery around it using the same
13 software or pieces of that same software. So you know, that
14 is the scenario behind option three.

15 What sorts of additional problems would that cause
16 us? I would think that the structure of building a
17 licensing support system around the existing InfoSTREAMS
18 really raised only one issue in my mind, and I don't see it
19 as an insurmountable issue. The issue it has raised is that
20 if both of those systems are sharing pieces of software
21 code, then your configuration management becomes an issue
22 such that if I needed to make a change for software to meet
23 my federal records requirement, does that ripple over into
24 the pieces of code that are being used to meet the LSS
25 requirement, and do I need to keep them in synchronization.

1 That was about the only issue, and configuration management
2 can be done in that environment, and that was really the
3 only issue that I saw at that point.

4 I just wanted to make sure that there was no
5 confusion after the last meeting about the possibility of
6 using one machine to do it all. I think when we start
7 getting into that area, I start running into a situation
8 where I may have to serve two different masters at the same
9 time, and that becomes a little bit more problematic. I
10 think in terms of the sizing and the scalability, we have
11 the architecture and the software design that will
12 accommodate adding resources on a scalable level, and
13 reusing as much of that code, and that was the spirit of
14 alternative option number three.

15 All of the code that we could reuse was a cost
16 savings against code that would've been similarly developed
17 under the two different system approaches. There were cost
18 savings there. The ability to add horsepower rather than
19 replicate horsepower, we were going to be able to use the
20 existing DOE hardware and just add Chinese wall additional
21 processing capabilities around it, that is a cost avoidance
22 in that we are not replicating hardware resources that are
23 already available meeting part of their requirement.

24 So but how do you put a dollar figure on it?
25 Well, that's when we get into this really very difficult to

1 project the exact dollar cost until you go through the drill
2 of figuring out how much of a piece of code was going to be
3 reusable, and what would the price of the hardware be two
4 years downstream for a mainframe. But we gave it our best
5 shot, and I think the findings in option three were
6 indicative that there are in fact realistic cost savings.
7 And as you say, cost may not be the ultimate driver, but in
8 terms of reusability, those are certainly feasible.

9 MR. LEVIN: Now that -- okay, that could lead to
10 another option that we discussed. Given that you have a
11 contract employee, one contract to put together a system,
12 and that system could be logically, in some cases maybe even
13 physically compartmentalized so that you can -- we can have
14 the LSS portion and the DOE internal InfoSTREAMs portion, we
15 came up with the possibility of having the LSSA being the
16 COTR, the contracting officer's technical representative
17 over all LSS activities under the Department of Energy
18 contract, which would in effect make us directly responsible
19 for the contractor for LSS activities. They would report
20 directly to the LSSA. But it would still be the Department
21 of Energy contract and the Department of Energy -- I mean it
22 would be the one contract that was handling this whole
23 InfoSTREAMs system that also would be doing LSS. And this
24 was an option we had just discussed at lunch.

25 MR. CAMERON: So I think that's -- we're going

1 to -- that's one idea that we're going to discuss in terms
2 of fortifying option three. I guess one thing I wrote on
3 the board was based on what Dan and Moe said, is that there
4 are realistic cost savings associated with Alternative 3.
5 The question is are the downsides associated with
6 Alternative 3 worth it, and we eliminate some of the down
7 sides.

8 Now you're not allowed to write on the board.
9 Stop it.

10 Okay. Well, that's the question obviously, are
11 the cost savings worth doing things differently.

12 MR. METTAM: What price tag do we put on the
13 United States government keeping their promises? That's
14 what we're talking about. They made a promise. They
15 embodied it in a rule. What does it cost to maintain that
16 promise? That's what we're really here talking about.
17 \$2.7 billion might get our attention, 63 million, ho-hum.

18 MR. SILBERG: Well, we're first on line because
19 they made a promise to take our fuel in '98. We paid
20 \$8 billion.

21 MR. CAMERON: Yeah, I think there's also the
22 aspect of getting a system up and running here to.

23 And I think Alternative 3 gives us some hope for
24 doing that. Okay. And I know what you're saying about the
25 bargain, Mal, but I think that we all have an interest in

1 seeing the system as a reality.

2 MR. LEVIN: Dan just got through telling us that
3 assuming he can meet our other concerns about InfoSTREAMs
4 which you're going to tell us about tomorrow, and my
5 suspicion is that we're pretty close to -- you know, to a
6 solution there. But I think Dan has just said that he can
7 do that through InfoSTREAMs, meet all these requirements for
8 the LSS and turn it over to you guys and satisfy the control
9 problem, that we don't have to build two separate systems,
10 with a few little exceptions.

11 MR. GRASER: I think it's even fairer to say that
12 the cost savings are realizable whether you make a change to
13 the rule or not.

14 MR. CAMERON: Right. Exactly.

15 MR. GRASER: And whether you have any sort of a
16 change in terms of the roles people play in terms of
17 oversight. It's kind of something that any technology --

18 MR. CAMERON: Uh-huh.

19 MR. GRASER: -- is going to do it to you anyhow.

20 MR. CAMERON: You're going to do anyway.

21 MR. GRASER: You may as well sit back and enjoy
22 it.

23 MR. SILBERG: Yeah, but these are changes in
24 addition to technological. These are cost savings in
25 addition to the ones you would get from technological

1 improvement.

2 MR. GRASER: I think the point that Mal is making
3 is that we haven't got to the heart of the issue, we're kind
4 of skirting around the cost avoidance and we probably need
5 to get back in terms of saying, you know, if cost isn't the
6 driver, then what is it in that rule and in the sequence of
7 events in the last couple of years.

8 MR. SILBERG: Well, why -- I don't understand why
9 cost isn't the driver. All costs are changes.

10 MR. MURPHY: Because it's your money, Jay, not
11 ours.

12 MR. SILBERG: All costs that change in technology
13 presumably will save costs, even on the system as it was
14 originally contemplated, but that doesn't mean that there
15 aren't additional cost savings by going to Alternative 3. I
16 thought --

17 MR. MURPHY: I haven't heard any identified.

18 MR. CAMERON: I think that in terms of cost
19 savings identified in terms of Alternative 3. I mean, you
20 can still ask for questions, so what. I think that's a
21 valid question.

22 MR. METTAM: Well no, but Dan's over there saying
23 you can still decide on whether, you know, you use
24 Alternative 3 or not, and I think one of the things that
25 keeps getting sort of skipped over is that no one's really

1 saying that you have to have two systems, you know. There's
2 no requirement that there be a separate developmental
3 process that goes on. You know, there's no requirement that
4 the data that the Department of Energy puts into their
5 system needs to be reentered or recaptured in any way.
6 We're talking about other participants' information, which
7 my guess is -- well, I shouldn't say that, but yeah, I would
8 assume the Department of Energy is probably not going
9 through some sort of scanning process to enter their own
10 documents, because you would hope that they're getting them
11 digitally from their own subcontractors, so that if what
12 you're looking at is a hardware question of how you get hard
13 copy documents into it, they're probably not really ready
14 for a whole bunch of non-DOE hard copy documents anyway, and
15 they'll have to buy whatever might be done.

16 I think if you start balancing the costs out, the
17 only real issue is, you know, who handles it ultimately, and
18 there are probably some costs in making that transfer, but
19 it's not as if he's going to, you know, rub a magnet against
20 his hard drive and say, "Well, here are all the documents,
21 go ahead and put them back into our system," he's going to
22 hand you a system that's got, as someone said, you know, the
23 bulk of the information is coming from DOE or DOE
24 subcontractor. I won't use their participant terminology,
25 it will confuse us. Already, that information will be in

1 there.

2 And then the question is, well who controls, who
3 handles the entry of information from parties in the process
4 other than the Department of Energy? And it should be
5 obvious from a public perception point of view that, you
6 know, what you're asking is for the public to say, you know,
7 trust the Department of Energy to handle that material
8 appropriately. I'm not saying they're not going to, but
9 from the outside looking in, you've got -- in theory you've
10 got a couple of parties involved underneath the regulator.
11 The NRC is going to rule on license ability of the site, and
12 the applicant is the Department of Energy, and you're
13 saying, "Well yeah, but they're also going to handle all the
14 important documents for everybody else." Difficult to buy
15 from the outside.

16 MR. SILBERG: Well, I thought, getting back to why
17 can't you just transfer the system to NRC and why do you
18 have to have a duplicate system, as I remember the
19 description of the system, InfoSTREAMs is a part of an
20 overall system that is agency-wide within DOE.

21 MR. GRASER: No, that's not the case.

22 MR. SILBERG: It's not? I thought there was also
23 a tie-in to the overall department system.

24 MR. GRASER: From E-mail connectivity for example,
25 but that's not an essential feature of LSS. That's more

1 along the lines of one of our office automation functions.

2 MR. MURPHY: You're assuming more efficiency in
3 the Department of Energy than they're entitled to.

4 MR. GRASER: Even if I wanted to --

5 MR. SILBERG: Well, I came to the conclusion that
6 President Reagan was right, and we should've abolished DOE a
7 long time ago and put it into smaller pieces where it would
8 be more manageable.

9 MR. SWAINSTON: Want to bring that to a vote? Can
10 I ask a regular -- might be an inane question, but what is
11 this impetus to get this LSS system up and running? Is
12 there -- you know, we're like at least 10 years away from
13 any kind of licensing proceeding. What is the real drive to
14 get it operating right now?

15 MR. CAMERON: I guess -- I don't know about 10
16 years away from a licensing proceeding. I mean, that may be
17 true, but I think -- I don't know what DOE's schedule is,
18 but it takes a long time to get a system. It takes some
19 time to get a system up and running and the bugs out, but
20 going back to the original LSS rule, one of the
21 objectives -- the only objective was not just to use it
22 after the license application came in, but to provide some
23 benefits to the potential parties to the licensing
24 proceeding to be able to use it before the license
25 application came in, not just to get ready for the

1 proceeding in terms of being able to formulate well
2 thought-out contentions, et cetera, et cetera, but to use it
3 in their prelicensing work.

4 And that's still an important objective as stated
5 in the supplementary information to the rule. Why spend all
6 the money to get this system up and running and only get the
7 benefits of using it after the license application comes in?
8 So I think that that sort of rears on getting the thing
9 ready as soon as we can get it ready, because it's not just
10 a question -- I mean Dan is not going to be just around -- I
11 mean, you know, it's not just around the corner the whole
12 thing.

13 MR. SWAINSTON: Well, let me play the devil's
14 advocate just a little bit on that, Chip. If that were the
15 case, then the participants should be urging you to get it
16 up and running. To my knowledge none of the participants --

17 MR. MURPHY: We are. We are.

18 MR. SWAINSTON: Okay. Well, we aren't, but I'm
19 not so sure that -- of what value you see now, but if that's
20 the case, then --

21 MR. MURPHY: We want to be able to use it to track
22 and manipulate in a benign sense, in other words, not in the
23 DOE sense, characterization data and documents that are
24 being generated.

25 MR. METTAM: Dan, I'm assuming InfoSTREAMs is

1 designed as a document management system sort of first and
2 foremost.

3 MR. GRASER: No.

4 MR. METTAM: What is -- what is -- okay. I know
5 we're jumping the gun into tomorrow's presentation but --

6 MR. GRASER: InfoSTREAMs, number one, is hardware
7 and software and wide area and local area network,
8 architecture that has been put in place. It is the sum
9 total of computer resources necessary for our program to
10 meet all of its ADP-type requirements. So number one, it is
11 the architectural foundation. We happen to have built that
12 architectural foundation with enough latitude to make it
13 scalable to either meet what our records requirement is
14 which is a small box, or to meet at least the reusability of
15 that software to meet bigger requirements in case we had to
16 reuse that software for licensing support system.

17 Second thing that InfoSTREAMs is, is a document
18 intake capability to get record material off the desktops
19 and out of the back doors of people's PCs and automatically
20 into the records environment so that we could meet some very
21 specific requirements of the rule. And the requirements
22 that we're talking about, you know, deal specifically with
23 the ability to capture circulated but non-concurred or
24 non-finalized circulated draft material and have that
25 material at least be subjected to a process that gives us a

1 good level of assurance that we're going to capture that
2 material to meet that aspect of the requirement of 10 CFR 2.

3 Third thing that InfoSTREAMs does is integrate
4 that capability to capture desktop automation, get it into
5 the records management environment, is that once it gets
6 into the records management environment for us to identify
7 which ones are going to go where, which ones do we need for
8 licensing versus which ones are only federal record
9 material, because the licensing support system processing is
10 an expensive drill, and you don't want to go through that
11 drill unless you know you need the document for licensing.
12 If I only need it for a federal record, I'll take a snapshot
13 of it, I'll put 10 fields of information, I'll throw it in a
14 corner, and I'll deliver it to the national archives.
15 That's what my requirement is.

16 But in terms of if we can identify which ones are
17 bound for licensing support system, we're then going to
18 handle those documents at that point in time, give them the
19 full treatment and put them right into a load format that's
20 specified by the header working group and so forth.

21 So the InfoSTREAMs is basically a philosophical
22 approach to meeting a whole bunch of requirements. We think
23 we've met it architecturally, hardware and software with
24 software that's able to be reused for this LSS requirement
25 if we need to. We've met our own programs internal

1 requirements to try to get standardized on office automation
2 tools because, you know, four or five years ago we had four
3 different versions of word processing packages across the
4 program and we couldn't even get that standardized. Well,
5 now we do. We have standard suite of office automation.

6 So that's kind of what information -- you can call
7 it a records management system and some of it is. You can
8 call it an office automation and some of it is.

9 MR. METTAM: But the part that we're looking at
10 that will sort of match with the LSS is basically the
11 records management portion. We don't care that E-mail works
12 over here back and forth between offices, or that
13 everybody's using Word Perfect 5.1.

14 MR. GRASER: Well, some of the records management,
15 from the Department of Energy's perspective, normally just
16 includes identifying the stuff as federal record material
17 and then dispositioning it. The LSS requirement, okay, that
18 is really unique and is added over on top of our normal
19 records stuff, is to be able to provide the retrievability
20 to a group of users that are non-DOE people, don't know what
21 our records look like, may not be ADP experts, but want to
22 sit down and have access to, you know, a general compilation
23 of information and not have to get 16,000 hits for each
24 query.

25 Okay. So the thing that is more LSS than records

1 management happens to be using it for more than just an
2 archive, an archival-type approach. It means pulling that
3 stuff out and pulling it down and looking through it and
4 wading through it and doing some cutting and pasting from it
5 and pulling that extracted information out and using that.
6 In our environment, we're doing a whole lot of that type of
7 activity because we're using those products to iterate,
8 create additional products and the next version of products,
9 but that's more office automation oriented.

10 MR. METTAM: Perhaps I could sort of add my two
11 cents to the question of why are we worried about the LSS
12 now. At least half of the counties, probably more, but at
13 least half of the counties that I know of firsthand are
14 using some sort of a document tracking system just to try to
15 keep on top of what in the world is going on what -- you
16 know, what's passing past the desk. Some of those are being
17 done cooperatively, and certainly we're working on sharing
18 information, developing bulletin boards and all that type of
19 thing. There seems to be a fit here for LSS work, and my
20 own contention would be that no matter how soon you start
21 it, it's not going to be ready when you want it anyway. And
22 so, you know, you're better off doing it sooner than later.

23 MR. LEVIN: That's a good point. From a systems
24 perspective, you can never have too much time to start
25 developing a system. The more time you spend up front and

1 the more time you had to do it right and implement it right,
2 the better the system is, plus the fact we can start getting
3 a jump on the large backlog of documents that already exists
4 that we have to load in the system. You don't want to wait
5 and design the -- a system by default because you ran out of
6 time, because all of a sudden the schedule gets accelerated
7 and you don't have as much time as you thought. Now that we
8 have the time, we would like to make use of it. It only
9 makes sense.

10 MR. MURPHY: You know, that's a very good point
11 too, for those of us around here who are tracking the
12 technical program as well, we've now got scenario A looming
13 over our heads. I don't know whether you're even aware of
14 that. But the administration full funding proposal where
15 if -- you know, if Dreyfus gets all the money he wants for
16 Congress, they go to a preliminary -- go to a site
17 suitability determination in 1998, file a license
18 application in 2001. We may very well be less than 10 years
19 in licensing.

20 MR. LEVIN: So you don't -- while we've got the
21 time --

22 MR. MURPHY: I wouldn't bet an awful lot of money
23 on that pony, Chip, but it's something that we have to be --

24 MR. GRASER: And for example --

25 MR. MURPHY: Yeah. You wouldn't want to wake up

1 one morning and say, oh my God, here it is and we've done
2 nothing to get ready for it.

3 MR. GRASER: You know, the scenarios that you
4 outlined right now are all just very much in a very active
5 discussion phase, and it's really very difficult to
6 speculate what impact, if any, they would have. Certainly
7 you could sit there and speculate and say, well, if people
8 are doing suitability activities and we have
9 suitability-type documents coming out, and people are going
10 to be expected to see that, what is the mechanism you're
11 going to use to make that information available to the
12 potentially affected parties. And bingo, right then and
13 there you have to answer, do you intend to use subpart J or
14 are you going to use subpart G? Well, this is all being
15 studied right now, and it may be premature to ask that
16 question, but it is certainly somewhere over the
17 not-too-distant horizon. As the program firms up, you know,
18 the issues in terms of full funding and scenario A and
19 whatnot will have a better opportunity to examine those
20 issues.

21 But going back to Moe's point, with the federal
22 procurement cycle and the federal long-range planning and
23 earmarking money for a major system, I basically -- I'm
24 developing my fiscal year '96 budget right now. So if we're
25 talking about having money for licensing support system work

1 that's going to be specifically earmarked for it, I'm doing
2 my '96 budget now, and that's the way the federal government
3 works. So you know, we may build it in six weeks, but it
4 will take me three years worth of budgeting and forecasting
5 to get it on the books, and that's the reality.

6 MR. SILBERG: Can I ask a question about -- at
7 least I don't have a problem with the timing. I think the
8 earlier you get this thing working, the better. You know,
9 the backlog is going to be a very nasty problem to solve.
10 It's going to be bigger than people think. It's going to
11 take a long time. It's going to involve documents that
12 aren't going to go into the system easily because they're
13 old and in miserable condition and all sorts of problems.
14 But let's get back to the issue about InfoSTREAMs as the
15 LSS, turning that over. Is it feasible -- I take it you
16 wouldn't turn over the entire InfoSTREAMs to NRC because a
17 lot of it is your own -- your records management, your
18 office automation. So you would be turning over, at most, a
19 subpart of that system on this theory that we talked about
20 before.

21 MR. GRASER: I think it's safer to characterize it
22 as saying that the federal records component is a smaller
23 component of the larger InfoSTREAMs, or the larger LSS
24 capability.

25 MR. SILBERG: Well, whichever is larger or

1 smaller, is it possible to break apart InfoSTREAMs, because
2 I take it you're probably not allowed to turn over the
3 records management system to NRC. Can you break the system
4 apart and turn over a part of it but not the rest of it, or
5 am I wrong on my assumption?

6 MR. GRASER: Well, sure you can, but the impact in
7 doing that in terms of how much cost it will take to glue
8 pieces back together again, we haven't gone thoroughly
9 through that analysis.

10 MR. BALCOM: You know, also if I'm not mistaken,
11 Dan, you can correct me if I'm wrong, the document
12 management and the search and query part of this is not --
13 does not exist today and has to be purchased, modified,
14 written, built, whatever.

15 MR. GRASER: Which piece of the document
16 management?

17 MR. BALCOM: Well, this --

18 MR. LEVIN: On the InfoSTREAM side?

19 MR. BALCOM: The LSS, whatever is required to meet
20 LSS requirements, part of which I guess DOE would use
21 internally anyway, is still not part of InfoSTREAM.

22 MR. GRASER: Yeah. We're going to be briefing
23 that tomorrow. We've put into play some mechanism to have,
24 you know, an operational proof of all of those technologies
25 hopefully by the end of this fiscal year. So between now

1 and September for all the remaining pieces.

2 MR. BALCOM: The search engine and the whole --

3 MR. GRASER: Search engine, CD storage, the whole
4 nine yards by September of --

5 MR. BALCOM: We'll go into that tomorrow.

6 MR. GRASER: Yeah. '94.

7 MR. BALCOM: Yeah.

8 MR. CAMERON: Could we -- I guess I'd like to get
9 us to the point where we could go over -- regardless of what
10 the panel eventually recommends or agrees to here, I would
11 like to get to the point where we could explore in a little
12 bit more detail, if you assume that we were going to use
13 option three, what types of things would give people more
14 confidence in terms of NRC controlling the system, but I
15 think that part of whether we ever get to an agreement on
16 option three obviously includes, are there cost savings.
17 And the feasibility of turning over the system.

18 I mean obviously another alternative here is the
19 status quo, which is turning over -- I shouldn't
20 characterize that as the status quo, but turning over the
21 system. And Dan talked about breaking it apart, trying to
22 glue it back together again. Could we get some discussion
23 about what the realistic aspects are of using InfoSTREAMs as
24 the foundation for developing the LSS and then saying to the
25 NRC, okay, the NRC is going to operate and maintain that

1 system. What does that mean?

2 MR. GRASER: Do you want to engage in a realistic
3 discussion of that right now?

4 MR. CAMERON: Well, I think it's --

5 MR. GRASER: Or are you suggesting that we sit
6 down and think through the issue and come back and report on
7 it?

8 MR. CAMERON: Well, that may be. I think we might
9 need to do that anyway --

10 MR. GRASER: Because we could shoot from the hip
11 and leave a lot of misimpressions around again.

12 MR. CAMERON: The important point of that right
13 now is that we talked about some of the cost savings and now
14 sort of summarized it by saying, so what, that doesn't
15 outweigh what was negotiated or what was in the rule. Now
16 if there is other things besides the cost savings, just in
17 terms of the practicality of doing this turnover, that that
18 means that we're going to have to do something like
19 Alternative 3 to have a system that works, and that sure as
20 hell would be important information.

21 MR. MURPHY: Chip, we have always envisioned a
22 turnover. The rule -- today's language provides for a
23 turnover.

24 MR. CAMERON: Now Mal, I know that the rule
25 language provides for it. What I'm saying is, okay, we've

1 gone down the road a number of years now, okay. What does
2 it mean in realistic terms at this point of turning over
3 InfoSTREAMs being used as the foundation for the LSS?
4 Because if you don't even use InfoSTREAMs, then you have a
5 huge amount of additional cost I think.

6 MR. MURPHY: No, I don't -- well --

7 MR. CAMERON: If it's not feasible, I mean, you
8 know -- I don't think anybody put in the rule that, you
9 know --

10 MR. MURPHY: I think we've gone beyond considering
11 building a brand-new LSS.

12 MR. CAMERON: Well, what I think it would be -- I
13 think it would be valuable for people to hear, what are the
14 realistic aspects of turning it over.

15 MR. MURPHY: And there's two sort of sub-issues
16 there. I suppose maybe we're losing track of them. One of
17 them, and by far the most important one, in my mind at
18 least, is control. We'll get to the "pick up the phone and
19 say do it and do it now."

20 MR. CAMERON: No, and I don't want to lose track
21 of that. Right.

22 MR. MURPHY: The second -- right. And the second
23 issue in turning it over is this physical location, part of
24 the rule -- current language in the rule says it can't be
25 physically located in DOE facilities. Let's separate those

1 two. I mean --

2 MR. CAMERON: Well, that's --

3 MR. MURPHY: As far as I'm concerned, I'm willing
4 to deal separately with those two.

5 MR. CAMERON: Yeah, I think that --

6 MR. MURPHY: Maybe we can satisfy the second one
7 by renting a room over in the Lafont Plaza and saying it's
8 no longer in the building or something. I -- you know,
9 so --

10 MR. CAMERON: So the thing is is that you're
11 right, you could -- we could exercise control that would be
12 effective --

13 MR. MURPHY: Yeah, put a sign on the door
14 saying --

15 MR. CAMERON: -- as possible --

16 MR. MURPHY: -- this room belongs to NRC and
17 everybody else keep out.

18 MR. CAMERON: -- but it still might be -- you
19 still might run afoul of the physical location --

20 MR. MURPHY: Yeah.

21 MR. CAMERON: -- problem. Which may be a never no
22 mind if you solve the -- I mean the physical location thing
23 is there because of the concern over control, and that's
24 basically how it was expressed. So if we can assure people
25 on control, then we may not need to worry about that.

1 MR. BALCOM: You know, I'm also going to guess
2 that whoever submits the RFP to do this work, the same
3 contractors are going to bid on it regardless of whether
4 it's DOE or NRC and, you know, so I wonder how big a deal it
5 is that it get moved. And another thought I have is that if
6 the cost avoidance is nominal or virtually nothing, let's
7 say we price Alternative 4, and it doesn't look so bad
8 anymore, what then remains that NRC has objection to that
9 they wouldn't want to run it or manage it?

10 MR. CAMERON: Well, just to answer that last
11 question, before we go back to maybe some admittedly gross
12 generalizations, top-of-the-head on realistic aspects of
13 turning it over. But as I mentioned before, the commission
14 has a real concern about ensuring continued budgetary
15 resources to operate and maintain the system. And that is a
16 real concern to the commission. Okay.

17 Now everybody's going to have their own view about
18 whether the cost savings, the feasibility problems, et
19 cetera, et cetera, about how important they are. And I
20 think to the commission the cost savings were an important
21 element here, definitely an important element. But we
22 always run into the budgetary resource problem, and I think
23 that that's always -- that's going to be with us, and the
24 commission is still going to be concerned about that no
25 matter how we come out of this session. So that has to be

1 fixed.

2 MR. SILBERG: Why are the commission's budgetary
3 concerns worse than DOE's budgetary concerns? Everybody's
4 got to go up to Congress. In a sense, NRC ought to have
5 somewhat less, because none of their money comes out of
6 taxes. Congress doesn't care as much anymore about what the
7 NRC's budget is, while DOE I think tends to get more
8 scrutiny.

9 MR. HOLDEN: Let me ask this question. It's
10 rarely that a federal agency, when they're speculating or
11 developing budgets, that there's -- in these projections, if
12 there's a savings, they've already tagged that for some
13 other program. Is there something that the NRC would be
14 looking at to do that or M&O or, you know, if it was waste
15 fund money and there's a \$63 million savings, if that would
16 go to granting effective status to several tribes in Nevada
17 who should be here with us. I've crossed the line, but
18 beyond that, I'm just curious.

19 MR. CAMERON: Now what is that -- what is the
20 specific question, Robert?

21 MR. HOLDEN: The question is this 63 million, you
22 know, if there's some projections with the budget, is that
23 63 million -- has it been talked about that that portion
24 would go to M&O, would it go to something else, what would
25 it --

1 MR. CAMERON: Oh no, in terms of -- it's mainly
2 talked about in terms of cost avoidance, I guess, generally,
3 rather than there being an actual \$63 million sitting
4 somewhere that if we save it we could use it somewhere else.

5 MR. HOLDEN: Just curious.

6 MR. METTAM: We mentioned earlier the scenario
7 that Dr. Dreyfus is working on, including the full funding
8 scenario. Well, there's also a scenario that's a level
9 funding scenario within the Department of Energy which says
10 basically all they're going to do is the geophysical
11 technical sites they'll be working, and they're not going to
12 do any licensing work, and they're not going to do any
13 EIS-type work. And you know, my question really is, you
14 know, how much safer do you think the OSS is on the
15 Department of Energy side of the house? It might well be
16 more easily funded by going to congress and saying, you
17 know, "The NRCs got to do this, LSS," as opposed to seeing
18 if you can fit it through the cracks on the department side.

19 MR. CAMERON: Well, I think that that question,
20 Brad, and Jay's question are fair questions. And when the
21 commission went through this equation, at least the first
22 time, its concern was is that we didn't think that we were
23 going to have the continued capability, budgetary capability
24 to implement the system after what we had gone through with
25 OMB in terms of trying to work out the MOU where we would

1 get DOE to pay for operation and maintenance of the system.
2 Now obviously one of the things that we'll take back to the
3 commission from this meeting are these caveats on the
4 commission's, you know, budgetary concerns. And I don't
5 know if John or Moe wants to say anything in addition on the
6 budget aspect.

7 MR. HOYLE: Well, I was going to not talk
8 specifically about the budget, but Mal brought up a point
9 this morning that he thought perhaps the staff was not
10 really behind this approach, that they really favored
11 another approach. And going back into the history of it,
12 you're right.

13 When delay occurred in the program, the high-level
14 waste program, work stopped on LSS. OMB was not getting DOE
15 money. And Lloyd became very concerned, thought it really
16 ought to get going, so he proposed to the commission at that
17 time that the commission do it all. And it was at that
18 juncture that the commission said, "Well, before we look at
19 that real hard or take that one ourselves, because our
20 budget is relatively small, you put the LSS in it and it's
21 got this big bulge in it then for LSS," they said, "Let's
22 look at this other, you know, other process."

23 So we went through all the alternatives, came out
24 with Alternative 3, commissions terms to try that out.
25 Commission is well aware of what's in the rule, well aware

1 of the work that went into establishing it. I think what
2 they're asking you is to take another look at it and look at
3 the agreements that you made earlier, decide are those the
4 ones that you really have to stick with and tell the
5 commission that that's what you have to stick with, or is
6 there some other way to accomplish exactly what was agreed
7 upon there in other implementation terms. So I don't think
8 I need to say any more about the budget.

9 MR. LEVIN: No, just -- the only thing I say about
10 the budget is that situations change, people change, things
11 change, things can always be readdressed based on new
12 information.

13 MR. MURPHY: Yeah, we can't make any decisions
14 here today based on what we anticipate --

15 MR. LEVIN: But you can make recommendations.

16 MR. MURPHY: -- the graciousness of congress is
17 going to be in five years. I mean, we all know they're
18 going to do something stupid, the question is who.

19 MR. CAMERON: Well, let's take a look at some of
20 the control mechanisms, and we talked this morning, we
21 talked about the audit system, we talked a little bit about
22 the MOU that would capture some of the basic issues, basic
23 points of control that we might agree on, and I would like
24 Moe to just talk about what this new one was that you worked
25 on. I mean you mentioned it before, but can you explain

1 what the implications are and how that ties into Mal being
2 able to -- say Mal will call Dan, Mal's going to call *
3 someone, you know. Mal will call Moe and Moe will call Dan.

4 MR. MURPHY: I'll test it. I'll send him some
5 piece of junk that Dan will reject.

6 MR. LEVIN: Okay. First before I get to that, let
7 me talk about one of the questions up here about how can my
8 relationship with DOE be that as a contractor. When I said
9 that, I wasn't meaning in the legal sense. I said I would
10 be -- I would treat our relationship as that of a contractor
11 and contractee in the way I dealt with them. Legally
12 obviously DOE cannot be a contractor to me. But one of the
13 things we could -- that's where the memorandum of
14 understanding came into play.

15 When you have a contract you have certain
16 statements of work, you have -- there are certain elements
17 there that explicitly define the relationship of the
18 contractor and the contractee. Okay. The -- and these are
19 the -- when the contractor isn't performing according to
20 these agreements, then you have certain legal things you can
21 do. That makes a legal contract.

22 Well, the memorandum of understanding between NRC
23 and DOE would be our contract. There we would explicitly
24 state what is expected of DOE, as I call it, a contractor to
25 the LSSA. As far as enforcement, legally we don't have the

1 same legal recourse under this arrangement with DOE as we
2 would under a normal contract. That's true. But what we
3 did consider or presented it as building in for this
4 enforcement was making public all activities, anything that
5 we found deficient or any problems, making it known,
6 elevating it to the highest levels and then take -- let the
7 system that we have in place that rules the way government
8 works take effect. We have the media. We have public
9 scrutiny, we have all these forces that will be our legal
10 forum, will replace the legal forum of enforcement. I mean
11 that's the way things work between government agencies.

12 So that's just to clarify how I saw working when I
13 said the relationship to me would be like that of a
14 contractor. I didn't really mean it was a contract. We
15 would kind of simulate a contract.

16 Then this new option came up, and I think this new
17 option, although we didn't really -- haven't had a chance to
18 really flesh it out and discuss all the ramifications and
19 everything, and there may be some problems with it, but it's
20 something to pursue. Actually gets to the point where I'm
21 not -- I would actually be -- the LSSA would actually be
22 directly in control of the contractor in the legal sense.
23 If the LSSA were the -- was the COTR, the contracting
24 officer's technical representative, over those tasks within
25 the DOE contract that were LSS specific, then there is a

1 legal relationship there. I really am dealing with the
2 contractor. Mal calls me and I've got a problem, I call the
3 contractor directly. I am the COTR.

4 MR. DRAPKIN: Furthermore, if work is done that is
5 not approved by the COTR, the invoice does not get paid.

6 MR. LEVIN: This is exactly. This is real true.
7 So this is something else we could pursue and kind of -- I
8 don't know exactly, but it gets very close back to the
9 original rule, I think, where NRC is operating, in a sense,
10 the LSS.

11 MR. BALCOM: Also sounds like it may get
12 perilously close to what OMB's original objection was about
13 the relationship. I don't know, maybe that's not the case.

14 MR. LEVIN: There's a lot of things we'll have to
15 explore with this, but I think it's an excellent suggestion,
16 and I think it bears a lot of looking into and a lot of
17 discussion.

18 MR. CAMERON: Would we even say -- would we even
19 characterize this as DOE operating and maintaining the
20 system?

21 MR. MURPHY: Oh, you wouldn't under those
22 circumstances. You --

23 MR. LEVIN: No, they really wouldn't. It would --
24 well --

25 MR. MURPHY: You could honestly --

1 MR. LEVIN: It would be a DOE contract. There's a
2 fine point --

3 MR. GRASER: It gets down to the issue of control
4 and oversight. Who are they reporting to? They are giving
5 performance and status reporting back to Moe who has control
6 over giving technical direction. Thou shalt do this, you
7 know, respond to that guy, get those documents loaded. They
8 report back to Moe. So you know, in essence what you're
9 doing is you're bringing the mountain over to Muhammad in
10 this case.

11 MR. SILBERG: Moe.

12 MR. GRASER: Moe.

13 MR. LEVIN: Let the record show --

14 MR. GRASER: It's the other way around. I mean,
15 what we've been trying to do is look at a situation, you
16 know, with this control issue that is seeming not to have a
17 very comfortable fit. But we just kind of took a different
18 whack at that from a different direction, and it has some
19 attractiveness to it.

20 MR. SILBERG: Is that permissible under government
21 contracting?

22 MR. GRASER: Well, that was my first question.

23 MR. LEVIN: I believe it is. I believe it can be
24 written in a contract, but that's something we'd have to
25 explore. Like I said, this is kind of a spur-of-the-moment,

1 came about as a result of spontaneous generation or
2 something.

3 MR. MURPHY: I think there are even -- and I'm
4 pretty fuzzy on this, and I certainly am subject to being
5 corrected, but I think there are maybe even some recent
6 examples of something very close to that in the weapons
7 complex cleanup area. I can think of -- and I'm not
8 precisely sure how it works, but the Corps of Engineers is
9 managing some contracts, DOE contracts for cleanup on the
10 Hanford Reservation that DOE has left. DOE contracts, DOE
11 is funding them, the Corps of Engineers is managing them on
12 a day-to-day basis, and maybe that's the way they're doing
13 it.

14 MR. GRASER: If there is a commitment on the part
15 of leadership to attempt to solve the problem and move
16 things forward, we can figure out a way to make it happen.
17 And if this is perceived as a mechanism that will move
18 things forward, then it has that in its -- you know, in its
19 behalf when the argument goes forward, that people perceive
20 this as something that's going to move the issue forward,
21 then we can get some support for it.

22 MR. LEVIN: And if we get a sense from the panel
23 that this would really help to break the log jam and get
24 things moving, I'll spend every resource I have to pursue it
25 immediately.

1 MR. CAMERON: Brad, did you have some misgivings
2 or --

3 MR. METTAM: Well, it wasn't misgivings. It
4 sounds like there's something there to look at. The one
5 concern I had is that, you know, one of the key benefits to
6 having these two systems sort of run concurrently by the
7 same people is that you wouldn't have as many, quote
8 unquote, LSS specific activities, you know. An activity
9 would be done to put it into the system, and that data would
10 be partly used for this system and partly -- you know, I'm
11 not saying, you know, I object to it, but I think you need
12 to very carefully craft, you know, the fact that if it
13 contributes to LSS data, it becomes a part of LSS -- there's
14 a lot of language that's going to have to be written.

15 MR. GRASER: That's right. As a matter of fact,
16 that was one of the other issues that Moe and I discussed,
17 and I just postulated off the top of my head that the minute
18 we put a flag on the document that we've -- it's past a
19 relevancy check that, yes, it is, it's on its way to the
20 licensing support system. Then the flow through the rest of
21 the process comes under his -- it would have to come under
22 his guidance. So the minute you make that determination at
23 that point -- from that point forward he has to be able to
24 say it's under his control. Because that's just like a
25 capture system.

1 MR. METTAM: And I think it would be important to
2 say that any document submitted by other participants would
3 automatically wind up in that area.

4 MR. GRASER: Yes.

5 MR. BALCOM: How about bundling your -- this
6 discussion that you have along with the physical location.

7 MR. DRAPKIN: I'm beginning to have trouble
8 identifying where one system starts and where another ends
9 these days because systems being tied together. So it's not
10 clear to me, just from a purely technical viewpoint, if I
11 have a PC or work station cluster in my office connected to
12 something, is it part of that something or is it part of
13 something else? It's just physical locations. It's not
14 such a clearly defined topic as it was five years ago.

15 MR. CAMERON: Yeah. Kirk, maybe the issue really
16 is -- I still think that the physical location, or whatever
17 the exact words were in the rule was, sort of a way, a
18 manifestation of the control issue. And if the COTR
19 suggestion solves the control issue, then maybe we don't
20 have to worry about physical location issue. I'm not saying
21 that we don't need to look at that in more detail, but it
22 might solve it that way.

23 But two questions. One is, if this suggestion was
24 implemented, does the panel agree that this would not --
25 this would not do any injustice to the rule as currently

1 promulgated?

2 MR. SILBERG: You're talking about the concept as
3 opposed to maybe some wording problems.

4 MR. CAMERON: Yeah.

5 MR. BALCOM: I would ask one more question. Who
6 does the COTR report to and under whose influence would the
7 COTR be? I could --

8 MR. LEVIN: The COTR would be the LSS --

9 MR. BALCOM: -- see him being under the influence
10 of both people, of both agencies.

11 MR. LEVIN: Be the LSSA.

12 MR. GRASER: He's asking the contracting officer
13 exactly is it a DOE contract.

14 MR. LEVIN: Oh, the contracting officer. Now in
15 this case, like I say, we'd have to look at the
16 ramifications. I mean it is a DOE contract, it will have
17 been let by a DOE contracting officer. We have to explore
18 that.

19 MR. GRASER: And for example, what role would he
20 play during budget formulation. He's fighting for dollars
21 against other DOE guys. I mean this is not a simple issue,
22 but, you know, all of those aspects need to be explored.
23 Going back to the contracting officer --

24 MR. CAMERON: I don't know. Can you have dual
25 contracting officers, one from each agency?

1 MR. LEVIN: That's -- I don't know. Like I said,
2 there are --

3 MR. GRASER: We have some homework to do on this.

4 MR. LEVIN: We don't have any procurement experts
5 here.

6 MR. CAMERON: You know the --

7 MR. LEVIN: If there are such a thing in
8 government.

9 MR. CAMERON: -- the new director of the office of
10 federal procurement planning, in that office generally is
11 looking at -- under the reinventing government rubric is
12 looking at innovative ways for government procurement,
13 particularly in systems area to be improved. And this may
14 tie right in to that.

15 MR. GRASER: We've gotten our own internal opinion
16 that we can have two contracting officer -- administrative
17 contracting officers on the same contract within the energy
18 department. Now whether or not we can have an
19 administrative contracting officer in each agency is a
20 slightly different matter, but it needs to be explored.

21 MR. LEVIN: Sure.

22 MR. MURPHY: Is it --

23 MR. LEVIN: One contracting officer is a little
24 bit --

25 MR. MURPHY: -- I think that -- I think that

1 suggestion is certainly potentially meritorious, and it
2 should really be explored, but is it not possible under
3 federal law to just have someone function under the control
4 and direction of another agency?

5 MR. LEVIN: You mean like a DOE employee?

6 MR. MURPHY: Or contract.

7 MR. LEVIN: Or a contract? Contract it has to be
8 written in the contract. It is not --

9 MR. MURPHY: I'll write it in the contract then.
10 I'm just saying --

11 MR. CAMERON: Is there anything to prevent it from
12 being written in the contract.

13 MR. MURPHY: You know, maybe there are some people
14 in the room who know, and if they do, they probably couldn't
15 tell us anyway, but isn't it -- in the weapons program it
16 would seem to me that there are circumstances under which
17 the Department of Defense would've been able in the old days
18 to tell DOE do this or don't do this, and DOE would've said,
19 yes, sir.

20 MR. SILBERG: I'd be surprised. I don't think so.
21 Been a long time since I was around that, but there were
22 pretty strict rules as to how the division of responsibility
23 between DOE and DOD took place, and there was a lot of
24 jealousy that one didn't step on another's toes.

25 MR. MURPHY: Oh, you're always going to have

1 jealousy. We don't care about that.

2 MS. JONES: There are existing contracts, or I
3 should say MOU's, which are the same thing as a contract
4 with the legal language that's in it that are in existence
5 today with DOE and other agencies, like USGS, the weather
6 service, DNA, that they spell out the statement of work and
7 they are treated just like a contract. Those agencies do
8 work for the Department of Energy. They've worked like that
9 for many, many years.

10 MR. MURPHY: So why can't it work in reverse and
11 have the Department of Energy LSS people work for the NRC?

12 MS. JONES: I personally don't see why it
13 couldn't, but like Dan said, we do not have a contracting
14 specialist down here today. Obviously we could get one to
15 provide us that advice and counsel, but I would -- I
16 personally don't see any prohibition to it.

17 MR. CAMERON: Does anybody on the panel have
18 any -- want to register any objection to pursuing this
19 particular line of inquiry, that is seeing if Moe could
20 serve as the COTR on the DOE contract? Let me get that from
21 Harry.

22 MR. SWAINSTON: Just lifted my head. I think
23 it's -- right now it's certainly worth looking into. It
24 avoids some of the problems of the Alternative 3 that are
25 objectionable to us. But we can't really give our stamp of

1 approval without those details.

2 MR. CAMERON: No, I wasn't worried about that. I
3 just wanted to see if we were all on the same wavelength.
4 Brad.

5 MR. METTAM: The only thing I can think of right
6 now that it doesn't do is it doesn't solve potential
7 perception problem that you might have with -- you know.
8 Even if you make them all wear, you know, bright orange
9 jackets that say, NRC on them, they're still going to be
10 perceived as being DOE's holding all the data. But I think
11 it's worthwhile looking at it as an alternative, certainly.

12 MR. CAMERON: Yeah, I guess he gets it -- at some
13 point you get to where the perception is never -- there's
14 not going to be anything you can do to try to -- you can do
15 as much as you can to minimize the perception problem, but
16 you really can't, really can't solve it.

17 MR. MURPHY: Well, that's true, but Rod's got a
18 good point. We need to be saying we're turning documents
19 over to the control of the LSS administrator.

20 MR. CAMERON: Right.

21 MR. MURPHY: We're turning our documents over to
22 the Department of Energy.

23 MR. CAMERON: I know that I would like to ask
24 other people out there to comment on any of this stuff at
25 some point, but maybe we need to take a break.

1 MR. MURPHY: I've got some phone calls to make.

2 MR. CAMERON: What's that now?

3 MR. MURPHY: I have other work to do. I'd like to
4 make some phone calls.

5 MR. CAMERON: Okay. Well, let's take a break and
6 come back at -- how about 20 after 3:00.

7 MR. MURPHY: That's great. Perfect.

8 [Recess from 3:00 p.m. to 3:30 p.m.]

9 MR. HOYLE: Why don't we get back together again,
10 please. I believe that as a result of this prior discussion
11 we've reached an agreement that the COTR proposal, if
12 workable, would be an appropriate way to implement the
13 provision of the licensing support rule 2.1011, which
14 provides that the LSS administrator will be responsible for
15 management and administration of the LSS.

16 MR. SILBERG: When you say "we," this is --

17 MR. HOYLE: We.

18 MR. SILBERG: NRC or -- you're summarizing all of
19 us?

20 MR. HOYLE: Well, we can talk about that, but I
21 believe what I heard was that the -- those at the table had
22 reached this agreement, that if it's workable, that it would
23 take care of the control issue for NRC, it would take care
24 of the budget issue, and I think it would -- it's not
25 Alternative 3. It's back to basic. It's a method of

1 implementing what is in the rule. And I would --

2 MR. GRASER: Could be any option.

3 MR. HOYLE: Pardon me?

4 MR. GRASER: I said, it could be any option.

5 There should not be a linkage to option three or anything
6 else.

7 MR. HOYLE: That's right. And that on this basis
8 I'm prepared to take that message back to the commission. I
9 will certainly keep all of you informed on that subject as
10 DOE and NRC both develop information on it. But I think
11 both agencies -- I speak for my own first, will pull out the
12 stops to see that that is done, can be done and is done.

13 MR. BECHTEL: Do you anticipate having another
14 meeting once you find out or --

15 MR. HOYLE: I don't intend to just call a
16 meeting --

17 MR. BECHTEL: Yeah.

18 MR. HOYLE: -- on that basis, but I do want to
19 talk about another meeting?

20 MR. BECHTEL: Uh-huh.

21 MR. HOYLE: And that could be a subject that we
22 could report on. I was going to bring that up at the end of
23 the day tomorrow, whenever there's enough additional subject
24 material to talk about, maybe in the July time frame,
25 something like that. But I think right now what I would do

1 is -- it's 3:30. Instead of trying to bring forward one of
2 tomorrow's subjects, I could be overruled, I would just say
3 that we'll start with DOE's presentation tomorrow morning
4 then at 8:30, and have Kirk and Mal follow as time permits.
5 I know some people getting back to the east have planes that
6 leave in the noon time frame, so I will try to end up by
7 10:00, 10:30 tomorrow morning. Any further discussion
8 today?

9 All right. Let's reassemble here at 8:30 tomorrow
10 morning. 8:30.

11 [Whereupon, at 3:35 p.m., the meeting was
12 recessed, to reconvene at 8:30 a.m., Friday, April 15,
13 1994.]

14
15
16
17
18
19
20
21
22
23
24
25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:

NAME OF PROCEEDING: LSSARP Meeting

DOCKET NUMBER:

PLACE OF PROCEEDING: Las Vegas, NV

were held as herein appears, and that this is the
original transcript thereof for the file of the
United States Nuclear Regulatory Commission taken
by me and thereafter reduced to typewriting by me
or under the direction of the court reporting
company, and that the transcript is a true and
accurate record of the foregoing proceedings.

Ann Riley

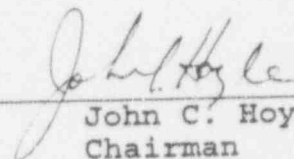
Official Reporter
Ann Riley & Associates, Ltd.



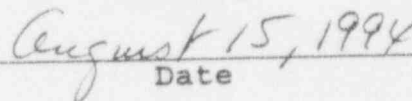
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CERTIFICATION
MINUTES OF SEVENTH MEETING OF THE
LSS ADVISORY REVIEW PANEL

I certify that the attached minutes of the Meeting of the LSS
Advisory Review Panel, held on April 14 and 15, 1994 are accurate
to the best of my knowledge and belief.



John C. Hoyle
Chairman



Date

MINUTES

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL MEETING

April 15-15, 1994

LAS VEGAS, NV

The seventh meeting of the Licensing Support System Advisory Review Panel (LSSARP) took place on April 14 and 15, 1994, in Las Vegas, Nevada.

Members of the LSSARP present were:

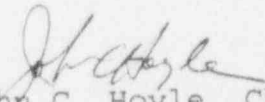
John Hoyle, Chairman (NRC)
Daniel Graser (DOE)
Corinne Macaluso (DOE)
Harry Swainston, (State of Nevada)
Kirk Balcom (State of Nevada)
Malachy Murphy (Nye County)
Dennis Bechtel (Clark County)
Brad Mettam (Inyo County)
Pete Cummings (City of Las Vegas)
Robert Holden (National Congress of American Indians)
Terry Quigley (National Congress of American Indians)
Jay Silberg (Nuclear Industry representative)

Enclosed are:

1. Meeting agenda
2. Federal Register Notice announcing meeting
3. Attendance List
4. 6/8/94 Report on Meeting of LSS Advisory Review Panel
5. Index to Meeting Transcript
6. Meeting transcript and Material Presented at the Meeting

The meeting was open and attended by members of the public.

The transcript has not been corrected or edited and it may contain inaccuracies.


John C. Hoyle, Chairman
LSS Advisory Review Panel

ENCLOSURE 1

AGENDA

LSSARP MEETING APRIL 14-15, 1994

Thursday, April 14

9:00 Opening Remarks (John Hoyle, NRC, Panel Chairman)
9:15 Briefing by LSS Administrator
(Moe Levin, LSSA/NRC)
10:15 BREAK
10:30 Briefing on LSS Administrator's Audit Program
(David Drapkin, LSSA/NRC)
12:00 LUNCH
1:30 Committee Discussion
5:00 Adjourn

Friday, April 15

8:30 Review, Discussion of Open Issues
9:30 DOE Presentation (Dan Graser, DOE)
- Capture of DOE Documents
- Status of InfoSTREAMS Development
10:00 Header Subgroup Report (Kirk Balcom, Nevada)
10:15 Use of LSS on Pilot Project Basis
(Mal Murphy, Nye County)
10:45 Future Agency Discussion

ENCLOSURE 2

Licensing Support System; Advisory Review Panel

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of meeting.

The Licensing Support System Advisory Review Panel (LSSARP) will hold a meeting on April 14 and 15, 1994, at the Yucca Mountain Site Characterization Project Office, Conference Room 202, 101 Convention Center Drive, Las Vegas, Nevada. The entire meeting will be open to the public pursuant to the Federal Advisory Committee Act (Public Law 94-463, 86 Stat. 770-776).

The Nuclear Regulatory Commission (NRC) established the LSSARP in 1989 to provide advice and recommendations to the NRC and to the Department of Energy (DOE) on topics, issues, and activities related to the design, development and operation of an electronic information management system known as the Licensing Support System (LSS). This system will contain information relevant to the Commission's future licensing proceeding for a geologic repository for the disposal of high-level radioactive waste. Membership on the Panel consists of representatives of the State of Nevada, a coalition of effective units of local government in Nevada, the National Congress of American Indians, a coalition of organizations representing the nuclear industry, DOE, NRC and two other agencies of the Federal government which have experience with large electronic information management systems.

The meeting will begin on April 14, 1994 at 9 a.m. and conclude at 5 p.m. If additional time is needed, the meeting will reconvene at 8:30 a.m. on April 15, 1994 and conclude at approximately Noon. The primary agenda for the meeting will consist of a presentation by the NRC and continuation of discussion by the Panel of the modified approach for the design and operation of the LSS which was proposed by the NRC and discussed initially at the Panel's 1993 meeting.

Interested persons may make oral presentations to the Panel or file written statements. Requests for oral presentations should be made to the

contact person listed below as far in advance as practicable so that appropriate arrangements can be made.

For further information regarding this meeting contact John C. Hoyle, Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone 301-504-1968.

Dated: March 18, 1994.

John C. Hoyle,

Advisory Committee Management Officer

[FR Doc. 94-6851 Filed 3-22-94; 8:45 am]

BILLING CODE 7560-01-06

ENCLOSURE 3

ATTENDANCE LIST

LSS ADVISORY REVIEW PANEL MEETING
APRIL 14-15, 1994

Panel Members

U.S. Nuclear Regulatory Commission

John C. Hoyle, Chairman

U.S. Department of Energy

Daniel Graser
Corinne Macaluso

State of Nevada

Harry Swainston
Kirk Balcom

Local Government - Site

Malachy Murphy, Nye County

Local Government - Adjacent

Dennis Bechtel, Clark County
Brad Mettam, Inyo County
Pete Cummings, City of Las Vegas

National Congress of American Indians

Robert Holden
Terry Quigley

Nuclear Industry

Jay Silberg

Others

Chip Cameron, NRC
Moe Levin, NRC
Kenneth Kalman, NRC
B. Paul Cotter, Jr., NRC
David Drapkin, NRC
Paul Bollwerk, NRC
Seth M. Coplan, NRC
Bob Shiideler, NRC
Tom Barchi, NRC
George Hallncr, TWR/INFOSTREAMS
Camille Kerrigan, TWR/INFOSTREAMS
Janice Tauser, TWR/INFOSTREAMS
Preston Junkin, TWR/INFOSTREAMS
Jim Boone, TWR/Regulatory & Licensing
Fielden Dickerson, TWR
David Warriner, DOE/YMSCO
Ray Godman, DOE/M&O/TRW
Mary Ann Jones, DOE/YMSCO
Sally Larimore, Clark County
Ardyce Milton, Clark County
Tony Neville, Labat-Anderson, Inc.
Jocelyn Smith, Labat-Anderson, Inc.
Joe Speicher, Labat-Anderson, Inc.
Jan Statler, SAIC/YMP
Brad Bush, SAIC/IRG/YMP
R.J. Hilsinger, IRG
Stan Echols, Winston & Strawn

ENCLOSURE 4



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

OFFICE OF THE
SECRETARY

June 8, 1994

MEMORANDUM FOR: Arnold E. Levin, LSS Administrator
FROM: John C. Hoyle, Chairman, LSS Advisory Review Panel
SUBJECT: SUMMARY OF LICENSING SUPPORT SYSTEM ADVISORY REVIEW
PANEL MEETING - APRIL 14-15, 1994

The Licensing Support System Advisory Review Panel (LSSARP) held a two-day meeting in Las Vegas, Nevada, on April 14-15, 1994. The primary purpose of the meeting was to provide the Panel members an opportunity to continue consideration of a proposal by NRC that would make DOE responsible for the development of the Licensing Support System (LSS) using InfoSTREAMS designs and technology and would make the LSSA responsible for controlling DOE's operation of the system once it was put into production. This proposal was initially discussed at the Panel's October 1993 meeting. All participating organizations serving on the Panel were represented except the Securities and Exchange Commission and the Patent and Trademark Office. The agenda for the meeting and list of attendees are attached.

Highlights of the meeting are summarized below.

1. Briefing on LSS Administrator's Planned Audit Program

Mr. Levin, LSS Administrator, meeting with the Panel for the first time since his appointment to this position, noted that he had considered carefully the comments and concerns expressed by Panel members at the prior meeting regarding the NRC proposal. In response to their concerns, his office had prepared a report to the Commission (SECY-94-081) which expanded on the mechanisms to be used by NRC to maintain its control of the LSS. His staff also developed enhanced strategies and methodologies to be used in the LSSA's audit and compliance assessment programs to clarify and strengthen the Administrator's ability to monitor and control DOE's performance and to identify and resolve problems in a timely manner.

Mr. Drapkin then provided a briefing on the details of LSSA's planned audit and compliance assessment programs.

After the briefing, the remainder of the day's session was devoted to discussion of ways to obtain economies in LSS development and operation without altering the respective roles of the NRC, the LSS Administrator, and DOE as contemplated by the existing LSS rule. The Panel concluded

4409140097

the discussion by agreeing with a new proposal by NRC that consideration be given to the assignment of direct authority to the LSS Administrator for all LSS activities to be conducted under DOE's InfoSTREAMS contract by making him the Contracting Officer's Technical Representative (COTR) for those activities. If such an assignment proves to be workable under existing Government contracting regulations, the Panel believed it would be an appropriate method of implementing the provision of the LSS rule which contemplates the LSS Administrator's control over the operation of the LSS.

Commitments: NRC and DOE will follow up on the proposal to assign the LSSA as COTR to DOE's InfoSTREAMS contractor and provide their findings to the Panel.

2. DOE Presentation Concerning Capture of DOE Documents

Mr. Graser described the procedures established by DOE to capture and enter into the InfoSTREAMS database pertinent documents which originate in the Secretary's office and in the defense waste organization.

Commitments: DOE will report back on whether there are mechanisms in place for capture of graphic oriented material in the defense waste program (such as field notes) and for capture of circulated drafts of Secretarial level documents.

3. DOE Presentation on Status of InfoSTREAMS Development

Mr. Graser provided a summary briefing on the status of development and testing of the initial increments of InfoSTREAMS. At the conclusion of the briefing, Panel members discussed the desirability of establishing a mechanism for members and their technical representatives to be more closely involved in the technical details of InfoSTREAMS design and development so that the LSSARP could determine whether the LSS functionality requirements can be met by this system. The Panel approved the establishment of a Technical Subgroup for this purpose.

Commitments: Interested Panel members should provide the LSSARP Chairman with names of their representatives for the Technical Subgroup.

4. Header Subgroup Report

Mr. Balcom, Subgroup Chairman and representative of the State of Nevada, described the Subgroup's activities since the last Panel meeting regarding the development of

instructions for cataloging and indexing LSS documentary materials. He recommended that the new fields and descriptions contained in his April 7, 1994, letter to the LSSARP Chairman (attached) be added to the header data previously approved by the full Panel. Mr. Graser noted that DOE was already implementing the new recommendations of the LSS Header Subgroup in its InfoSTREAMS document capture program.

Commitments: Panel approval of the Header Subgroup's recommendation will be scheduled for the next meeting.

5. Use of LSS on Pilot Project Basis

Mr. Murphy, Nye County Representative, proposed that a study be made of the feasibility of developing the LSS to the point at which its functionality could be tested on a pilot project basis by storing and retrieving documents pertinent to the certification of the Multi-Purpose Canister (MPC). His proposal was initially described in his letter of March 30, 1994, to the LSSARP Chairman (attached). The Panel noted that the proposal raised several issues, including those of public access, impact on DOE schedules and funding and priority loading of LSS documents, but agreed to request consideration of the feasibility of the plan by DOE.

Commitments: DOE agreed to consider the feasibility, timing, potential cost, resource implications and possible adverse impacts on InfoSTREAMS of a possible pilot test of LSS utilizing documents associated with the certification of the Multi-Purpose Canister (MPC) under 10 CFR 71 and 72.

The NRC staff will also evaluate the proposal and identify the issues which need to be addressed before such a test is implemented.

6. Future Agenda Discussion

The Panel agreed to schedule the next LSSARP meeting in early September. It will be held in the Washington, DC area.

Attachments:

1. Agenda for April 14-15, 1994 Meeting
2. Attendance List
3. April 7, 1994 Letter from Mr. Kirk Balcom
4. March 30, 1994 Letter from Mr. Malachy Murphy

cc: The Chairman
Commissioner Remick
Commissioner Rogers
Commissioner de Planque
LSSARP Members
OGC
EDO
FMSS
ASLBP

AGENDA

LSSARP MEETING APRIL 14-15, 1994

Thursday, April 14

9:00	Opening Remarks (John Hoyle, NRC, Panel Chairman)
9:15	Briefing by LSS Administrator (Moe Levin, LSSA/NRC)
10:15	BREAK
10:30	Briefing on LSS Administrator's Audit Program (David Drapkin, LSSA/NRC)
12:00	LUNCH
1:30	Committee Discussion
5:00	Adjourn

Friday, April 15

8:30	Review, Discussion of Open Issues
9:30	DOE Presentation (Dan Graser, DOE) - Capture of DOE Documents - Status of InfoSTREAMS Development
10:00	Header Subgroup Report (Kirk Balcom, Nevada)
10:15	Use of LSS on Pilot Project Basis (Mal Murphy, Nye County)
10:45	Future Agenda Discussion

ATTENDANCE LIST

LSS ADVISORY REVIEW PANEL MEETING
APRIL 14-15, 1994

Panel Members

U.S. Nuclear Regulatory Commission

John C. Hoyle, Chairman

U.S. Department of Energy

Daniel Graser
Corinne Macaluso

State of Nevada

Harry Swainston
Kirk Balcom

Local Government - Site

Malachy Murphy, Nye County

Local Government - Adjacent

Dennis Bechtel, Clark County
Brad Mettam, Inyo County
Pete Cummings, City of Las Vegas

National Congress of American Indians

Robert Holden
Terry Quigley

Nuclear Industry

Jay Silberg

Others

Chip Cameron, NRC
Moe Levin, NRC
Kenneth Kalman, NRC
B. Paul Cotter, Jr., NRC
David Drapkin, NRC
Paul Bollwerk, NRC
Seth M. Coplan, NRC
Bob Shiideler, NRC
Tom Barchi, NRC
George Hallnor, TWR/INFOSTREAMS
Camille Kerrigan, TWR/INFOSTREAMS
Janice Tauser, TWR/INFOSTREAMS
Preston Junkin, TWR/INFOSTREAMS
Jim Boone, TWR/Regulatory & Licensing
Fielden Dickerson, TWR
David Warriner, DOE/YMSCO
Ray Godman, DOE/M&O/TRW
Mary Ann Jones, DOE/YMSCO
Sally Larimore, Clark County
Ardyce Milton, Clark County
Tony Neville, Labat-Anderson, Inc.
Jocelyn Smith, Labat-Anderson, Inc.
Joe Speicher, Labat-Anderson, Inc.
Jan Statler, SAIC/YMP
Brad Bush, SAIC/IRG/YMP
R.J. Hilsinger, IRG
Stan Echols, Winston & Strawn

Kirk Balcom
7617 Huron Drive
Gainesville, Virginia 22065
(703) 754-1399

April 7, 1994

Mr. John C. Hoyle
Chairman
LSS Advisory Review Panel
U.S. Nuclear Regulatory Commission
Mail Stop 16 H 3
Washington, D.C. 20555

Dear Mr. Hoyle

The reconstituted Header Working Group of the LSS Advisory Review Panel met on February 23 - 24 at the offices of TRW in Vienna, Virginia and agreed upon several changes and additions to the header fields which had been previously approved by the ARP. Several fields were added as subparts to existing fields, there are new individual fields, and new groups of fields which have multiple subparts. For the most part, these changes reflect the ongoing development of DOE's records management systems and OCRWM's InfoStreams. In attendance were representatives from DOE, NRC, the State of Nevada, TRW and Labat-Anderson. Representatives from Clark County sent their comments by mail prior to the meeting.

The accompanying table lists the old fields, the new fields and the new groups of information which DOE would like to capture and recommendations for constructing the data base structure. For the most part, we hope it is self-explanatory. Most of the additions have to do with tracking documents, their electronic images, the relationships between documents, QA status, concurrence/approval information and additional data which we refer to as "housekeeping." Two additional categories at the end of the table, "Audit Information" and "License Process Information," reflect the requirements for data used by the Compliance Assessment Program and licensing procedural documents, respectively.

NRC raised the issue of including adequate fields for auditing the entry and maintenance of documentary materials and non-documentary references into the LSS as an integral part of systems design implementation. Reference is made in the list of fields to "LSS Audit Information." It is expected that the definitions and descriptions will be the subject of future meetings in conjunction with the Compliance Assessment Program.

I have attached the original report of "Recommended Fields for LSS Header Records," dated May 18, 1990 and the subsequent appendix with two additional fields for

9407140117

reference and background purposes. Most of the information is still valid. That paper was organized around four categories: 1) fields required by participants, 2) fields optional to participant, but completed by the LSSA, 3) fields optional to both the participants and the LSSA, and 4) fields not applicable to the participant, but provided by the LSSA. The premise then was that there would be capture stations at various locations with clear guidelines for the division of responsibility for data entry. Given the present uncertainty over data validation roles and the location of the LSS computer, we have organized the table of fields with a less precise distinction of exactly which organization will be responsible for which data other than the obvious. We expect this to shake out once the participants have agreed on these issues.

Please let me know if you have any questions about our recommendations and what kind of presentation you would like at the upcoming ARP meeting

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Balaban".

cc: Harry Swainston, State of Nevada

LSS Header Working Group Meeting February 23-24 1994

The following changes were made to the attached LSS Field Definition Summary Table as a result of the Header Working Group meeting held on February 23-24, 1994. For ease of reading, Field names are underlined and *column headings* are in italics.

Table Changes:

- 1) The *Format Control* column was removed from table since it was the source of more confusion than clarification.
- 2) The Submitter HC Page / Image Count field was moved under the repeating group Electronic Image Reference Info.
- 3) Author and Author Organization fields: the column - *Data Submitted by Participant* was changed from 'Required' to 'Either Author or Author Organization is Mandatory'.
- 4) Receiver Name and Receiver Organization moved under Document Route/Tracking Info repeating group. Fields had been listed twice.
- 5) Document Date Flag field: the following *Comment* was added, 'Indicates an estimated date'.
- 6) Access Control Code field expanded to Access Control Info which includes:
 - Access Control Code - with *Comment* added, 'Default is PUBLIC'
 - Type of Protection - Required
 - Protection Explanation - Required
- 7) Double asterisks (**) added to Title, Created Title, Abstract, and Comments fields indicating: 'Only one variable length field existed with multiple entries just being appended to previous text'.
- 8) Copyright Info field name changed to Copyright - since a repeating group of information with additional information was not required for copyrighted material. The *Controlled Authority List* entry for Copyright was changed from 'Y' to 'N'.
- 9) Document Type field: the column - *Data Supplied by LSS System or LSSA* was changed from 'N' to 'Optional'.
- 10) Publication Info: Page Range field - a *Comment* was added to reflect: 'Electronically imaged page range shall be stored'.
- 11) Descriptors field: the column - *Data Supplied by Participant* changed from 'Mandatory' to 'Optional'; the column - *Data Supplied by LSS System or LSSA* was changed from 'Required' to 'Mandatory'.
- 12) Identifiers field - the *Comment* was removed (did not apply).
- 13) Sponsoring Organization field: the column - *Data Submitted by Participant* was changed from 'Required' to 'Optional'.
- 14) Contract Number field: Deleted; Not required in LSS.
- 15) Image Reference Info field: Names changed to reflect that Image meant Electronic Image:

Electronic Image Reference Info:

- Electronic Image Count - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.

- Electronic Image Location ID - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.

- 16) Electronic Document Route/Tracking Info field name changed to Document Route/Tracking Info - since route tracking information is needed for hardcopy documents as well as electronic documents routed electronically.
- 17) LSS Record Housekeeping Info: list of fields updated to include fields previously recommended by Header Working Group as administrative and process tracking fields in document: Recommended Fields for LSS Header Records, 5/18/90.
- 18) LSS Audit Info: repeating group added per Dave Drapkin's suggestion to satisfy auditing requirements.
- 19) LSS/InfoSTREAMS field name: LSS/IS Accession Number was changed to Participant Accession Number.

Proposed LSS Field Definition Summary Table

Draft - As of 3/9/94

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:

- o *Original LSS Field Name / or New Candidate Field Name*: * = A field which is being proposed by OCRWM as a candidate LSS field.
- o *LSS / InfoSTREAMS Field Name* = Name common to both LSS and InfoSTREAMS field
- o *Data Submitted by Participant* = This field will be submitted by the participant (Mandatory = must be provided for each unit (record); Required = must be provided if applicable; Optional = provided at discretion of participant)
- o *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)
- o *Multi-valued* = Multiple entries allowed in a field.
- o *Controlled Authority List* = List of accepted entries to be used by all participants, such as document types or specific forms of an organization name.
- o *Free Text Searchable* = The ability to perform phrase or single-word searches of the field entries.
- o *Comments/Issues* = Any additional comments or outstanding issues.

11 0 0
11 0 0

Legend:

- o Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined
 * A field which is being proposed by OCRWM as a candidate LSS field.
 ** Only one variable length text field. Multiple entries just appended to previous text.

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
✓ LSS Accession Number	LSS Accession Number	N	Mandatory	N	N	NA	Generated by LSS
✓ Participant Accession Number	Participant Accession Number	Mandatory	N	Y	N	NA	
✓ Submitter Center	Submitter Center	Mandatory	N	Y	Y	NA	
✓ Title/Description	Title	Either Title or Created Title is Mandatory	N	N**	N	Y	Title and Created Title are searchable as one field
	Created Title	"	N	N**	N	Y	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
✓ Author	Author Name	Either Author or Author Organization is Mandatory.	N	Y	TBD /	N	Need full Name?
✓ Author Organization	Author Organization	" 1-3 Mandatory	N	Y	Y	Y	
✓ Document Date	Document Date Document Date Flag	Mandatory Required	N N	N N	N Y	NA NA	Indicates an estimated date
✓ Document/Report Number	Document Number	Required Mandatory	N	Y	N	NA	
✓ Document Condition	Document Condition	Required Mandatory	N	Y	Y	NA	
✓ Edition/Version	Version	Required And	N	Y /	N	Y	
✓ Event Date	Event Date	Required Mandatory	N	Y	N	NA	
✓ Event Date Code	Event Code	Required Mandatory	N	Y	Y	NA	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
* Protected Status	Access Control Info: <i>Expanded</i> Access Control Code	Mandatory	N	-	-	-	Default value is 'Public'.
*	- Type of Protection	Mandatory	N	Y	Y	NA	
*	- Protection Explanation	Required	N	TBD	TBD	TBD	
		Required	N	TBD	TBD	TBD	
Related Documents	Related Record Number	Required <i>Max 1</i>	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	
Special Class	Special Class	Required	N	Y	Y	Y	
Abstract	Abstract	Required <i>0-1</i>	N	N**	N	Y	
Package ID	Package Identifier	Required <i>0-1</i>	Y	Y	N	NA	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
*	Package Code	Required	Y	Y	Y	NA	
Copyright	Copyright	Required	N	N	N	NA	
Document Type	Document Type	Mandatory	Optional	Y	Y	Y	
Publication Data	Publication Info:	Optional	Required	-	-	-	Electronically imaged page range shall be stored.
	- Publication Source			N	Y	Y	
	- Publication Source Editor			Y	N	N	
	- Publisher			N	Y	N	
	- Publication Place			N	N	N	
	- Page Range			N	N	N	
	- Citation Information			N	N	TBD	
	- ISBN/Library of Congress Number			N	N	TBD	
Descriptors	Descriptors	Optional	Mandatory	Y	Y	Y	Use LSS Thesaurus

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or ISSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
Identifiers	Identifiers	Optional	Optional	Y	N	Y	
Comments	Comments	Optional	Optional	N **	N	Y	
Sponsoring Organization	Sponsoring Organization	Optional	N	Y	Y	Y	Would need in IRIS too
*	Media	Required	N	Y	Y	NA	
*	QA Record	Mandatory	N	N	Y	NA	
*	Traceability Number	Required	Required	Y	N	N	
*	Traceability Code	Required	Required	Y	Y	NA	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
*	Electronic Image Reference Info:	Required	Required	-	-	-	Electronic image info supplied by Participant to be converted to LSS reference info. Temporary field used to validate submitter page/image count. System generated.
Submitter Page Count	Submitter HC Page / Electronic Image Count (Temp field)	Mandatory	N	N	N	N	
Number of Images	- Electronic Image Count	N	Mandatory	N	N	N	
*	- Electronic Image Location ID	N	Mandatory	TBD	N	N	
*	Searchable Text Reference Info: (Contents TBD)	Required	Required	-	-	-	
*	Physical Unit Location Reference Info: (Contents TBD)	Required	Required	-	-	-	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
	Concurrence/Approval Info: - Concur/Approval Name - Concur/Approval Organization - Concur/Approval Type - Concur/Approval Status - Concur/Approval Date - Signed Name - Signed Organization - Concur/Approval Component File ID(s) - Electronic Signature Verification - Silence is Consent Flag	Required	N	-	-	-	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
*	Document Route/Tracking Info:	Required	N	-	-	-	
Addressee	- Receiver Name	Required	N	Y	TBD	N	
Addressee Organization	- Receiver Organization	Required	N	Y	Y	Y	
	- Copyee Name						
	- Copyee Organization						
	- Date Sent						
	- Special Instruction						
	- Type Route						

Proposed LSS Field Definition Summary Table

Original LSS Field Name / or New Candidate Field Name (*)	LSS/InfoSTREAMS Field Name	Data Submitted by Participant	Data Supplied by LSS System or ISSA	Multi-Value	Controlled Authority List	Free Text Search	Comments/Issues
Administrative and Process Tracking Fields:	LSS Record Housekeeping Info: - Date Received at LSS - Date Available in LSS - Date/time Loaded into LSS - Date/time of Last Modification - LSS Indexer ID - Station ID - QC ID - Subject & Abstract Cataloger ID - Cataloging QC ID - Processing Stage Status - Verification ID - Change Tracking Log	N	Mandatory	-	-	-	

Proposed Detailed LSS Field List

Draft - As of 3/9/94

Abstract

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

Access Control Info

A logical group of information pertaining to the access control placed on the document or unit. This field is used to indicate whether access to a document is restricted as privileged, and the type of protection to be enforced. The logical group may include the following fields:

- Access Control Code
- Type of Protection
- Protection Explanation.

Author Name

The name of each person listed on the document or unit as responsible for all or part of its creation. Only personal authors are entered in this field. Corporations as authors are captured in the Author Organization field. This field is part of a logical group which includes:

- Author Name
- Author Organization.

Entries in the Author field are linked to the corresponding entry in the Author Organization field.

Author Organization

The name of the organization (i.e., company, corporation or group) with which each author was affiliated at the time the document was created, or the name of the organization responsible for creating or originating the document when there is no personal author. If an author works for one organization and is representing another, then both affiliations should be captured, e.g., an attorney using a law firm's letterhead but representing a client organization. This field is part of a logical group which includes:

- Author Name
- Author Organization.

An entry in this field is linked to the Author Name field in order to provide the connection between an author and his/her affiliation. Thus a searcher seeking a document authored by J. A. Brown of Sandia will not retrieve a document authored by J. A. Brown of DOE and C. R. Smith of Sandia.

Comments

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

Concurrence/Approval Info

This is a logical group of concurrence/approval information concerning all persons listed on the concurrence/approval form for the document. This information is needed for all electronic documents which are routed electronically for concurrence and/or approval. The fields within the logical group may include:

- Concurrence/Approval Name
- Concur/Approval Organization
- Concur/Approval Type
- Concur/Approval Status
- Concurrence/Approval Date
- Signed Name
- Signed Organization
- Concur/Approval Component File ID(s)
- Electronic Signature Verification
- Silence is Consent Flag
- Electronic Signature

For hardcopy documents, this field contains the names of all persons on the concurrence/approval list.

Copyright

An indication of the copyright status of a document. Entries will be made in this field if a document is copyrighted; this usually applies to documents that are commercially published. Copyrighted materials require permission from and possible payment of royalties to the author or publisher in order to store, reproduce, and distribute copies.

NOTE: Some copyright notices restrict the entry of copyrighted material into electronic format. This issue will need to be addressed prior to capturing images and searchable text of copyrighted documents.

Created Title

A sentence or phrase which 1) briefly describes the contents of the untitled document or a non-document, 2) augments the existing title to improve its clarity or meaning, or 3) augments the existing title to distinguish it from other titles that may be mistaken as duplicates. Either a Title or a Created Title is mandatory for every document or unit.

Descriptors

Words or phrases from the LSS Thesaurus representing the subject content of the document or unit. A descriptor may or may not be a word or phrase contained in the text of the document. As many descriptors should be used as needed to describe the main concepts of the unit. The use of the descriptor obviates the need for synonyms in a search statement.

Document Condition

The physical condition of the document at the time of entry into the system which would preclude the ability of the capture station to accurately or completely capture all information. This includes information such as INC (pages missing), ILL (portions illegible), and MARG (marginalia).

Document Date

The date on which the document was issued, published or completed. If the date is unknown, information in the document will be used to determine a likely date. In this case, the Estimated Date Flag is set. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date field is linked to the corresponding entry in the Document Date Flag field.

Document Date Flag

An indicator that the document date has been estimated from information contained in the document or in the accompanying documents. The Document Date field will contain the date that corresponds to the date on the record. If there is no date, other means of inferring the date will be used. In these cases, the Estimated Date Flag will be set to inform the user that the date has been estimated. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date Flag field is linked to the corresponding entry in the Document Date field.

Document Number

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

Document Route/Tracking Info

This is a logical group of information concerning the routing, distribution, and tracking of a

document. The fields within this logical group may include:

- Receiver Name
- Receiver Organization
- Copyee Name
- Copyee Organization
- Date Sent
- Special Instructions
- Type of Route.

Document Type

The format or physical form of the document. Examples include a book, notebook and plan.

Electronic Image Reference Info

This is a logical group of reference information concerning the electronic image of the record.

The fields in this logical group may include:

- Electronic Image Count
- Electronic Image Location ID

- Submitter HC Page/Electronic Image Count - is a temporary field used by the LSS Administrator to validate the hardcopy page count or electronic image count supplied by the Participant.

Event Code

A code that identifies the type of event occurring on the Event Date. Entries will be made in this field only when there is an entry in the Event Date field. Examples of codes include: AUDIT (Audit), INSP (Inspection), HEAR (hearing), or EFFECT (Effective or Implementation Date). This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Code field is linked to the appropriate entry in the Event Date field.

Event Date

This field is used to capture the date of 1) The effective date of an order, procedure, or any other implementation date of the document; or, 2) the date(s) of a particular happening (such as an inspection, audit, meeting or hearing) that is the main topic(s) of the content of the document. The field will assist in assembling all documents about a particular event or all documents that must be implemented on or between specific dates. Examples of events include audits and inspections. Examples of implementation events include the effective date of an order or a regulation. This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Date field is linked to the corresponding entry in the Event Code field.

Identifiers

Words or phrases which are not contained in the LSS Thesaurus but the submitter or cataloger believes represents the subject content of the unit and will assist the user in retrieval of the unit. These may be "buzz words" or words representing new concepts which have not yet been incorporated into the LSS Thesaurus. The terms in this field provide a candidate list of terms for inclusion into the LSS Thesaurus.

LSS Accession Number

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

LSS Audit Info

This is a logical group which contains LSS audit information. The specific field level information has not yet been defined.

LSS Record Housekeeping Info

This is a logical group of information which contains data base management administrative and process tracking fields used by the LSS Administrator. These fields may include:

- Date Received at LSS
- Date Available in LSS
- 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
- Change Tracking Log.

Media

The physical media upon which the unit is stored. Examples of Media include PHOTO (photographs), VIDEO (video), and DISK (magnetic disk).

Package Code

A code that identifies the type of package which has been assigned a Package ID. Entries will be made in this field only when there is an entry in the Package ID field. Examples of Package Codes include: DRAW (drawing package), DATA (data package), or INSPEC (inspection package). This field is part of a logical group which includes:

- Package Identifier
- Package Code.

Each entry in the Package Code field will be linked to the appropriate entry in the Package Identifier field.

Package Identifier

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

- Package Identifier
- Package Code.

Each entry in the Package Identifier field will be linked to the appropriate entry in the Package Identifier field.

Participant Accession Number

A unique identification number required by 10CFR 2/J to be assigned by the participant to each unit submitted for entry into the LSS. This number assists the submitters in locating documents they have submitted and assists the capture operation in verifying the identity of the documents received and matching it with the image and text. This field should contain a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alphanumeric scheme which the submitting organization might use to control their own units. It may be the accession number used in their own records system. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Physical Unit Location Reference Info

This is a logical group of location information which indicates where the physical unit can be found. The specific field level information has not yet been determined.

Publication Info

The publication information is a logical group of bibliographic information that is not covered in other fields, but is important in identifying or citing the document. This group in combination with author and title fields provides the user with a standard consistent bibliographic citation for use in creating bibliographies and references for reports. This logical group may include the following fields:

- Publication Source
- Publication Source Editor
- Publisher
- Publication Place
- Page Range
- Citation Information
- ISBN/Library of Congress Number.

QA Record

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

Related Record Code

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

- Related Record Number
- Related Record Code.

Each entry in the Related Record Code field will be linked to the appropriate entry in the Related Record Number field.

Related Record Number

This field contains the LSS Accession Number(s) of a record that has a particular relationship to the document or unit being entered. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document and a later version, comments, corrections, or errata); and whole/part (a book and its chapters, a journal and its articles), an information package and the cataloging units it contains. The type of relationship is captured in the Related Record Code field. This field is part of a logical group which includes:

- Related Record Number
- Related Record Code.

Each entry in the related Record Number field will be linked to the appropriate entry in the Related Record Code field.

Searchable Text Reference Info

This is a logical group of information required to identify and locate the searchable text file. The specific field level information has not yet been determined.

Special Class

The special group or category to which a document or unit may belong. Entries in this field identify special categories of documents in order to retrieve them as a group, such as Site Characterization Plan Reference. The field is also used to indicate that a record does not contain text or does not have an image. Examples of Special Class data includes: Header only, No searchable text or image, or Translation of a document from a foreign language.

Sponsoring Organization

The name of the agency or agencies responsible for funding or otherwise sponsoring the work reported in the unit.

Submitter Center

A coded field for the name and location of the participant or its subdivision submitting material for inclusion into the LSS. This field provides a contact point for material that is rejected by the LSS Administrator. It also provides a contact point for notification that the header, image, and searchable text have been loaded into the LSS and are ready for review and verification by the first submitting agency. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Each entry in the Submitter Center field will be linked to the appropriate entry in the Participant Accession Number field.

Title

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

Traceability Code

A code that indicates the type of traceability number. Examples of this code include: ATDT (technical data link), CIDI (Configuration Identifier & Document Identifier), and WBS (Work Breakdown Structure). This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Number field.

Traceability Number

An identifier that has been assigned to a document in order to link it to a specific activity or to a specific record in another database. These identifiers will enable searchers to easily retrieve all records associated with any given site activity by providing a special linkage not available through other fields. They will also point to related records contained in other databases such as the technical data database. Examples of traceability numbers include WBS number, linkages to technical databases, and configuration management identifiers. This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Code field.

Version

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

LANE
POWELL
SPEARS
LUBERSKY

March 30, 1994

John C. Hoyle, Chairman
LSSARP
United States Nuclear Regulatory Commission
Mail Stop 16H3
Washington, D.C. 20555

Malachuk R. Murphy

LAW OFFICES

Evergreen Plaza
Building
211 Capitol Way
Olympia, WA
98501-1231

$$(-2)(3) = -6 \text{ and } -6 \in \mathbb{R} \setminus \mathbb{Q}$$

Facsimile
1206, 754 1603

*A Partnership
Including
Professional
Corporation*

Re: LSSARP Meeting April 14 - 15, 1994

Dear John:

As you are probably aware, the DOE has now made a decision to develop a multi-purpose canister (MPC) and to seek certification of an MPC from the NRC under 10 CFR Part 71. It is my understanding that the DOE will be seeking certification some time in the next few years in order to be able to make MPCs available at reactor sites by 1998. MPC certification proceedings would be far less complex, contentious, and time-consuming than the ultimate licensing proceedings on the repository itself.

I suggest that we might begin at least preliminary discussions at the April 14 - 15 meeting in Las Vegas on the feasibility of developing the LSS to a point where all interested parties could use it, at least on a pilot project basis, during any MPC certification proceedings. If that is at all possible, it could be a worthwhile learning experience, and provide some extremely valuable lessons which could be applied in fully developing the LSS for use during the ultimate repository licensing process. I think we could undertake to discuss this without necessarily extending the meeting beyond a day and a half.

With best personal regards.

Yours very truly,

LANE POWELL SPEARS LUBERSKY

Malachy R. Murphy
Regulatory and Licensing Advisor
Nye County NWRPO

MRM:1m

cc: Les W. Bradshaw
Phillip A. Niedzielski-Eichner
Lloyd Levy
Members LSSARP

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

LPOLY E POLYMER 10848MRM LTR

ENCLOSURE 5

INDEX
OF
TRANSCRIPT
LSS ADVISORY REVIEW PANEL MEETING
APRIL 14-15, 1994

	<u>PAGE</u>
Introduction of Members	3
Remarks by LSS Administrator	7
Briefing on LSS Administrator's Audit Program	9
Discussion of NRC Control of LSS Operation	67
Status of Comments on Topical Guidelines	90
Discussion of Control Issues	93
Discussion of LSSA as COTR	133
Capture of DOE Documents	149
Status of InfoSTREAMS Development	155
Discussion of Establishment of Technical Subgroup	179
Header Subgroup Report	188
Use of LSS on Pilot Project Basis	198
Future Meeting Discussion	220

ENCLOSURE 6

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: LSSARP Meeting

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Friday, April 15, 1994

PAGES: 147 - 221

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300

Washington, D.C. 20006

(202) 293-3950

94-091-50117

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: LSSARP Meeting

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Friday, April 15, 1994

PAGES: 147 - 221

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300

Washington, D.C. 20006

(202) 293-3950

94071-50117

1 UNITED STATES NUCLEAR REGULATORY COMMISSION
2 ATOMIC SAFETY AND LICENSING BOARD

3 ***

4 LSSARP MEETING

5 ***

6
7 Department of Energy
8 101 Convention Center Dr.
9 Las Vegas, Nevada
10

11 Friday, April 15, 1994
12

13 The above-entitled meeting convened, pursuant to
14 adjournment, at 8:30 a.m.
15

16 BEFORE:

17 JOHN HOYLE,
18 NRC PANEL CHAIRMAN
19
20
21
22
23
24
25

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1612 K Street, N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

1 APPEARANCES:

2 KIRK BALCOM, Nevada
3 MALACHY MURPHY, Nye County
4 BRAD METTAM, Inyo County
5 ROBERT HOLDEN, NCAI
6 DENNIS BECHTEL, Clark County
7 JAY SILBERG, Nuclear Energy Institute
8 CORINNE MACALUSO, DOE
9 DAN GRASER, DOE
10 JOHN HOYLE, NRC
11 ARNOLD MOE LEVIN, NRC
12 CHIP CAMERON, NRC
13 TERRY QUIGLEY, NCAI
14 HARRY SWAINSTON, Nevada
15 MARYANN JONES, DOE
16 DAVID DRAPKIN, NRC
17 TONY NEVILLE, Labat-Anderson
18 MIKE BAUGHMAN
19 VIRGIL ROCHESTER
20 SALLY LARIMORE, Clark Country
21 ARDYCE MILTON
22
23
24
25

P R O C E E D I N G S

[8:30 a.m.]

1
2
3 MR. HOYLE: Good morning once again. Today's
4 schedule will start us off with a presentation by Dan Graser
5 talking about capture of DOE documents. We were
6 particularly interested in hearing how they're going to
7 capture non-archive documents, documents concerning the
8 waste program that are not originated in his office, and
9 status of InfoSTREAMs. So unless there are initial
10 comments, let's hear from Dan.

11 MR. GRASER: Okay. Before I get up and use the
12 overhead, we can address the issue of the waste acceptance,
13 waste materials that are coming into our program that Mal
14 raised at the last ARP meeting. We went off and put
15 together a response, and I believe a copy of that had been
16 sent to all the ARP members. Just to recap the contents of
17 that letter the -- you know, the issue of dealing with the
18 defense waste has been recognized within the Department of
19 Energy and across various other programs that have some
20 involvement. And what we've found and what we're able to
21 respond to is that, you know, from my perspective it looks
22 like things are fairly well under control. That letter,
23 just the highlights of it, you can certainly go back and
24 read through it if you choose, but that letter that I wrote
25 back to John basically outlined the fact that the program

1 does have a formal policy and requirements, documentation in
2 place. The document spells out the levels of treatment, the
3 types of documentation that would be required. So from that
4 perspective what we have is a documented approach to dealing
5 with the acceptance and the documentation of that material.

6 In terms of whether or not that is actually being
7 used or followed, we then went in and started looking at the
8 various record submissions that have come into our normal
9 records processing environment. And in fact we do have
10 submissions of materials coming in pursuant to that, you
11 know, to that requirements document. And in addition to the
12 fact that you have the documentation and things actually
13 happening according to that documentation, there is an
14 ongoing oversight group that includes all of the
15 organizations within the Department of Energy that have
16 involvement here, and that group has been meeting on a
17 regular basis.

18 So you know, I think to sum it up on the defense
19 waste issue, that is certainly, you know, from my
20 perspective fairly well under control. The other aspect of
21 the question that Mal asked was also in regards to materials
22 at the secretarial level. And there is a standing
23 correspondence management system within the Department of
24 Energy. It's run by a group called the executive
25 secretariat. And what the executive secretariat does is

1 screen and filter all of the incoming and outgoing
2 secretarial materials. Anything that relates to a specific
3 program is automatically copied to the program. So if it is
4 formally received and accepted at the secretary's office,
5 the operative program will always get a copy of that.
6 Sometimes for action, but at a minimum at least for
7 information. And when it comes through our mail room we
8 take that item, piece of correspondence, either incoming our
9 outgoing, and it then goes into our records system. I think
10 the only area where we have potentially a situation is where
11 something is not received through a normal correspondence
12 type mode -- specifically if somebody walked in the door and
13 handed something down to the secretary during the course of
14 a discussion, for example overheads or view charts or
15 something. I have reasonable faith, although, you know, one
16 never really knows for sure when you can't just go right up
17 and verify it. But I have reasonable belief that even those
18 materials are then grabbed by the people in the executive
19 secretariat and they are included as part of the chron
20 material in the secretary's office.

21 But I guess what I'm saying is that at least for
22 the formal correspondence level material the mechanism is in
23 place, has been in place even prior to Hazel O'Leary, to
24 have that sort of capture. And if anybody has any
25 additional questions I can go back and continue to check

1 things out.

2 MR. MURPHY: I've got a couple of questions, Dan.

3 MR. GRASER: Okay.

4 MR. MURPHY: On the defense waste site, your
5 February 1st letter in which you've just gone over here
6 details the kind of documents, the three categories of
7 documents that InfoSTREAMS is currently capturing, I guess.
8 Does that -- and record is sufficient to provide evidence of
9 activity subject to 2A requirements is pretty broad?

10 MR. GRASER: Yes.

11 MR. MURPHY: Almost everything.

12 MR. GRASER: Right.

13 MR. MURPHY: Theoretically. But have you checked
14 to see whether or not there is -- you're able to capture or
15 they're aware of the -- and I was looking for it and I'm
16 close to finding it in the rule and I haven't found it yet.
17 The -- remember our raw data debate during the -- what did
18 we call that stuff, graphic-oriented material? We handled
19 that separately --

20 MR. GRASER: Right.

21 MR. MURPHY: -- under the rule where you -- where
22 the people are required to submit a header --

23 MR. GRASER: Right.

24 MR. MURPHY: -- and a bibliographic index, I
25 guess. But the raw data -- as I call it raw data. I think

1 the rule calls it graphic-oriented material, can be kept
2 separate. Got to say where it is, you know, like the --

3 MR. GRASER: Uh-huh.

4 MR. MURPHY: -- field notebook --

5 MR. GRASER: Right.

6 MR. MURPHY: -- kind of stuff. Are we able to do
7 that in the defense waste program?

8 MR. GRASER: Again, I'll have to check down to
9 that level in terms of going through the, you know, exactly
10 what lies underneath these records.

11 MR. MURPHY: No. I think it's a different problem
12 because there's not field work being done out there. There
13 aren't well logs and --

14 MR. GRASER: Right.

15 MR. MURPHY: -- that are taken back to Golden,
16 Colorado or anything, but it's -- you might want to check on
17 that.

18 MR. GRASER: Okay. So it's the equivalent
19 underlying technical data associated with those activities.

20 MR. MURPHY: Right.

21 MR. GRASER: That's the status of that.

22 MR. MURPHY: That's right.

23 MR. GRASER: All right.

24 MR. MURPHY: And then secondly, with so far as the
25 secretarial level documents are concerned, are we able to

1 grab the circulated draft?

2 MR. GRASER: I'll have to check on that one as
3 well. The circulated drafts for controlled correspondence,
4 I'll have to check on that one as well. Typically that --
5 the correspondence control units when something is a piece
6 of controlled correspondence like that. They will track the
7 versions that have gone out to various Department of Energy
8 assistant secretaries. So if they are requesting a
9 concurrence activity, the controlled correspondence unit
10 will actually know that there are six copies out there
11 looking for concurrence and the action date is such and such
12 and this guy hasn't responded, and if he doesn't respond by
13 COD today he's got to stay until he's finished tonight. So
14 they do keep track of the control of the concurrence
15 material, and the status of it. But as to whether or not
16 there's a capture mechanism for those common materials, I'll
17 have to check on that.

18 MR. MURPHY: Yeah, that's what we would be
19 interested in.

20 MR. GRASER: Okay.

21 MR. HOYLE: Dan, can I ask a question? Do you
22 know where the responsible officer is going to be? Is it
23 going to be in that's going to be in archive or a higher
24 level? I mean that's the person that really has to certify
25 that all the documents are there.

1 MR. GRASER: I really don't know. I would -- I
2 don't even want to venture a guess. Okay. Can move right
3 along here, keep the airlines happy. This is a presentation
4 we've been giving again in the last few weeks and part of
5 the TRW team is out here in fact using this briefing for --
6 also for briefing the technical status to the Duck Mountain
7 site characterization staff out here as well. This
8 represents a current snapshot of our strategy on
9 InfoSTREAMs. The overheads that I'm going to be showing,
10 for those of you who have had presentations, for example,
11 from Barbara Cerney, some of this will be very familiar.
12 But since -- you know, since I've been the acting director
13 of the information management division since October, we
14 have changed somewhat our tactical implementation, although
15 the same basic philosophy is there. And what you will see
16 here is some elaboration on some of those changes that are
17 in process right now. This is our tactical deployment.
18 This is for InfoSTREAMs, our internal records management,
19 our internal document intake capabilities. And the thing I
20 do want to say about that is, again, we have been very aware
21 of the fact that there may be potential for reuse of our
22 InfoSTREAMs technologies, architectures, hardware and
23 software. So a lot of what we're seeing in the InfoSTREAMs
24 environment has, you know, a very good chance of
25 reusability. And whether or not saving the money is

1 perceived as being of value.

2 The first overhead we have here, just for those of
3 you who haven't seen InfoSTREAMS or licensing support
4 system, what we have here is just basically representation
5 of the sorts of things that the InfoSTREAMS strategy or
6 technology was intended to do. We have an environment where
7 people within the program, within the project are creating
8 documentation materials in support of license application or
9 characterization or scientific activities, whatever the case
10 may be. In InfoSTREAMS increment 2.0, which is undergoing
11 final acceptance testing as we speak, what is going to be
12 happening is that at that point of document creation not
13 only are we grabbing on to the document, we are also
14 creating a preliminary header that tells us we have
15 something here that is potentially record material. And
16 we're going to create a short header record for that, even
17 while the document may be in a developmental stage.

18 MR. SILBERG: Who creates that, the author?

19 MR. GRASER: The author. Right. While some of
20 it's machine-generated, too. For example, the date the
21 thing was launched, that's machine-generated. Who is the
22 user that's logged into the machine, that's
23 machine-generated. In our internal environment we do have a
24 situation where fairly large numbers of people are involved
25 in the review of a document. That can be technical review,

1 review for concurrence, supervisory approval and so forth
2 and so on. Well, the objective of the system is to get from
3 the point of authorship to a point where we have a mechanism
4 to capture the document itself, header material, comments,
5 review concurrence history. Again, a lot of this has to do
6 with setting ourselves up in a position to capture those
7 circulated but non-finalized draft materials. There could
8 be multiple iterations of a document process and as you come
9 out of the end of the drill you may have the final
10 circulated draft back here, which is the one that the LSS is
11 really interested in. You don't know how many iterations
12 you're going to go through before you get to the final
13 draft. That's one of the technical aspects that we've been
14 working with. The bottom line is that when we come out of
15 this whole process, we end up with what we're calling our
16 prerecords database because again, from a federal records
17 perspective, you know, a piece of documentation is not a
18 federal record necessarily while it's perhaps in the
19 preliminary draft stage.

20 MR. BECHTEL: Who are the reviewers up on the top
21 there? Is that --

22 MR. GRASER: Well, the reviewers, I mean there
23 could be lots of different scenarios. This is kind of a
24 generic representation.

25 MR. BECHTEL: Uh-huh.

1 MR. GRASER: It depends, you know, depends on the
2 nature of the activity that they're involved in. The
3 software, for example, supports administrative functions --

4 MR. BECHTEL: Uh-huh.

5 MR. GRASER: -- and it could support actual
6 technical or scientific work teams off collaborating on
7 creating a document package or a records package or a
8 technical data package, whatever the case may be. So it's
9 fairly generic in that regard.

10 MR. SILBERG: The project procedures require that
11 all comments on all documents be on system as opposed to
12 handwritten notes in the margin or notes scribbled on paper
13 that go back to the author?

14 MR. GRASER: That's practically unenforceable.
15 There are situations where we don't have the entire
16 enterprise on the InfoSTREAMs environment. So there will
17 always be situations where we are working with a piece of
18 paper. It's not a totally electronic environment. So there
19 will always be situations where people will be involved in
20 doing a paper -- you know, a review on a piece of paper.
21 Now we've been moving and encouraging people more and more
22 to use automation to respond to materials. And in fact if
23 it is a QA-affecting activity, there are very specific
24 procedures in place as to how comments are made and
25 captured. But if it's a non-QA-type activity, you know,

1 correspondence, yes, there will still be situations where
2 people are doing mark up, but we've been encouraging that
3 people use the automation approach in making those comments.

4 MR. MURPHY: Don't we -- we capture the marginalia
5 anyway, don't we?

6 MR. GRASER: Yeah.

7 MR. SILBERG: It's going to be a much simpler
8 system if --

9 MR. MURPHY: Huh?

10 MR. SILBERG: -- everything is electronic and you
11 don't have to worry about handwritten notes, just going to
12 make life easier for everybody.

13 MR. GRASER: Right. It would be nice to be, but
14 you know, we are not there. General counsel procurement.
15 There are lots of activities outside of the archive program
16 that still get involved in the review of our materials.

17 Once we have this prerecords database environment,
18 we have a couple of situations. Yes indeed, the data is
19 available if the author fails to submit, and if it meets the
20 check that says this was a circulated draft that was
21 circulated for supervisory concurrence and approval. And
22 this is -- gives us a mechanism to grab those if they in
23 fact were done in the automated environment, then we already
24 have access to that.

25 This free record database environment exchange

1 right now is -- it -- you know, there are aspects of it that
2 are automated, but there are aspects of it that are still
3 manual, so it is not a total electronic environment. But
4 what we're trying to represent here is, you know, the fact
5 that we have from this prerecords database environment, we
6 have documents moving through and getting final closure and
7 we have the final package, records package of material. And
8 that material then comes into a formal, more formalized
9 records management environment. The records management
10 process, for example, is going to then go through the drill
11 of getting a bitmap image, scaling the document, doing text
12 conversion, doing our -- completing the records header that
13 was created up here because we now have a final piece of
14 material and a final document date and all the rest of those
15 goodies. So we complete -- this is our internal records
16 management header structure and this is the thing that we're
17 mapping directly onto the LSS header structure. And those
18 materials are stored in what we're calling -- this very
19 deliberately -- our licensing data management system. Not
20 to confuse it with LSS, but when you look at what this is
21 you will say, "Yes indeedy, these look like the products
22 that we need to output to the licensing support system."
23 And yes indeed, that's what it is. And this is not quite as
24 simple as it looks. We have the situation of linking image
25 and text, synchronization, and the header record

1 representing all that.

2 In addition to that, the system still accommodates
3 submission from external generation sources. And in fact
4 this next chart represents the -- some of the strategy that
5 we've been using for the intake process. And again, if you
6 look down the left side here you will recognize the sorts of
7 things in the LSS intake needed to accommodate. We have
8 paper coming in from some sources. We have perhaps file
9 transfers or people submitting material already on optical
10 disk, whatever the case may be. Well, the structure we are
11 at at this point is recognizing these various -- this is not
12 a satellite. It's from satellite data stores.

13 MR. MURPHY: Looks like a satellite to me.

14 MR. GRASER: It's a satellite. It's not a
15 satellite.

16 MR. SILBERG: That's known as iminal humor.

17 MR. GRASER: Iminal humor, that's right. The
18 thing I'd like to highlight here, though, is that we've got
19 here what we're calling an interface specification. And you
20 could conceive of, you know, or characterize that as a
21 passport. Basically what we're doing is, we're saying to
22 the members of our own organization, if you're doing records
23 submission we're going to give you a specification for how
24 that filter-up of information happens within our enterprise.
25 And that specification is not just format or media, it also

1 goes directly into quality, accuracy and a few other aspects
2 of the integrity of data coming into the system to process.
3 And again, this is just demonstrating that we have feeds
4 coming in in various ways and if they --

5 MR. SILBERG: Once something goes into this
6 licensing data management system, what happens to the
7 prerecords database? Does that stay in another part of the
8 system or does that disappear?

9 MR. GRASER: Archive. Yeah, it's archived.

10 MR. SILBERG: All of those early drafts, even
11 though they don't fit within the circulated draft
12 definition, remain somewhere in electronic --

13 MR. GRASER: Well, they remain in an electronic
14 environment, but what you're talking about -- what we're
15 talking about is, how long do you maintain that? Then that
16 starts to fall under normal federal records dispositioning
17 scheduling. What is this thing? Is this backup material,
18 how are you going to deal with it and so forth. So --
19 the -- once we --

20 MR. SILBERG: What is the normal total and broad
21 time frame for that kind of stuff?

22 MR. GRASER: That sort of stuff is probably on a
23 perhaps a five- or seven-year schedule. I would just treat
24 it as a normal federal record. In some cases it could be
25 three years. The disposition schedule for the archive

1 program is about that thick. It's a fairly substantial and
2 has really fine granularity to it.

3 Once we have information pumped into our licensing
4 data side of the shop, the story that we're telling here
5 with this particular view graph is that the system
6 capability has the ability to do full text search inquiry
7 results, presenting the images and presenting the
8 bibliographic header information. Again, this looks
9 amazingly like the LSS functionality. And that's why when
10 people were talking about the reusability of InfoSTREAMs,
11 this is where the map -- this is really where the relevant
12 piece of the LSS functionality is.

13 And in response to Kirk's question from yesterday,
14 you know, well, where do we stand on this? Well, let me
15 finish this first. Again, the -- what we're showing here in
16 terms of output is the flexibility in terms of the types of
17 output. Crank it out to paper. Crank it out to removable
18 media and perhaps use that as a delivery media to move
19 things into a licensing support system. Let's see here --
20 yeah, let me get --

21 MR. SILBERG: That part is up and running now?

22 MR. GRASER: Well, the -- I'll be getting to that.
23 That's really about --

24 MR. SILBERG: Okay, go ahead.

25 MR. GRASER: -- two charts downstream. But in

1 response to Kirk's question from yesterday -- well, we'll
2 get that. It's two charts downstream. In terms of the
3 architectural approach we're taking with InfoSTREAMs, this
4 chart wants to emphasize the message that it's modular and
5 it's plug and play. And what that means for non-computer
6 techies, is that there are components of the system that --
7 not without cost, but there's nothing in the system that
8 wraps you up and puts a box around us and tells you you are
9 tied to a single vendor. Okay. So for example, you can go
10 in and look at the text engine that we're using on this, and
11 it's not a proprietary product that is embedded with a
12 certain piece of hardware that -- you know, you're not
13 buying a turnkey system from a single vendor, and that's
14 what this story tells. The text engine, for example, would
15 allow us to take our current basis plus product and
16 determine that there might be a better product, more
17 cost-effective product or newer technology. And we could
18 take the data and put it under a different text search
19 engine and continue to move forward. And again, it's not
20 without cost but it's not an impossibility. We haven't done
21 anything to lock us into single vendor, you know, single
22 vendor reliance. In terms of the architectural aspects,
23 everything we've been doing at InfoSTREAMs is a
24 client-server environment. Client environment is
25 represented by accessing a system through PCs based in

1 people's offices. And the server environment is, if you
2 will, the applications that are resident on a big vax
3 cluster sitting off in a computer center someplace dealing
4 with different sorts of applications within the InfoSTREAMs
5 environment. And again, a number of these have particular
6 relevance to meeting either the LSS input capability or
7 meeting specific things that we're very concerned about in
8 terms of auditability and traceability. The message for
9 this particular chart is that there is interchangeability,
10 interoperability within that architectural environment.
11 Wrong chart. There we go.

12 The -- there is another aspect of the InfoSTREAMs
13 architecture that's fairly important, and it will have
14 importance for the licensing support system as well. It's a
15 piece of software that sits on our vax plus and it's called
16 a storage monitor. And essentially what it does is, it's a
17 setup software that provides mechanism to store a very large
18 number of objects, either images or text files or however --
19 whatever you may be using, okay, image file or text file, a
20 database, whatever the case may be. But in very large
21 volumes, these things, finding out where they're sitting in
22 storage requires some degree of sophistication. And the
23 product that will allow us to do that -- and this is a
24 product that allows us to be scalable from what our
25 InfoSTREAMs requirement is up to the ability to meet LSS

1 reusability. It's all hinging on that storage monitor
2 capability, the fact that it can handle extremely large
3 volumes of pointers to pieces of information scattered out
4 across a computer's memory.

5 The other thing that's important on this
6 particular chart is to recognize the role that we've been
7 playing, the attention we've been giving to establishing an
8 architecture that will allow us to have acceptable
9 performance, especially when you're starting to throw around
10 image files. Image files, very large, they're very -- you
11 know, telecommunication hogs if you will. Takes a long time
12 to squeeze them through a small pipeline. One of the things
13 that we've been focusing on is to make sure that we build in
14 and use that storage manager to identify the location of
15 where documents are sitting and to be able to identify which
16 documents are the most frequently used documents. And doing
17 that allows you to set up caches -- caches -- caches,
18 however you want to pronounce it, both for inputting. And
19 once you have started to use a document to start doing
20 retrieval process, wherever optical mediums may be stored,
21 and we have a distributed environment. We have optical
22 stores in Washington, we have them here, off in Las Vegas.
23 When a user starts to actively use a certain document
24 collection, if that document is being frequently called up,
25 instead of putting it all the way back the system will hold

1 it in ready -- kind of ready reserve. And typically what
2 that means is the first time you call a document up it may
3 take 18 seconds to get the image back on the screen. Second
4 time you call that document up you'll get it in two seconds.
5 That capability of that software to do that, that's a
6 performance issue as well, not just in terms of keeping
7 track of things in extremely large numbers, but also to make
8 sure that you get credible performance.

9 Now for all the previous LSS presentations on what
10 we've been doing with InfoSTREAMs, those of you who have
11 heard Barbara's presentation should be fairly familiar with
12 this. Increment one was establishing standard office
13 automation suite, doing development and testing of the
14 capability to do electronic routing and review and to
15 establish standard e-mail and groupware suites that would be
16 used at least within the program. Increment two, and this
17 is the one that's in testing right now and we're getting
18 ready to do deployment of this functionality, was originally
19 intended to have a user interface shell that would make it
20 essentially very easy for somebody to flip through different
21 applications during creating a document package. They could
22 use Lotus and Word Perfect and whatever the case may be and
23 just basically be flipping in and out of applications
24 packages without having to exit one package and go into
25 another. It included the concept of pre-indexing, back into

1 optical storage, integration of document and review process
2 and back in storage and so forth, kind of laying the
3 foundation for records management activities.

4 Increment three was looking at automated records
5 indexing, relevancy review, retention, validation in terms
6 of RIDS dispositioning, depending on the content of the
7 document, was going to merge our internal records management
8 system with the new InfoSTREAMs data management structures.

9 And increment four was basically going to
10 image-enable that whole process so that the users would have
11 the opportunity to use imaging at their choice in
12 applications where they felt it would be helpful to them.

13 We are wrapping up increment two as I said, and
14 the most recent development that I can say is that we
15 recognized during increment two that there were pieces of
16 this functionality here that we had to have. We couldn't
17 wait for another year or another year-and-a-half for these
18 sorts of functionalities. So in the last six months of this
19 year we've been working on a plan that by the end of this
20 year what we have at the end of increment 2.0 is also going
21 to include operational demonstration capability for CD-Rom
22 input, file transfer input, paper input, transfers and
23 collection of material from our other sites and locations
24 and loading them into this LVMS which has, for all intents
25 and purposes, the LSS functionality. And that's why when

1 Kirk asked the question yesterday, you know, the back end of
2 this system still doesn't have optical and where's the text
3 retrieval, what we've done is we've juiced up the whole
4 process. It's not going to be totally operational, but it
5 is going to be the equivalent of a demonstration test of all
6 of those key functional capabilities for the LSS. Starting
7 next fiscal year we're going to be taking that and moving it
8 in, you know, out of that testing mode into, okay, let's
9 make it production now. And that will not be an overnight
10 drill, but I would say that, you know, probably by the end
11 of the year all of the elements that we would be using for
12 LSS would be reusable for LSS. We are going to be able to,
13 you know, operationally demonstrate those capabilities
14 within InfoSTREAMs.

15 So what essentially we have done, the analogy was
16 like building a ship. We've kind of taken some of these
17 pieces from here and included them in building the hull.
18 And what we have is the hull has been launched and it's
19 going down the ramp. The next row would be to do
20 superstructure-type types of activities and these will
21 represent those superstructure type of activities now that
22 the hull work is completed right down here. This hull work
23 represents the architecture.

24 So that's essentially where we stand with the
25 InfoSTREAMs development right now. We have that front end

1 suite. We have that office automation, the document
2 creation, the tracking, routing, concurrence capability,
3 although it is not, you know, it is not available to
4 participants outside of our program, DOE participants. But
5 in terms of recognizing the need to get these types of
6 capabilities out onto the street, we're fast-tracking some
7 of these aspects right here. And these are not low-hanging
8 fruit, these are in fact very critical capabilities for the
9 LSS.

10 That's essentially where we stand. Anybody has
11 any questions --

12 MR. MURPHY: Your satellite LDEMS, if I understand
13 it correctly, are your DOE contractors, for example?

14 MR. GRASER: Right.

15 MR. MURPHY: GS.

16 MR. GRASER: Well --

17 MR. MURPHY: Livermore, Los Alamos.

18 MR. GRASER: I would say that it's probably right
19 now fair to characterize the three vax installations that we
20 have and the document -- the central records facilities, and
21 we have a number of the central records facilities. We have
22 one in Dunloring, you know, we have another one out here in
23 Las Vegas. We have a quality records center down in the
24 Forrestal building. Those are the environments where we can
25 say in those vax environments we're going to be having these

1 technologies plugged in, the optical environment, the
2 document cataloging capability. In terms of the participant
3 organizations from the Yucca Mountain activity, for example
4 the Sandias, Los Alamos and so forth, we are still working
5 through the technical implementation, but we -- you know,
6 we're on the verge of putting out the initial intake and
7 cataloging of that material. And then passing that along to
8 have the remainder of the processing done in a centralized
9 location so that at least the initial up-front capture of
10 the document and the cataloging would be done down at that
11 level out there.

12 Will those people have CD-ROM output capabilities?
13 Yes, indeed. Some of them already do. And that's why we're
14 working on getting that CD-ROM as an input medium.

15 Will they have the ability to send us bitmap
16 images? Yes, indeed. Some of those people already have
17 very robust, mature document-scanning. You know, they can
18 scan documents in, give bitmap images and deliver images and
19 headers to us on a CD-ROM already. And that's why we were
20 recognizing these guys want to do it. So whether or not
21 they would have a local data store, and I think that's the
22 key that I'm kind of wavering about, whether they would have
23 a local data store with the full text retrieval capability
24 and all the rest of that, that's something we're still
25 working on the technical implementation of that.

1 We were hoping to have that wrapped this year. We
2 came into some issues over the telecommunications network
3 needed to support some of that approach that we were taking.
4 So we're reevaluating that right now. I expect that that is
5 probably going to have at least closure on the strategy
6 within the next couple of months and probably some direction
7 at that point in terms of how we're actually going to
8 implement it. So, it's the technical implementation. Some
9 of the details are still up in the air.

10 MR. MURPHY: Yeah. This has to do with the FDC
11 discussion I want to bring up later on, of course. But we
12 will, I take it then, you're saying be able, at some point
13 in time, to set up at our LSS -- sit down at our LSS
14 consoles and call up technical information that Lawrence
15 Livermore has generated with respect to the engineered
16 barrier system, just like we can call up --

17 MR. GRASER: Well, if it is --

18 MR. MURPHY: That's what the LSS is supposed to --

19 MR. GRASER: If it is LSS-relevant --

20 MR. MURPHY: Oh yeah.

21 MR. GRASER: -- that material is going to end up
22 on one of the three central vax clusters. If it is
23 LSS-relevant, it's going to come into that domain.

24 MR. MURPHY: Well, let's just assume that
25 everything they do with respect to the EBS, the engineered

1 barrier system is LSS-relevant.

2 MR. GRASER: Right. So you won't have to --

3 MR. MURPHY: We'd be able to find it in --

4 MR. GRASER: Right.

5 MR. BECHTEL: Dan, I'd like to introduce Sally
6 Larimore of Clark County staff. She's the system engineers
7 on staff and she's got several questions.

8 MR. GRASER: Okay.

9 MS. LARIMORE: Hi. I was at the October meeting
10 and a lot of my comments are kind of picking up from there
11 and also addressing your slides from today. We've been
12 asked to consider InfoSTREAMs as the engine for our system,
13 our licensing support system, but we have some concerns.
14 It's still a bit of a black box to us. In particular, it
15 sounds like functionally there's a lot of equivalency in
16 terms of the requirements. However, we haven't yet received
17 the detail requirements such that we can be sure that beyond
18 the surface similarities such as text input, text retrieval,
19 text output and so forth that things such as throughput and
20 simultaneous access, and access to the system from various
21 platforms, will be achieved. So at the last meeting I asked
22 for that sort of information, particularly in the context of
23 the suggested rule change that would eliminate the modem
24 access and supplant that with a DOE backbone-type of access,
25 and we still haven't received a response from that October

1 meeting.

2 Our concern is that there could be indeed during
3 the licensing phase with so many different users needing to
4 access large volumes of data, indeed these text files could
5 be extremely large, that there could be performance problems
6 that could indeed seriously impede timely discovery process
7 for some of the potential litigants. So I would like to get
8 some information. I think other members of the LSSARP would
9 like to know what your performance budget is in terms of
10 timing, throughput, what sort of studies that you're doing
11 to look at that, and if possible, to have that information
12 disclosed to us so that we can decide whether the
13 performance characteristics of the system will meet our need
14 for timely access, and that indeed all the potential
15 litigants will have access to the system without large
16 expenditures of money to buy compatible hardware. We need
17 to know what operating system you're going to be using.
18 This is an OSF1. Is it the LS? What communications
19 protocol and transports you're going to be using and so
20 forth, and all of that information hasn't been available to
21 date.

22 MR. GRASER: Let me just clarify, which system are
23 you really talking about? Are you talking about
24 InfoSTREAMs?

25 MS. LARIMORE: I'm talking about InfoSTREAMs.

1 MR. GRASER: You having access to InfoSTREAMs?

2 MS. LARIMORE: If InfoSTREAMs is being used as the
3 LSS architecture --

4 MR. GRASER: It's under consideration.

5 MS. LARIMORE: Right. And in order for us to
6 consider it as a viable candidate for our adoption as LSS,
7 we have to understand what the system is. And right now
8 we've seen a high-level, very coarse representation of the
9 system performance parameters and requirements. And they're
10 probably very good for your internal use, but what's not
11 clear to us is that it's going to meet the requirements of
12 this group.

13 MR. GRASER: I guess I'll have to ask John how you
14 prefer to handle that. The information you are asking for
15 is not the sort of thing that you're going to get in a
16 half-an-hour briefing or maybe even a half-a-day briefing.
17 The InfoSTREAMs architecture and -- if InfoSTREAMs were used
18 as a foundation, if option three were in fact the foundation
19 for LSS, you know, you're --

20 MR. MURPHY: Option four.

21 MR. GRASER: Option four.

22 MR. CAMERON: With InfoSTREAMs as the foundation.

23 MR. MURPHY: There you go.

24 MR. CAMERON: Option four.

25 MR. GRASER: If -- you know, if in fact you want

1 that level of information as to how -- you know, how would
2 this look in a much larger scale enterprise environment and
3 talk about performance issues and backbone and hardware and
4 software, we're probably talking probably one or two days.
5 And, you know, if you really want to get into the down and
6 dirty, you know, it is entirely appropriate that you be, you
7 know, an ADP expert.

8 MR. CAMERON: Well, I have a --

9 MR. GRASER: Professional anyhow.

10 MS. LARIMORE: -- I have a masters degree in
11 software engineering, so I think I could probably --

12 MR. GRASER: Right. I'm -- yeah. That's -- and
13 I'm not questioning that. I'm just saying --

14 MS. LARIMORE: -- follow it.

15 MR. GRASER: -- that if you want to get down into
16 that level, it takes that level of a person. If you're --

17 MS. LARIMORE: Right. Those are the nature of my
18 questions.

19 MR. GRASER: Okay. Right. Sure.

20 MS. LARIMORE: And also I imagine that you're
21 following some standard development methodology, perhaps
22 even an analog to DOD standard 2167A and 1521B, which would
23 be that you have some series of standard design reviews,
24 requirement reviews and so forth, and audits. And we would
25 like to have access to your critical design review

1 materials, if you have those available for all increments.

2 MR. GRASER: Well again, you know, InfoSTREAMs
3 development has been going on since 1991. If you really
4 want to have access to it, there's about probably 21,000
5 pages of that documentation, because InfoSTREAMs is
6 developed as a Department of Energy internal records
7 management system, you know. We're doing a design based on
8 our requirements.

9 MS. LARIMORE: Right. That's exactly the nature
10 of our concern.

11 MR. GRASER: And in terms of the reusability and
12 those pieces of the InfoSTREAMs development that are
13 potentially reusable, there's a lot of documentation.

14 MR. SILBERG: Could I make a suggestion? It seems
15 to me that maybe there are a series of discrete questions
16 which if you can give to Dan in writing, write him a letter
17 and you can answer them in writing or if that's -- if you
18 can't answer them in writing, set up a tutorial and whoever
19 around this table wants to come --

20 MR. GRASER: Right.

21 MR. SILBERG: -- can come and whoever like --

22 MR. GRASER: Right.

23 MR. SILBERG: -- myself doesn't understand any of
24 these discussions --

25 MR. METTAM: Let me build on that a little,

1 because I think we're close to the same point. How external
2 parties can use and how they look at the system that you're
3 developing, I think is a very important issue, and my
4 suggestion was going to be, let's send her to you. I mean,
5 if you want to submit it in writing first that's fine, but
6 then she could translate it into English for those of us who
7 don't, you know, who don't follow the technical jargon. I
8 think an outside look at how an external organization would
9 react to the LSS components of InfoSTREAMs, and certainly
10 there are parts of InfoSTREAMs that will sluff off in the
11 process, and we don't really need to be concerned about
12 those. But the other portions, the portions that
13 conceivably will convert into an LSS system, might benefit
14 from an external look-at.

15 MR. CAMERON: Yeah. I think at some point
16 obviously we're going to have to take a look at layout, what
17 the LSS requirements are and see how InfoSTREAMs meets those
18 functionalities. And for most of us that could be done on a
19 very high level, but of course there needs to be the details
20 for people to evaluate that. But if we do something, if the
21 panel decides to do something like that, I think it should
22 be done in a systematic way so that there's not just a
23 series of, not random questions, but questions of -- that
24 you have concerns about, but it's undertaken systematically.

25 MR. GRASER: Right. I think what I was getting at

1 is, if you're really interested in the details of the
2 architecture and performance and all the rest of that,
3 that's not the sort of thing that's a snapshot drill, you
4 know, that's going to be -- it's going to require people who
5 really know their stuff and a commitment of an amount of
6 time to sit down and wade through it because it's a fairly
7 complex system architecture.

8 MR. SILBERG: Well, Chip, if you're worried about
9 a series of these kind of requests coming in seriatim, let
10 me suggest that any participant who has questions now funnel
11 them through John. John will pull them all together --

12 MR. GRASER: Well, either that or if the
13 participants who have a particular interest, let's identify
14 and get everybody together. And if we're going to do it
15 then we will do it, you know, in a form, in a time frame
16 that will be acceptable to people rather than one at a time.

17 MR. BECHTEL: Well, perhaps --

18 MR. CAMERON: What I would suggest is that maybe
19 the panel appoint a subcommittee of some of the --

20 MR. GRASER: ADP.

21 MR. CAMERON: -- the ADP people to maybe lay out a
22 comparative chart and then come in and talk to you and then
23 maybe give a report back to the full panel.

24 MR. GRASER: Sure.

25 MR. CAMERON: But I think it should be more

1 than -- I think that there's two or three at least that have
2 this capability to --

3 MR. GRASER: Right. I understand that.

4 MR. CAMERON: -- understand this.

5 MR. GRASER: And I think if it's going to be done
6 under the auspices of the ARP, then you probably ought to
7 treat it the same way we treat the header, the header
8 working group and that -- if somebody wants to come in --

9 MR. CAMERON: I think that's a good idea.

10 MR. GRASER: -- and take a focused look at
11 something, then let us do it in an established way.

12 MR. BECHTEL: Maybe this would lend itself to the
13 establishment of just another subcommittee. And perhaps
14 Sally can just write down her concerns. We had made a
15 request for a in-depth meeting after the last meeting, but
16 we thought we would wait and see -- you know, just get back
17 to the panel again. So maybe that would be one item we
18 could --

19 MS. LARIMORE: Yeah. My questions are related to
20 issues that have been brought up over the last day and a
21 half. Too, we've been asked to consider InfoSTREAMs because
22 it potentially offers us tremendous cost savings. However,
23 it's not a cost savings if it truly doesn't meet our
24 requirements, and we find out that when we get the system we
25 have to reengineer it so that it can do the -- meet the

1 performance requirements that we have and so forth. So it
2 could indeed be excellent for internal use within the DOE
3 because it was designed to your requirements and it's
4 tailored to your needs, but require so much reworking,
5 though it's modular, still having to reengineer the modules
6 that it would be not as effective as building our own.

7 The other thing that's related to it is a concern
8 that was brought up in the presentation on LSSA yesterday,
9 in that in talking about the audit program there were
10 statements made on charts on page 3, 4, 5, figure 3, page 28
11 of Mr. Drapkin's presentation in which they indicated that
12 the NRC would -- or the LSSA would make periodic audits of
13 the DOE LSS development. Well, this system's been ongoing
14 since June of '91. Have there been any audits to date?

15 Also in that same presentation on page 27, chart
16 27, the fourth bullet's contradicted all those statements
17 and said no actual auditing of DOE's activities until
18 implementation and design. Well, those of us who have been
19 in engineering disciplines with this software or any other
20 know that once you implement a design, it's far more costly
21 at that point in the development cycle to make a change than
22 it is during the requirements and design process. So I'd
23 like to, I guess, address this question to LSSA's
24 administrator and also the NRC, are you providing oversight
25 into the development or not?

1 MR. CAMERON: At this point, no. We are just in
2 the process of developing the audit program. The idea of
3 using InfoSTREAMs for the LSS is fairly new and we haven't.
4 But we have to. The LSSA has to certify that it does meet
5 the requirements. And I agree with you that it's very tough
6 after the system is -- has already been developed for a
7 certain period of time to go in and audit it and say, well,
8 this doesn't meet the requirements and you have to change
9 it, but that's what we'll have to do.

10 MS. LARIMORE: Well, see, that is another cost
11 impact potential because then at that point, of course, DOE
12 has developed their system and their contractor has met
13 those requirements for that system. But we're saying now
14 you don't meet our requirements and now we run the risk of
15 having a variant system. We have one that's the original
16 InfoSTREAMs and one that's the adjusted InfoSTREAMs system
17 to meet the problems that we've identified after the fact.

18 MR. CAMERON: Can I make a clarification here, and
19 Moe, correct me if I'm wrong on this, but I'd just like to
20 make a distinction between in audits and the LSSA's
21 consultation function basically. As I understood how the
22 design aspect of this was going to work that it wouldn't
23 necessarily be a "audit," but that the LSS administrators
24 people would be involved with Dan in the development of
25 InfoSTREAMs on the design. I think that there's an

1 important difference between consultation and audit in terms
2 of resources and some other things, but I think that your
3 concerns are valid and would be met by this consultation
4 aspect.

5 MR. DRAPKIN: Well, since this idea arose several
6 years ago, one of the things that I personally having been
7 doing and I know other people, has been to work with Dan's
8 group to see how good a fit this could be. So it's not as
9 if we're coming in cold all of a sudden, let us take a look
10 at a design that's two years old or three years old or four
11 years old. It's just not -- that's just not a clear picture
12 or an accurate picture of how things are going.

13 Furthermore my understanding, and Dan can correct
14 me if I'm wrong, is that he, from the beginning, knew that
15 he had to feed the LSS, including the original design. So
16 he designed it to his system, all of those capabilities or
17 capture capabilities that the LSS would need. And you
18 should also realize that most of the information in the LSS
19 comes from DOE. So it's not quite so far away as the
20 picture you're painting. I agree we need to take a look at
21 it, but it's not something that hasn't been thought of or
22 looked at before.

23 MS. LARIMORE: Well, I didn't want to indicate
24 that, but I don't believe that we're aware of the level of
25 insight that the LSS has and we certainly don't have the

1 same level of insight.

2 As far as "audit," the term "audit" was used in
3 the presentation that talked about the auditing capabilities
4 and the word "audit" was used four times in that
5 presentation, in those citations I just mentioned. So we
6 need to define our vocabulary then, because that's entirely
7 misleading.

8 The other thing I'm concerned about, I agree the
9 InfoSTREAMs -- this will be my final point. I realize all
10 the members want to get into these details. But the
11 InfoSTREAMs being a driver, certainly I agree, DOE will have
12 the preponderance of data that will be going into the
13 system. However, the environment that we just saw depicted
14 in these view graphs showing the author creating the
15 document and so forth, didn't seem to indicate any
16 timeliness requirement. So I imagine it's looking at a
17 normal operational office type of environment, and I was
18 concerned about simultaneous access to documents in a very
19 short critical time frame for all litigants to have fair and
20 free and equal access at the same time. You're looking at
21 authors working on documents at different times and so
22 forth. So those assumptions aren't the same, I imagine,
23 that DOE made in making their internal system to create
24 documents and track them as they are in terms of the LSS in
25 needing to have as close to near real time access to the

1 information as we can for all participants at the same time.

2 MR. MURPHY: You mean access to the information as
3 it's being generated?

4 MS. LARIMORE: No, as it is put into the LSS. So
5 once a document's inducted, I think the environment in which
6 the access of that document occurs is a more time-driven and
7 critical environment than the environment in which the
8 document was drafted.

9 MR. MURPHY: Well, 90 percent of the information
10 we're going to be interested in in licensing in the LSS will
11 have been generated some years -- and theoretically
12 implemented into the system -- some years prior to that.

13 MS. LARIMORE: Oh no, I -- once a document's
14 there, it's the latency in the system for you to get it at
15 the same time that another potential litigant would want to
16 access and retrieve that data. So imagine all these
17 different people dialed in at the same time.

18 MR. MURPHY: Everybody asking for the same
19 document. Okay.

20 MS. LARIMORE: That was the last of my comments.

21 MR. HOYLE: Did you have anything further?

22 MR. CAMERON: I just would say as a general
23 statement that we've been trying to figure out how we're
24 going to proceed with the LSS. And I think that now that we
25 perhaps have the management budget responsibility, the major

1 things perhaps worked out, that we have to lay out some of
2 the other interfaces that are going to happen between the
3 LSS administrator and DOE on design, development, et cetera.
4 And I think we can proceed to -- we should proceed to do
5 that.

6 MR. ARNOLD: I think probably the working group is
7 a good idea for pursuing this, because I agree with what you
8 say, we have to lay out the parameters for the system and
9 model it to make sure the system meets the parameters. And
10 to my understanding or to my knowledge those parameters have
11 not been defined yet. So I agree.

12 And as far as the word "audit," you're right, we
13 have to take a look at that. Maybe auditing wasn't the
14 correct word. Maybe it was a certification-type process,
15 certifying that the system meets -- can satisfy those
16 parameters. So the wording, we'll look at the wording.

17 MR. GRASER: Yeah. If -- in terms of the
18 licensing support system, the functional requirements in
19 terms of performance response time, types of access, all of
20 those issues, there has been documented and it's been
21 generally made available to people who have been around the
22 ARP for quite some time that from the LSS prototype and the
23 design work that was completed in 1990, there is a document
24 that's about yea-thick with the LSS requirements, functional
25 requirements. And, you know, so in fact the parameters, a

1 lot of the parameters of system performance, they are well
2 documented --

3 MR. ARNOLD: As far as simultaneous access?

4 MR. GRASER: Yes. Numbers of users, expected
5 response time and everything.

6 MR. HOYLE: Was that the SAIC work?

7 MR. GRASER: Yes. Yes. And that's only about
8 3,000 pages of documentation. But, you know, the particular
9 reports from a requirements perspective, we have a single
10 documentation that pulled the result of that three-year
11 project all together and we could certainly make that
12 available to you as well.

13 MS. LARIMORE: All right.

14 MR. GRASER: And that's --

15 MR. ARNOLD: That might be the basis for this
16 starting off this working group to start reviewing that.

17 MR. GRASER: Well sure. I mean you might want to
18 revalidate or get some education on how we came to define
19 those functional requirements, but it's well-documented and
20 it is available and we made it available to a number of
21 people. There's no problem giving any of that out.

22 MR. HOYLE: All right. Let me ask each of the
23 participants to let me know whether they want to participate
24 on this working group called technical working group or
25 something of that nature, and we'll set that up and get that

1 rolling. Do you have anything else?

2 MS. LARIMORE: No, thank you.

3 MR. HOYLE: Sally, thank you very much. It's
4 9:30. Why don't we give Kirk an opportunity to talk about
5 the work of the header subgroup?

6 MR. BALCOM: Well, I'm embarrassed to say that at
7 8:30 when the meeting started I was lollygagging around the
8 coffee shop thinking the meeting started at 9:00. So I'm
9 really sorry I missed your presentation, Dan. I'd like to
10 catch up with it. Maybe we could stay after.

11 MR. GRASER: For you I'll do it.

12 MR. BALCOM: Okay. Because it really looks --
13 we've come an awful long way on the implementation of some
14 of the concepts here in the last four or five years. I have
15 a handout. I'll have ten copies. Consists of two parts.
16 One is the -- well, let me tell you what this is all about
17 first. The header working group was constituted four years
18 ago to arrive at some consensus about how we would catalog
19 and index all the documents that will be coming in, based on
20 the theory that we would look for a multitude of ways to do
21 retrieval, one which is full text retrieval, that not being
22 good enough, to also have a rather elaborate cataloging and
23 indexing scheme so everybody could kind of put together
24 their own ideas about how they wanted to retrieve and
25 organize the materials. And the second of two handouts is

1 the old four-year-old historical representation of what the
2 header working group recommended and what this panel adopted
3 in, I think, 1990. I'll hand both of these out. The top
4 handout will be what we've just done recently. We met in
5 February. Representatives of of course the state of Nevada,
6 Department of Energy and the consultants, TRW. TRW did a
7 lot of work in putting together the most recent way that we
8 were going to show that these fields have been added to and
9 modified as changed. We had Nuclear Regulatory Commission
10 and their consultant, Labat-Anderson. Donna Minella, who
11 has a long history in preparing this, was there as a
12 representative of the Department of Energy. Clark County
13 sent us a series of materials by fax and we tried to take
14 all of this into account when we took a new look at this.

15 So what we've come up with is a list that's in
16 this first packet here, which has a series of numbers on the
17 front. Those are almost like footnotes or annotations as to
18 new fields and changes and modifications. If you get in on
19 page 4, there's a series of definitions. We made some minor
20 definitional changes. As the approach for the system has
21 changed somewhat in that our original concept was to have
22 capture stations and it was -- at that point it was intended
23 that an enormous amount of work in terms of doing -- trying
24 to make these fields accurate would be done there. Now a
25 lot of that burden has been shifted to the actual

1 participant submitters. And then we have a series of charts
2 represented by these boxes. In the first field we have in
3 the first set of boxes on the lefthand side we have the
4 original field names. And in some cases there will be an
5 asterisk in that field. That means that there is some new
6 material that's been -- that was suggested and, you know, of
7 course the header working group went over that in some
8 detail and we waived the merits and the pros and cons of
9 whether to include those fields and how they should work and
10 what they should be called and then arrive at consensus. So
11 this really is a full-consensus document at this point of
12 all of those representatives.

13 The second collection of fields says -- or names
14 -- says "LSS InfoSTREAMs field name." In other words, as
15 InfoSTREAMs was being developed it -- they were doing --
16 organizing their material in a similar fashion to the old
17 LSS design. And the goal of our working group was to meld
18 those and combine those together so that the LSS would be
19 able to take advantage of InfoSTREAMs technology and
20 actually some moves in technology. As we're moving now to
21 having more imaging at the Department of Energy and, you
22 know, the way the computer business is -- the direction in
23 which it's heading, you're going to see sound, simply a
24 piece of media, and film as a piece of media and -- or an
25 image. And so we're trying to incorporate all these new

1 concepts into what would ultimately be available and not
2 just stick to the printed page. So some of these changes
3 represent that. Now we can go over this field by field if
4 you'd like. Bear in mind that the working group has already
5 done that, or you can simply look at it and ask questions
6 and I leave it up to you as to how you want to proceed from
7 here.

8 MR. SILBERG: Would the difference -- you've
9 written in "mandatory" some places where it says "required."

10 MR. BALCOM: Right. The "mandatory" -- we had a
11 fairly lengthy, probably too long discussion about what
12 "mandatory" means. "Mandatory," a field that -- information
13 that is submitted by the participant which is this third
14 column over, we wrestled with whether information must be
15 submitted by the participant, and let's find an example in
16 here. And -- well, the number -- that doesn't make much
17 sense. Let's talk about the document date on page 6. "Data
18 submitted by participant, document date mandatory." If
19 there's no date on the document, for example, that's
20 apparent by looking at it, the participant must make a date
21 up, and that sounds a little strange. But what we're
22 suggesting is that you attempt to date some of these
23 documents and that if you can't date it at all, we'll have
24 some artificial scheme which will say, you know, a bunch of
25 zeroes or nines or something like that that will say that we

1 indeed don't -- can't figure out what the date for this is,
2 but that some data must go in this field, and we spent a
3 fair amount of time wrestling with this. So "mandatory"
4 means that some data must appear in this field, even if it
5 fits with some artificial scheme of some sort. And those
6 will be laid out in rules and guidelines which are yet to
7 come. We specifically didn't try and deal with that.

8 MR. BECHTEL: So there would be some notation,
9 though, that that would be an estimated date if you're --

10 MR. BALCOM: Yes.

11 MR. BECHTEL: -- actually inputting.

12 MR. BALCOM: Right. In "Document Date," for,
13 example it says "Document Date Flag," and over in the
14 comments on the righthand side indicates an estimated date.

15 MR. SILBERG: "Required" means it could be
16 estimated, "mandatory" means it has to be from the original
17 document?

18 MR. BALCOM: "Required," let me read the
19 definition on page 4. Okay. "Data submitted by
20 participant, mandatory, must be provided from each unit or
21 record; required, must be provided as applicable, optional,
22 provided at the discretion of the participant." So this is
23 a way to ensure that the onus is on the participant to
24 complete these materials.

25 MR. HOYLE: I'm prepared to accept the

1 recommendation for a subgroup. Are others prepared to do
2 that?

3 MR. BECHTEL: I haven't seen this. We just got
4 it.

5 MR. HOYLE: Okay. Maybe we should put that on
6 the --

7 MR. BECHTEL: I don't see any reason --

8 MR. HOYLE: -- agenda for the next meeting.

9 MR. SILBERG: I don't see any reason why we would
10 have a problem with it if everyone agrees with it but we
11 haven't looked at it.

12 MR. BALCOM: It's a bit of a moving target too.
13 At the end you'll see some fields that are about auditing
14 and housekeeping. That's intended to give us some room to
15 grow in the future.

16 MR. SILBERG: I assume NRC and DOE both believe
17 that this is eminently workable and if that's the case, I
18 certainly don't have a problem with it.

19 MR. HOYLE: I'm assuming that too, from the
20 standpoint of our participation with the group.

21 MR. BECHTEL: The document has been responsive to
22 Clark County's comments, so I think we find it acceptable.

23 MR. SILBERG: If it's okay with NRC and DOE, it's
24 okay with us.

25 MR. DRAPKIN: It's clear that the document is not,

1 however, complete. There are additions that have yet to be
2 made.

3 MR. BALCOM: So this represents where we are in
4 early 1994, and we fully expect that there will be
5 additional modifications.

6 MR. HOYLE: Let's leave it that we find no
7 objection or reason to change what's here. We'll talk about
8 it again at the next meeting to see if any additional
9 additions have been made by that time. The subgroup is
10 continuing in existence, and do you have a meeting date
11 planned for your next get together?

12 MR. BALCOM: No, no, we don't. We really want to
13 kind of see what needs to be done and see what comes up
14 that's new. And I think it takes some time for that to
15 happen. But we really have at this point no need to meet
16 again right now.

17 MR. SILBERG: What time does DOE start using this,
18 or are they using the earlier version of it? And what do
19 they do about stuff for which they've created headers under
20 prior direction?

21 MR. GRASER: We're already using an even larger
22 set, a super set, a much larger set than what you see here
23 for our own -- what we're calling our IRIS system, the
24 interim RIS system. The interim RIS header structure has,
25 you know, tracking right into this header structure all of

1 the materials that we have, and we've got about a half a
2 million pages of material. In the current records
3 information system we have a header record and a microfilm
4 location for those documents. So we don't have -- you know,
5 we don't have full text for those materials. And the header
6 structure under the old records system doesn't reflect a lot
7 of this. In order to identify which of those old materials
8 need to go into the LSS, we have to look at them from a
9 screening perspective. We have information that is in that
10 record system that the cataloging needs to be enhanced to
11 bring it up to these standards. And if it is LSS-bound then
12 I need to get my text and so forth. So what we're going to
13 be doing is eventually having to be engaged in a rescreening
14 effort, and start decriminating our old system, identifying
15 the ones that need to go into the licensing support system
16 and put them into this new structure, get the headers, get
17 the text, get the images if they're LSS-bound. So we
18 recognize that there is a back fit drill that has to be done
19 and right now it's on a volume of about a half a million
20 records.

21 MR. SILBERG: Well, it seems to me very important
22 that in each step that there's an LSS header. You're on an
23 on-line basis generating documents. Those two need to be
24 brought together, otherwise we're going to be going through
25 a lot of wasted effort down the road.

1 MR. GRASER: The header structure that we have for
2 our federal records, you know, there are additional federal
3 records fields that we have in our own system requirement
4 that are not an LSS type requirement. But the
5 synchronization between the fields in InfoSTREAMs, the
6 interim RIS system and the licensing support system, we've
7 been keeping track and having those synchronized. We want
8 to avoid having to double-process those documents, believe
9 me.

10 MR. BECHTEL: Perhaps one additional task for the
11 subcommittee may be the -- considering the end user and how
12 to get the end user involved, maybe the planning stages of
13 that, yeah, the interface between the system and the end
14 user.

15 MR. BALCOM: Say that again. I'm not sure I
16 understood what the question is.

17 MR. BECHTEL: Perhaps the subcommittee now could
18 get involved with just beginning to think about an interface
19 between the end user and the system itself and --

20 MR. HOYLE: This would be the new subcommittee
21 we've talked about not --

22 MR. BECHTEL: No, no, no.

23 MR. HOYLE: Oh, the header --

24 MR. BECHTEL: Just the existing header
25 subcommittee.

1 MR. BALCOM: Well, yeah. I don't think we were
2 asked to do that but --

3 MR. GRASER: That's more of a systems
4 consideration, I think, than a header records structure
5 consideration, and if we're -- you know, if indeed we're
6 going to have a subcommittee on the technology aspects of
7 it, I think that's --

8 MR. BECHTEL: More appropriate to --

9 MR. GRASER: -- a better form for it. Sure.

10 MR. BECHTEL: Okay. That's fine.

11 MR. BALCOM: Some of the same people would
12 probably be on that anyway.

13 MR. HOYLE: Jay, following up on your line of
14 questioning there, do you think this committee should be
15 recommending to DOE specifically that it endorse and use the
16 headers that we have endorsed here?

17 MR. SILBERG: Well, it sounds like they're doing
18 that already.

19 MR. HOYLE: It sounds like they're doing it, but
20 do we -- maybe we should make a statement that we understand
21 that you are doing that in a letter.

22 MR. GRASER: You're welcome to write a letter. If
23 we're already doing it, it seems kind of superfluous but --

24 MR. HOYLE: Okay.

25 MR. GRASER: No.

1 MR. HOYLE: I'll put it in the record.

2 MR. SILBERG: Or you can just put it in your next
3 quarterly report, or however often the LSS reports come out,
4 on the next --

5 MR. HOYLE: Well, I'll put out a scenario of this
6 meeting and it will be included in there. Any more -- all
7 right. It's a little bit before 10:00. Should we take a
8 very quick break and then listen to Mal?

9 [Recess.]

10 MR. HOYLE: Okay. The panel's final presentation
11 on our agenda for this meeting is a discussion lead off by
12 Mal on the use of the LSS on a pilot project basis. He sent
13 me a letter of March the 30th on this subject and sent that
14 to other committee members. And I have some extra copies
15 here if a committee member needs one.

16 MR. METTAM: I've got some extras for you as well.

17 MR. HOYLE: Okay. So Mal, why don't you go ahead.

18 MR. MURPHY: Yeah. As John said, I wrote him a
19 letter on the 30th of March and the other members of the
20 panel should have received a copy. If not, we've got some
21 extra ones. Suggesting that we at least take a look at the
22 possibility of getting the LSS, and I think -- I did this on
23 the assumption that InfoSTREAMs would -- that we would
24 conclude that InfoSTREAMs was an appropriate vehicle for
25 developing the LSS, because if not, we had to build a new

1 system. I don't think this would probably be possible. But
2 at least take a strong look at the possibility of getting an
3 LSS system to that -- such a point the user on a pilot
4 project basis to -- was a learning experience and sort of
5 debut the system, trying to use it in the multi-purpose
6 canister certification proceedings that will be coming up in
7 the near future. And I cited 10CFR part 71. I think it's
8 actually -- DOE's actually going to have to ask for
9 certification under both 71 and 72, part 71 applying to
10 transportation and part 72 storage.

11 So that was an inadvertent error in the letter.
12 But that will not be -- those of you who are aware of NRC
13 proceedings, that will not be a licensing proceeding in the
14 same sense that the repository licensing proceedings will
15 be. It won't be a contested case hearing necessarily or any
16 of those things. It will be a much more simplified process,
17 but it seems to me in thinking about it that it might give
18 us an opportunity in a real regulatory context, not just in,
19 you know, in talking about it, to use the system in a way
20 that would -- that wouldn't -- you know, that any errors or
21 bugs that we found in the system wouldn't impact -- wouldn't
22 affect negatively the certification process, wouldn't slow
23 it down or stop it for two years or anything like that. And
24 yet it would give us the opportunity to use the system in a
25 regulatory arena in a way which would be both beneficial to

1 us, help us be more effective in the certification process,
2 as well as allow us all to kind of perfect the LSS well in
3 advance of the actual repository licensing process.

4 Now as far as the timing is concerned, the last we
5 all heard, those of us who pay attention to the whole
6 program, is that the -- as many of you are aware, the
7 department has determined that they won't -- they're going
8 to go with a multi-purpose canister. Dreyfus has directed,
9 I guess the secretary has directed the program to seek
10 certification of the MPC under both part 71 and 72 and as I
11 understand it, postpone the decision about how they're going
12 to -- they will use the MPC in the ultimate repository if
13 it's ever built, until later, at least until after
14 certification is received. But it's our understanding that
15 they want -- the department wants to receive certification
16 for these MPCs in time to use them to start receiving spent
17 fuel from utilities by the 1998 date. So I'm not sure. I
18 think we've seen dates, as I recall. I should've brought
19 the MPC. I should've brought the MPC material I had with
20 me, but it seems to me that I recall they would have to ask
21 for certification sometime -- from the NRC sometime in the
22 1996 time frame, and receive that certification in '97 in
23 order to construct enough of these things to start receiving
24 spent fuel, taking title from spent fuel, from utilities at
25 reactor sites by 1998.

1 MR. SILBERG: Or at least delivering the MPCs
2 to --

3 MR. MURPHY: Delivering the MPCs to the utilities
4 by '98. And so I -- you know, I think we need to take a
5 look at the possibility of using this thing, getting it up
6 and running. And I gathered from what you were saying this
7 morning, Dan, that we can't get it to that point, at least
8 so that we can use it on a pilot project basis by 1996.

9 MR. GRASER: Well, that's kind of my question. I
10 was going to ask you to clarify or elaborate a little bit
11 further on what -- you know, what your objective is. Is it
12 to actually have the opportunity to test those LSS
13 functionalities or is it to test the LSS?

14 MR. MURPHY: What do you -- I don't understand
15 your distinction.

16 MR. GRASER: I think that had you made any
17 distinction, are you talking about having the LSS --

18 MR. MURPHY: Oh, you mean --

19 MR. GRASER: -- the one we're going to use for a
20 repository, you know, are you -- once you're getting that,
21 having that available, and it will be the LSS, or do you
22 want to use the certification process as the testing
23 environment for testing the functional pieces of the system
24 to insure that it don't break?

25 MR. MURPHY: It s the latter. It's the latter

1 because I didn't envision the whole panoply of procedural
2 provisions in the LSS rule coming into play in time for the
3 MPC process, certification process, such as the prelicensing
4 application review board and you being required to get 100
5 percent certification from Moe prior to MPC that the LSS is
6 totally up and running. No. So it's the former.

7 MR. GRASER: Okay.

8 MR. MURPHY: Let's test the functionality.

9 MR. GRASER: It would be an opportunity to test
10 the pieces and components that we say we're going to rely
11 on --

12 MR. MURPHY: Right.

13 MR. GRASER: -- when we go into building the LSS.
14 Okay.

15 MR. MURPHY: And with a relatively limited amount
16 of documentation and data that you will need for that MPC
17 process. You're not going to need to look at -- to have all
18 the vulcanism documents loaded, you're not going to need to
19 have all of the ground water travel time documents loaded,
20 et cetera, et cetera.

21 MR. GRASER: Right.

22 MR. MURPHY: You'd be looking just at
23 multi-purpose canister design and development documents,
24 engineered barrier system documents, transportation
25 documents, et cetera. So you would have a much smaller

1 universe of documents you would have to get ready to deal
2 with. What it would require for us is prior to turning the
3 system over to the LSSA giving us access to the system
4 somehow.

5 MR. GRASER: Now I'm just wondering, are you
6 thinking along the lines that if you're characterizing one
7 of the engineered barrier system attributes of the canister,
8 does that imply that, you know, there's some sort of
9 recognition that there is a piece of repository licensing
10 activity that's happening now within this time frame?

11 MR. MURPHY: Yeah.

12 MR. GRASER: Because we're dealing with
13 certification issues and those are different.

14 MR. MURPHY: Well, we -- another purpose for the
15 letter, I suppose, was to put everybody on notice that we
16 intend to participate actively in the certification, in the
17 MPC certification process. I'm sure that's true of the
18 state. I assume it's true of the other local governments as
19 well and the tribes for a variety of reasons. The MPC is
20 going to be transported on the nation's highways and rail
21 systems. The MPC is going to be delivered to reactors at
22 various states and localities around the country. The MPC
23 is -- you know, there is a likelihood that the MPC, a lot of
24 them are going to be parked out there at the repository site
25 at Midway Valley for some time before they go underground,

1 and ultimately the current design is that the MPCs will be
2 driven into the drifts in the repository, parked there. The
3 door will be closed and we'll walk away, and they will be
4 the disposal canisters. So we need to look, all of us in
5 our oversight responsibilities, need to watch very carefully
6 how that -- the integrity of the MPC is going to survive
7 this process. And in all of its aspects, transportation as
8 well as storage.

9 MR. GRASER: I think what I'm trying to nail down
10 from a technician's point of view is that if we followed
11 this drill, I wanted to know whether or not I'm building the
12 LSS. Because then we have to, you know, sit down and get
13 things cracking fairly quickly here, or if I'm using it to
14 test, you know, the technologies and, you know, we're going
15 to use that certification process, but I'm still --

16 MR. MURPHY: Well, you tell me. I don't know the
17 answer to that. You can't --

18 MR. GRASER: I think that's why this is in
19 discussion. Right.

20 MR. MURPHY: Can we test the functionalities
21 without you building the LSS?

22 MR. GRASER: And I'd just like to know if I am or
23 not. And I think that needs to be clarified.

24 MR. CAMERON: Are you using certification -- I
25 mean, Mal was using certification in the context of part 71,

1 72. Are you using certification in the context of the LSSA
2 administrator certification?

3 MR. GRASER: No, I'm following Mal. I understand
4 the distinction between certifying the canister. Right.

5 MR. CAMERON: Okay.

6 MR. GRASER: I wasn't --

7 MR. MURPHY: I'm trying to give you a little help
8 too, Dan, so you can go up to Dreyfus and the secretary and
9 say, "Hey, these guys are making me -- we need the LSS by
10 the MPC certification process so you've got to give them the
11 money. No more arguments, give me the money."

12 MR. SILBERG: On your normal schedule, the
13 schedule you're on right now, where would you be with the
14 system by the time the certification process starts? Would
15 there be something that if you gave Nye County and Nevada
16 and NAI Thermals, they could tap into that database and use
17 it the way you've used the LSS when you get into the hearing
18 on the repository in the '96 time frame?

19 MR. GRASER: It depends. Very strong possibility.
20 Yes.

21 MR. SILBERG: I mean from our standpoint, assuming
22 that it doesn't seriously discombobulate the way this system
23 is being developed in an inefficient fashion, and assuming
24 it doesn't drive the costs up significantly, sounds like a
25 great idea.

1 MR. GRASER: But, you know, you're talking about
2 assuming it's based on the InfoSTREAMs --

3 MR. SILBERG: Yeah.

4 MR. GRASER: Right, right, right.

5 MR. MURPHY: Right. If it's not based on
6 InfoSTREAMs, then forget about this because --

7 MR. SILBERG: No hope.

8 MR. MURPHY: -- we can't get it done by then. The
9 whole thing is assuming that InfoSTREAMs is appropriate.

10 MR. GRASER: Well, again, if it's not based on
11 InfoSTREAMs I wouldn't necessarily make that comment,
12 because InfoSTREAMs is a bigger breadbox than what we may
13 need to support --

14 MR. GRASER: Well, again, if it's not based on
15 InfoSTREAMs I wouldn't necessarily make that comment,
16 because InfoSTREAMs is a bigger breadbox than what we may
17 need to support that, and we may use a strategy that's
18 easier and crisper and cleaner to meet the requirements
19 during the cache review process. So in fact, you know,
20 there's not a necessary linkage. It says if you don't use
21 option three, you can't be there in time to have some system
22 available for the certification process. But there's a
23 number of objectives here and the fact that it doesn't --
24 you don't get a lot out of one particular piece of the
25 objectives doesn't mean that it isn't a good idea. It would

1 test the functionality, but also I think that it would get
2 people used to using the system in a regulatory context.
3 And I still think that there's a lot of the regulatory --
4 the people involved in the regulatory process who the LSS is
5 sort of a figment of the imagination in a sense, and I guess
6 it is at this point, but that once they realize the
7 capabilities that the system has, that's going to be
8 important. People get used to using the system.

9 MR. GRASER: Jay, I think I need to just kind of
10 clarify or qualify that response I gave to you. You know,
11 we're kind of making a fairly large leap here and I think it
12 was brought out by the comments regarding the LSS
13 performance- and InfoSTREAMs performance-type issues.
14 There's a fairly large leap from going to saying it is
15 feasible to reuse InfoSTREAMs as the LSS to actually putting
16 a plan in place that will get us from that "Yes, it is
17 feasible" to "Yes, it is happening." And, you know, what
18 it's going to take to turn a plan around to make InfoSTREAMs
19 become some piece of the LSS functionality. There's some
20 contingencies in there and you have to recognize that. So
21 would we have something available in the '96 time frame?
22 Well, if we can expeditiously work the plan how to do that,
23 but you have to come to agreement on whether or not option
24 three is the one that everybody wants to use.

25 MR. MURPHY: Four.

1 MR. GRASER: Four.

2 MR. MURPHY: Four.

3 MR. GRASER: Option X is the one that everybody
4 wants to use, and we would have to come to closure on that.
5 We would have to develop the plan to figure out how to make
6 all of that stuff happen before I could give you a flat
7 outright commitment that, yes, we could have terminals
8 hooked up by '97 or whenever it may be.

9 MR. MURPHY: Well, but you --

10 MR. GRASER: But it's not --

11 MR. MURPHY: -- you wouldn't reject it out of
12 hand.

13 MR. GRASER: No, I wouldn't reject it out of hand
14 at all.

15 MR. MURPHY: I didn't expect to get a --

16 MR. GRASER: It's not that far a stretch really,
17 but you just have to recognize that it's not an automatic
18 jump, I mean can't have --

19 MR. MURPHY: Oh, I understand that. You know, we
20 could get it -- we could use it even earlier. For example,
21 we're fairly close, I think, to DOE issuing a notice of
22 intent to contract for the MPC environmental impact
23 statement. And they expect to have -- I think they need to
24 have the environmental impact statement final and a record
25 of decision issued prior to seeking certification from the

1 NRC in 1996. So you know, we could -- one could say we
2 could use the LSS functionalities to track the EIS
3 development, the MPC EIS development within the next several
4 months. But I assume that we couldn't get it done that
5 quickly. Maybe I'm wrong. Maybe we can. Why don't you all
6 just give -- why don't you just give us all keys to the
7 InfoSTREAMs?

8 MR. SILBERG: That's why I made the comment about,
9 you know, we don't really want to cause total turmoil to
10 meet dates, which might be nice in the context of using it
11 in the MPC world. If we can do it, great, but if --

12 MR. MURPHY: Don't use "we" too loosely here.
13 Harry might want to speak for himself there.

14 MR. CAMERON: Yeah, I think that speaking for the
15 NRC, there's a lot of issues that we would have to go back
16 and discuss in terms of technical staff and talking with
17 commissioners and all of that. I guess one question I had
18 that either you, Mal, or Jay may be able to answer or
19 perhaps Ken Kalman out there from the technical staff, NRC
20 technical staff, to what extent in the certification process
21 for the MTC will the repository MPC interaction have to be
22 explored before certification? I mean, I would assume that
23 if it is going to be a multi-purpose cache, that before
24 certification we would have to be --

25 MR. HOYLE: No.

1 MR. CAMERON: No?

2 MR. MURPHY: No. They're only --

3 MR. SILBERG: It'll be certified for whatever they
4 ask certification for.

5 MR. CAMERON: So they're only going to ask for
6 certification for storage and transportation?

7 MR. MURPHY: Above-ground storage.

8 MR. CAMERON: Okay. Well that -- you know, one of
9 the issues that we need to explore in this, for a pilot
10 project doesn't need -- necessarily need to be a show
11 stopper, but we are putting transportation information in
12 the LSS, or will through the topical guidelines as part of
13 the environmental impact statement context. Okay. And, you
14 know, obviously the LSS was not meant to directly deal with
15 transportation issues or directly with monitored retrievable
16 storage issues.

17 MR. MURPHY: I'm not talking about transportation
18 issues in the sense of routing. I'm talking about
19 transportation in the sense of, the MPC is going to be --
20 DOE can demonstrate that when the MPC falls off the rail car
21 it won't crack open, that kind of transportation, not should
22 it go through dominion, all this kind of stuff.

23 MR. CAMERON: No, no, I realize that, but I think
24 that that's one issue that we need to explore, and as I said
25 before, it doesn't necessarily have to be any sort of a

1 show-stopper in terms of a pilot project.

2 MR. MURPHY: Right.

3 MR. SWAINSTON: Our fearless leader is leaving us.

4 MR. HOYLE: Yeah. I made a promise I'd have the
5 meeting almost wound up by 10:30. So -- reservation --

6 MR. METTAM: Well, we should just say that we're
7 in agreement to try to use it as a pilot project, direct --

8 MS. MACALUSO: We're agreeing to look at it.

9 MR. METTAM: Take a look at it. That's all I want
10 you to do today is say, yeah, we'll take a look at it.

11 MR. GRASER: The question is, once we've looked at
12 it what do we expect back as a panel. Is this a, you know,
13 come back to us and tell us, you know, is it feasible? What
14 would it take to make it happen? In what time frame? And
15 what is the potential cost? And do you have a mechanism for
16 funding that activity according to that schedule? And so
17 forth. So you know, I kind of need to know, you know,
18 what's expected to come back to the panel out of all of
19 this.

20 [Arnold Levin and David Drapkin left meeting.]

21 MR. MURPHY: You just said it.

22 MR. SILBERG: You did a very good job.

23 MR. GRASER: Well, that was a rhetorical question.

24 MR. HOYLE: You're talking about a certain number
25 of passwords into the system so a certain number of users

1 and that sort of thing.

2 MR. GRASER: Sure. Whatever it takes, and we can
3 set at our console and call up and say, give me all the
4 documents you have on --

5 MR. CAMERON: And once they --

6 MR. GRASER: -- a locality, or give me all the
7 documents you have on some stainless steel whatever.

8 MR. CAMERON: One of the things that will need to
9 be considered is that it is going to be a -- it's going to
10 be a certification proceeding that's going to be open to the
11 public generally. And we have to consider how we work the
12 ARP having access to a pilot set of documents --

13 MR. MURPHY: Well, that's why I'm saying we would
14 be --

15 MR. CAMERON: -- with the public too.

16 MR. MURPHY: No, that's why I'm saying we would be
17 doing this in order to test the system, that it wouldn't
18 be -- we wouldn't get ourselves into the box in saying as we
19 would in the licensing proceeding, if you don't participate
20 in the LSS, you can't participate in the MPA or the MPC
21 certification process. But by the same token, if we find
22 out that the process is -- that the system is full of
23 problems, the certification process doesn't have to stop
24 until the LSS is fixed, which would be the case in
25 licensing. The NRC and DOE can continue down that parallel

1 track and certify the MPC if we have to stop here and say,
2 "Oh geez, Graser screwed up, the system won't work." But if
3 we wait until licensing and get to that point, then we've
4 got a problem that's going to impact the timing of the
5 licensing process itself.

6 MR. CAMERON: No, I agree with that. I'm just
7 thinking about the fact that should there be a select -- if
8 there's a select group of people who are concerned about the
9 MPC who are going to be gaining the benefit of full text
10 access, et cetera, et cetera. Okay. And what does that
11 mean in terms of citizen groups, whatever, that are not on
12 the advisory review panel who want to use the pilot system?
13 So there's some issues like that that need to be worked out.

14 MR. MURPHY: Yeah, I see what you're saying.
15 You're going to have some people out there in the country
16 will be upset because they can't get into it.

17 MR. CAMERON: That's right.

18 MR. MURPHY: Because they can't use it.

19 MR. CAMERON: That's right.

20 MR. MURPHY: I think the answer to that, the
21 answer in my mind at least is that we're testing this
22 system. We're not using it as a required tool in licensing.
23 We're using it. We're using this pilot project to test to
24 see whether the system is going to work the way we want it
25 to.

1 MR. SILBERG: And depending on how many terminals
2 this pilot system could have, it might be available to other
3 people as well.

4 MR. MURPHY: Sure.

5 MR. CAMERON: Well, I think that's an issue --

6 MR. MURPHY: Sure.

7 MR. CAMERON: -- we need to consider, is making it
8 available through a public document room or whatever, or
9 generally for remote access, but that gets in terms -- that
10 gets into the issues of what kind of stress it's going to
11 put on the capabilities of InfoSTREAMs at that time, et
12 cetera, et cetera. But that's a big policy issue that I
13 think plays into the technical aspects of it that we need to
14 really try to figure out up front.

15 MR. HOLDEN: But I guess the concern is over, you
16 know, public and other users having access to the
17 information and to the system itself. The people around the
18 state do have some sort of status other than those other
19 potential stakeholders or interested parties. And along
20 with that, just make sure that you keep half-a-dozen
21 terminals available to try, because there's about nine
22 tribes that are seeking effective status, and hopefully
23 they'll have that within the year. So --

24 MR. CAMERON: Absolutely. Need to think about
25 that.

1 MR. SWAINSTON: I'm just wondering what kind of
2 authorization, either for DOE or NRC, would be necessary to
3 use this system. My understanding is the LSS system is
4 basically an NRC system. Is there some authorization that
5 has to come from the commission for them to use it in this
6 purpose?

7 MR. CAMERON: Well, I think that the commission
8 would have to -- obviously would have to agree that the
9 pilot project was a good idea. I mean, we wouldn't go
10 forward unless the commission approved it and they'd have to
11 consider the issues that -- some of the issues that we've
12 been talking about. But --

13 MR. SILBERG: It doesn't have to be an NRC system
14 at that point. This would be prior to --

15 MR. MURPHY: This would be prior to turning --

16 MR. SILBERG: Solely within DOE.

17 MR. SWAINSTON: Well, in that case does Secretary
18 of Energy have to okay this or -- I'm just --

19 MR. GRASER: Well, I would certainly like to
20 have -- I'd like to have some management, upper level
21 management check on this as well, you know. I -- you know,
22 my objective is to figure out how to make things work, not
23 to figure out ways to say it can't be done. If it is a
24 worthy cause, there are ways that we can set it up that
25 would have minimal or no impact on people accessing

1 InfoSTREAMs, when what they're talking about is just
2 accessing my internal records system right now. Well, we
3 can still do that demonstration. We could still, you know,
4 build a Chinese wall around the technology such that we
5 could have the technology in place, that there was no, you
6 know, no problem at all with people coming into that over
7 phones or anything. It didn't pose any sort of a risk to
8 the rest of the information system, and validly demonstrates
9 that technology, and to give people access to that
10 information which is the side benefit.

11 So you know, what -- there are ways that things
12 can be done. But as I said, I would certainly like to have
13 the opportunity to go back and have all of the effective
14 management involved in that, give it the buy-in before I
15 committed to it.

16 MR. CAMERON: One other aspect of this is that the
17 panel is going to have to deal with in the future is, we've
18 talked a little bit in the past about the priority loading
19 schedule for the LSS; in other words, trying to load
20 documents that are going to give LSS users the most benefit
21 early on. And I think that dealing with a single topic is a
22 good way to do that, so that this is sort of a beginning on
23 that. But that overall issue of priority loading is going
24 to have to be addressed.

25 MR. MURPHY: But those are for backlogged

1 documents. These documents should be in the system, in the
2 InfoSTREAMs system right now. I mean, the MPC is a
3 relatively new concept. It's only been around out there for
4 couple of years or --

5 MR. SILBERG: And since it's a pilot, if we miss
6 documents or, you know, the fact you've backlogged --

7 MR. MURPHY: You miss documents, it doesn't
8 matter.

9 MR. SILBERG: -- is it in there, it's not in
10 there.

11 MR. MURPHY: Exactly. But I would think that
12 virtually all of the MPC, the important MPC documents are in
13 InfoSTREAMs right now.

14 MR. CAMERON: Yeah, well that's -- no, I mean
15 that's great. I'm just saying that the concept supports an
16 important, more general concept.

17 MR. MURPHY: I don't know. Jay's point is right
18 on the money, is that's what we're -- that's what we'd be
19 able to find out hopefully.

20 MR. METTAM: And obviously the opening screen
21 would say something: "This is a pilot program and may not
22 include all documents."

23 MR. MURPHY: Yeah, there you go.

24 MR. SILBERG: In the event this were a real LSS
25 you would --

1 MR. CAMERON: Just have one question for you. So
2 what gives you the idea? In your opening remarks you were
3 talking about the high level waste licensing proceeding. I
4 wondered what gives you the idea that it's going to be a
5 contested proceeding? Are you just feeling pessimistic
6 today or what? Get up on the wrong side of the bed?

7 MR. MURPHY: What time did you get to bed last
8 night? No, probably not. All the issues will be resolved
9 by that time. I would suspect that this would be -- yeah,
10 that the repository licensing proceeding summarily decided.
11 Sure, Jim. Yeah.

12 MR. HOYLE: Any serious or otherwise comments?
13 Okay. We ought to talk a little bit about what's next for
14 ourselves. I had been kind of thinking that it would be
15 timely to pull ourselves together again in about the July
16 time frame back from Washington, you know, as we were into
17 our earlier schedules over the last couple of years. We'd
18 have a meeting out here in the west and then one in the east
19 and so forth. I'd like to get back to that. We've -- let's
20 see, I'll prepare a summary, of course, of what we've
21 discussed the last couple of days. NRC and DOE have to
22 follow through on the COTR proposal. There's some followup
23 items from this meeting. We need to set up a technical
24 working group and Dan, of course, is going to check on the
25 pilot program. But I think as we sift through those items,

1 maybe by July we would be able to have the technical working
2 group give us some preliminary report on what it has been
3 able to do. Another update from the licensing support
4 system administrator's office -- this of course is all
5 assuming that the COTR activity can get worked out. Maybe
6 DOE can report back on the pilot project status if we
7 haven't already heard from them. And I don't know that
8 there would be any more on the topical guidelines at that
9 time, but if there were we could have a report from the NRC
10 on that.

11 Are there other activities that we should be
12 talking about as a group that are on your minds that we
13 haven't brought up? What does July sound like for another
14 meeting?

15 MR. SILBERG: That sounds a little early to me.

16 MR. HOYLE: Early?

17 MR. SILBERG: That's just my opinion.

18 MR. SWAINSTON: It's a little hot in Washington.

19 MR. HOYLE: We weren't going to share that with
20 you.

21 MR. MURPHY: We've got a TRB meeting in Denver on
22 the 12th, 13th, or 13th, 14th, something like that. We've
23 got -- we're holding time -- the week of the 25th we're
24 holding to schedule a technical exchange land management
25 meeting-type stuff in DOE and NRC.

1 MR. SILBERG: Out here?

2 MR. MURPHY: I don't know. Just in the six months
3 interactions scheduling process we take -- we schedule
4 meetings for six months and then we hold blocks of time for
5 the following six months, during which we schedule meetings.
6 So the week of the 25th of July is --

7 MR. SILBERG: Well, do you think that's too soon
8 or about right?

9 MR. MURPHY: I think it may be too soon. I think
10 you're probably right. What four months?

11 MR. SWAINSTON: Why don't we make it September?

12 MR. MURPHY: Yeah, September probably -- six
13 months probably sounds a little better, I would think.

14 MR. HOYLE: Okay. Do you have anything on your
15 schedule blocked out yet in the September time frame?

16 MR. MURPHY: September 13, 14 and 15 is being held
17 for the interactions process. That's it for that month I
18 think. Oh, I've got a trial coming up at the end of the
19 month too. The first three weeks -- within the first three
20 weeks, 13th, 14th and 15th are the only things blocked out.

21 MR. HOYLE: Okay. I will look seriously then at
22 the early part of September and be back with you. And I'll
23 work out an agenda with you.

24 Is there anything else, any other new business we
25 ought to talk about? Is there any member of the audience

1 that would like to make any comments? I think we should
2 stand adjourned, then, till the next meeting early
3 September. Thank you very much.

4 [Whereupon, at 10:45 a.m., the meeting was
5 concluded.]

6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:

NAME OF PROCEEDING: LSSARP Meeting

DOCKET NUMBER:

PLACE OF PROCEEDING: Las Vegas NV

were held as herein appears, and that this is the
original transcript thereof for the file of the
United States Nuclear Regulatory Commission taken
by me and thereafter reduced to typewriting by me
or under the direction of the court reporting
company, and that the transcript is a true and
accurate record of the foregoing proceedings.

Official Reporter
Ann Riley & Associates, Ltd.

Attachment 1

LSSA AUDIT PROGRAM

Presented by:

DAVID S. DRAPKIN

**DIRECTOR, LSS SUPPORT AND OVERSIGHT SERVICES
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION**

**MEETING OF THE LICENSING SUPPORT SYSTEM ADVISORY REVIEW
PANEL**

**APRIL 14, 1994
LAS VEGAS, NEVADA**

**LSSARP PRESENTATION
APRIL 14, 1994**

OUTLINE/AGENDA

- **PURPOSE OF PRESENTATION**
- **CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM**
- **PURPOSE AND GOALS OF AUDIT PROGRAM**
- **OVERVIEW OF LSSA AUDIT PROGRAM**
- **STANDARDS AND REQUIREMENTS DOCUMENTS**

OUTLINE/AGENDA (continued)

- **GENERIC AUDIT TYPES**
- **GENERIC AUDIT METHODOLOGY**
- **SPECIFIC LSSA AUDITING ACTIVITIES**
 - **PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT**
 - **DOCUMENTARY MATERIAL PROCESSING OPERATIONS**
- **AUDIT PROGRAM COSTS**

PURPOSE OF PRESENTATION

- **GIVE FURTHER DETAILS OF THE LSSA'S CONTROL OF THE OPERATION, MAINTENANCE, AND CONTENT OF THE LSS VIA THE PROPOSED LSSA AUDIT PROGRAM**
- **EMPHASIZE THE LSSA'S OVERSIGHT ROLE RELATED TO DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS**
- **PROPOSE LSSARP PARTICIPATION IN LSSA AUDITS OF DOE'S LSS OPERATIONS**

CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP)

THE LSSA'S MANDATE IF ALTERNATIVE 3 IS ADOPTED

- **ENSURE INTEGRITY OF LSS DATABASE**
- **EVALUATE AND CERTIFY PARTICIPANT COMPLIANCE**
- **OVERSEE DOE DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE TO ENSURE COMPLIANCE**

CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP) (continued)

**THE PROPOSED LSSA CAP APPROACH CAN BE SEPARATED INTO FOUR
PRIMARY COMPONENTS:**

- **LSSA REVIEW OF PROGRAM MANAGEMENT DOCUMENTS AND
INFORMATION**
- **LSSA QA FACILITY**
- **LSSA AUDIT PROGRAM**
- **LSSARP OBSERVATION OF LSSA AUDITS OF DOE'S
DEVELOPMENT, OPERATION, AND MAINTENANCE**

PURPOSE OF AUDIT PROGRAM

- **HELP ENSURE DATABASE INTEGRITY**
- **EVALUATE COMPLIANCE WITH LSS RULE**
- **EVALUATE PARTICIPANT COMPLIANCE WITH *LSS PARTICIPANT COMMITMENTS***
- **PROVIDE DIRECT LSSA OVERSIGHT OF DOE'S OPERATION AND MAINTENANCE**
- **PROVIDE INPUT FOR CERTIFICATION OF PARTICIPANT COMPLIANCE**

GOALS OF THE AUDIT PROGRAM

THE LSSA WILL BE ABLE TO DETERMINE:

- **PARTICIPANT ABILITY TO MEET COMMITMENTS**
- **EFFECTIVENESS OF PARTICIPANTS' DOCUMENT PROCESSING OPERATIONS**
- **ACCURACY AND COMPLETENESS OF PARTICIPANTS' LSS DOCUMENTARY MATERIAL**
- **EFFECTIVENESS OF DOE'S OPERATION AND MAINTENANCE OF THE LSS**

OVERVIEW OF LSSA AUDIT PROGRAM

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE**
- **START-UP REVIEW TO EVALUATE PARTICIPANT DOCUMENT PROCESSING OPERATIONS**
- **SEMI-ANNUAL AUDITS OF EACH PARTICIPANT DOCUMENT PROCESSING OPERATION**
- **INTERIM FOCUSED AUDITS**

OVERVIEW OF LSSA AUDIT PROGRAM (continued)

- **AD HOC (UNANNOUNCED) AUDITS**
- **ONGOING REVIEW OF REQUIRED PARTICIPANT REPORTS AND DOCUMENTATION**
- **AUDIT REPORTING**
- **LSSARP PARTICIPATION THROUGH OBSERVATION OF LSSA AUDITS**

STANDARDS AND REQUIREMENTS DOCUMENTS USED IN AUDITING PROGRAM

- *LSS RULE*
- *LSS PARTICIPANT COMMITMENTS*
- *LSSA GUIDANCE ON THE FORMAT AND CONTENT OF PARTICIPANT COMPLIANCE PROGRAM PLANS*
- *LSS PARTICIPANT COMPLIANCE PROGRAM PLAN*
- *LSS PARTICIPANT MATERIAL SUBMISSION PLAN*
- *LSS PARTICIPANT CERTIFICATIONS*
- *LSSA PROCESSING STANDARDS AND GUIDANCE*
- *NRC REGULATORY GUIDE ON THE LSS TOPICAL GUIDELINES*

LSS PARTICIPANT COMMITMENTS

LSSA IS PREPARING A COMMITMENTS DOCUMENT THAT WILL:

- **CLEARLY DEFINE PARTICIPANT OBLIGATIONS (COMMITMENTS) NECESSARY FOR AN EFFECTIVE LSS PROGRAM**
- **PROPOSE STANDARDS**
- **DEFINE METHOD OF MEASURING PARTICIPANT PERFORMANCE**

THIS DOCUMENT WILL BE RELEASED FOR LSSARP REVIEW AND COMMENT

FOUR FUNCTIONAL AREAS OF *LSS* PARTICIPANT COMMITMENTS

- **GROUP ONE - PROPER IDENTIFICATION OF DOCUMENT UNIVERSE, PROPER RELEVANCY SCREENING, AND TIMELY SUBMISSION OF MATERIALS**
- **GROUP TWO - PHYSICAL CONDITION OF SUBMITTED MATERIAL AND ACCURATE CODING OF THE MATERIAL**
- **GROUP THREE - PARTICIPANT MANAGEMENT REQUIREMENTS AND CONDITIONS FOR GAINING AND RETAINING ACCESS**
- **GROUP FOUR - DOE OBLIGATIONS RELATIVE TO DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF THE LSS**

**IN THE HANDOUT YOU WILL RECEIVE AT THE CONCLUSION OF THIS
PRESENTATION, YOU WILL FIND SEVERAL ILLUSTRATIVE
COMMITMENTS
TO SERVE AS EXAMPLES OF THE LEVEL OF DETAIL ANTICIPATED**

Insert Figure 1 Here

GENERIC AUDIT TYPES

A SYSTEMATIC PROGRAM OF QA AUDITS INVOLVES EXAMINING THREE PRIMARY ASPECTS OF THE PARTICIPANT'S LSS-RELATED ACTIVITIES, COVERED BY THREE TYPES OF AUDITS:

- **ADEQUACY**
- **PROCESS**
- **RESULTS**

STATISTICAL SAMPLING

- **LSSA CAP CURRENTLY DESIGNED TO REVIEW STATISTICALLY VALID, RANDOM SAMPLES OF PARTICIPANT-SUBMITTED MATERIAL**
- **SOME ON-SITE AUDITING ACTIVITIES WILL ALSO BE BASED ON STATISTICAL RANDOM SAMPLING**
- **REVIEWING A SAMPLE IS MORE COST EFFECTIVE THAN EVALUATING 100 PERCENT OF EACH SUBMISSION**
- **THE STATISTICAL VALIDITY INHERENT IN THIS APPROACH PROVIDES A REASONABLE LEVEL OF RELIABILITY IN QUALITY ASSESSMENTS**

ADEQUACY AUDIT

PURPOSE IS TO DETERMINE:

- **ARE MANAGEMENT PLANS IN PLACE?**
- **DO MANAGEMENT PLANS ESTABLISH THE NECESSARY REQUIREMENTS?**
- **DO THE OPERATING PROCEDURES ADEQUATELY DESCRIBE THE METHODOLOGY AND ASSIGN RESPONSIBILITIES AT THE APPROPRIATE LEVEL TO ACCOMPLISH THE PROCESS?**

PROCESS AUDITS

- **EXAMINE IMPLEMENTATION OF PARTICIPANT PLANS AND PROCEDURES**
- **REVIEW SHOULD INCLUDE RECORDS MAINTAINED THROUGHOUT THE PROCESS**
- **CAN COVER A BROAD RANGE OF SYSTEM ACTIVITIES OR FOCUS ON SPECIFIC AREAS**

RESULTS AUDITS

- **EXAMINATION OF THE RESULTS TO DETERMINE IF END PRODUCT IS FIT FOR ITS INTENDED USE**
- **FOCUSSES ON END PRODUCT TO ENSURE THAT THE PROCESS RESULTS ARE USABLE IN THE LSS**
- **UNDER THE CAP AS CURRENTLY CONCEIVED, NO NEED FOR ON-SITE RESULTS AUDITS OF PARTICIPANT-PREPARED DOCUMENTARY MATERIALS**

GENERIC AUDIT METHODOLOGY

THE GENERIC AUDIT METHODOLOGY INCLUDES FOUR BASIC PHASES:

- **AUDIT PLANNING**
- **CONDUCTING THE AUDIT**
- **REPORTING RESULTS**
- **FOLLOW-UP ACTIVITIES**

Insert Figure 2 Here

AUDIT PLANNING

- **INITIATING AN AUDIT**
- **AUDIT PERSONNEL**
- **AUDIT PREPARATION**
- **CHECKLISTS**
- **NOTIFICATION**

CONDUCTING THE ON-SITE AUDIT

- **OPENING CONFERENCE**
- **AUDITING PROCESS**
- **CLOSING CONFERENCE**

REPORTING RESULTS

- **RECORD OF THE ENTIRE AUDIT PROCESS**
- **GENERAL DESCRIPTION OF THE AUDIT SCOPE AND OBJECTIVES, PROCEDURES, AND PERSONNEL INVOLVED**
- **DETAILED ACCOUNT OF THE AUDIT PROCESS, THE EVIDENCE OBTAINED, AND THE CONCLUSIONS DRAWN**
- **LSSARP REPRESENTATIVE IN REVIEWING REPORTING RESULTS**

FOLLOW-UP ACTIVITIES

- **FINDINGS MUST BE FOLLOWED UP WITH A DOCUMENTED CORRECTIVE ACTION PLAN**
- **FOLLOW-UP WILL INCLUDE RE-EXAMINING SPECIFIC ACTIVITIES OR MATERIALS IN QUESTION**
- **SCHEDULE FOLLOW-UP FOCUSED AUDIT**
- **FAILURE OF PARTICIPANT TO EFFECTUATE CORRECTIVE ACTION PLAN WILL REQUIRE LSSA DECISION ON ENFORCEMENT ACTIONS**

Insert Figure 3 Here

**SPECIFIC AUDITING ACTIVITIES
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE
OF THE LSS**

- **REVIEW AND APPROVAL OF SYSTEM REQUIREMENTS BEFORE IMPLEMENTATION**
- **EARLY LSSA PARTICIPATION DURING SYSTEM PLANNING**
- **DOE'S ROLE WILL BE TO PROPOSE REQUIREMENTS, WHILE LSSA WILL SERVE IN A REVIEW CAPACITY**
- **NO ACTUAL AUDITING OF DOE'S ACTIVITIES UNTIL IMPLEMENTATION OF LSS DESIGN**
- **SEMI-ANNUAL AUDIT OF DOE'S OPERATION AND MAINTENANCE OF LSS**
- **LSSA WILL REQUEST PARTICIPATION OF LSSARP REPRESENTATIVES AS OBSERVERS AT SEMI-ANNUAL DOE AUDITS**

DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS (CONTINUED)

**ELEMENTS OF THE LSSA AUDIT PROGRAM THAT ENSURE EFFECTIVE
OVERSIGHT OF DOE' LSS-RELATED ACTIVITY ARE:**

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE
ONCE LSS IS IN PLACE**
- **ONGOING MONITORING OF LSS AVAILABILITY AND
FUNCTIONALITY BY LSSA QA FACILITY**
- **USING AUDIT RESULTS AS KEY TO LSSA CERTIFICATION OF
DOE COMPLIANCE WITH REQUIREMENTS OF THE LSS RULE**

PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT

- **IDENTIFICATION OF POTENTIAL SOURCES OF DOCUMENTARY MATERIAL**
- **ESTIMATES OF DOCUMENTARY MATERIAL BACKLOG**
- **ESTIMATES OF DOCUMENT GENERATION RATE**
- **PRODUCTION SCHEDULE ESTIMATES (RELATED TO THE MATERIAL SUBMISSION PLAN)**
- **STAFFING**
- **TRAINING**
- **QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES, INCLUDING INTERNAL AUDITS**
- **TRACKING/COMPARISON OF PROCESSED MATERIALS TO PLANNED PRODUCTIVITY**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS OF DOE

- **PART OF LSSA SEMI-ANNUAL AUDITS**
- **INCLUDE RELEVANCY SCREENING**
- **FOCUS ON THE SYSTEMS AND OPERATIONAL PROCEDURES AS THE BASIS FOR EVALUATION**
- **COMPARE PROCEDURES TO ACTUAL PROCESS TO VALIDATE ACCURACY OF PROCESS IMPLEMENTATION**
- **REQUIRE DOE TO REVIEW PROCEDURES AND PROCESSES**
- **PREPARE A REPORT FOR EACH PROCESS REVIEWED**
- **REQUIRE DOE TO SUBMIT UPDATES AND DOCUMENTATION**
- **WRITTEN CONFIRMATION OF THE CORRECTIVE ACTION IN THE FORM OF A REMEDIAL ACTION PLAN**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS - NON-DOE PARTICIPANTS

- **AUDITS OF NON-DOE PARTICIPANTS WOULD BE REDUCED IN SCOPE**
- **SIX NON-DOE PARTICIPANT ENTITIES WILL SUPPLY DOCUMENTARY MATERIAL**
- **PRE-AUDIT PREPARATION SAME AS FOR DOE**
- **LSSA AUDIT TEAM WOULD CONDUCT AUDIT**
- **AUDIT TEAM CONSOLIDATES AND REPORTS RESULTS**
- **PARTICIPANTS REQUIRED TO DEVELOP A REMEDIAL ACTION PLAN**
- **REMEDIAL ACTION PLAN REVIEWED BY THE LSSA AND USED FOR FOLLOW-UP ACTIVITIES**
- **FREQUENCY OF AUDITS MAY BE INCREASED OR DECREASED**

ESTIMATED ANNUAL AUDIT PROGRAM COSTS

<u>AUDIT PROGRAM</u>	<u>APPROXIMATE DOLLARS</u>
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS	*
INFOSTREAMS	569,500
NON-DOE PARTICIPANT OPERATIONS	614,100
TOTAL	<u>\$1,183,600</u>

*BECAUSE INFORMATION ON THESE ACTIVITIES IS VERY INCOMPLETE, COSTING SUCH ACTIVITIES IS SPECULATIVE. NO SPECIFIC COSTS ARE IDENTIFIED IN THIS DOCUMENT FOR THOSE LSSA ACTIVITIES.

COMMENTS ON THE LSSA AUDIT PROGRAM

SHOULD BE SENT TO:

**DAVID S. DRAPKIN, DIRECTOR
LSS SUPPORT AND OVERSIGHT SERVICES
DIRECTOR'S OFFICE
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555**

COMMENTS ARE DUE NO LATER THAN MAY 16, 1994

Civilian Radioactive Waste
Management System

Management & Operating
Contractor



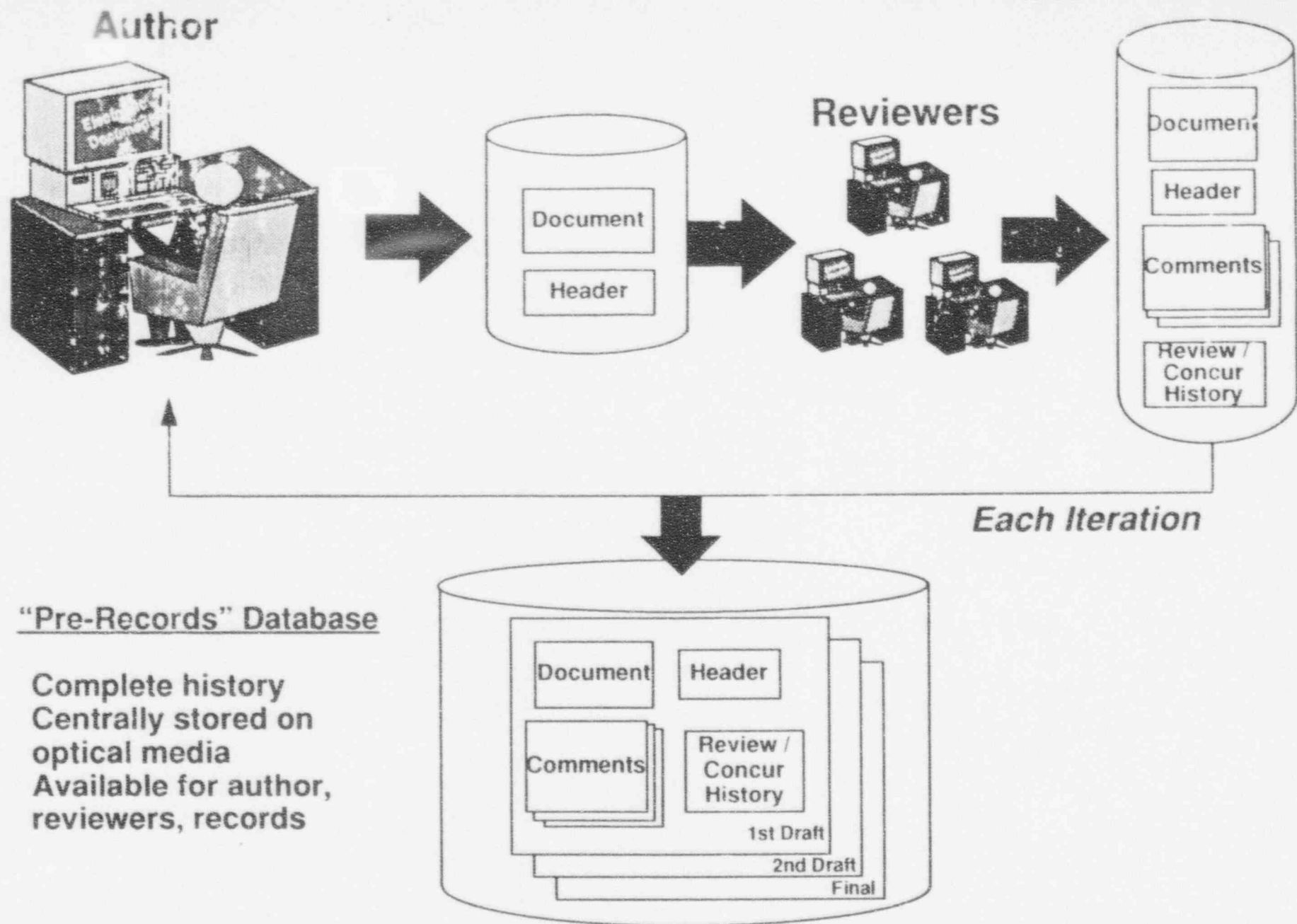
TRW Environmental Safety
Systems Inc.

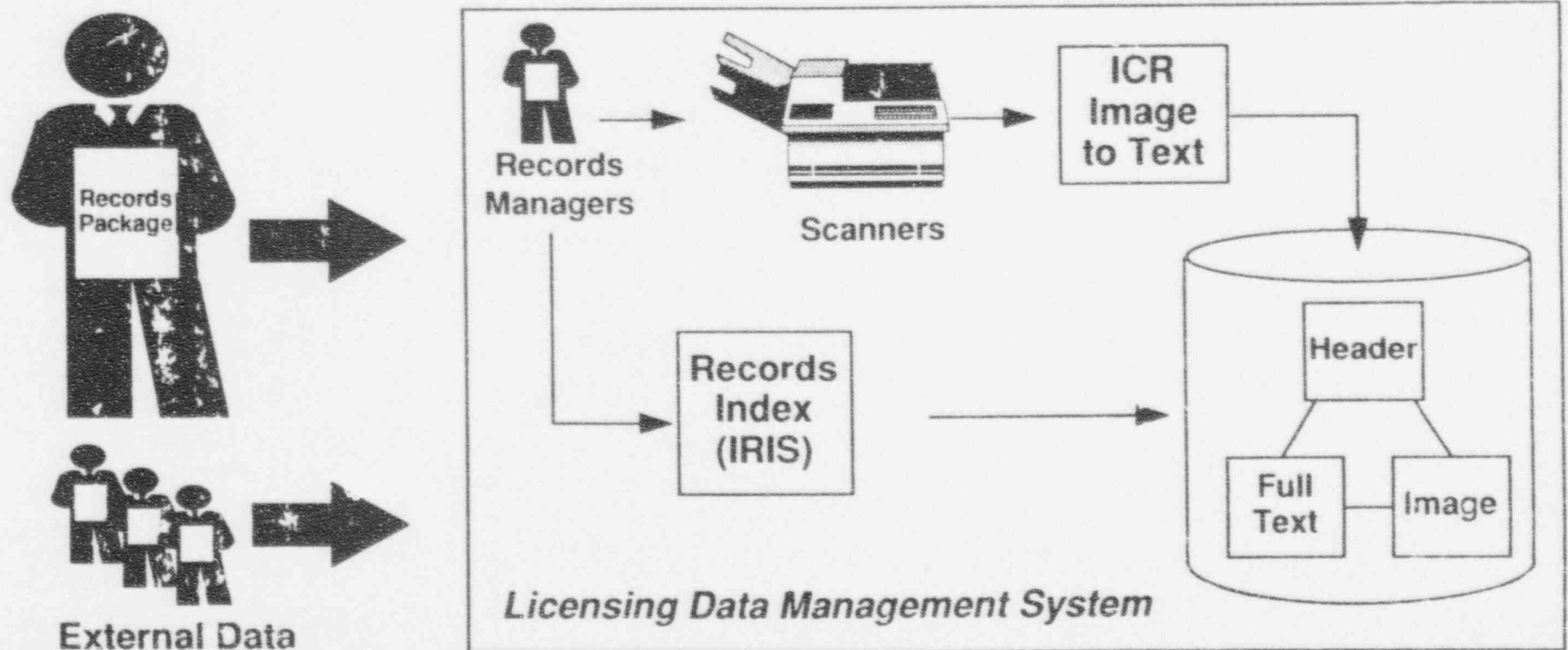
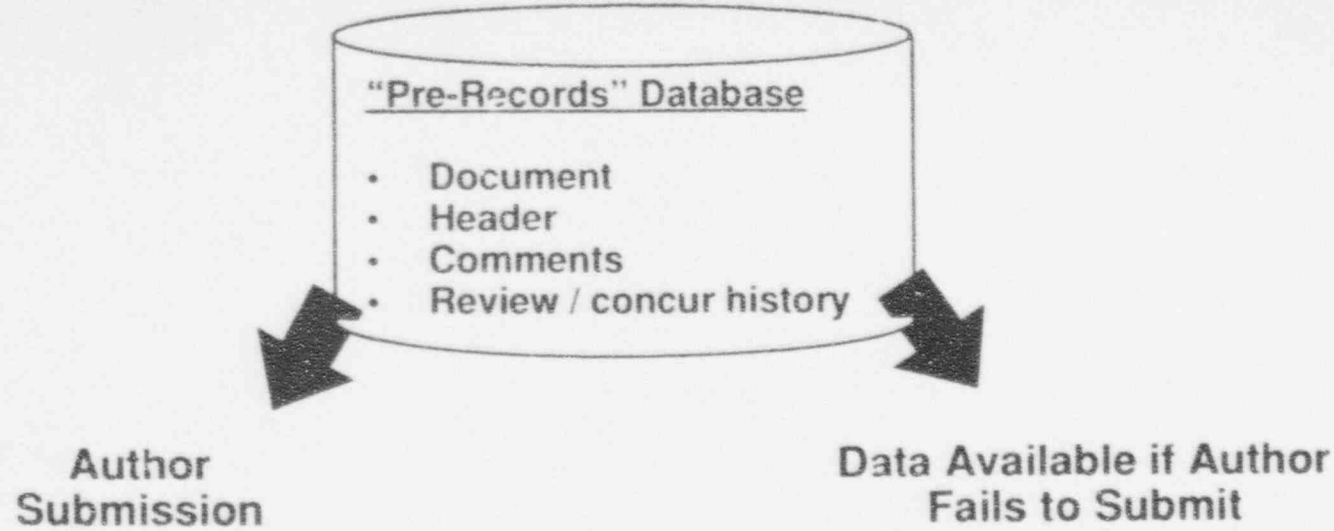
InfoSTREAMS Overview

B&W Fuel Company
Duke Engineering & Services, Inc.
Fluor Daniel, Inc.
INTERA Inc.

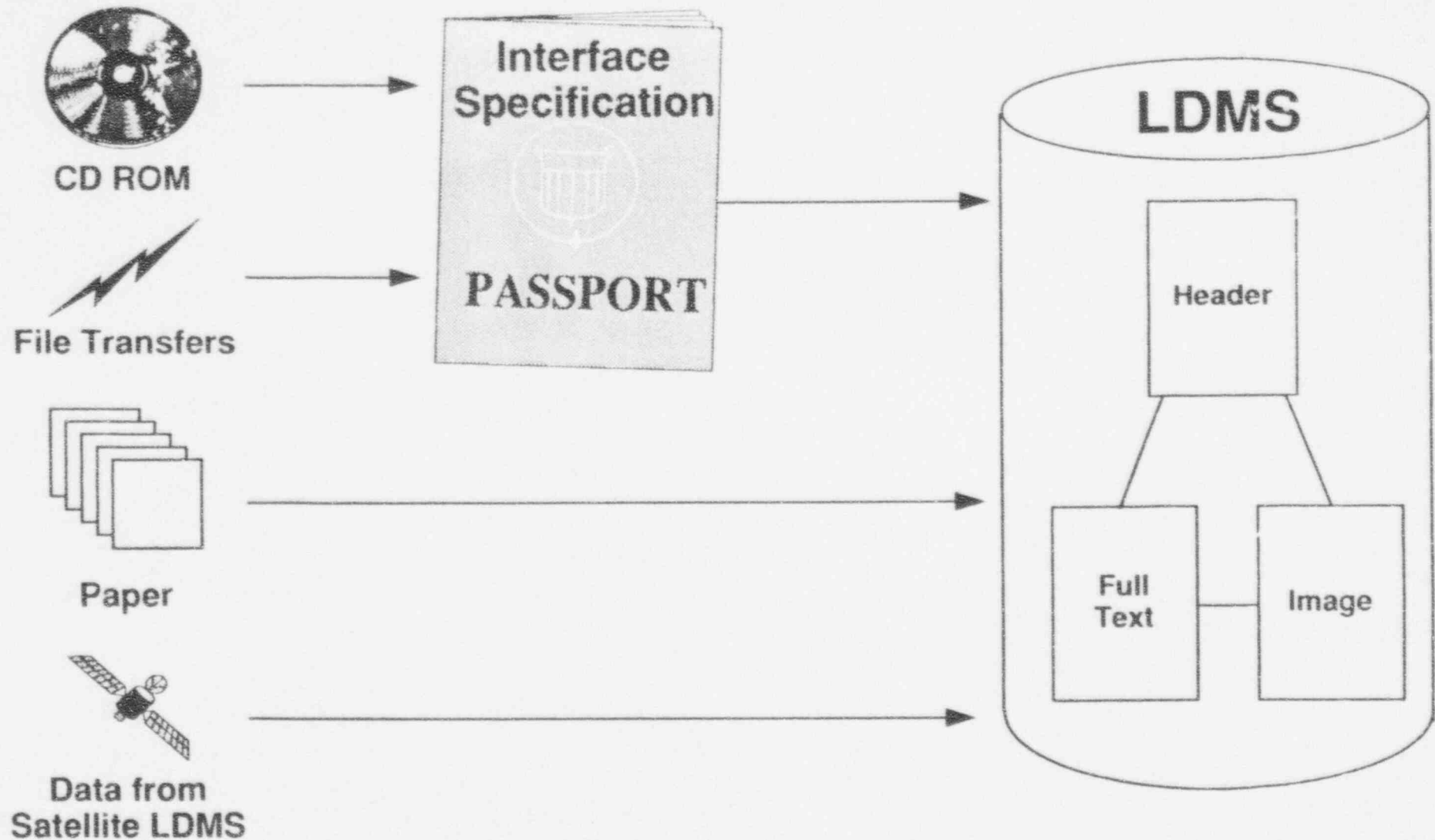
JK Research Associates, Inc.
• E. R. Johnson Associates, Inc.
Logicon RDA

Morrison Knudsen Corporation
TRW Environmental Safety Systems Inc.
Winston & Strawn
Woodward-Clyde Federal Services



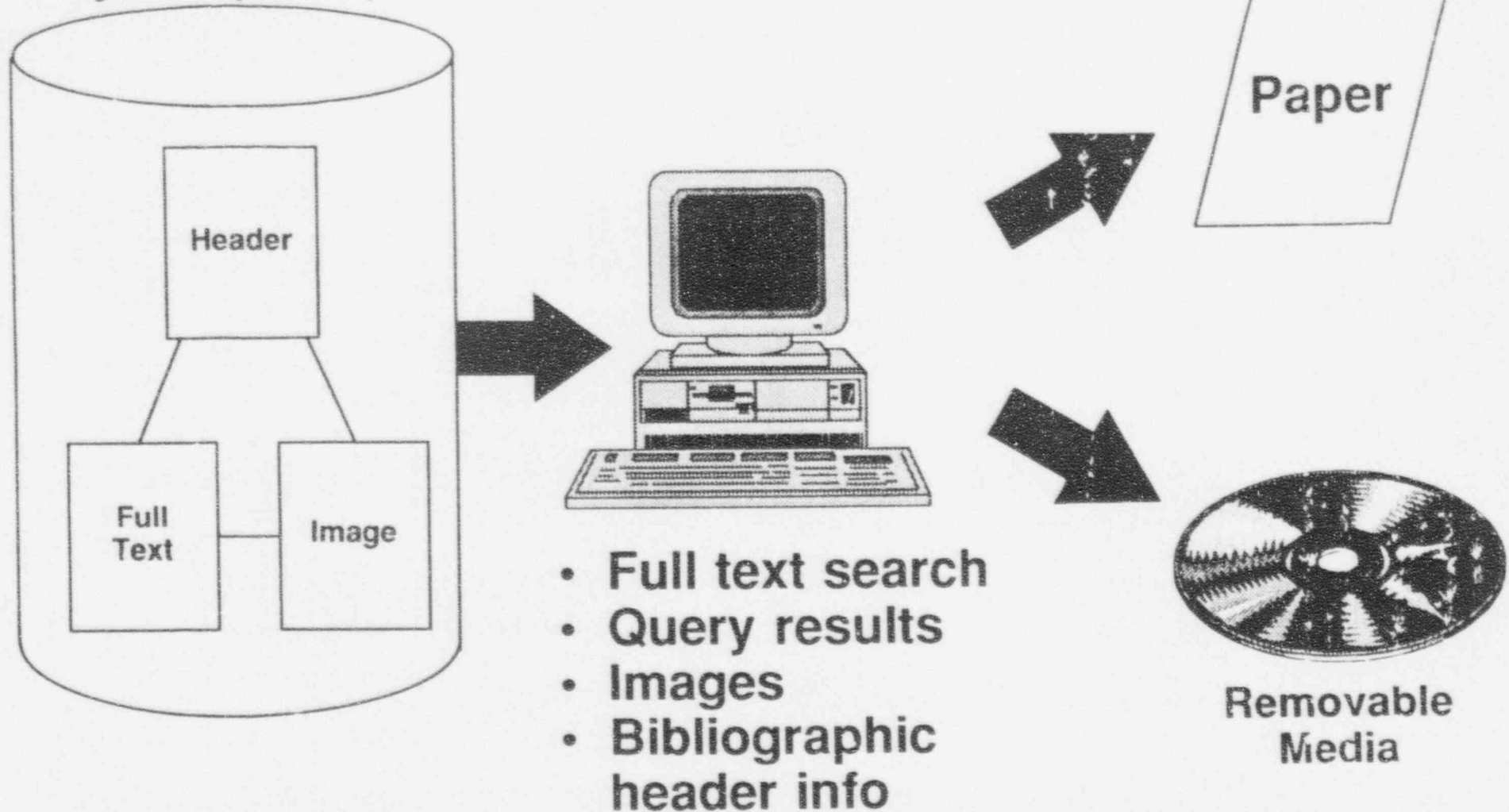


Licensing Data Management System (LDMS) inputs

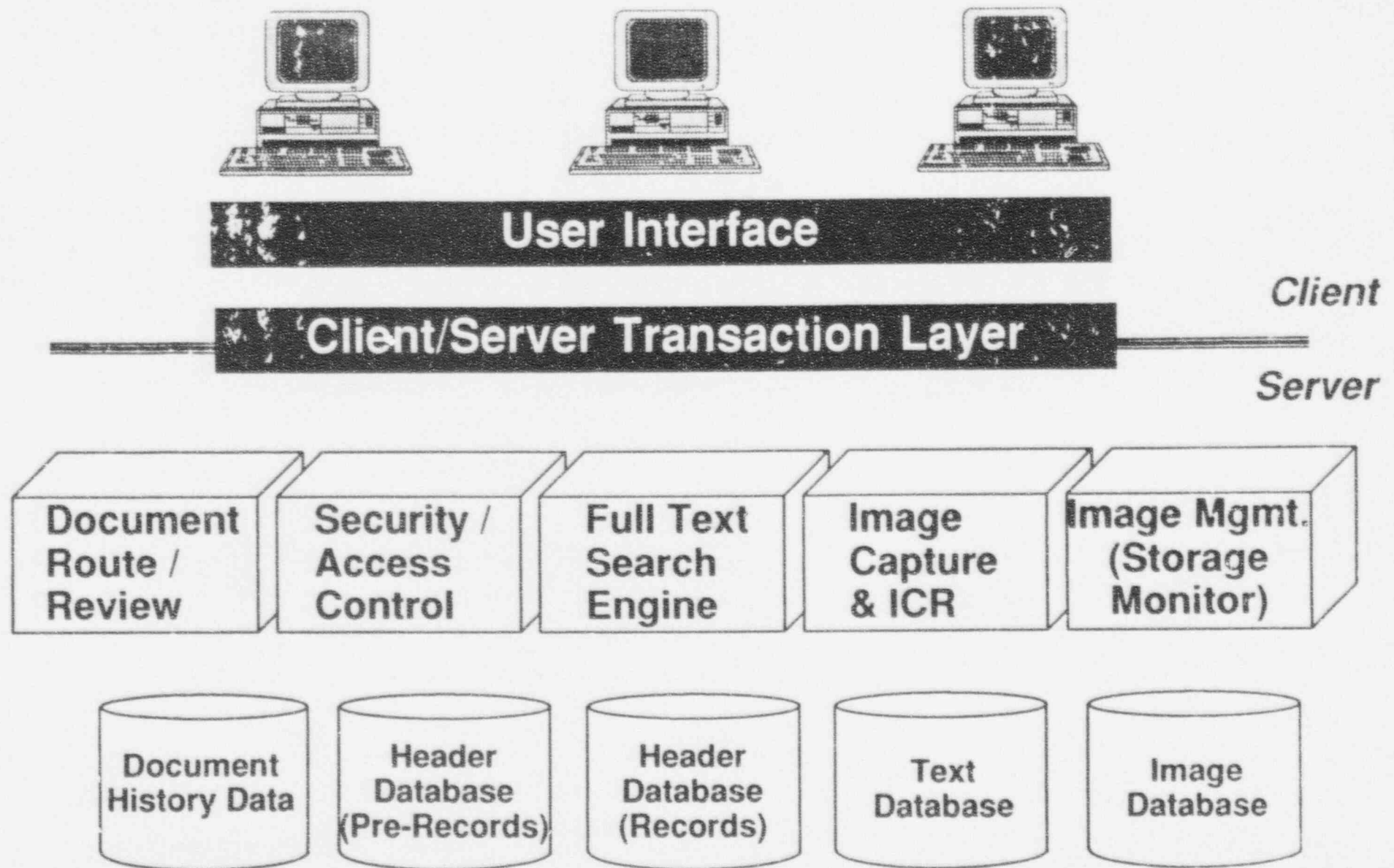


LDMS Outputs

Licensing Data Management System (LDMS)



Modular "Plug and Play" Architecture



Civillan Radioactive Waste
Management System

Management & Operating
Contractor

SR-0303

4/12/94

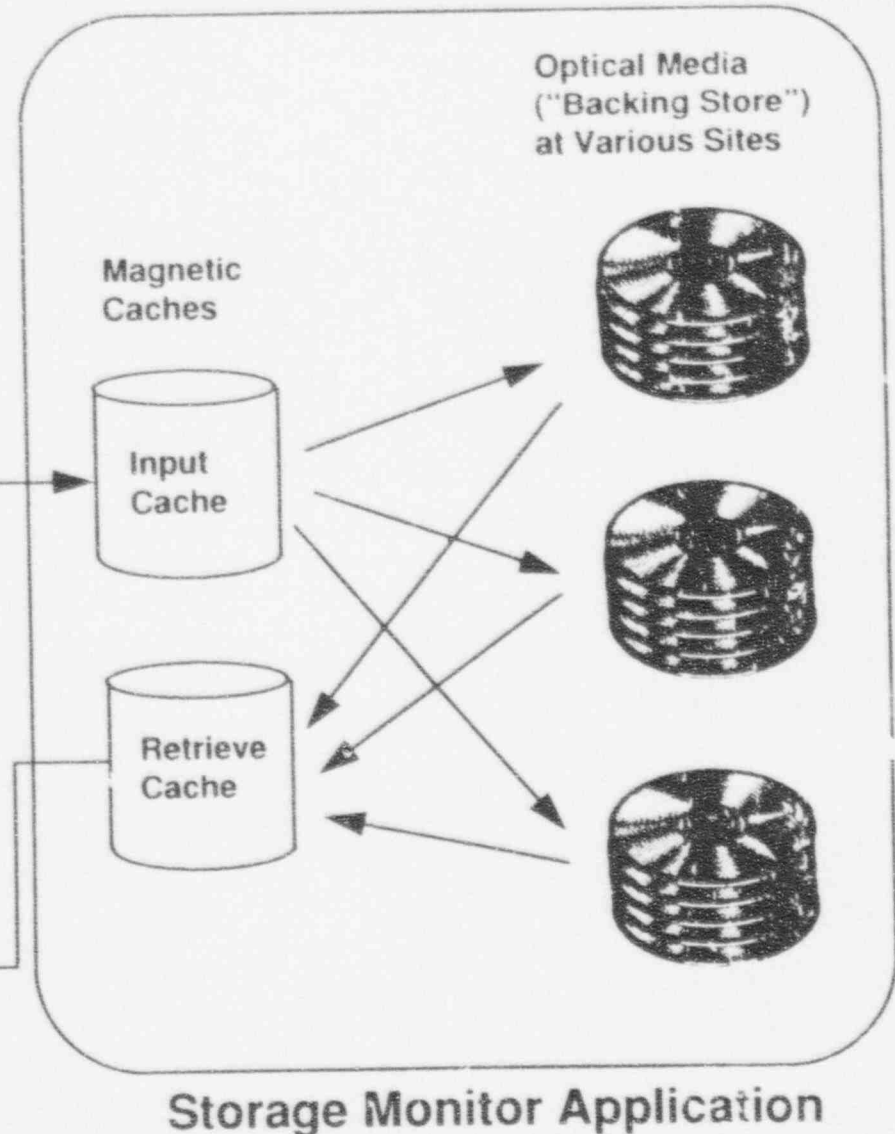
6

What is Storage Monitor?

Storage Monitor (SM) is a commercial product with an application interface that is essentially a sophisticated file system for optically stored information

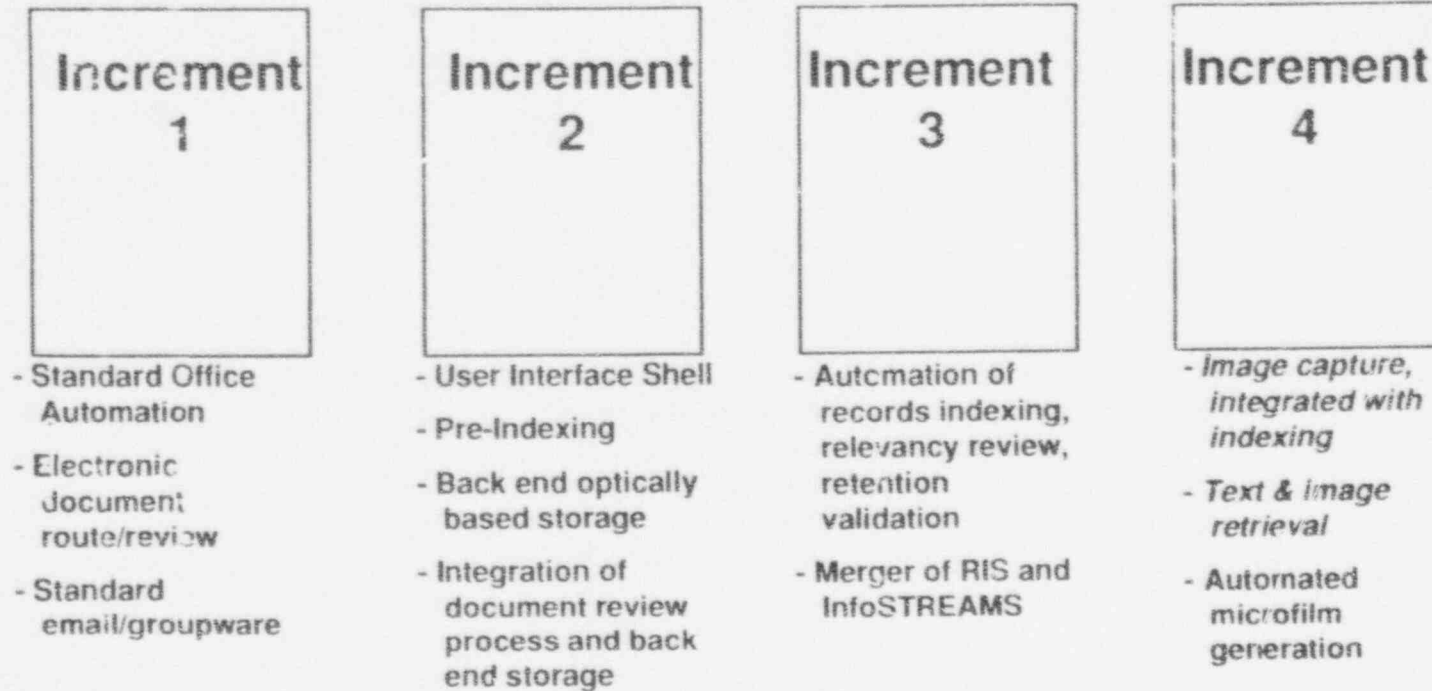
- Images
- Native files
- Magnetic caches for performance
- Format independent

Software Application
("Store Image,"
"Retrieve Image")

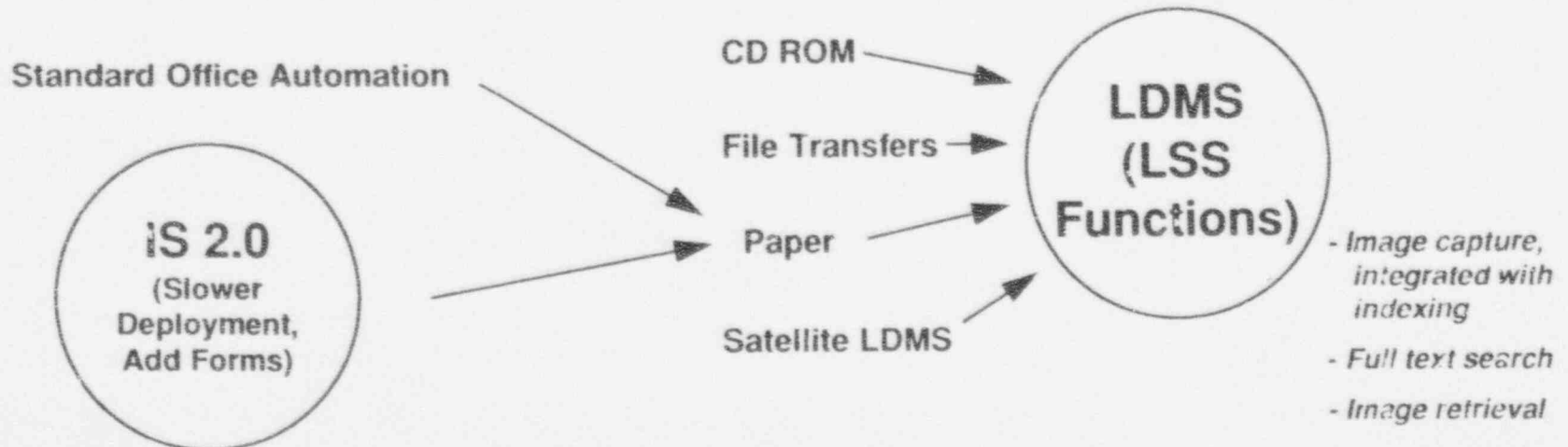


Change to Plan - Leverage LSS Functions

Previous Plan



Current 6 Month Plan (to end of FY94)



Civilian Radioactive Waste Management System

Management & Operating Contractor

SR-0303

4/12/94

8

Kirk Balcom
7617 Huron Drive
Gainesville, Virginia 22065
(703) 754-1399

April 7, 1994

Mr. John C. Hoyle
Chairman
LSS Advisory Review Panel
U.S. Nuclear Regulatory Commission
Mail Stop 16 H 3
Washington, D.C. 20555

Dear Mr. Hoyle:

The reconstituted Header Working Group of the LSS Advisory Review Panel met on February 23 - 24 at the offices of TRW in Vienna, Virginia and agreed upon several changes and additions to the header fields which had been previously approved by the ARP. Several fields were added as subparts to existing fields, there are new individual fields, and new groups of fields which have multiple subparts. For the most part, these changes reflect the ongoing development of DOE's records management systems and OCRWM's InfoStreams. In attendance were representatives from DOE, NRC, the State of Nevada, TRW and Labat-Anderson. Representatives from Clark County sent their comments by mail prior to the meeting.

The accompanying table lists the old fields, the new fields and the new groups of information which DOE would like to capture and recommendations for constructing the data base structure. For the most part, we hope it is self-explanatory. Most of the additions have to do with tracking documents, their electronic images, the relationships between documents, QA status, concurrence/approval information and additional data which we refer to as "housekeeping." Two additional categories at the end of the table, "Audit Information" and "License Process Information," reflect the requirements for data used by the Compliance Assessment Program and licensing procedural documents, respectively.

NRC raised the issue of including adequate fields for auditing the entry and maintenance of documentary materials and non-documentary references into the LSS as an integral part of systems design implementation. Reference is made in the list of fields to "LSS Audit Information." It is expected that the definitions and descriptions will be the subject of future meetings in conjunction with the Compliance Assessment Program.

I have attached the original report of "Recommended Fields for LSS Header Records," dated May 18, 1990 and the subsequent appendix with two additional fields for

9407140117

reference and background purposes. Most of the information is still valid. That paper was organized around four categories: 1) fields required by participants, 2) fields optional to participant, but completed by the LSSA, 3) fields optional to both the participants and the LSSA, and 4) fields not applicable to the participant, but provided by the LSSA. The premise then was that there would be capture stations at various locations with clear guidelines for the division of responsibility for data entry. Given the present uncertainty over data validation roles and the location of the LSS computer, we have organized the table of fields with a less precise distinction of exactly which organization will be responsible for which data other than the obvious. We expect this to shake out once the participants have agreed on these issues.

Please let me know if you have any questions about our recommendations and what kind of presentation you would like at the upcoming ARP meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Balon".

cc: Harry Swainston, State of Nevada

LSS Header Working Group Meeting February 23-24 1994

The following changes were made to the attached LSS Field Definition Summary Table as a result of the Header Working Group meeting held on February 23-24, 1994. For ease of reading, Field names are underlined and *column headings* are in italics.

Table Changes:

- 1) The Format Control column was removed from table since it was the source of more confusion than clarification.
- 2) The Submitter HC Page / Image Count field was moved under the repeating group Electronic Image Reference Info.
- 3) Author and Author Organization fields: the column - *Data Submitted by Participant* was changed from 'Required' to 'Either Author or Author Organization is Mandatory'.
- 4) Receiver Name and Receiver Organization moved under Document Route/Tracking Info repeating group. Fields had been listed twice.
- 5) Document Date Flag field: the following *Comment* was added, 'Indicates an estimated date'.
- 6) Access Control Code field expanded to Access Control Info which includes:
 - Access Control Code - with *Comment* added, 'Default is PUBLIC'
 - Type of Protection - Required
 - Protection Explanation - Required
- 7) Double asterisks (**) added to Title, Created Title, Abstract, and Comments fields indicating: 'Only one variable length field existed with multiple entries just being appended to previous text'.
- 8) Copyright Info field name changed to Copyright - since a repeating group of information with additional information was not required for copyrighted material. The *Controlled Authority List* entry for Copyright was changed from 'Y' to 'N'.
- 9) Document Type field: the column - *Data Supplied by LSS System or LSSA* was changed from 'N' to 'Optional'.
- 10) Publication Info: Page Range field - a *Comment* was added to reflect: 'Electronically imaged page range shall be stored'.
- 11) Descriptors field: the column - *Data Supplied by Participant* changed from 'Mandatory' to 'Optional'; the column - *Data Supplied by LSS System or LSSA* was changed from 'Required' to 'Mandatory'.
- 12) Identifiers field - the *Comment* was removed (did not apply).
- 13) Sponsoring Organization field: the column - *Data Submitted by Participant* was changed from 'Required' to 'Optional'.
- 14) Contract Number field: Deleted; Not required in LSS.
- 15) Image Reference Info field: Names changed to reflect that Image meant Electronic Image:

Electronic Image Reference Info:

- Electronic Image Count - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.
- Electronic Image Location ID - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.

- 16) Electronic Document Route/Tracking Info field name changed to Document Route/Tracking Info - since route tracking information is needed for hardcopy documents as well as electronic documents routed electronically.
- 17) LSS Record Housekeeping Info: list of fields updated to include fields previously recommended by Header Working Group as administrative and process tracking fields in document: Recommended Fields for LSS Header Records, 5/18/90.
- 18) LSS Audit Info: repeating group added per Dave Drapkin's suggestion to satisfy auditing requirements.
- 19) LSS/InfoSTREAMS field name: LSS/IS Accession Number was changed to Participant Accession Number.

Proposed LSS Field Definition Summary Table

Draft - As of 3/9/94

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:

- o *Original LSS Field Name / or New Candidate Field Name: ** = A field which is being proposed by OCRWM as a candidate LSS field.
- o *LSS / InfoSTREAMS Field Name* = Name common to both LSS and InfoSTREAMS field
- o *Data Submitted by Participant* = This field will be submitted by the participant (Mandatory = must be provided for each unit (record); Required = must be provided if applicable; Optional = provided at discretion of participant)
- o *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)
- o *Multi-valued* = Multiple entries allowed in a field.
- o *Controlled Authority List* = List of accepted entries to be used by all participants, such as document types or specific forms of an organization name.
- o *Free Text Searchable* = The ability to perform phrase or single-word searches of the field entries.
- o *Comments/Issues* = Any additional comments or outstanding issues.

Legend:

- o Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined
 * A field which is being proposed by OCRWM as a candidate LSS field.
 ** Only one variable length text field. Multiple entries just appended to previous text.

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
LSS Accession Number	LSS Accession Number	N	Mandatory	N	N	NA	Generated by LSS
Participant Accession Number	Participant Accession Number	Mandatory	N	Y	N	NA	
Submitter Center	Submitter Center	Mandatory	N	Y	Y	NA	
Title/Description	Title	Either Title or Created Title is Mandatory	N	N**	N	Y	Title and Created Title are searchable as one field
	Created Title	"	N	N**	N	Y	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
✓ Author:	Author Name	Either Author or Author Organization is Mandatory.	N	Y	TBD <i>N</i>	N	Need full Name?
✓ Author Organization	Author Organization	<i>"Auth. Org. is Mandatory"</i>	N	Y	Y	Y	
✓ Document Date	Document Date	Mandatory	N	N	N	NA	
	Document Date Flag	Required	N	N	Y	NA	Indicates an estimated date
✓ Document/Report Number	Document Number	Required <i>Mandatory</i>	N	Y	N	NA	
✓ Document Condition	Document Condition	Required <i>Mandatory</i>	N	Y	Y	NA	
✓ Edition/Version	Version	Required <i>And</i>	N	Y <i>N</i>	N	Y	
✓ Event Date	Event Date	Required <i>And</i>	N	Y	N	NA	
✓ Event Date Code	Event Code	Required <i>And</i>	N	Y	Y	NA	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
* Protected Status	Access Control Info: <i>Expanded</i> Access Control Code	Mandatory	N	-	-	-	Default value is 'Public'.
*	- Type of Protection	Mandatory	N	Y	Y	NA	
*	- Protection Explanation	Required	N	TBD	TBD	TBD	
*	- Protection Explanation	Required	N	TBD	TBD	TBD	
Related Documents	Related Record Number	Required <i>mandatory</i>	Y	Y	Y <i>N</i>	NA	Related Record Number(s) supplied by Participants will be converted to LSS Accession Number(s)
*	Related Record Code	Required	Y	Y	Y	NA	
Special Class	Special Class	Required	N	Y	Y	Y	
Abstract	Abstract	Required <i>mandatory</i>	N	N**	N	Y	
Package ID	Package Identifier	Required <i>mandatory</i>	Y	Y	N	NA	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
*	Package Code	Required	Y	Y	Y	NA	
Copyright	Copyright	Required	N	N	N	NA	
Document Type	Document Type	Mandatory	Optional	Y	Y	Y	
Publication Data	Publication Info:	Optional	Required	-	-	-	Electronically imaged page range shall be stored.
	- Publication Source			N	Y	Y	
	- Publication Source Editor			Y	N	N	
	- Publisher			N	Y	N	
	- Publication Place			N	N	N	
	- Page Range			N	N	N	
	- Citation Information			N	N	TBD	
	- ISBN/Library of Congress Number			N	N	TBD	
Descriptors	Descriptors	Optional	Mandatory	Y	Y	Y	Use LSS Thesaurus

Proposed LSS Field Definition Summary Table

<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
Identifiers	Identifiers	Optional	Optional	Y	N	Y	
Comments	Comments	Optional	Optional	N **	N	Y	
Sponsoring Organization	Sponsoring Organization	Optional	N	Y	Y	Y	Would need in IRIS too
*	Media	Required	N	Y	Y	NA	
*	QA Record	Mandatory	N	N	Y	NA	
*	Traceability Number	Required	Required	Y	N	N	
*	Traceability Code	Required	Required	Y	Y	NA	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / or New Candidate Field Name (*)	LSS/InfoSTREAMS Field Name	Data Submitted by Participant	Data Supplied by LSS System or LSSA	Mandatory Value	Controlled Authority List	Free Text Search	Comments/Issues
*	Electronic Image Reference Info:	Required	Required	-	-	-	Electronic image info supplied by Participant to be converted to LSS reference info. Temporary field used to validate submitter page/image count.
Submitter Page Count	Submitter HC Page / Electronic Image Count (Temp field)	Mandatory	N	N	N	N	
Number of Images	- Electronic Image Count	N	Mandatory	N	N	N	
*	- Electronic Image Location ID	N	Mandatory	TBD	N	N	
*	Searchable Text Reference Info:	Required	Required	-	-	-	
	(Contents TBD)						
*	Physical Unit Location Reference Info:	Required	Required	-	-	-	
	(Contents TBD)						

Proposed LSS Field Definition Summary Table

<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
	Concurrence/Approval Info: - Concur/Approval Name - Concur/Approval Organization - Concur/Approval Type - Concur/Approval Status - Concur/Approval Date - Signed Name - Signed Organization - Concur/Approval Component File ID(s) - Electronic Signature Verification - Silence is Consent Flag	Required	N	-	-	-	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
*	Document Route/Tracking Info:	Required	N	-	-	-	
Addressee	- Receiver Name	Required	N	Y	TBD	N	
Addressee Organization	- Receiver Organization	Required	N	Y	Y	Y	
	- Copyee Name						
	- Copyee Organization						
	- Date Sent						
	- Special Instruction						
	- Type Route						

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
Administrative and Process Tracking Fields:	LSS Record Housekeeping Info: - Date Received at LSS - Date Available in LSS - Date/Time Loaded into LSS - Date/time of Last Modification - LSS Indexer ID - Station ID - QC ID - Subject & Abstract Cataloger ID - Cataloging QC ID - Processing Stage Status - Verification ID - Change Tracking Log	N	Mandatory	-	-	-	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / or New Candidate Field Name (*)	LSS/Infostream Field Name	Data Submitted by Participant	Data Supplied by LSS System or ISSA	Multi-Value	Controlled Authority List	Free Text Search	Comments/Issues
*	LSS Audit Info: (Contents TBD)	N	Required	-	-	-	

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

Proposed Detailed LSS Field List

Draft - As of 3/9/94

Abstract

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

Access Control Info

A logical group of information pertaining to the access control placed on the document or unit. This field is used to indicate whether access to a document is restricted as privileged, and the type of protection to be enforced. The logical group may include the following fields:

- Access Control Code
- Type of Protection
- Protection Explanation.

Author Name

The name of each person listed on the document or unit as responsible for all or part of its creation. Only personal authors are entered in this field. Corporations as authors are captured in the Author Organization field. This field is part of a logical group which includes:

- Author Name
- Author Organization.

Entries in the Author field are linked to the corresponding entry in the Author Organization field.

Author Organization

The name of the organization (i.e., company, corporation or group) with which each author was affiliated at the time the document was created, or the name of the organization responsible for creating or originating the document when there is no personal author. If an author works for one organization and is representing another, then both affiliations should be captured, e.g., an attorney using a law firm's letterhead but representing a client organization. This field is part of a logical group which includes:

- Author Name
- Author Organization.

An entry in this field is linked to the Author Name field in order to provide the connection between an author and his/her affiliation. Thus a searcher seeking a document authored by J. A. Brown of Sandia will not retrieve a document authored by J. A. Brown of DOE and C. R. Smith of Sandia.

Comments

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

Concurrence/Approval Info

This is a logical group of concurrence/approval information concerning all persons listed on the concurrence/approval form for the document. This information is needed for all electronic documents which are routed electronically for concurrence and/or approval. The fields within the logical group may include:

- Concurrence/Approval Name
- Concur/Approval Organization
- Concur/Approval Type
- Concur/Approval Status
- Concurrence/Approval Date
- Signed Name
- Signed Organization
- Concur/Approval Component File ID(s)
- Electronic Signature Verification
- Silence is Consent Flag
- Electronic Signature.

For hardcopy documents, this field contains the names of all persons on the concurrence/approval list.

Copyright

An indication of the copyright status of a document. Entries will be made in this field if a document is copyrighted; this usually applies to documents that are commercially published. Copyrighted materials require permission from and possible payment of royalties to the author or publisher in order to store, reproduce, and distribute copies.

NOTE: Some copyright notices restrict the entry of copyrighted material into electronic format. This issue will need to be addressed prior to capturing images and searchable text of copyrighted documents.

Created Title

A sentence or phrase which 1) briefly describes the contents of the untitled document or a non-document, 2) augments the existing title to improve its clarity or meaning, or 3) augments the existing title to distinguish it from other titles that may be mistaken as duplicates. Either a Title or a Created Title is mandatory for every document or unit.

Descriptors

Words or phrases from the LSS Thesaurus representing the subject content of the document or unit. A descriptor may or may not be a word or phrase contained in the text of the document. As many descriptors should be used as needed to describe the main concepts of the unit. The use of the descriptor obviates the need for synonyms in a search statement.

Document Condition

The physical condition of the document at the time of entry into the system which would preclude the ability of the capture station to accurately or completely capture all information. This includes information such as INC (pages missing), ILL (portions illegible), and MARG (marginalia).

Document Date

The date on which the document was issued, published or completed. If the date is unknown, information in the document will be used to determine a likely date. In this case, the Estimated Date Flag is set. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date field is linked to the corresponding entry in the Document Date Flag field.

Document Date Flag

An indicator that the document date has been estimated from information contained in the document or in the accompanying documents. The Document Date field will contain the date that corresponds to the date on the record. If there is no date, other means of inferring the date will be used. In these cases, the Estimated Date Flag will be set to inform the user that the date has been estimated. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date Flag field is linked to the corresponding entry in the Document Date field.

Document Number

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

Document Route/Tracking Info

This is a logical group of information concerning the routing, distribution, and tracking of a

document. The fields within this logical group may include:

- Receiver Name
- Receiver Organization
- Copyee Name
- Copyee Organization
- Date Sent
- Special Instructions
- Type of Route.

Document Type

The format or physical form of the document. Examples include a book, notebook and plan.

Electronic Image Reference Info

This is a logical group of reference information concerning the electronic image of the record. The fields in this logical group may include:

- Electronic Image Count
- Electronic Image Location ID
- Submitter HC Page/Electronic Image Count - is a temporary field used by the LSS Administrator to validate the hardcopy page count or electronic image count supplied by the Participant.

Event Code

A code that identifies the type of event occurring on the Event Date. Entries will be made in this field only when there is an entry in the Event Date field. Examples of codes include: AUDIT (Audit), INSP (Inspection), HEAR (hearing), or EFFECT (Effective or Implementation Date). This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Code field is linked to the appropriate entry in the Event Date field.

Event Date

This field is used to capture the date of 1) The effective date of an order, procedure, or any other implementation date of the document; or, 2) the date(s) of a particular happening (such as an inspection, audit, meeting or hearing) that is the main topic(s) of the content of the document. The field will assist in assembling all documents about a particular event or all documents that must be implemented on or between specific dates. Examples of events include audits and inspections. Examples of implementation events include the effective date of an order or a regulation. This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Date field is linked to the corresponding entry in the Event Code field.

Identifiers

Words or phrases which are not contained in the LSS Thesaurus but the submitter or cataloger believes represents the subject content of the unit and will assist the user in retrieval of the unit. These may be "buzz words" or words representing new concepts which have not yet been incorporated into the LSS Thesaurus. The terms in this field provide a candidate list of terms for inclusion into the LSS Thesaurus.

LSS Accession Number

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

LSS Audit Info

This is a logical group which contains LSS audit information. The specific field level information has not yet been defined.

LSS Record Housekeeping Info

This is a logical group of information which contains data base management administrative and process tracking fields used by the LSS Administrator. These fields may include:

- Date Received at LSS
- Date Available in LSS
- 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
- Change Tracking Log.

Media

The physical media upon which the unit is stored. Examples of Media include PHOTO (photographs), VIDEO (video), and DISK (magnetic disk).

Package Code

A code that identifies the type of package which has been assigned a Package ID. Entries will be made in this field only when there is an entry in the Package ID field. Examples of Package Codes include: DRAW (drawing package), DATA (data package), or INSPEC (inspection package). This field is part of a logical group which includes:

- Package Identifier
- Package Code.

Each entry in the Package Code field will be linked to the appropriate entry in the Package Identifier field.

Package Identifier

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

- Package Identifier
- Package Code.

Each entry in the Package Identifier field will be linked to the appropriate entry in the Package Identifier field.

Participant Accession Number

A unique identification number required by 10CFR 2/J to be assigned by the participant to each unit submitted for entry into the LSS. This number assists the submitters in locating documents they have submitted and assists the capture operation in verifying the identity of the documents received and matching it with the image and text. This field should contain a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alphanumeric scheme which the submitting organization might use to control their own units. It may be the accession number used in their own records system. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Physical Unit Location Reference Info

This is a logical group of location information which indicates where the physical unit can be found. The specific field level information has not yet been determined.

Publication Info

The publication information is a logical group of bibliographic information that is not covered in other fields, but is important in identifying or citing the document. This group in combination with author and title fields provides the user with a standard consistent bibliographic citation for use in creating bibliographies and references for reports. This logical group may include the following fields:

- Publication Source
- Publication Source Editor
- Publisher
- Publication Place
- Page Range
- Citation Information
- ISBN/Library of Congress Number.

QA Record

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

Related Record Code

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

- Related Record Number
- Related Record Code.

Each entry in the Related Record Code field will be linked to the appropriate entry in the Related Record Number field.

Related Record Number

This field contains the LSS Accession Number(s) of a record that has a particular relationship to the document or unit being entered. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document and a later versions, comments, corrections, or errata); and whole/part (a book and its chapters, a journal and its articles), an information package and the cataloging units it contains. The type of relationship is captured in the Related Record Code field. This field is part of a logical group which includes:

- Related Record Number
- Related Record Code.

Each entry in the related Record Number field will be linked to the appropriate entry in the Related Record Code field.

Searchable Text Reference Info

This is a logical group of information required to identify and locate the searchable text file. The specific field level information has not yet been determined.

Special Class

The special group or category to which a document or unit may belong. Entries in this field identify special categories of documents in order to retrieve them as a group, such as Site Characterization Plan Reference. The field is also used to indicate that a record does not contain text or does not have an image. Examples of Special Class data includes: Header only, No searchable text or image, or Translation of a document from a foreign language.

Sponsoring Organization

The name of the agency or agencies responsible for funding or otherwise sponsoring the work reported in the unit.

Submitter Center

A coded field for the name and location of the participant or its subdivision submitting material for inclusion into the LSS. This field provides a contact point for material that is rejected by the LSS Administrator. It also provides a contact point for notification that the header, image, and searchable text have been loaded into the LSS and are ready for review and verification by the first submitting agency. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Each entry in the Submitter Center field will be linked to the appropriate entry in the Participant Accession Number field.

Title

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

Traceability Code

A code that indicates the type of traceability number. Examples of this code include: ATDT (technical data link), CIDI (Configuration Identifier & Document Identifier), and WBS (Work Breakdown Structure). This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Number field.

Traceability Number

An identifier that has been assigned to a document in order to link it to a specific activity or to a specific record in another database. These identifiers will enable searchers to easily retrieve all records associated with any given site activity by providing a special linkage not available through other fields. They will also point to related records contained in other databases such as the technical data database. Examples of traceability numbers include WBS number, linkages to technical databases, and configuration management identifiers. This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Code field.

Version

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

LANE
POWELL
SPEARS
LUBERSKY

March 30, 1994

Malachy R. Murphy

John C. Hoyle, Chairman
LSSARP
United States Nuclear Regulatory Commission
Mail Stop 16H3
Washington, D.C. 20555

Law Office

Evergreen Plaza
Building
711 Capitol Way
Olympia, WA
98501-1231

(206) 754-6681

Facsimile
(206) 754-1603

A Partnership
Including
Professional
Corporation

Re: LSSARP Meeting April 14 - 15, 1994

Dear John:

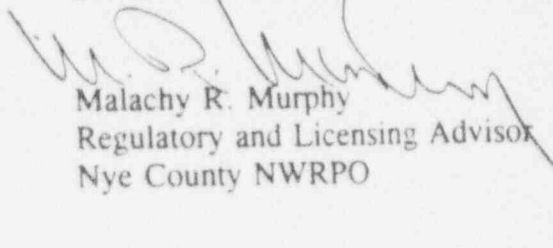
As you are probably aware, the DOE has now made a decision to develop a multi-purpose canister (MPC) and to seek certification of an MPC from the NRC under 10 CFR Part 71. It is my understanding that the DOE will be seeking certification some time in the next few years in order to be able to make MPCs available at reactor sites by 1998. MPC certification proceedings would be far less complex, contentious, and time-consuming than the ultimate licensing proceedings on the repository itself.

I suggest that we might begin at least preliminary discussions at the April 14 - 15 meeting in Las Vegas on the feasibility of developing the LSS to a point where all interested parties could use it, at least on a pilot project basis, during any MPC certification proceedings. If that is at all possible, it could be a worthwhile learning experience, and provide some extremely valuable lessons which could be applied in fully developing the LSS for use during the ultimate repository licensing process. I think we could undertake to discuss this without necessarily extending the meeting beyond a day and a half.

With best personal regards.

Yours very truly,

LANE POWELL SPEARS LUBERSKY


Malachy R. Murphy
Regulatory and Licensing Advisor
Nye County NWRPO

MRM:lm

cc: Les W. Bradshaw
Phillip A. Niedzielski-Eichner
Lloyd Levy
Members LSSARP

LPOLY E POLY MRM 10848MRM LTR

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

London, England
Tokyo, Japan

9407140127

Civilian Radioactive Waste
Management System

Management & Operating
Contractor



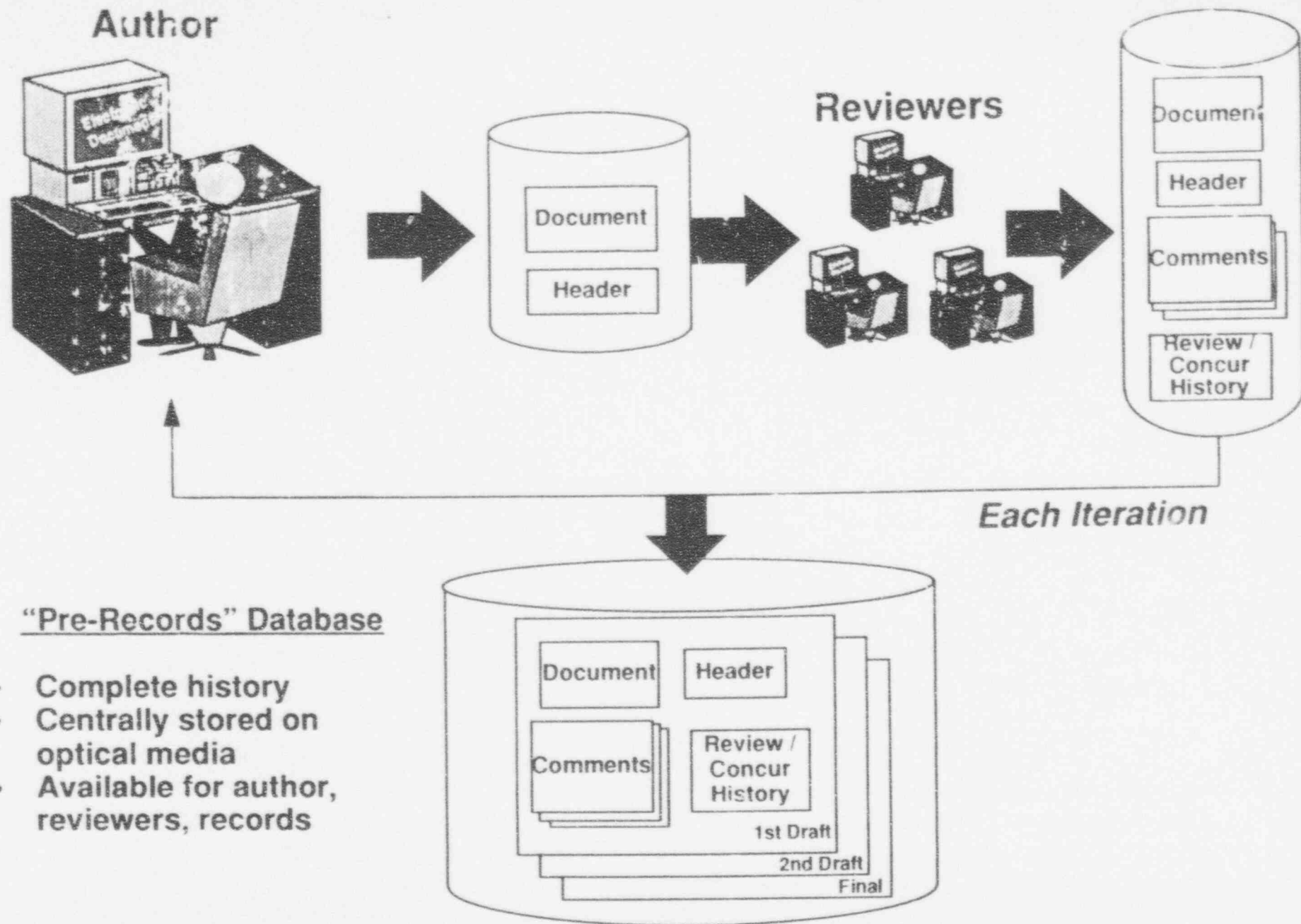
TRW Environmental Safety
Systems Inc.

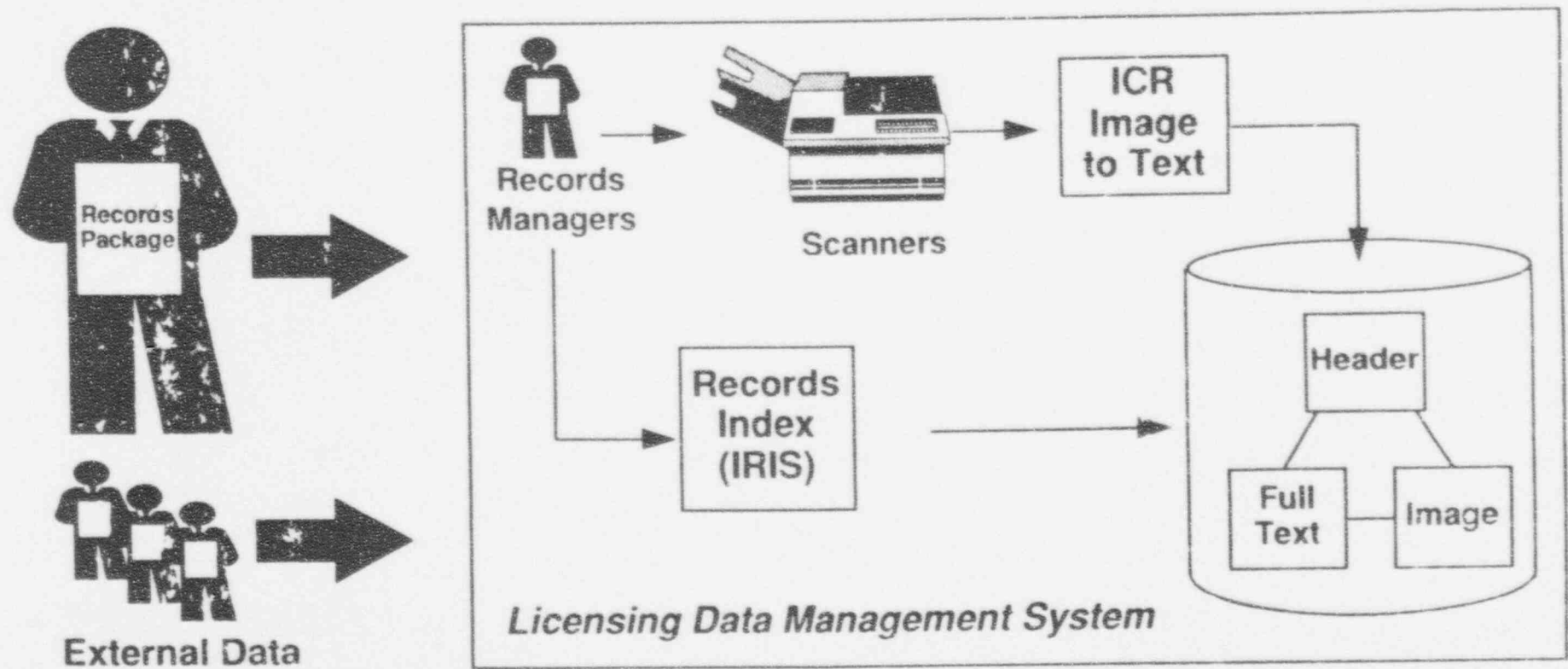
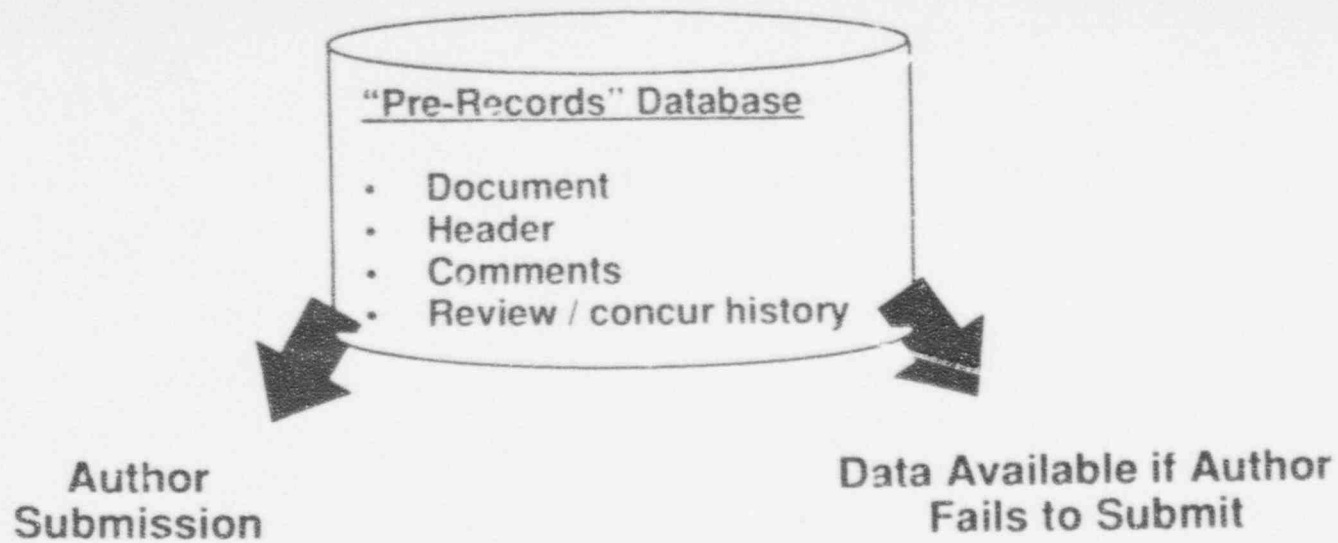
InfoSTREAMS Overview

B&W Fuel Company
Duke Engineering & Services, Inc.
Fluor Daniel, Inc.
INTERA Inc.

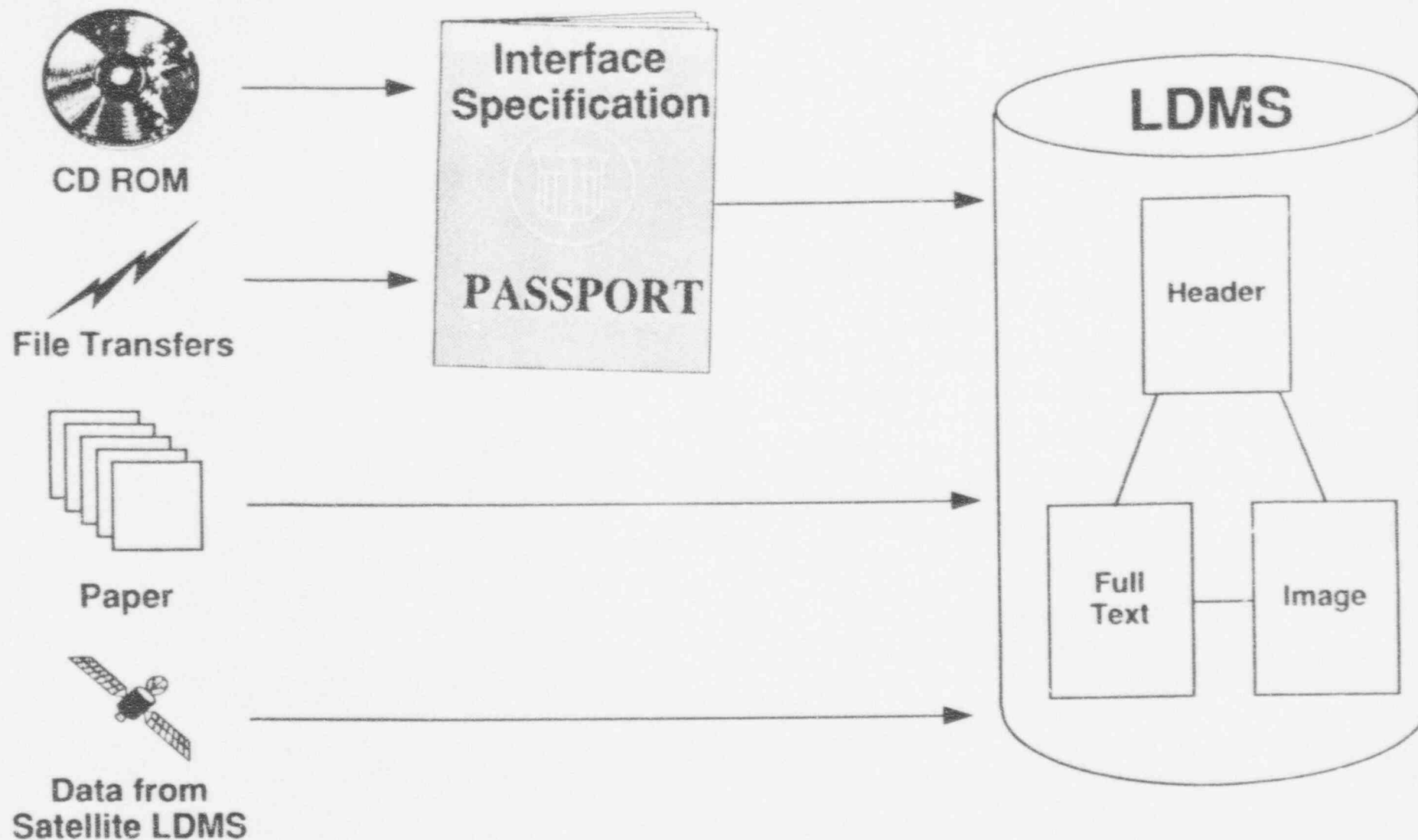
JK Research Associates, Inc.
E. R. Johnson Associates, Inc.
Logicon RDA

Morrison Knudsen Corporation
TRW Environmental Safety Systems Inc.
Winston & Strawn
Woodward-Clyde Federal Services



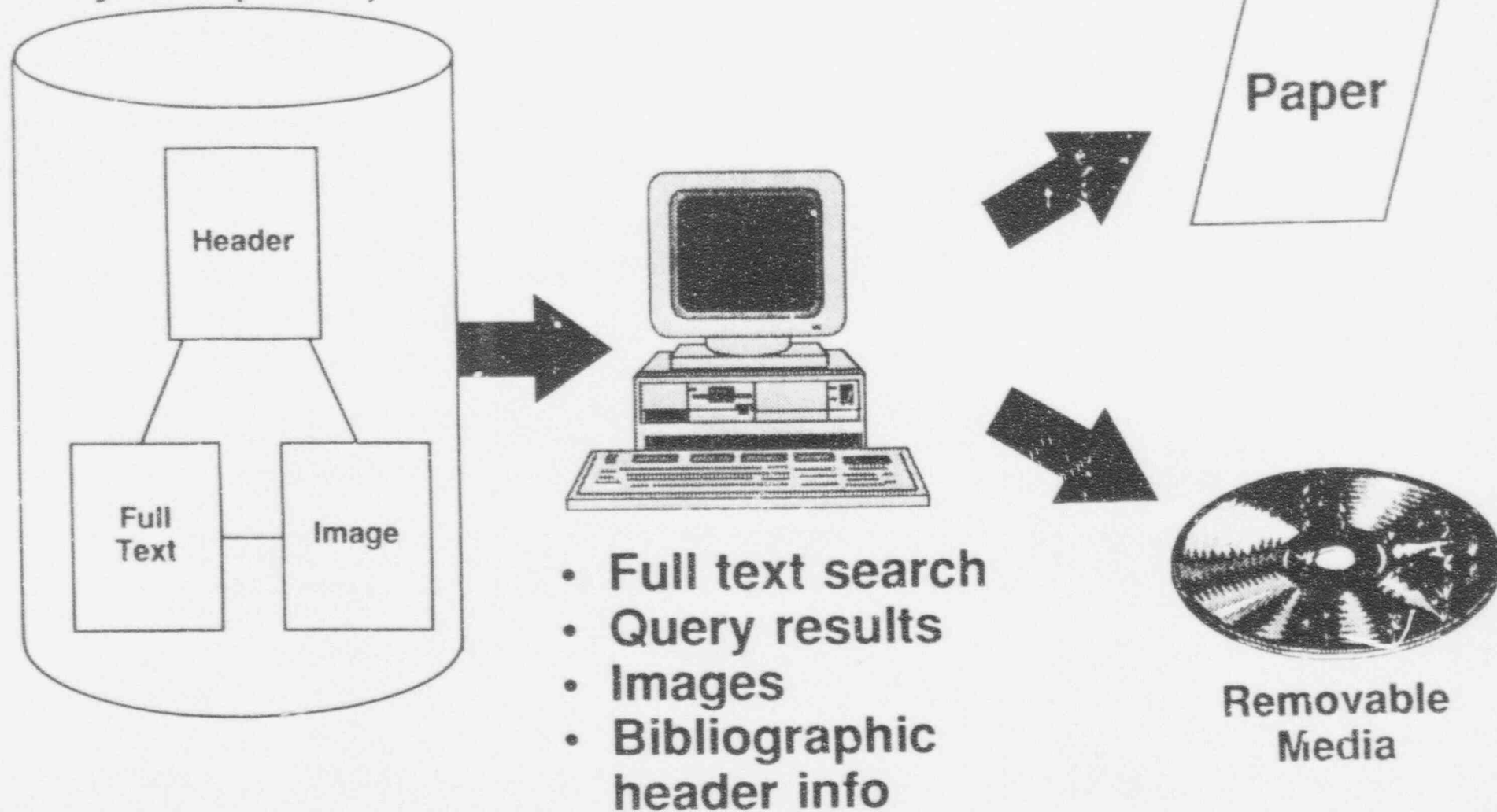


Licensing Data Management System (LDMS) inputs

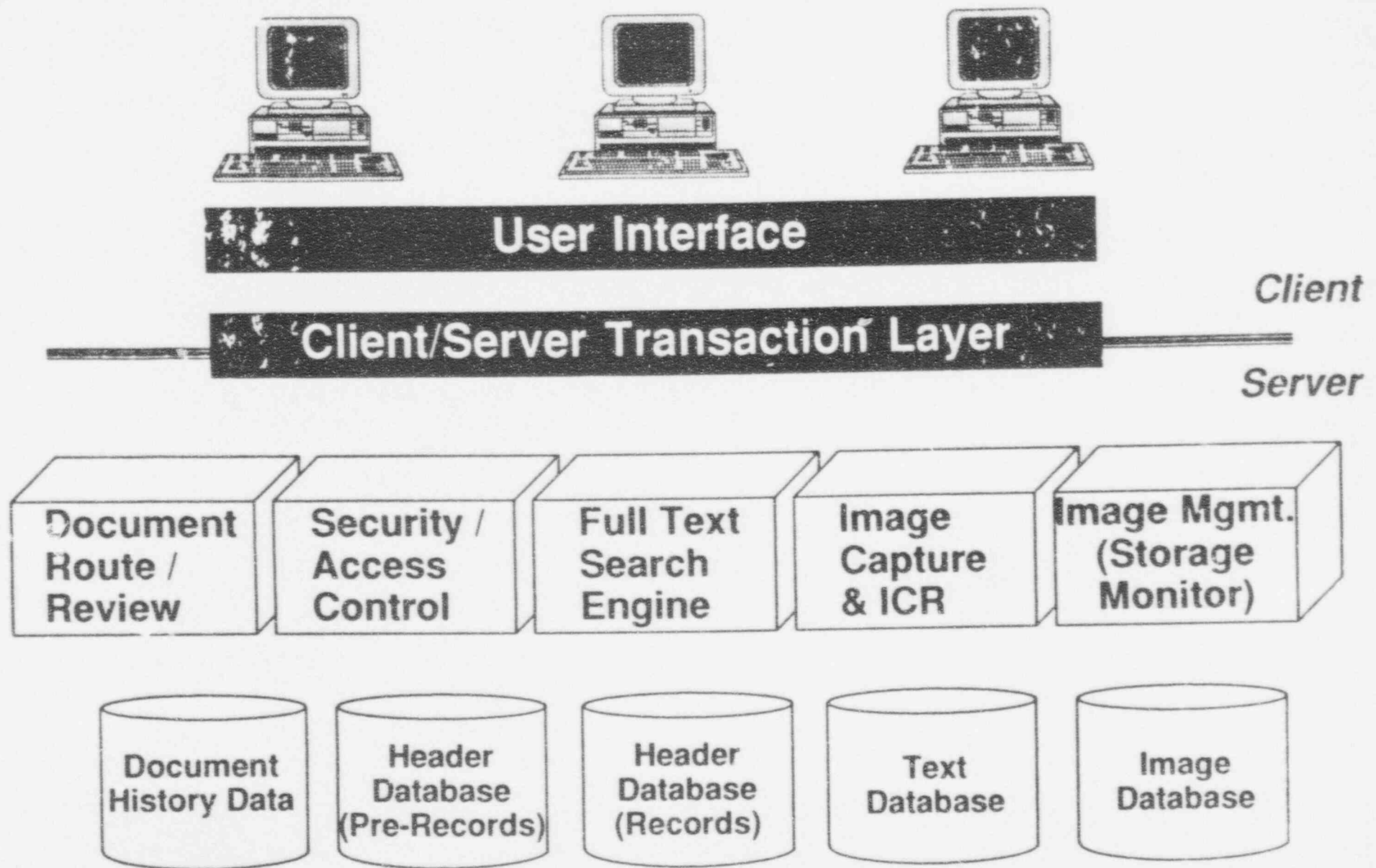


LDMS Outputs

Licensing Data Management System (LDMS)



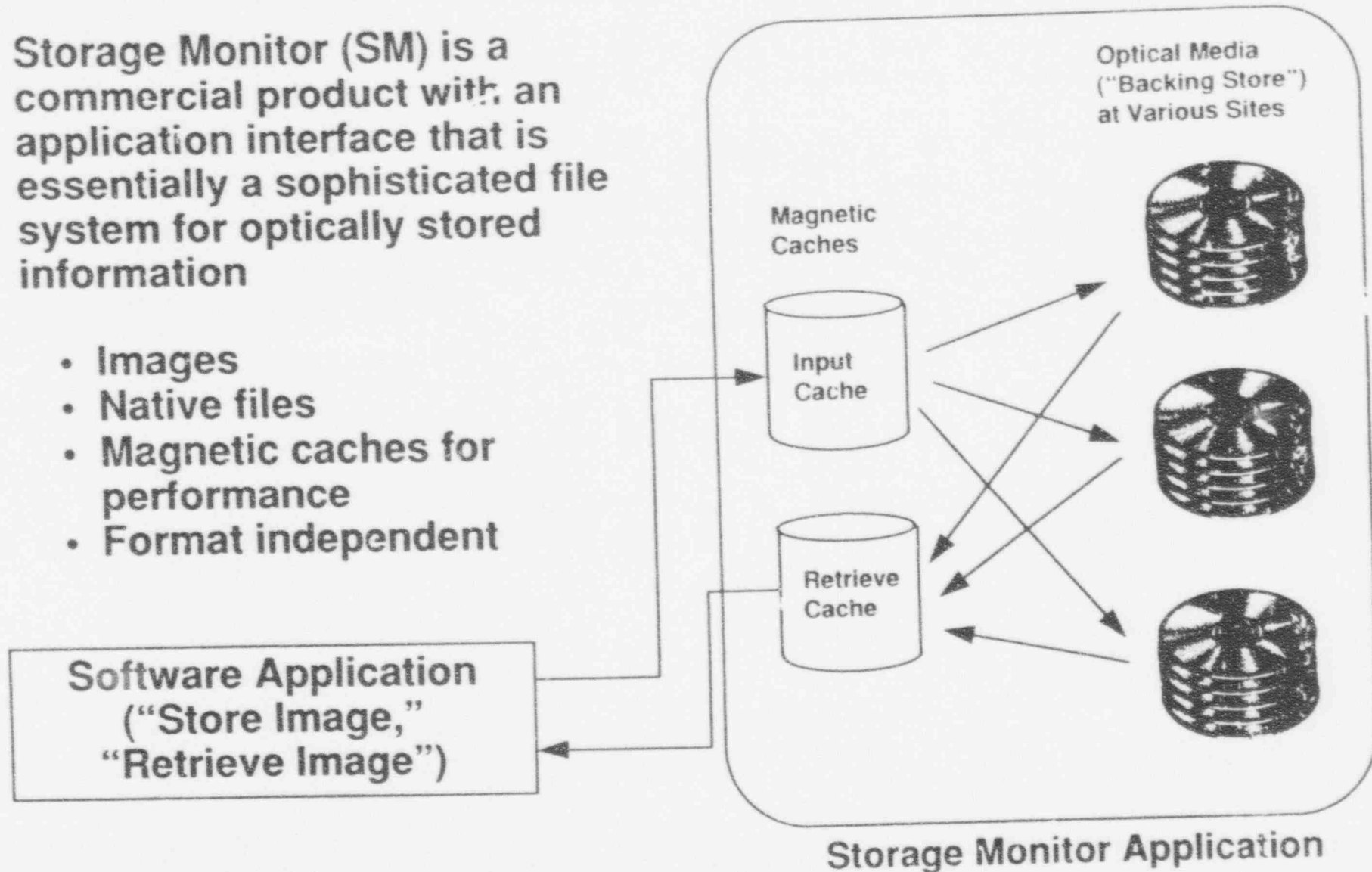
Modular "Plug and Play" Architecture



What is Storage Monitor?

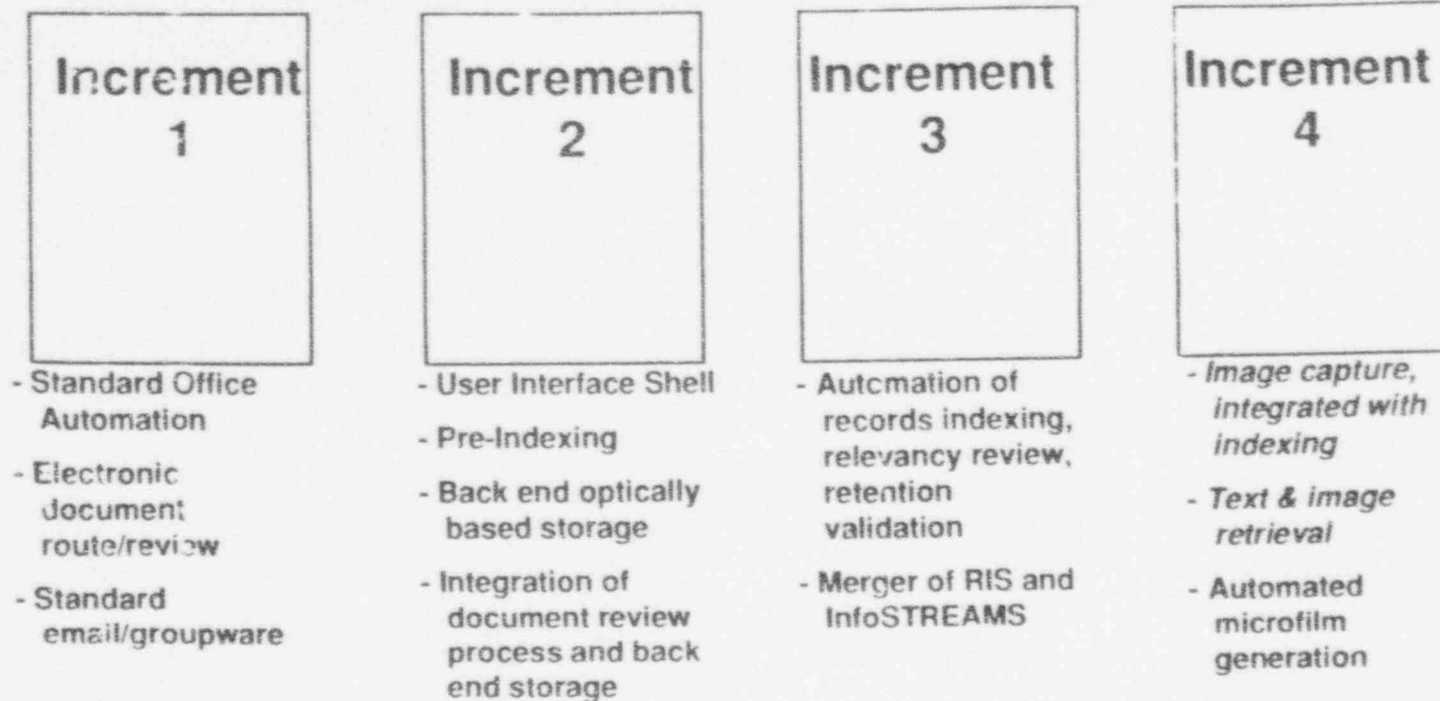
Storage Monitor (SM) is a commercial product with an application interface that is essentially a sophisticated file system for optically stored information

- Images
- Native files
- Magnetic caches for performance
- Format independent

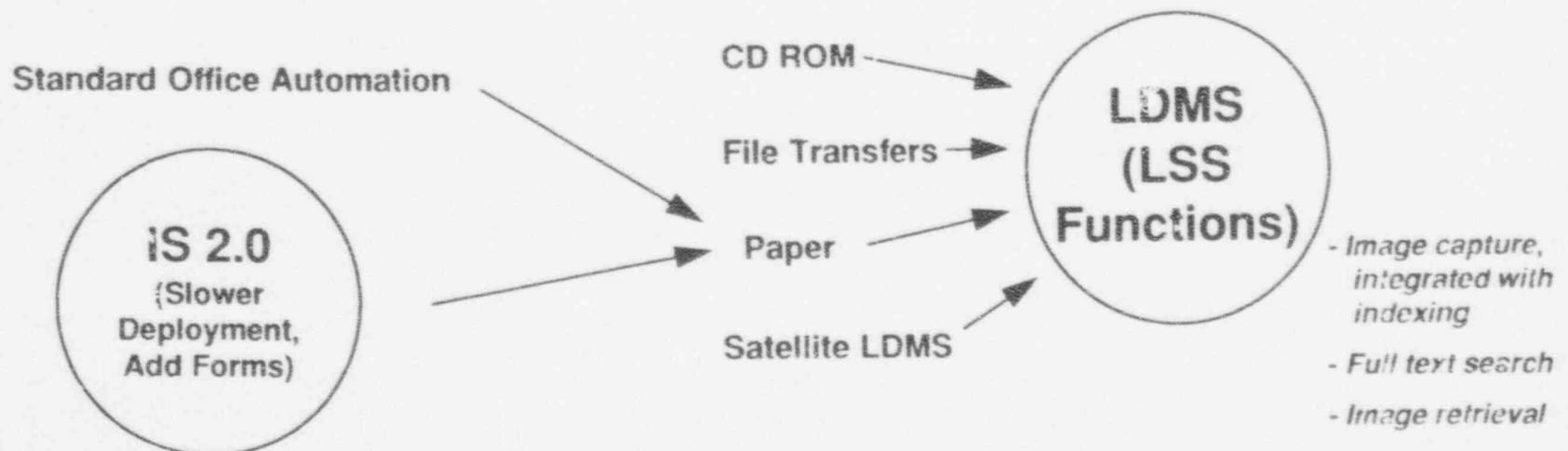


Change to Plan - Leverage LSS Functions


Previous Plan



Current 6 Month Plan (to end of FY94)



Civilian Radioactive Waste
Management System
Management & Operating
Contractor

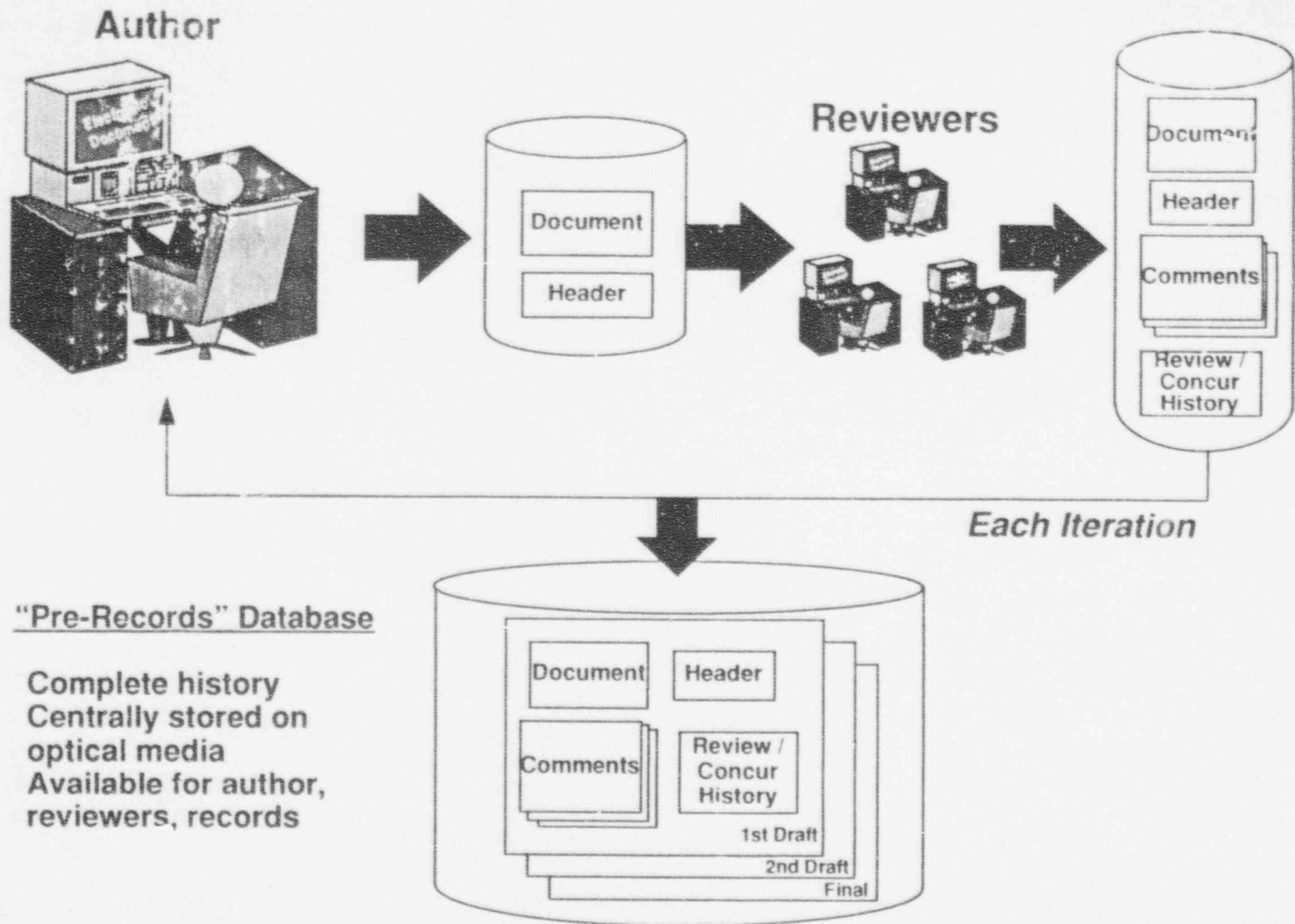

TRW Environmental Safety
Systems Inc.

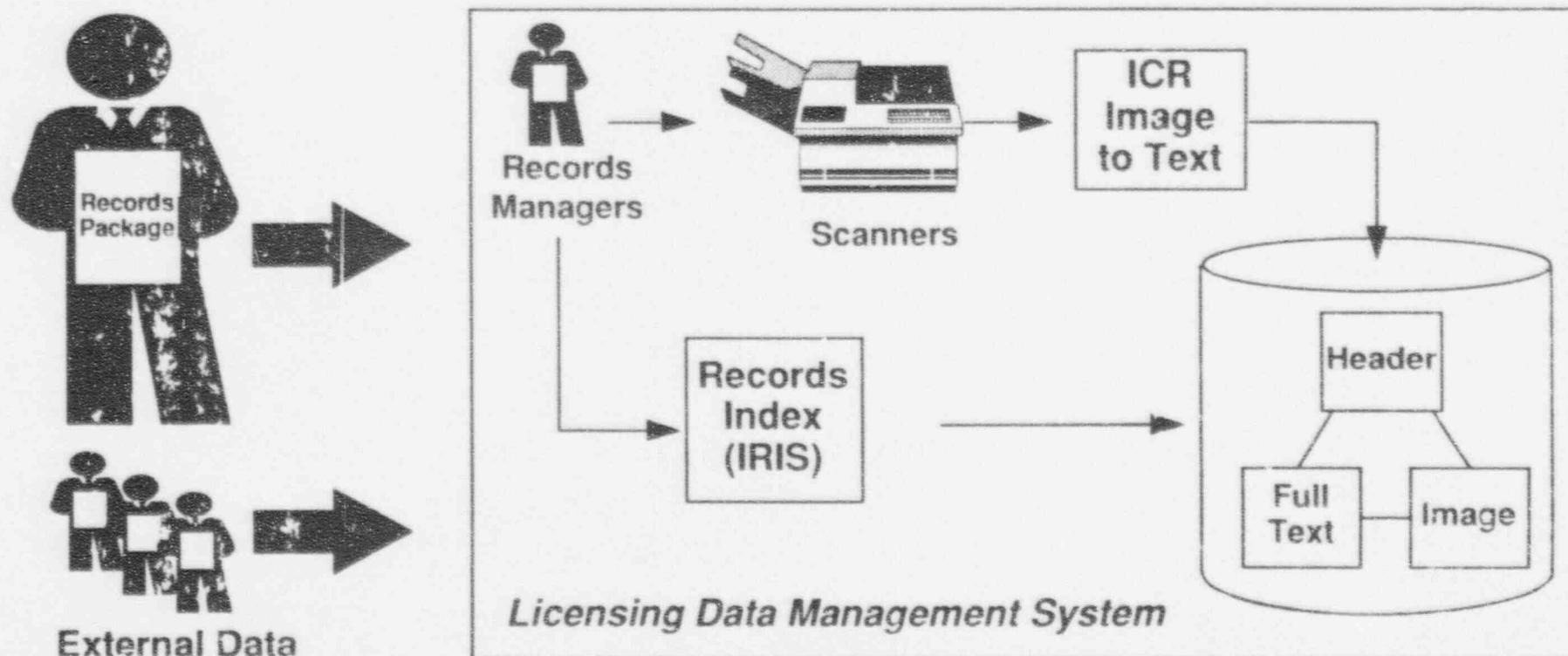
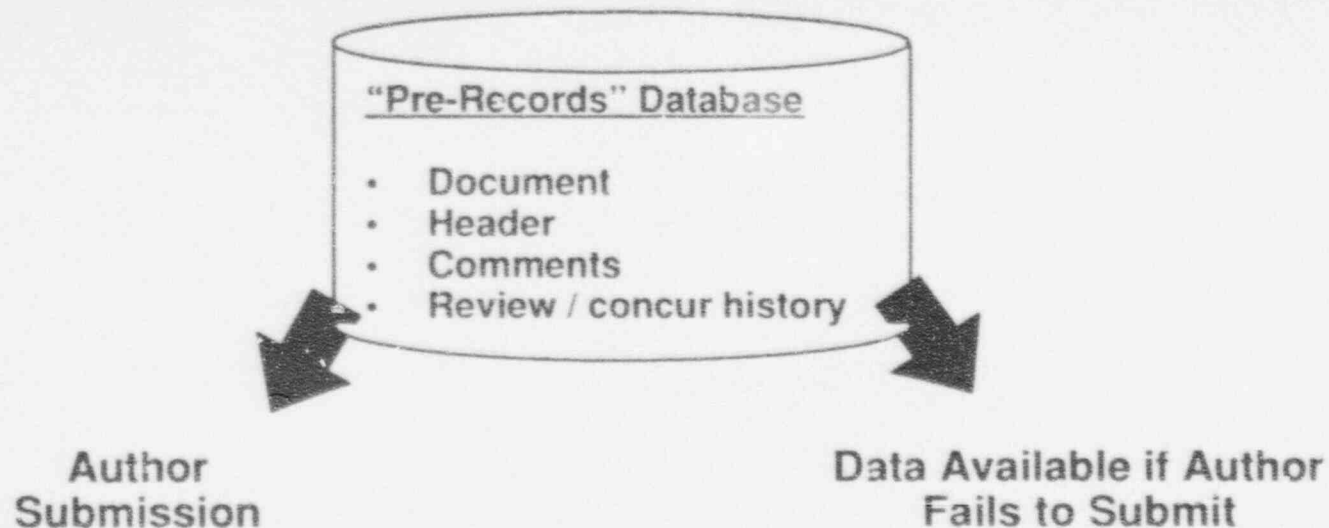
InfoSTREAMS Overview

B&W Fuel Company
Duke Engineering & Services, Inc.
Fluor Daniel, Inc.
INTERA Inc.

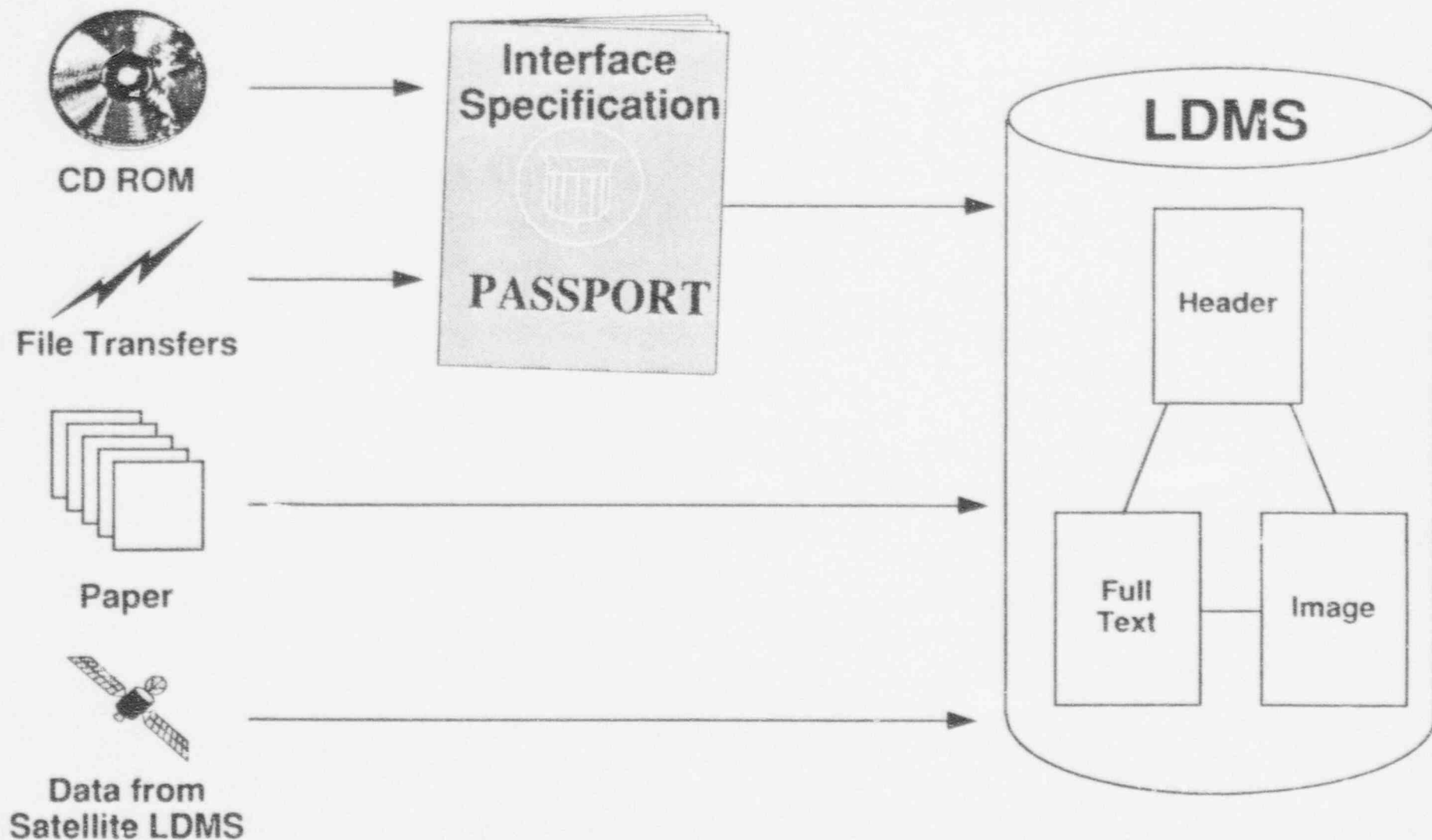
JK Research Associates, Inc.
E. R. Johnson Associates, Inc.
Logicon RDA

Morrison Knudsen Corporation
TRW Environmental Safety Systems Inc.
Winston & Strawn
Woodward-Clyde Federal Services

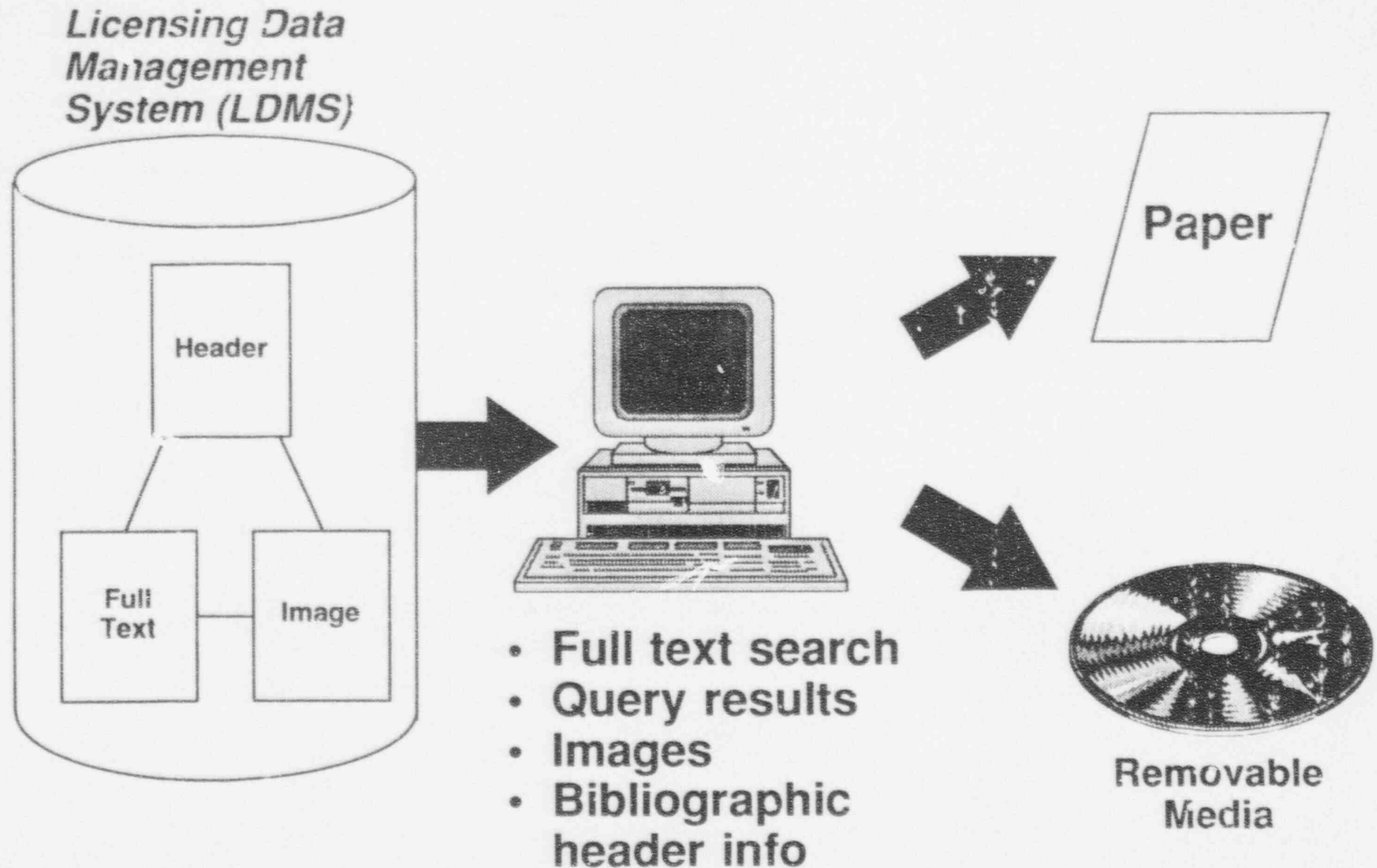




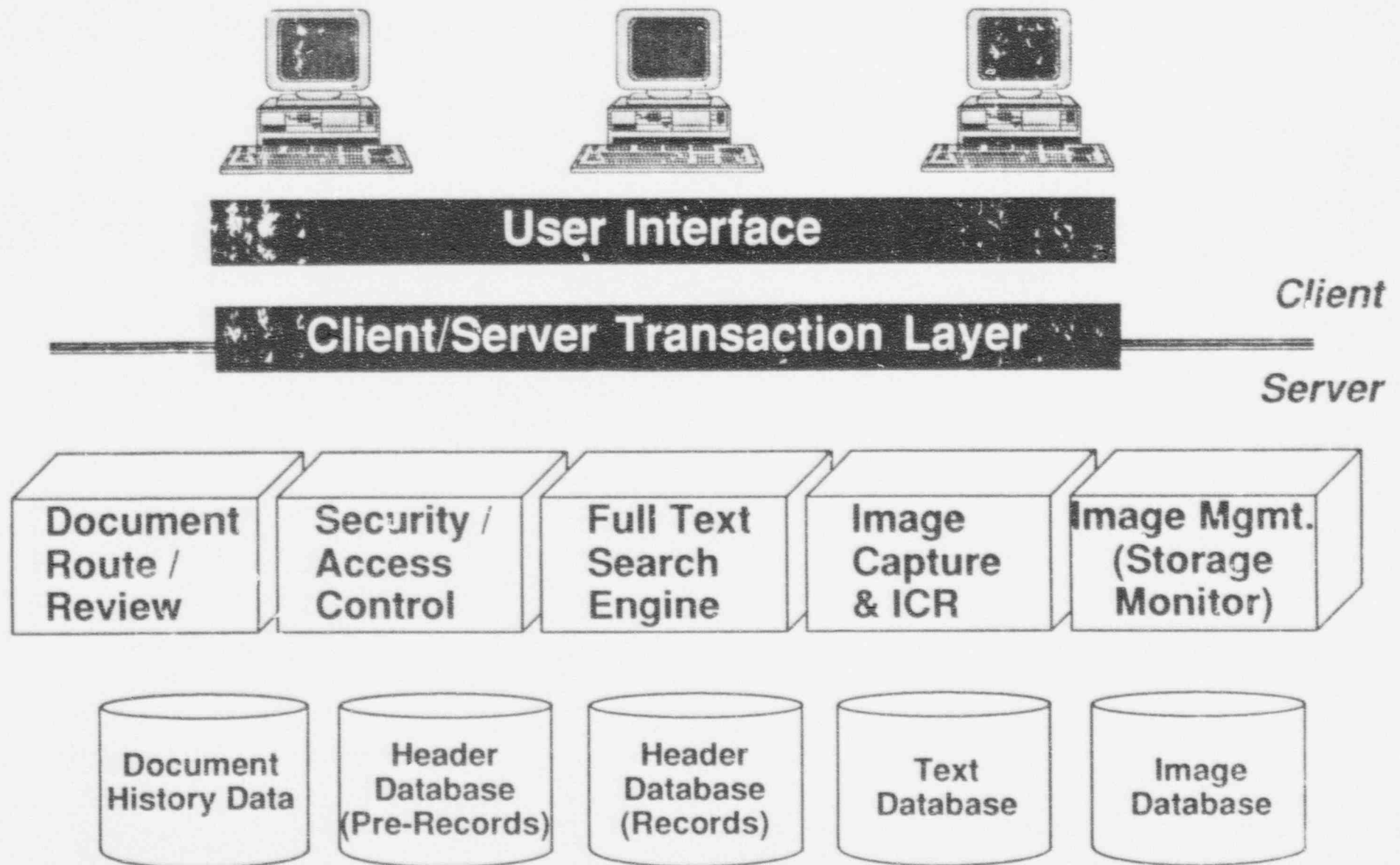
Licensing Data Management System (LDMS) inputs



LDMS Outputs



Modular "Plug and Play" Architecture



Civilian Radioactive Waste
Management System

Management & Operating
Contractor

SR-0303

4/12/94

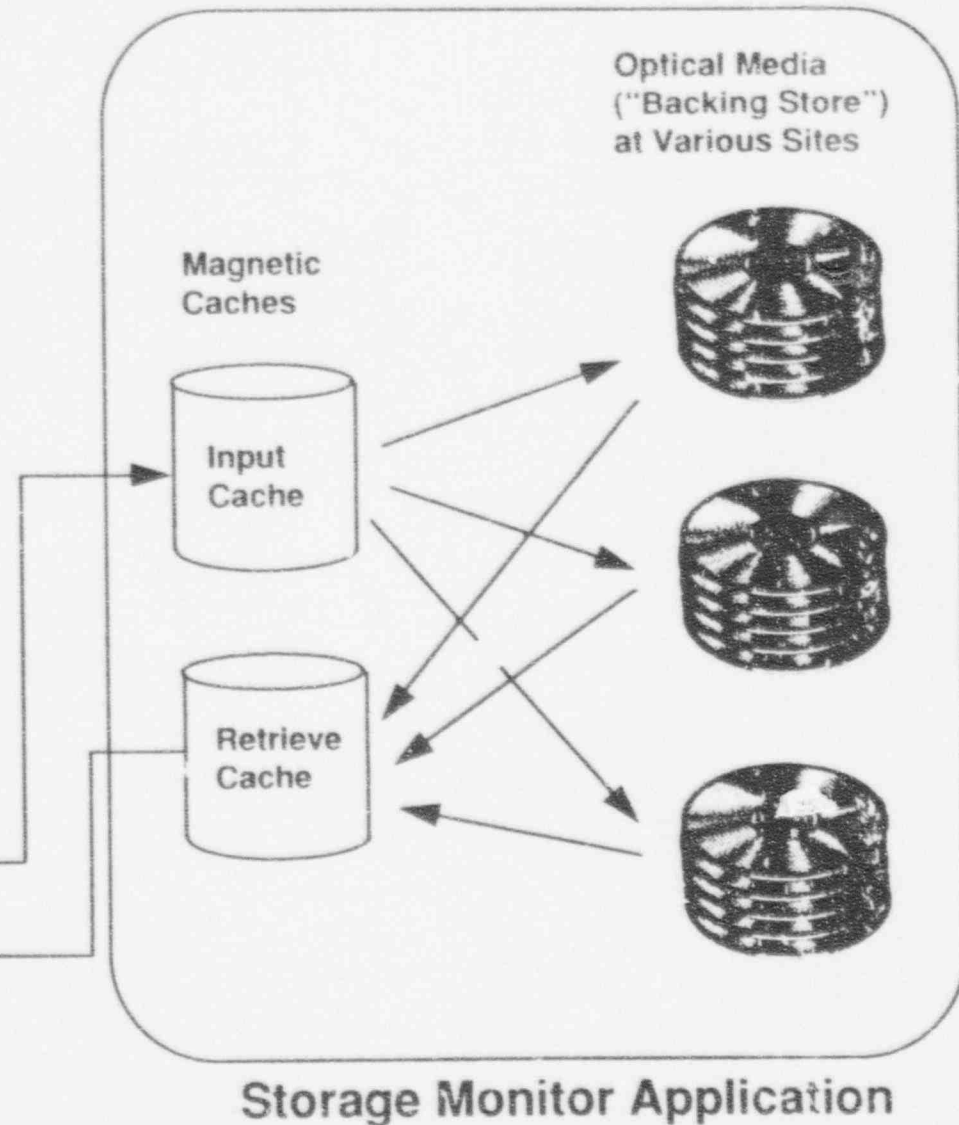
6

What is Storage Monitor?

Storage Monitor (SM) is a commercial product with an application interface that is essentially a sophisticated file system for optically stored information

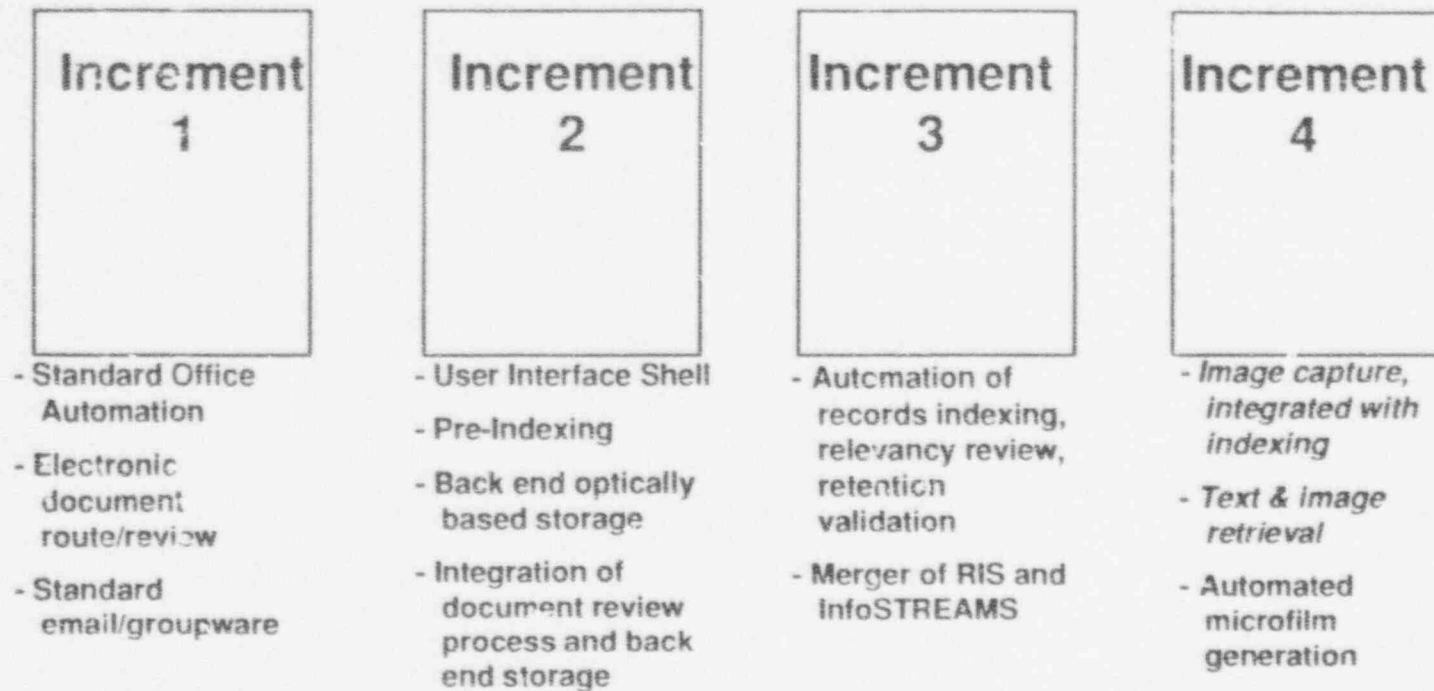
- Images
- Native files
- Magnetic caches for performance
- Format independent

Software Application
("Store Image,"
"Retrieve Image")

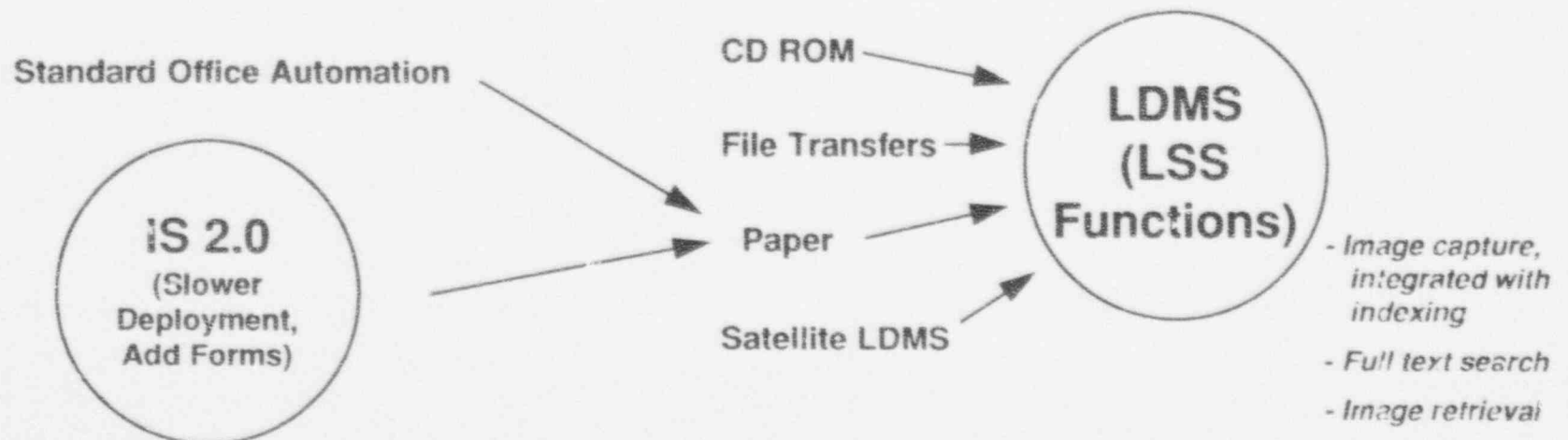


Change to Plan - Leverage LSS Functions

Previous Plan



Current 6 Month Plan (to end of FY94)



LSSA AUDIT PROGRAM

Presented by:

DAVID S. DRAPKIN

**DIRECTOR, LSS SUPPORT AND OVERSIGHT SERVICES
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION**

**MEETING OF THE LICENSING SUPPORT SYSTEM ADVISORY REVIEW
PANEL**

**APRIL 14, 1994
LAS VEGAS, NEVADA**

**LSSARP PRESENTATION
APRIL 14, 1994**

OUTLINE/AGENDA

- **PURPOSE OF PRESENTATION**
- **CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM**
- **PURPOSE AND GOALS OF AUDIT PROGRAM**
- **OVERVIEW OF LSSA AUDIT PROGRAM**
- **STANDARDS AND REQUIREMENTS DOCUMENTS**

OUTLINE/AGENDA (continued)

- **GENERIC AUDIT TYPES**
- **GENERIC AUDIT METHODOLOGY**
- **SPECIFIC LSSA AUDITING ACTIVITIES**
 - **PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT**
 - **DOCUMENTARY MATERIAL PROCESSING OPERATIONS**
- **AUDIT PROGRAM COSTS**

PURPOSE OF PRESENTATION

- GIVE FURTHER DETAILS OF THE LSSA'S CONTROL OF THE OPERATION, MAINTENANCE, AND CONTENT OF THE LSS VIA THE PROPOSED LSSA AUDIT PROGRAM
- EMPHASIZE THE LSSA'S OVERSIGHT ROLE RELATED TO DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS
- PROPOSE LSSARP PARTICIPATION IN LSSA AUDITS OF DOE'S LSS OPERATIONS

CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP)

THE LSSA'S MANDATE IF ALTERNATIVE 3 IS ADOPTED

- **ENSURE INTEGRITY OF LSS DATABASE**
- **EVALUATE AND CERTIFY PARTICIPANT COMPLIANCE**
- **OVERSEE DOE DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE TO ENSURE COMPLIANCE**

**CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE
ASSESSMENT PROGRAM (CAP) (continued)**

**THE PROPOSED LSSA CAP APPROACH CAN BE SEPARATED INTO FOUR
PRIMARY COMPONENTS:**

- **LSSA REVIEW OF PROGRAM MANAGEMENT DOCUMENTS AND
INFORMATION**
- **LSSA QA FACILITY**
- **LSSA AUDIT PROGRAM**
- **LSSARP OBSERVATION OF LSSA AUDITS OF DOE'S
DEVELOPMENT, OPERATION, AND MAINTENANCE**

PURPOSE OF AUDIT PROGRAM

- **HELP ENSURE DATABASE INTEGRITY**
- **EVALUATE COMPLIANCE WITH LSS RULE**
- **EVALUATE PARTICIPANT COMPLIANCE WITH *LSS PARTICIPANT COMMITMENTS***
- **PROVIDE DIRECT LSSA OVERSIGHT OF DOE'S OPERATION AND MAINTENANCE**
- **PROVIDE INPUT FOR CERTIFICATION OF PARTICIPANT COMPLIANCE**

GOALS OF THE AUDIT PROGRAM

THE LSSA WILL BE ABLE TO DETERMINE:

- **PARTICIPANT ABILITY TO MEET COMMITMENTS**
- **EFFECTIVENESS OF PARTICIPANTS' DOCUMENT PROCESSING OPERATIONS**
- **ACCURACY AND COMPLETENESS OF PARTICIPANTS' LSS DOCUMENTARY MATERIAL**
- **EFFECTIVENESS OF DOE'S OPERATION AND MAINTENANCE OF THE LSS**

OVERVIEW OF LSSA AUDIT PROGRAM

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE**
- **START-UP REVIEW TO EVALUATE PARTICIPANT DOCUMENT PROCESSING OPERATIONS**
- **SEMI-ANNUAL AUDITS OF EACH PARTICIPANT DOCUMENT PROCESSING OPERATION**
- **INTERIM FOCUSED AUDITS**

OVERVIEW OF LSSA AUDIT PROGRAM (continued)

- **AD HOC (UNANNOUNCED) AUDITS**
- **ONGOING REVIEW OF REQUIRED PARTICIPANT REPORTS AND DOCUMENTATION**
- **AUDIT REPORTING**
- **LSSARP PARTICIPATION THROUGH OBSERVATION OF LSSA AUDITS**

STANDARDS AND REQUIREMENTS DOCUMENTS USED IN AUDITING PROGRAM

- *LSS RULE*
- *LSS PARTICIPANT COMMITMENTS*
- *LSSA GUIDANCE ON THE FORMAT AND CONTENT OF PARTICIPANT COMPLIANCE PROGRAM PLANS*
- *LSS PARTICIPANT COMPLIANCE PROGRAM PLAN*
- *LSS PARTICIPANT MATERIAL SUBMISSION PLAN*
- *LSS PARTICIPANT CERTIFICATIONS*
- *LSSA PROCESSING STANDARDS AND GUIDANCE*
- *NRC REGULATORY GUIDE ON THE LSS TOPICAL GUIDELINES*

LSS PARTICIPANT COMMITMENTS

LSSA IS PREPARING A COMMITMENTS DOCUMENT THAT WILL:

- **CLEARLY DEFINE PARTICIPANT OBLIGATIONS (COMMITMENTS) NECESSARY FOR AN EFFECTIVE LSS PROGRAM**
- **PROPOSE STANDARDS**
- **DEFINE METHOD OF MEASURING PARTICIPANT PERFORMANCE**

THIS DOCUMENT WILL BE RELEASED FOR LSSARP REVIEW AND COMMENT

FOUR FUNCTIONAL AREAS OF LSS PARTICIPANT COMMITMENTS

- **GROUP ONE - PROPER IDENTIFICATION OF DOCUMENT UNIVERSE, PROPER RELEVANCY SCREENING, AND TIMELY SUBMISSION OF MATERIALS**
- **GROUP TWO - PHYSICAL CONDITION OF SUBMITTED MATERIAL AND ACCURATE CODING OF THE MATERIAL**
- **GROUP THREE - PARTICIPANT MANAGEMENT REQUIREMENTS AND CONDITIONS FOR GAINING AND RETAINING ACCESS**
- **GROUP FOUR - DOE OBLIGATIONS RELATIVE TO DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF THE LSS**

**IN THE HANDOUT YOU WILL RECEIVE AT THE CONCLUSION OF THIS
PRESENTATION, YOU WILL FIND SEVERAL ILLUSTRATIVE
COMMITMENTS
TO SERVE AS EXAMPLES OF THE LEVEL OF DETAIL ANTICIPATED**

Insert Figure 1 Here

GENERIC AUDIT TYPES

A SYSTEMATIC PROGRAM OF QA AUDITS INVOLVES EXAMINING THREE PRIMARY ASPECTS OF THE PARTICIPANT'S LSS-RELATED ACTIVITIES, COVERED BY THREE TYPES OF AUDITS:

- **ADEQUACY**
- **PROCESS**
- **RESULTS**

STATISTICAL SAMPLING

- **LSSA CAP CURRENTLY DESIGNED TO REVIEW STATISTICALLY VALID, RANDOM SAMPLES OF PARTICIPANT-SUBMITTED MATERIAL**
- **SOME ON-SITE AUDITING ACTIVITIES WILL ALSO BE BASED ON STATISTICAL RANDOM SAMPLING**
- **REVIEWING A SAMPLE IS MORE COST EFFECTIVE THAN EVALUATING 100 PERCENT OF EACH SUBMISSION**
- **THE STATISTICAL VALIDITY INHERENT IN THIS APPROACH PROVIDES A REASONABLE LEVEL OF RELIABILITY IN QUALITY ASSESSMENTS**

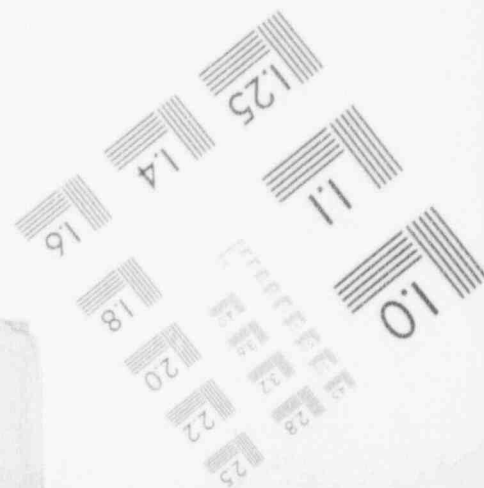
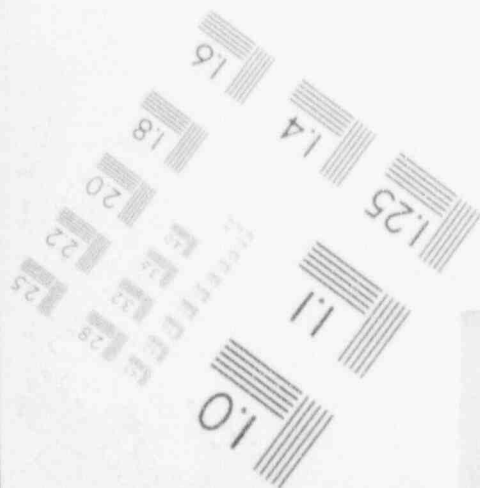
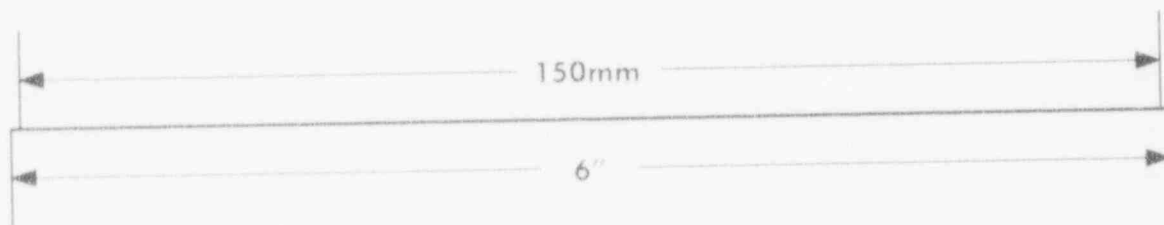
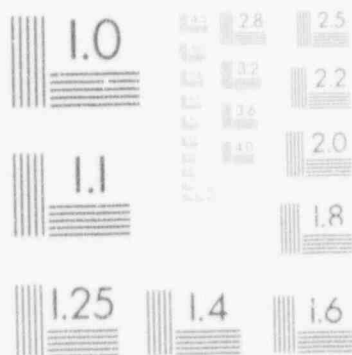
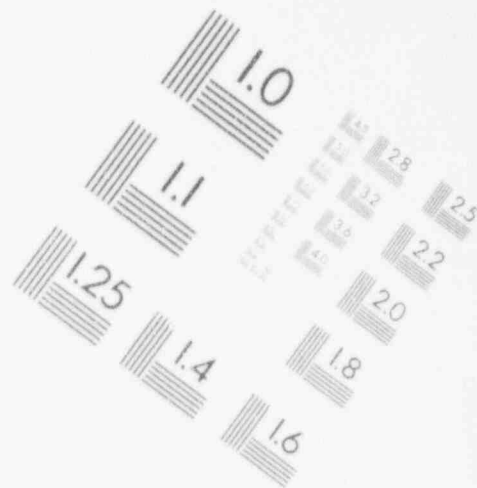
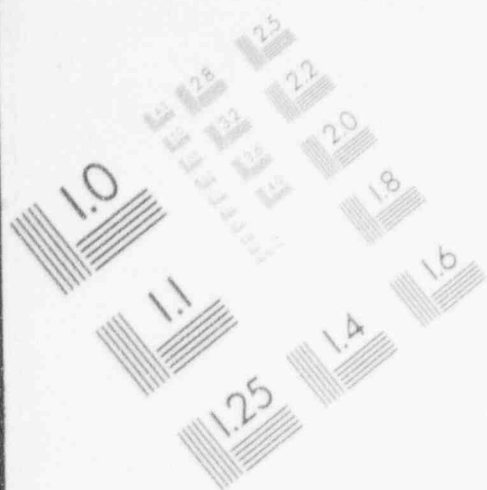
ADEQUACY AUDIT

PURPOSE IS TO DETERMINE:

- **ARE MANAGEMENT PLANS IN PLACE?**
- **DO MANAGEMENT PLANS ESTABLISH THE NECESSARY REQUIREMENTS?**
- **DO THE OPERATING PROCEDURES ADEQUATELY DESCRIBE THE METHODOLOGY AND ASSIGN RESPONSIBILITIES AT THE APPROPRIATE LEVEL TO ACCOMPLISH THE PROCESS?**

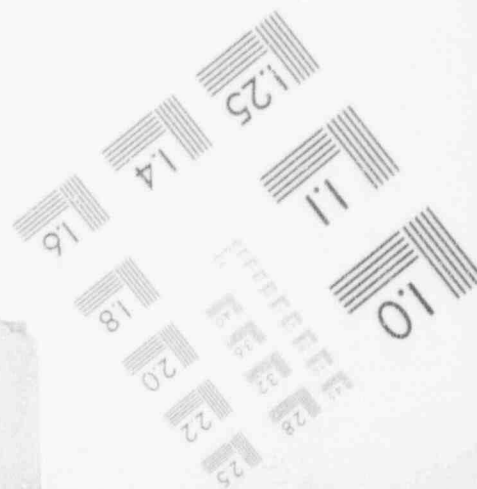
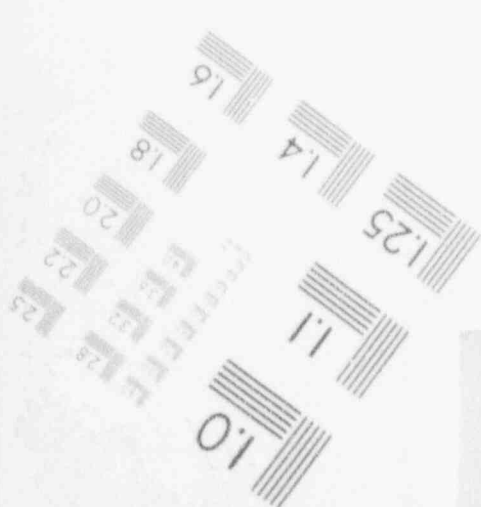
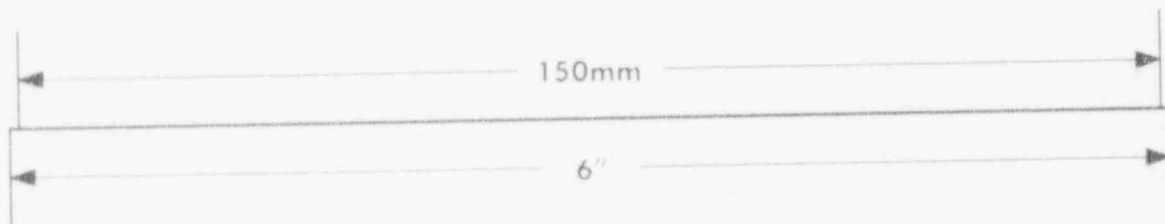
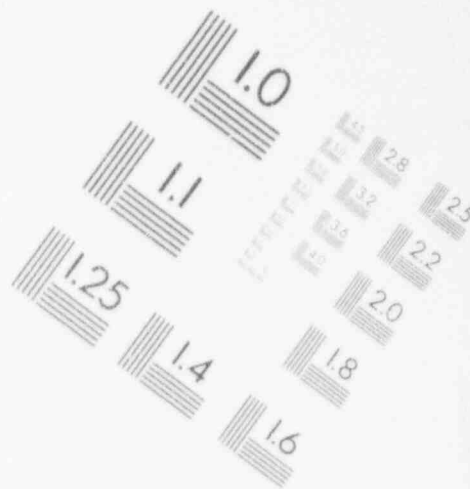
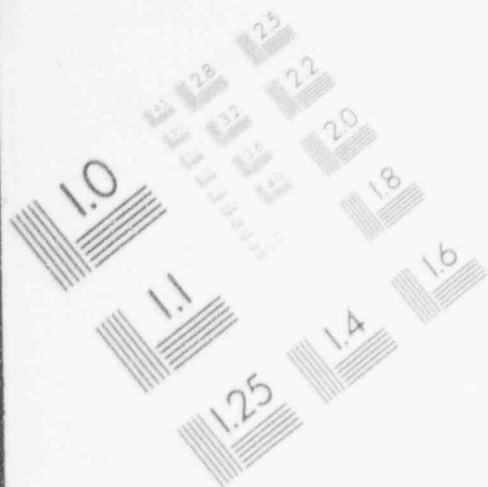
1

IMAGE EVALUATION TEST TARGET (MT-3)



1

IMAGE EVALUATION
TEST TARGET (MT-3)



PROCESS AUDITS

- **EXAMINE IMPLEMENTATION OF PARTICIPANT PLANS AND PROCEDURES**
- **REVIEW SHOULD INCLUDE RECORDS MAINTAINED THROUGHOUT THE PROCESS**
- **CAN COVER A BROAD RANGE OF SYSTEM ACTIVITIES OR FOCUS ON SPECIFIC AREAS**

RESULTS AUDITS

- **EXAMINATION OF THE RESULTS TO DETERMINE IF END PRODUCT IS FIT FOR ITS INTENDED USE**
- **FOCUSSES ON END PRODUCT TO ENSURE THAT THE PROCESS RESULTS ARE USABLE IN THE LSS**
- **UNDER THE CAP AS CURRENTLY CONCEIVED, NO NEED FOR ON-SITE RESULTS AUDITS OF PARTICIPANT-PREPARED DOCUMENTARY MATERIALS**

GENERIC AUDIT METHODOLOGY

THE GENERIC AUDIT METHODOLOGY INCLUDES FOUR BASIC PHASES:

- **AUDIT PLANNING**
- **CONDUCTING THE AUDIT**
- **REPORTING RESULTS**
- **FOLLOW-UP ACTIVITIES**

Insert Figure 2 Here

AUDIT PLANNING

- **INITIATING AN AUDIT**
- **AUDIT PERSONNEL**
- **AUDIT PREPARATION**
- **CHECKLISTS**
- **NOTIFICATION**

CONDUCTING THE ON-SITE AUDIT

- **OPENING CONFERENCE**
- **AUDITING PROCESS**
- **CLOSING CONFERENCE**

REPORTING RESULTS

- **RECORD OF THE ENTIRE AUDIT PROCESS**
- **GENERAL DESCRIPTION OF THE AUDIT SCOPE AND OBJECTIVES, PROCEDURES, AND PERSONNEL INVOLVED**
- **DETAILED ACCOUNT OF THE AUDIT PROCESS, THE EVIDENCE OBTAINED, AND THE CONCLUSIONS DRAWN**
- **LSSARP REPRESENTATIVE IN REVIEWING REPORTING RESULTS**

FOLLOW-UP ACTIVITIES

- **FINDINGS MUST BE FOLLOWED UP WITH A DOCUMENTED CORRECTIVE ACTION PLAN**
- **FOLLOW-UP WILL INCLUDE RE-EXAMINING SPECIFIC ACTIVITIES OR MATERIALS IN QUESTION**
- **SCHEDULE FOLLOW-UP FOCUSSED AUDIT**
- **FAILURE OF PARTICIPANT TO EFFECTUATE CORRECTIVE ACTION PLAN WILL REQUIRE LSSA DECISION ON ENFORCEMENT ACTIONS**

Insert Figure 3 Here

**SPECIFIC AUDITING ACTIVITIES
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE
OF THE LSS**

- **REVIEW AND APPROVAL OF SYSTEM REQUIREMENTS BEFORE IMPLEMENTATION**
- **EARLY LSSA PARTICIPATION DURING SYSTEM PLANNING**
- **DOE'S ROLE WILL BE TO PROPOSE REQUIREMENTS, WHILE LSSA WILL SERVE IN A REVIEW CAPACITY**
- **NO ACTUAL AUDITING OF DOE'S ACTIVITIES UNTIL IMPLEMENTATION OF LSS DESIGN**
- **SEMI-ANNUAL AUDIT OF DOE'S OPERATION AND MAINTENANCE OF LSS**
- **LSSA WILL REQUEST PARTICIPATION OF LSSARP REPRESENTATIVES AS OBSERVERS AT SEMI-ANNUAL DOE AUDITS**

DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS (CONTINUED)

**ELEMENTS OF THE LSSA AUDIT PROGRAM THAT ENSURE EFFECTIVE
OVERSIGHT OF DOE' LSS-RELATED ACTIVITY ARE:**

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE
ONCE LSS IS IN PLACE**
- **ONGOING MONITORING OF LSS AVAILABILITY AND
FUNCTIONALITY BY LSSA QA FACILITY**
- **USING AUDIT RESULTS AS KEY TO LSSA CERTIFICATION OF
DOE COMPLIANCE WITH REQUIREMENTS OF THE LSS RULE**

PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT

- **IDENTIFICATION OF POTENTIAL SOURCES OF DOCUMENTARY MATERIAL**
- **ESTIMATES OF DOCUMENTARY MATERIAL BACKLOG**
- **ESTIMATES OF DOCUMENT GENERATION RATE**
- **PRODUCTION SCHEDULE ESTIMATES (RELATED TO THE MATERIAL SUBMISSION PLAN)**
- **STAFFING**
- **TRAINING**
- **QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES, INCLUDING INTERNAL AUDITS**
- **TRACKING/COMPARISON OF PROCESSED MATERIALS TO PLANNED PRODUCTIVITY**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS OF DOE

- **PART OF LSSA SEMI-ANNUAL AUDITS**
- **INCLUDE RELEVANCY SCREENING**
- **FOCUS ON THE SYSTEMS AND OPERATIONAL PROCEDURES AS THE BASIS FOR EVALUATION**
- **COMPARE PROCEDURES TO ACTUAL PROCESS TO VALIDATE ACCURACY OF PROCESS IMPLEMENTATION**
- **REQUIRE DOE TO REVIEW PROCEDURES AND PROCESSES**
- **PREPARE A REPORT FOR EACH PROCESS REVIEWED**
- **REQUIRE DOE TO SUBMIT UPDATES AND DOCUMENTATION**
- **WRITTEN CONFIRMATION OF THE CORRECTIVE ACTION IN THE FORM OF A REMEDIAL ACTION PLAN**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS - NON-DOE PARTICIPANTS

- **AUDITS OF NON-DOE PARTICIPANTS WOULD BE REDUCED IN SCOPE**
- **SIX NON-DOE PARTICIPANT ENTITIES WILL SUPPLY DOCUMENTARY MATERIAL**
- **PRE-AUDIT PREPARATION SAME AS FOR DOE**
- **LSSA AUDIT TEAM WOULD CONDUCT AUDIT**
- **AUDIT TEAM CONSOLIDATES AND REPORTS RESULTS**
- **PARTICIPANTS REQUIRED TO DEVELOP A REMEDIAL ACTION PLAN**
- **REMEDIAL ACTION PLAN REVIEWED BY THE LSSA AND USED FOR FOLLOW-UP ACTIVITIES**
- **FREQUENCY OF AUDITS MAY BE INCREASED OR DECREASED**

ESTIMATED ANNUAL AUDIT PROGRAM COSTS

<u>AUDIT PROGRAM</u>	<u>APPROXIMATE DOLLARS</u>
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS	*
INFOSTREAMS	569,500
NON-DOE PARTICIPANT OPERATIONS	614,100
TOTAL	\$1,183,600

*BECAUSE INFORMATION ON THESE ACTIVITIES IS VERY INCOMPLETE, COSTING SUCH ACTIVITIES IS SPECULATIVE. NO SPECIFIC COSTS ARE IDENTIFIED IN THIS DOCUMENT FOR THOSE LSSA ACTIVITIES.

COMMENTS ON THE LSSA AUDIT PROGRAM

SHOULD BE SENT TO:

**DAVID S. DRAPKIN, DIRECTOR
LSS SUPPORT AND OVERSIGHT SERVICES
DIRECTOR'S OFFICE
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555**

COMMENTS ARE DUE NO LATER THAN MAY 16, 1994

LSSA AUDIT PROGRAM

Presented by:

DAVID S. DRAPKIN

**DIRECTOR, LSS SUPPORT AND OVERSIGHT SERVICES
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION**

**MEETING OF THE LICENSING SUPPORT SYSTEM ADVISORY REVIEW
PANEL**

**APRIL 14, 1994
LAS VEGAS, NEVADA**

**LSSARP PRESENTATION
APRIL 14, 1994**

OUTLINE/AGENDA

- **PURPOSE OF PRESENTATION**
- **CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM**
- **PURPOSE AND GOALS OF AUDIT PROGRAM**
- **OVERVIEW OF LSSA AUDIT PROGRAM**
- **STANDARDS AND REQUIREMENTS DOCUMENTS**

OUTLINE/AGENDA (continued)

- **GENERIC AUDIT TYPES**
- **GENERIC AUDIT METHODOLOGY**
- **SPECIFIC LSSA AUDITING ACTIVITIES**
 - **PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT**
 - **DOCUMENTARY MATERIAL PROCESSING OPERATIONS**
- **AUDIT PROGRAM COSTS**

PURPOSE OF PRESENTATION

- **GIVE FURTHER DETAILS OF THE LSSA'S CONTROL OF THE OPERATION, MAINTENANCE, AND CONTENT OF THE LSS VIA THE PROPOSED LSSA AUDIT PROGRAM**
- **EMPHASIZE THE LSSA'S OVERSIGHT ROLE RELATED TO DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS**
- **PROPOSE LSSARP PARTICIPATION IN LSSA AUDITS OF DOE'S LSS OPERATIONS**

CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP)

THE LSSA'S MANDATE IF ALTERNATIVE 3 IS ADOPTED

- **ENSURE INTEGRITY OF LSS DATABASE**
- **EVALUATE AND CERTIFY PARTICIPANT COMPLIANCE**
- **OVERSEE DOE DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE TO ENSURE COMPLIANCE**

CONTEXT OF AUDIT PROGRAM WITHIN LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP) (continued)

**THE PROPOSED LSSA CAP APPROACH CAN BE SEPARATED INTO FOUR
PRIMARY COMPONENTS:**

- **LSSA REVIEW OF PROGRAM MANAGEMENT DOCUMENTS AND
INFORMATION**
- **LSSA QA FACILITY**
- **LSSA AUDIT PROGRAM**
- **LSSARP OBSERVATION OF LSSA AUDITS OF DOE'S
DEVELOPMENT, OPERATION, AND MAINTENANCE**

PURPOSE OF AUDIT PROGRAM

- **HELP ENSURE DATABASE INTEGRITY**
- **EVALUATE COMPLIANCE WITH LSS RULE**
- **EVALUATE PARTICIPANT COMPLIANCE WITH *LSS PARTICIPANT COMMITMENTS***
- **PROVIDE DIRECT LSSA OVERSIGHT OF DOE'S OPERATION AND MAINTENANCE**
- **PROVIDE INPUT FOR CERTIFICATION OF PARTICIPANT COMPLIANCE**

GOALS OF THE AUDIT PROGRAM

THE LSSA WILL BE ABLE TO DETERMINE:

- **PARTICIPANT ABILITY TO MEET COMMITMENTS**
- **EFFECTIVENESS OF PARTICIPANTS' DOCUMENT PROCESSING OPERATIONS**
- **ACCURACY AND COMPLETENESS OF PARTICIPANTS' LSS DOCUMENTARY MATERIAL**
- **EFFECTIVENESS OF DOE'S OPERATION AND MAINTENANCE OF THE LSS**

OVERVIEW OF LSSA AUDIT PROGRAM

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE**
- **START-UP REVIEW TO EVALUATE PARTICIPANT DOCUMENT PROCESSING OPERATIONS**
- **SEMI-ANNUAL AUDITS OF EACH PARTICIPANT DOCUMENT PROCESSING OPERATION**
- **INTERIM FOCUSED AUDITS**

OVERVIEW OF LSSA AUDIT PROGRAM (continued)

- **AD HOC (UNANNOUNCED) AUDITS**
- **ONGOING REVIEW OF REQUIRED PARTICIPANT REPORTS AND DOCUMENTATION**
- **AUDIT REPORTING**
- **LSSARP PARTICIPATION THROUGH OBSERVATION OF LSSA AUDITS**

STANDARDS AND REQUIREMENTS DOCUMENTS USED IN AUDITING PROGRAM

- *LSS RULE*
- *LSS PARTICIPANT COMMITMENTS*
- *LSSA GUIDANCE ON THE FORMAT AND CONTENT OF PARTICIPANT COMPLIANCE PROGRAM PLANS*
- *LSS PARTICIPANT COMPLIANCE PROGRAM PLAN*
- *LSS PARTICIPANT MATERIAL SUBMISSION PLAN*
- *LSS PARTICIPANT CERTIFICATIONS*
- *LSSA PROCESSING STANDARDS AND GUIDANCE*
- *NRC REGULATORY GUIDE ON THE LSS TOPICAL GUIDELINES*

LSS PARTICIPANT COMMITMENTS

LSSA IS PREPARING A COMMITMENTS DOCUMENT THAT WILL:

- **CLEARLY DEFINE PARTICIPANT OBLIGATIONS (COMMITMENTS) NECESSARY FOR AN EFFECTIVE LSS PROGRAM**
- **PROPOSE STANDARDS**
- **DEFINE METHOD OF MEASURING PARTICIPANT PERFORMANCE**

THIS DOCUMENT WILL BE RELEASED FOR LSSARP REVIEW AND COMMENT

FOUR FUNCTIONAL AREAS OF *LSS* PARTICIPANT COMMITMENTS

- **GROUP ONE - PROPER IDENTIFICATION OF DOCUMENT UNIVERSE, PROPER RELEVANCY SCREENING, AND TIMELY SUBMISSION OF MATERIALS**
- **GROUP TWO - PHYSICAL CONDITION OF SUBMITTED MATERIAL AND ACCURATE CODING OF THE MATERIAL**
- **GROUP THREE - PARTICIPANT MANAGEMENT REQUIREMENTS AND CONDITIONS FOR GAINING AND RETAINING ACCESS**
- **GROUP FOUR - DOE OBLIGATIONS RELATIVE TO DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF THE LSS**

**IN THE HANDOUT YOU WILL RECEIVE AT THE CONCLUSION OF THIS
PRESENTATION, YOU WILL FIND SEVERAL ILLUSTRATIVE
COMMITMENTS
TO SERVE AS EXAMPLES OF THE LEVEL OF DETAIL ANTICIPATED**

Insert Figure 1 Here

GENERIC AUDIT TYPES

A SYSTEMATIC PROGRAM OF QA AUDITS INVOLVES EXAMINING THREE PRIMARY ASPECTS OF THE PARTICIPANT'S LSS-RELATED ACTIVITIES, COVERED BY THREE TYPES OF AUDITS:

- **ADEQUACY**
- **PROCESS**
- **RESULTS**

STATISTICAL SAMPLING

- LSSA CAP CURRENTLY DESIGNED TO REVIEW STATISTICALLY VALID, RANDOM SAMPLES OF PARTICIPANT-SUBMITTED MATERIAL
- SOME ON-SITE AUDITING ACTIVITIES WILL ALSO BE BASED ON STATISTICAL RANDOM SAMPLING
- REVIEWING A SAMPLE IS MORE COST EFFECTIVE THAN EVALUATING 100 PERCENT OF EACH SUBMISSION
- THE STATISTICAL VALIDITY INHERENT IN THIS APPROACH PROVIDES A REASONABLE LEVEL OF RELIABILITY IN QUALITY ASSESSMENTS

ADEQUACY AUDIT

PURPOSE IS TO DETERMINE:

- **ARE MANAGEMENT PLANS IN PLACE?**
- **DO MANAGEMENT PLANS ESTABLISH THE NECESSARY REQUIREMENTS?**
- **DO THE OPERATING PROCEDURES ADEQUATELY DESCRIBE THE METHODOLOGY AND ASSIGN RESPONSIBILITIES AT THE APPROPRIATE LEVEL TO ACCOMPLISH THE PROCESS?**

PROCESS AUDITS

- **EXAMINE IMPLEMENTATION OF PARTICIPANT PLANS AND PROCEDURES**
- **REVIEW SHOULD INCLUDE RECORDS MAINTAINED THROUGHOUT THE PROCESS**
- **CAN COVER A BROAD RANGE OF SYSTEM ACTIVITIES OR FOCUS ON SPECIFIC AREAS**

RESULTS AUDITS

- **EXAMINATION OF THE RESULTS TO DETERMINE IF END PRODUCT IS FIT FOR ITS INTENDED USE**
- **FOCUSSES ON END PRODUCT TO ENSURE THAT THE PROCESS RESULTS ARE USABLE IN THE LSS**
- **UNDER THE CAP AS CURRENTLY CONCEIVED, NO NEED FOR ON-SITE RESULTS AUDITS OF PARTICIPANT-PREPARED DOCUMENTARY MATERIALS**

GENERIC AUDIT METHODOLOGY

THE GENERIC AUDIT METHODOLOGY INCLUDES FOUR BASIC PHASES:

- **AUDIT PLANNING**
- **CONDUCTING THE AUDIT**
- **REPORTING RESULTS**
- **FOLLOW-UP ACTIVITIES**

Insert Figure 2 Here

AUDIT PLANNING

- **INITIATING AN AUDIT**
- **AUDIT PERSONNEL**
- **AUDIT PREPARATION**
- **CHECKLISTS**
- **NOTIFICATION**

CONDUCTING THE ON-SITE AUDIT

- **OPENING CONFERENCE**
- **AUDITING PROCESS**
- **CLOSING CONFERENCE**

REPORTING RESULTS

- **RECORD OF THE ENTIRE AUDIT PROCESS**
- **GENERAL DESCRIPTION OF THE AUDIT SCOPE AND OBJECTIVES, PROCEDURES, AND PERSONNEL INVOLVED**
- **DETAILED ACCOUNT OF THE AUDIT PROCESS, THE EVIDENCE OBTAINED, AND THE CONCLUSIONS DRAWN**
- **LSSARP REPRESENTATIVE IN REVIEWING REPORTING RESULTS**

FOLLOW-UP ACTIVITIES

- **FINDINGS MUST BE FOLLOWED UP WITH A DOCUMENTED CORRECTIVE ACTION PLAN**
- **FOLLOW-UP WILL INCLUDE RE-EXAMINING SPECIFIC ACTIVITIES OR MATERIALS IN QUESTION**
- **SCHEDULE FOLLOW-UP FOCUSSED AUDIT**
- **FAILURE OF PARTICIPANT TO EFFECTUATE CORRECTIVE ACTION PLAN WILL REQUIRE LSSA DECISION ON ENFORCEMENT ACTIONS**

Insert Figure 3 Here

**SPECIFIC AUDITING ACTIVITIES
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE
OF THE LSS**

- REVIEW AND APPROVAL OF SYSTEM REQUIREMENTS BEFORE IMPLEMENTATION
- EARLY LSSA PARTICIPATION DURING SYSTEM PLANNING
- DOE'S ROLE WILL BE TO PROPOSE REQUIREMENTS, WHILE LSSA WILL SERVE IN A REVIEW CAPACITY
- NO ACTUAL AUDITING OF DOE'S ACTIVITIES UNTIL IMPLEMENTATION OF LSS DESIGN
- SEMI-ANNUAL AUDIT OF DOE'S OPERATION AND MAINTENANCE OF LSS
- LSSA WILL REQUEST PARTICIPATION OF LSSARP REPRESENTATIVES AS OBSERVERS AT SEMI-ANNUAL DOE AUDITS

DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS (CONTINUED)

**ELEMENTS OF THE LSSA AUDIT PROGRAM THAT ENSURE EFFECTIVE
OVERSIGHT OF DOE' LSS-RELATED ACTIVITY ARE:**

- **PERIODIC AUDITS OF DOE LSS DEVELOPMENT**
- **SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE
ONCE LSS IS IN PLACE**
- **ONGOING MONITORING OF LSS AVAILABILITY AND
FUNCTIONALITY BY LSSA QA FACILITY**
- **USING AUDIT RESULTS AS KEY TO LSSA CERTIFICATION OF
DOE COMPLIANCE WITH REQUIREMENTS OF THE LSS RULE**

PARTICIPANT LSS-RELATED PROGRAM MANAGEMENT

- **IDENTIFICATION OF POTENTIAL SOURCES OF DOCUMENTARY MATERIAL**
- **ESTIMATES OF DOCUMENTARY MATERIAL BACKLOG**
- **ESTIMATES OF DOCUMENT GENERATION RATE**
- **PRODUCTION SCHEDULE ESTIMATES (RELATED TO THE MATERIAL SUBMISSION PLAN)**
- **STAFFING**
- **TRAINING**
- **QUALITY ASSURANCE/QUALITY CONTROL ACTIVITIES, INCLUDING INTERNAL AUDITS**
- **TRACKING/COMPARISON OF PROCESSED MATERIALS TO PLANNED PRODUCTIVITY**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS OF DOE

- **PART OF LSSA SEMI-ANNUAL AUDITS**
- **INCLUDE RELEVANCY SCREENING**
- **FOCUS ON THE SYSTEMS AND OPERATIONAL PROCEDURES AS THE BASIS FOR EVALUATION**
- **COMPARE PROCEDURES TO ACTUAL PROCESS TO VALIDATE ACCURACY OF PROCESS IMPLEMENTATION**
- **REQUIRE DOE TO REVIEW PROCEDURES AND PROCESSES**
- **PREPARE A REPORT FOR EACH PROCESS REVIEWED**
- **REQUIRE DOE TO SUBMIT UPDATES AND DOCUMENTATION**
- **WRITTEN CONFIRMATION OF THE CORRECTIVE ACTION IN THE FORM OF A REMEDIAL ACTION PLAN**

DOCUMENTARY MATERIAL PROCESSING OPERATIONS - NON-DOE PARTICIPANTS

- **AUDITS OF NON-DOE PARTICIPANTS WOULD BE REDUCED IN SCOPE**
- **SIX NON-DOE PARTICIPANT ENTITIES WILL SUPPLY DOCUMENTARY MATERIAL**
- **PRE-AUDIT PREPARATION SAME AS FOR DOE**
- **LSSA AUDIT TEAM WOULD CONDUCT AUDIT**
- **AUDIT TEAM CONSOLIDATES AND REPORTS RESULTS**
- **PARTICIPANTS REQUIRED TO DEVELOP A REMEDIAL ACTION PLAN**
- **REMEDIAL ACTION PLAN REVIEWED BY THE LSSA AND USED FOR FOLLOW-UP ACTIVITIES**
- **FREQUENCY OF AUDITS MAY BE INCREASED OR DECREASED**

ESTIMATED ANNUAL AUDIT PROGRAM COSTS

<u>AUDIT PROGRAM</u>	<u>APPROXIMATE DOLLARS</u>
DOE DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS	*
INFOSTREAMS	569,500
NON-DOE PARTICIPANT OPERATIONS	614,100
TOTAL	<u>\$1,183,600</u>

*BECAUSE INFORMATION ON THESE ACTIVITIES IS VERY INCOMPLETE, COSTING SUCH ACTIVITIES IS SPECULATIVE. NO SPECIFIC COSTS ARE IDENTIFIED IN THIS DOCUMENT FOR THOSE LSSA ACTIVITIES.

COMMENTS ON THE LSSA AUDIT PROGRAM

SHOULD BE SENT TO:

**DAVID S. DRAPKIN, DIRECTOR
LSS SUPPORT AND OVERSIGHT SERVICES
DIRECTOR'S OFFICE
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555**

COMMENTS ARE DUE NO LATER THAN MAY 16, 1994

Kirk Balcom
7617 Huron Drive
Gainesville, Virginia 22065
(703) 754-1399

April 7, 1994

Mr. John C. Hoyle
Chairman
LSS Advisory Review Panel
U.S. Nuclear Regulatory Commission
Mail Stop 16 H 3
Washington, D.C. 20555

Dear Mr. Hoyle:

The reconstituted Header Working Group of the LSS Advisory Review Panel met on February 23 - 24 at the offices of TRW in Vienna, Virginia and agreed upon several changes and additions to the header fields which had been previously approved by the ARP. Several fields were added as subparts to existing fields, there are new individual fields, and new groups of fields which have multiple subparts. For the most part, these changes reflect the ongoing development of DOE's records management systems and OCRWM's InfoStreams. In attendance were representatives from DOE, NRC, the State of Nevada, TRW and Labat-Anderson. Representatives from Clark County sent their comments by mail prior to the meeting.

The accompanying table lists the old fields, the new fields and the new groups of information which DOE would like to capture and recommendations for constructing the data base structure. For the most part, we hope it is self-explanatory. Most of the additions have to do with tracking documents, their electronic images, the relationships between documents, QA status, concurrence/approval information and additional data which we refer to as "housekeeping." Two additional categories at the end of the table, "Audit Information" and "License Process Information," reflect the requirements for data used by the Compliance Assessment Program and licensing procedural documents, respectively.

NRC raised the issue of including adequate fields for auditing the entry and maintenance of documentary materials and non-documentary references into the LSS as an integral part of systems design implementation. Reference is made in the list of fields to "LSS Audit Information." It is expected that the definitions and descriptions will be the subject of future meetings in conjunction with the Compliance Assessment Program.

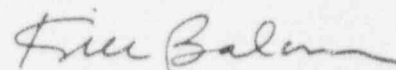
I have attached the original report of "Recommended Fields for LSS Header Records," dated May 18, 1990 and the subsequent appendix with two additional fields for

9407140117

reference and background purposes. Most of the information is still valid. That paper was organized around four categories: 1) fields required by participants, 2) fields optional to participant, but completed by the LSSA, 3) fields optional to both the participants and the LSSA, and 4) fields not applicable to the participant, but provided by the LSSA. The premise then was that there would be capture stations at various locations with clear guidelines for the division of responsibility for data entry. Given the present uncertainty over data validation roles and the location of the LSS computer, we have organized the table of fields with a less precise distinction of exactly which organization will be responsible for which data other than the obvious. We expect this to shake out once the participants have agreed on these issues.

Please let me know if you have any questions about our recommendations and what kind of presentation you would like at the upcoming ARP meeting.

Sincerely,

A handwritten signature in cursive script, appearing to read "Eric Balen".

cc: Harry Swainston, State of Nevada

LSS Header Working Group Meeting February 23-24 1994

The following changes were made to the attached LSS Field Definition Summary Table as a result of the Header Working Group meeting held on February 23-24, 1994. For ease of reading, Field names are underlined and *column headings* are in italics.

Table Changes:

- 1) The *Format Control* column was removed from table since it was the source of more confusion than clarification.
- 2) The Submitter HC Page / Image Count field was moved under the repeating group Electronic Image Reference Info.
- 3) Author and Author Organization fields: the column - *Data Submitted by Participant* was changed from 'Required' to 'Either Author or Author Organization is Mandatory'.
- 4) Receiver Name and Receiver Organization moved under Document Route/Tracking Info repeating group. Fields had been listed twice.
- 5) Document Date Flag field: the following *Comment* was added, 'Indicates an estimated date'.
- 6) Access Control Code field expanded to Access Control Info which includes:
 - Access Control Code - with *Comment* added, 'Default is PUBLIC'
 - Type of Protection - Required
 - Protection Explanation - Required
- 7) Double asterisks (**) added to Title, Created Title, Abstract, and Comments fields indicating: 'Only one variable length field existed with multiple entries just being appended to previous text'.
- 8) Copyright Info field name changed to Copyright - since a repeating group of information with additional information was not required for copyrighted material. The *Controlled Authority List* entry for Copyright was changed from 'Y' to 'N'.
- 9) Document Type field: the column - *Data Supplied by LSS System or LSSA* was changed from 'N' to 'Optional'.
- 10) Publication Info: Page Range field - a *Comment* was added to reflect: 'Electronically imaged page range shall be stored'.
- 11) Descriptive field: the column - *Data Supplied by Participant* changed from 'Mandatory' to 'Optional'; the column - *Data Supplied by LSS System or LSSA* was changed from 'Required' to 'Mandatory'.
- 12) Identifiers field - the *Comment* was removed (did not apply).
- 13) Sponsoring Organization field: the column - *Data Submitted by Participant* was changed from 'Required' to 'Optional'.
- 14) Contract Number field: Deleted; Not required in LSS.
- 15) Image Reference Info field: Names changed to reflect that Image meant Electronic Image:

Electronic Image Reference Info:

- Electronic Image Count - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.
- Electronic Image Location ID - the column - *Data Supplied by LSS System or LSSA* = 'Mandatory'.

- 16) Electronic Document Route/Tracking Info field name changed to Document Route/Tracking Info - since route tracking information is needed for hardcopy documents as well as electronic documents routed electronically.
- 17) LSS Record Housekeeping Info: list of fields updated to include fields previously recommended by Header Working Group as administrative and process tracking fields in document: Recommended Fields for LSS Header Records, 5/18/90.
- 18) LSS Audit Info: repeating group added per Dave Drapkin's suggestion to satisfy auditing requirements.
- 19) LSS/InfoSTREAMS field name: LSS/IS Accession Number was changed to Participant Accession Number.

Proposed LSS Field Definition Summary Table

Draft - As of 3/9/94

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:

- o *Original LSS Field Name / or New Candidate Field Name:* * = A field which is being proposed by OCRWM as a candidate LSS field.
- o *LSS / InfoSTREAMS Field Name* = Name common to both LSS and InfoSTREAMS field
- o *Data Submitted by Participant* = This field will be submitted by the participant (Mandatory = must be provided for each unit (record); Required = must be provided if applicable; Optional = provided at discretion of participant)
- o *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)
- o *Multi-valued* = Multiple entries allowed in a field.
- o *Controlled Authority List* = List of accepted entries to be used by all participants, such as document types or specific forms of an organization name.
- o *Free Text Searchable* = The ability to perform phrase or single-word searches of the field entries.
- o *Comments/Issues* = Any additional comments or outstanding issues.

Legend:

- o Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined
 * A field which is being proposed by OCRWM as a candidate LSS field.
 ** Only one variable length text field. Multiple entries just appended to previous text.

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
✓ LSS Accession Number	LSS Accession Number	N	Mandatory	N	N	NA	Generated by LSS
✓ Participant Accession Number	Participant Accession Number	Mandatory	N	Y	N	NA	
✓ Submitter Center	Submitter Center	Mandatory	N	Y	Y	NA	
✓ Title/Description	Title	Either Title or Created Title is Mandatory	N	N**	N	Y	Title and Created Title are searchable as one field
	Created Title	"	N	N**	N	Y	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
✓ Author	Author Name	Either Author or Author Organization is Mandatory.	N	Y	TBD <i>N</i>	N	Need full Name?
✓ Author Organization	Author Organization	<i>" Either Author or Org. is Mandatory"</i>	N	Y	Y	Y	
✓ Document Date	Document Date	Mandatory	N	N	N	NA	Indicates an estimated date
	Document Date Flag	Required	N	N	Y	NA	
✓ Document/Report Number	Document Number	Required <i>Mandatory</i>	N	Y	N	NA	
✓ Document Condition	Document Condition	Required <i>Mandatory</i>	N	Y	Y	NA	
✓ Edition/Version	Version	Required <i>And</i>	N	Y <i>N</i>	N	Y	
✓ Event Date	Event Date	Required <i>Mandatory</i>	N	Y	N	NA	
✓ Event Date Code	Event Code	Required <i>Mandatory</i>	N	Y	Y	NA	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
*	Access Control Info:	Mandatory	N	-	-	-	Default value is 'Public'.
* Protected Status	<i>Expanded</i> Access Control Code	Mandatory	N	Y	Y	NA	
*	- Type of Protection	Required	N	TBD	TBD	TBD	
*	- Protection Explanation	Required	N	TBD	TBD	TBD	
* Related Documents	Related Record Number	Required <i>Max 1</i>	Y	Y	Y <i>N</i>	NA	Related Record Number(s) supplied by Participants will be converted to LSS Accession Number(s)
*	Related Record Code	Required	Y	Y	Y	NA	
* Special Class	Special Class	Required <i>1</i>	N	Y	Y	Y	
* Abstract	Abstract	Required <i>Max 1</i>	N	N**	N	Y	
* Package ID	Package Identifier	Required <i>Max 1</i>	Y	Y	N	NA	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
*	Package Code	Required	Y	Y	Y	NA	
Copyright	Copyright	Required	N	N	N	NA	
Document Type	Document Type	Mandatory	Optional	Y	Y	Y	
Publication Data	Publication Info:	Optional	Required	-	-	-	Electronically imaged page range shall be stored.
	- Publication Source			N	Y	Y	
	- Publication Source Editor			Y	N	N	
	- Publisher			N	Y	N	
	- Publication Place			N	N	N	
	- Page Range			N	N	N	
	- Citation Information			N	N	TBD	
	- ISBN/Library of Congress Number			N	N	TBD	
Descriptors	Descriptors	Optional	Mandatory	Y	Y	Y	Use LSS Thesaurus

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
Identifiers	Identifiers	Optional	Optional	Y	N	Y	
Comments	Comments	Optional	Optional	N **	N	Y	
Sponsoring Organization	Sponsoring Organization	Optional	N	Y	Y	Y	Would need in IRIS too
*	Media	Required	N	Y	Y	NA	
*	QA Record	Mandatory	N	N	Y	NA	
*	Traceability Number	Required	Required	Y	N	N	
*	Traceability Code	Required	Required	Y	Y	NA	

Proposed LSS Field Definition Summary Table

<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
*	Electronic Image Reference Info:	Required	Required	-	-	-	Electronic image info supplied by Participant to be converted to LSS reference info. Temporary field used to validate submitter page/image count.
Submitter Page Count	Submitter HC Page / Electronic Image Count (Temp field)	Mandatory	N	N	N	N	
Number of Images	- Electronic Image Count	N	Mandatory	N	N	N	
*	- Electronic Image Location ID	N	Mandatory	TBD	N	N	System generated.
*	Searchable Text Reference Info:	Required	Required	-	-	-	
	(Contents TBD)						
*	Physical Unit Location Reference Info:	Required	Required	-	-	-	
	(Contents TBD)						

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
	Concurrence/Approval Info: - Concur/Approval Name - Concur/Approval Organization - Concur/Approval Type - Concur/Approval Status - Concur/Approval Date - Signed Name - Signed Organization - Concur/Approval Component File ID(s) - Electronic Signature Verification - Silence is Consent Flag	Required	N	-	-	-	

Proposed LSS Field Definition Summary Table							
Original LSS Field Name / 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
* Addressee Addressee Organization	Document Route/Tracking Info:	Required	N	-	-	-	
	- Receiver Name	Required	N	Y	TBD	N	
	- Receiver Organization	Required	N	Y	Y	Y	
	- Copyee Name						
	- Copyee Organization						
	- Date Sent						
	- Special Instruction						
	- Type Route						

Proposed LSS Field Definition Summary Table							
<i>Original LSS Field Name / or New Candidate Field Name (*)</i>	<i>LSS/InfoSTREAMS Field Name</i>	<i>Data Submitted by Participant</i>	<i>Data Supplied by LSS System or LSSA</i>	<i>Multi-Value</i>	<i>Controlled Authority List</i>	<i>Free Text Search</i>	<i>Comments/Issues</i>
Administrative and Process Tracking Fields:	LSS Record Housekeeping Info: - Date Received at LSS - Date Available in LSS - Date/Time Loaded into LSS - Date/Time of Last Modification - LSS Indexer ID - Station ID - QC ID - Subject & Abstract Cataloger ID - Cataloging QC ID - Processing Stage Status - Verification ID - Change Tracking Log	N	Mandatory	-	-	-	

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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
*	LSS Audit Info: (Contents TBD)	N	Required	-	-	-	

License Process Information - Related LSS Table

Original LSS Field Name / 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)						

Proposed Detailed LSS Field List

Draft - As of 3/9/94

Abstract

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

Access Control Info

A logical group of information pertaining to the access control placed on the document or unit. This field is used to indicate whether access to a document is restricted as privileged, and the type of protection to be enforced. The logical group may include the following fields:

- Access Control Code
- Type of Protection
- Protection Explanation.

Author Name

The name of each person listed on the document or unit as responsible for all or part of its creation. Only personal authors are entered in this field. Corporations as authors are captured in the Author Organization field. This field is part of a logical group which includes:

- Author Name
- Author Organization.

Entries in the Author field are linked to the corresponding entry in the Author Organization field.

Author Organization

The name of the organization (i.e., company, corporation or group) with which each author was affiliated at the time the document was created, or the name of the organization responsible for creating or originating the document when there is no personal author. If an author works for one organization and is representing another, then both affiliations should be captured, e.g., an attorney using a law firm's letterhead but representing a client organization. This field is part of a logical group which includes:

- Author Name
- Author Organization.

An entry in this field is linked to the Author Name field in order to provide the connection between an author and his/her affiliation. Thus a searcher seeking a document authored by J. A. Brown of Sandia will not retrieve a document authored by J. A. Brown of DOE and C. R. Smith of Sandia.

Comments

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

Concurrence/Approval Info

This is a logical group of concurrence/approval information concerning all persons listed on the concurrence/approval form for the document. This information is needed for all electronic documents which are routed electronically for concurrence and/or approval. The fields within the logical group may include:

- Concurrence/Approval Name
- Concur/Approval Organization
- Concur/Approval Type
- Concur/Approval Status
- Concurrence/Approval Date
- Signed Name
- Signed Organization
- Concur/Approval Component File ID(s)
- Electronic Signature Verification
- Silence is Consent Flag
- Electronic Signature.

For hardcopy documents, this field contains the names of all persons on the concurrence/approval list.

Copyright

An indication of the copyright status of a document. Entries will be made in this field if a document is copyrighted; this usually applies to documents that are commercially published. Copyrighted materials require permission from and possible payment of royalties to the author or publisher in order to store, reproduce, and distribute copies.

NOTE: Some copyright notices restrict the entry of copyrighted material into electronic format. This issue will need to be addressed prior to capturing images and searchable text of copyrighted documents.

Created Title

A sentence or phrase which 1) briefly describes the contents of the untitled document or a non-document, 2) augments the existing title to improve its clarity or meaning, or 3) augments the existing title to distinguish it from other titles that may be mistaken as duplicates. Either a Title or a Created Title is mandatory for every document or unit.

Descriptors

Words or phrases from the LSS Thesaurus representing the subject content of the document or unit. A descriptor may or may not be a word or phrase contained in the text of the document. As many descriptors should be used as needed to describe the main concepts of the unit. The use of the descriptor obviates the need for synonyms in a search statement.

Document Condition

The physical condition of the document at the time of entry into the system which would preclude the ability of the capture station to accurately or completely capture all information. This includes information such as INC (pages missing), ILL (portions illegible), and MARG (marginalia).

Document Date

The date on which the document was issued, published or completed. If the date is unknown, information in the document will be used to determine a likely date. In this case, the Estimated Date Flag is set. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date field is linked to the corresponding entry in the Document Date Flag field.

Document Date Flag

An indicator that the document date has been estimated from information contained in the document or in the accompanying documents. The Document Date field will contain the date that corresponds to the date on the record. If there is no date, other means of inferring the date will be used. In these cases, the Estimated Date Flag will be set to inform the user that the date has been estimated. This field is part of a logical group which includes:

- Document Date
- Document Date Flag.

The entry in the Document Date Flag field is linked to the corresponding entry in the Document Date field.

Document Number

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

Document Route/Tracking Info

This is a logical group of information concerning the routing, distribution, and tracking of a

document. The fields within this logical group may include:

- Receiver Name
- Receiver Organization
- Copyee Name
- Copyee Organization
- Date Sent
- Special Instructions
- Type of Route.

Document Type

The format or physical form of the document. Examples include a book, notebook and plan.

Electronic Image Reference Info

This is a logical group of reference information concerning the electronic image of the record.

The fields in this logical group may include:

- Electronic Image Count
- Electronic Image Location ID
- Submitter HC Page/Electronic Image Count - is a temporary field used by the LSS Administrator to validate the hardcopy page count or electronic image count supplied by the Participant.

Event Code

A code that identifies the type of event occurring on the Event Date. Entries will be made in this field only when there is an entry in the Event Date field. Examples of codes include: AUDIT (Audit), INSP (Inspection), HEAR (hearing), or EFFECT (Effective or Implementation Date). This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Code field is linked to the appropriate entry in the Event Date field.

Event Date

This field is used to capture the date of 1) The effective date of an order, procedure, or any other implementation date of the document; or, 2) the date(s) of a particular happening (such as an inspection, audit, meeting or hearing) that is the main topic(s) of the content of the document. The field will assist in assembling all documents about a particular event or all documents that must be implemented on or between specific dates. Examples of events include audits and inspections. Examples of implementation events include the effective date of an order or a regulation. This field is part of a logical group which includes:

- Event Date
- Event Code.

Each entry in the Event Date field is linked to the corresponding entry in the Event Code field.

Identifiers

Words or phrases which are not contained in the LSS Thesaurus but the submitter or cataloger believes represents the subject content of the unit and will assist the user in retrieval of the unit. These may be "buzz words" or words representing new concepts which have not yet been incorporated into the LSS Thesaurus. The terms in this field provide a candidate list of terms for inclusion into the LSS Thesaurus.

LSS Accession Number

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

LSS Audit Info

This is a logical group which contains LSS audit information. The specific field level information has not yet been defined.

LSS Record Housekeeping Info

This is a logical group of information which contains data base management administrative and process tracking fields used by the LSS Administrator. These fields may include:

- Date Received at LSS
- Date Available in LSS
- 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
- Change Tracking Log.

Media

The physical media upon which the unit is stored. Examples of Media include PHOTO (photographs), VIDEO (video), and DISK (magnetic disk).

Package Code

A code that identifies the type of package which has been assigned a Package ID. Entries will be made in this field only when there is an entry in the Package ID field. Examples of Package Codes include: DRAW (drawing package), DATA (data package), or INSPEC (inspection package). This field is part of a logical group which includes:

- Package Identifier
- Package Code.

Each entry in the Package Code field will be linked to the appropriate entry in the Package Identifier field.

Package Identifier

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

- Package Identifier
- Package Code.

Each entry in the Package Identifier field will be linked to the appropriate entry in the Package Identifier field.

Participant Accession Number

A unique identification number required by 10CFR 2/J to be assigned by the participant to each unit submitted for entry into the LSS. This number assists the submitters in locating documents they have submitted and assists the capture operation in verifying the identity of the documents received and matching it with the image and text. This field should contain a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alphanumeric scheme which the submitting organization might use to control their own units. It may be the accession number used in their own records system. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Physical Unit Location Reference Info

This is a logical group of location information which indicates where the physical unit can be found. The specific field level information has not yet been determined.

Publication Info

The publication information is a logical group of bibliographic information that is not covered in other fields, but is important in identifying or citing the document. This group in combination with author and title fields provides the user with a standard consistent bibliographic citation for use in creating bibliographies and references for reports. This logical group may include the following fields:

- Publication Source
- Publication Source Editor
- Publisher
- Publication Place
- Page Range
- Citation Information
- ISBN/Library of Congress Number.

QA Record

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

Related Record Code

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

- Related Record Number
- Related Record Code.

Each entry in the Related Record Code field will be linked to the appropriate entry in the Related Record Number field.

Related Record Number

This field contains the LSS Accession Number(s) of a record that has a particular relationship to the document or unit being entered. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document and a later version, comments, corrections, or errata); and whole/part (a book and its chapters, a journal and its articles), an information package and the cataloging units it contains. The type of relationship is captured in the Related Record Code field. This field is part of a logical group which includes:

- Related Record Number
- Related Record Code.

Each entry in the related Record Number field will be linked to the appropriate entry in the Related Record Code field.

Searchable Text Reference Info

This is a logical group of information required to identify and locate the searchable text file. The specific field level information has not yet been determined.

Special Class

The special group or category to which a document or unit may belong. Entries in this field identify special categories of documents in order to retrieve them as a group, such as Site Characterization Plan Reference. The field is also used to indicate that a record does not contain text or does not have an image. Examples of Special Class data includes: Header only, No searchable text or image, or Translation of a document from a foreign language.

Sponsoring Organization

The name of the agency or agencies responsible for funding or otherwise sponsoring the work reported in the unit.

Submitter Center

A coded field for the name and location of the participant or its subdivision submitting material for inclusion into the LSS. This field provides a contact point for material that is rejected by the LSS Administrator. It also provides a contact point for notification that the header, image, and searchable text have been loaded into the LSS and are ready for review and verification by the first submitting agency. This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center.

Each entry in the Submitter Center field will be linked to the appropriate entry in the Participant Accession Number field.

Title

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

Traceability Code

A code that indicates the type of traceability number. Examples of this code include: ATDT (technical data link), CIDI (Configuration Identifier & Document Identifier), and WBS (Work Breakdown Structure). This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Number field.

Traceability Number

An identifier that has been assigned to a document in order to link it to a specific activity or to a specific record in another database. These identifiers will enable searchers to easily retrieve all records associated with any given site activity by providing a special linkage not available through other fields. They will also point to related records contained in other databases such as the technical data database. Examples of traceability numbers include WBS number, linkages to technical databases, and configuration management identifiers. This field is part of a logical group which includes:

- Traceability Number
- Traceability Code.

Entries in this field will be linked to corresponding entries in the Traceability Code field.

Version

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

LANE
POWELL
SPEARS
LUBERSKY

March 30, 1994

Malachy R. Murphy

John C. Hoyle, Chairman
LSSARP
United States Nuclear Regulatory Commission
Mail Stop 16H3
Washington, D.C. 20555

Law Office

Evergreen Plaza
Building

711 Capitol Way
Olympia, WA

98501-1231

(206) 754-6001

Facsimile

(206) 754-1605

A Partnership
Including
Professional
Corporations

Re: LSSARP Meeting April 14 - 15, 1994

Dear John:

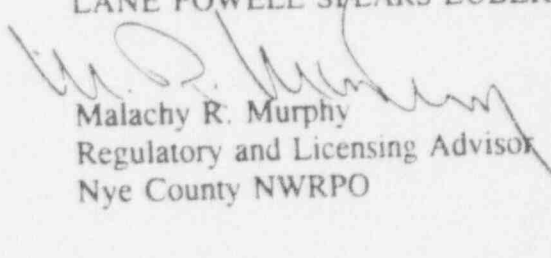
As you are probably aware, the DOE has now made a decision to develop a multi-purpose canister (MPC) and to seek certification of an MPC from the NRC under 10 CFR Part 71. It is my understanding that the DOE will be seeking certification some time in the next few years in order to be able to make MPCs available at reactor sites by 1998. MPC certification proceedings would be far less complex, contentious, and time-consuming than the ultimate licensing proceedings on the repository itself.

I suggest that we might begin at least preliminary discussions at the April 14 - 15 meeting in Las Vegas on the feasibility of developing the LSS to a point where all interested parties could use it, at least on a pilot project basis, during any MPC certification proceedings. If that is at all possible, it could be a worthwhile learning experience, and provide some extremely valuable lessons which could be applied in fully developing the LSS for use during the ultimate repository licensing process. I think we could undertake to discuss this without necessarily extending the meeting beyond a day and a half.

With best personal regards.

Yours very truly,

LANE POWELL SPEARS LUBERSKY


Malachy R. Murphy
Regulatory and Licensing Advisor
Nye County NWRPO

MRM:lm

cc: Les W. Bradshaw
Phillip A. Niedzielski-Eichner
Lloyd Levy
Members LSSARP

LPOLY E POLY MRM 1084861 MLTR

Anchorage, AK
Los Angeles, CA
Mount Vernon, WA
Olympia, WA
Portland, OR
Seattle, WA
London, England
Tokyo, Japan



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

August 9, 1991

MEMORANDUM FOR: Lloyd J. Donnelly, LSS Administrator
FROM: *John C. Hoyle*
John C. Hoyle, Chairman, LSS Advisory Review
Panel
SUBJECT: REPORT ON MEETING OF LSS ADVISORY REVIEW PANEL

The LSS Advisory Review Panel, which was established by the Commission in December 1989, held its fifth meeting on July 17, 1991, in Bethesda, Maryland. A summary of the meeting activity follows:

1. Panel Administrative Issues

The Panel discussed administrative matters and approved the minutes of the October 10-11, 1990, meeting.

2. Approval of Document Header Fields

The Panel approved the final two fields recommended by the Header Working Group -- "Package ID" and "Copyright." The Panel's review and approval of header fields is now complete. Enclosed is a complete list of the header fields which have been approved by the LSSARP for normal documents.

3. LSS Development

Ms. Lynn Scattolini, LSSA staff, briefed the Panel on the LSSA's proposed LSS development schedule in the event that the NRC should replace DOE as the agency responsible for design and development of the LSS.

4. LSS Procurement Strategy and Approach

The Panel was given a briefing by Mr. James Shields of the LSSA staff on the use of the design documents prepared by SAIC for DOE and the LSSA's planned procurement strategy and approach. Mr. Shields stressed that the procurement strategy does not differ greatly from DOE's planned procurement strategy except that more activities would be included in a single procurement for design, development, implementation, operation, and maintenance of the system. The Panel had no specific comments related to the SAIC design documents.

9408290424

5. Information Management Within DOE

Ms. Barbara Cerny of DOE discussed the system DOE is putting in place for handling its own high-level waste documents and its relationship to the LSS. She spoke about the concept OCRWM is using to build its information management system, the schedule for developing the system, and the management, operation, and procurement of the system.

6. UNLV Research on Information Systems

Dr. Tom Nartker of the University of Nevada-Las Vegas informed the Panel of the research that is being done at UNLV in the field of information management, particularly in the areas of optical character recognition technology and full text retrieval software technology.

7. Quality Management

The LSS Administrator provided a briefing on the quality management approach and work breakdown structure which is being developed by LSSA to manage the design and development of the LSS.

8. Automated Project Management System

Mr. James Shields, LSSA staff, discussed the LSSA's automated project management system. He explained that the LSSA staff is using the Timeline software package to implement its automated project management system by incorporating the tasks and activities from the work breakdown structure to prepare schedules, milestones, and management reports.

9. Topical Guidelines

Currently, the NRC staff is addressing the Panel's February 21, 1991, comments and is preparing a draft Regulatory Guide. The draft will be forwarded to the Commission for review in late August. The NRC staff reported that after the Commission approves the draft, it will be issued for public comment, and a notice of availability will be published in the Federal Register.

10. Handling of Non-Documentary Material in the LSS

Ms. Betsy Shelburne, LSSA staff, gave a status report on the work the Center for Nuclear Waste Regulatory Analyses is doing under its contract with the LSSA to address the handling of non-documentary data in the LSS.

11. Schedule for Next Meeting

The Panel did not schedule a date for its next meeting. When more definite information becomes available on topics requiring Panel action, I will correspond with the Panel members to establish a meeting date. The Panel tentatively agreed to hold the next meeting in Nevada.

Enclosure:
List of Header Fields

cc w/encl:
The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Romick
OGC
SECY
LSSARP Members
LSS Internal Steering Committee

August 9, 1991

Enclosure

List of Header Fields

The following fields have been approved by the LSS Advisory Review Panel for the use in headers for normal documents:

Participant Accession Number
Submitter Center
Submitter Page Count
Title/Description
Author
Author Organization
Addressee
Addressee Organization
Document Date
Document/Report Number
Document Condition
Edition/Version
Event Date, Code
Protected Status
Related Documents
Special Class
Document Type
Sponsoring Organization
Publication Data
Descriptors (Thesaurus)
Identifiers
Comments
Abstract/Summary
LSS System Accession No.
Number of Images
Pointers
Package ID
Copyright
Abstract (if available; not searchable)

ENCLOSURE 5

INDEX

TO

TRANSCRIPT OF LSS ADVISORY REVIEW PANEL JULY 17, 1991, MEETING

	<u>Page</u>
Introduction of members	2
Approval of Minutes of October 10-11, 1990, meeting	3
Status of LSS	4
LSSA's proposed LSS development schedule	8
LSSA's proposed procurement strategy and approach	31
SAIC design document review	43
Information management in DOE and its relationship to the LSS	46
UNLV research on information systems	80
LSSA's quality management approach and work breakdown structure	93
LSSA's automated project management system	104
Finalization of Header Working Group recommendation	112
Update on revised topical guidelines	114
Update on technical data	117
Future meetings	129

ENCLOSURE 6

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Licensing Support System, Advisory
Review Panel, Fifth Panel Meeting

Docket No.

LOCATION: Bethesda, Maryland

DATE: Wednesday, July 17, 1991

PAGES: 1 - 136

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300

Washington, D.C. 20006

(202) 293-3950

9408290431

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

NUCLEAR REGULATORY COMMISSION

LICENSING SUPPORT SYSTEM

ADVISORY REVIEW PANEL

FIFTH PANEL MEETING

4350 East/West Highway
5th Floor Conference Room
Bethesda, Maryland

Wednesday, July 17, 1991

The above-entitled meeting commenced, pursuant to
notice, at 9:00 a.m., John Hoyle, Chairman, presiding.

P R O C E E D I N G S

[9:00 a.m.]

MR. HOYLE: Welcome to the fifth meeting of the Licensing Support System Advisory Review Panel. My name is John Hoyle. I am with the Nuclear Regulatory Commission and the Chairman of this panel. I would like to recognize the members of the panel that are here today.

I'm going to start with the newest member of the panel, Dave Copenhafer, from the Securities and Exchange Commission. Dave is very closely associated with the Edgar system which SEC has put in. He can tell you more of that, if he would like to, whenever he would like to.

We have representatives of most of the other members today with us, but not all. Let me go down the list. Next to Dave is Engelbrecht vonTiesenhauen, representing Clark County, Nevada. He sitting in today for Dennis Bechtel who has usually been sitting with us.

Next to him is Jason Pitts, representing Lincoln County, Nevada, in place of Lenard Smith. We have a space down on the end for Loretta Metoxen, representing the Indian tribal interests, but she's not here as yet. We are expecting her.

Coming back up the other side of the table, we have Barbara Cerny and Corrine Macaluso, representing the Department of Energy; Felix Killar from the nuclear

1 industry; and, Kirk Balcom from the State of Nevada.

2 Do any of the members want to make any remarks at
3 this time?

4 [No response.]

5 MR. HOYLE: There is some reconstruction going on
6 in the vicinity, but they have told us that they're not
7 going to be making any noise to bother us. So let's hope
8 that works out through the day. The NRC's Inspector General
9 is going to be moving into the area over here. He is now
10 located in another building in Bethesda.

11 The agenda for today is a little different from
12 that which we anticipated at the end of our Reno meeting.
13 In the intervening months, changes have been brewing;
14 changes in the schedule for the repository, budget changes.
15 We'll hear from Lloyd Donnelly, the Administrator of the
16 Licensing Support System at NRC, and from Barb Cerny,
17 Department of Energy, on those matters.

18 First, I think I would like to get going on the
19 agenda. The first item is listed as administrative matters.
20 The item of business I want to pick up there are the minutes
21 of our last meeting. We sent them out November 1 of last
22 year to the members. I don't think we received any comments
23 on them. Are there any comments on the minutes of the last
24 meeting?

25 [No response.]

1 MR. HOYLE: Hearing none, we'll consider them
2 approved. I will certify them for the record. Hearing no
3 other formal administrative issues on the schedule, we do
4 plan to take a break or two. There is a snack bar
5 downstairs on the first floor of this building which you
6 could visit during the break. We do plan to have a lunch
7 break.

8 There are phones around that people can use.
9 There is a pay phone in the lobby. There are phones in the
10 LSS Administrator's Office, which is down the left corridor
11 down here. Any other administrative matters that the panel
12 wishes to bring up?

13 [No response.]

14 MR. HOYLE: I believe at this point I will
15 introduce Lloyd Donnelly, the LSS Administrator for the
16 Nuclear Regulatory Commission. Lloyd will make a few
17 remarks and then introduce the first briefer. Lloyd.

18 MR. DONNELLY: I wanted to try to catch people up
19 here on what has been happening over the last few months.
20 I've tried to put myself in your position and getting just a
21 periodic fix on what is going on is not always that easy. A
22 lot has gone on, although little progress has been made.

23 I think the last ARP meeting was in October. At
24 that time, both agencies, DOE and NRC, had their budgets in
25 for review at OMB. That would have been the Fiscal Year

1 1991 budget. As an outcome of that review by OMB, OMB took
2 a position that, A, it was too early to fund the LSS and, B,
3 that when the time was right, whatever time that was, that
4 NRC, not DOE, should budget for LSS design and development.

5 That presented a dilemma for the Commission
6 because of the Commission's previous decision at the time of
7 the LSS rulemaking that they would prefer to have funding
8 for not only design and development, but for operation and
9 maintenance in the DOE budget. Since that time, the two
10 agencies have not been able to agree. A number of
11 interactions have taken place between NRC and DOE.

12 As a result of those, the Chairman requested that
13 I prepare a paper and send it to the Commission outlining
14 some alternatives for the Commission to consider in terms of
15 what should be done with respect to schedule and budget and
16 responsibilities for the LSS program. I did that on June
17 19. The Commission is still looking that material over and
18 I expect they will be issuing what our agency calls a staff
19 requirements memorandum from the Commission as a whole after
20 they complete the review of the paper.

21 I had hoped that that would be out so that we
22 could focus on that today with a little more specificity
23 than I can tell you. I will say this. First of all, my
24 focus is for the successful development and implementation
25 and use of the licensing support system. My recommendation

1 to the Commission was a recommendation that I felt would
2 achieve that end.

3 It was not consistent with the Commission's
4 previous decision. It recommended that we do take over
5 design and development responsibility and budget for that
6 and establish a realistic schedule for the development and
7 loading of the system such that we can meet the objectives
8 laid out in the licensing support system rulemaking. As I
9 said, the Commission is considering this and will be issuing
10 a decision shortly.

11 I expect that they will be asking for not only my
12 views, but also the views of other offices within the agency
13 and from this review panel on those recommendations. I
14 envision about a two-month period here where there will be
15 further reviews by offices such as our Office of the General
16 Counsel or the Atomic Safety Licensing Board Panel, this
17 group, and perhaps even the agency's Advisory Committee on
18 Nuclear Waste.

19 For your planning purposes, I want to advise you
20 of two things. First of all, a number of our presentations
21 today focusing on procurement strategy schedule reflect the
22 information that I recommended to the Commission. I thought
23 it would be useful for you to have that. It's not
24 necessarily what the Commission will adopt.

25 As a framework for perhaps a month or so from now

1 where I will be writing to you, at least I expect I will, to
2 solicit your views, I would anticipate those views being
3 focused on your responsibilities as future users and
4 interactors with the system and not on the policy matters of
5 who should budget for the system and those kinds of
6 considerations. Again, I'm just speculating, but you can
7 anticipate a letter sometime in the mid to late August
8 timeframe, I would think, soliciting your views.

9 That is where we are. I guess I would like to ask
10 if any of you have any questions about what I just laid out.
11 If you do, I'd be glad to respond to them.

12 [No response.]

13 MR. DONNELLY: If not, we'll proceed to the next
14 presentation. Lynn, would you come forward?

15 MR. HOYLE: Lloyd, thank you very much. While
16 Lynn comes forward, let me correct a terrible mistake I made
17 by not introducing Marilee Rood at my left who is assisting
18 me, as she usually does with all the administrative matters
19 that go on in meetings such as this.

20 The microphone system we're using today, as you
21 see, the wires are really for the benefit of the Court
22 Reporter and not so much for those of you at the table or in
23 the audience. All of us will have to project as best we can
24 so everyone can hear us today.

25 Lynn, I hope you will be able to project your best

1 today.

2 MS. SCATTOLINI: Good morning. I am Lynn
3 Scattolini. I work for Lloyd in the Office of the Licensing
4 System Administrator at NRC. If you can't hear me, which
5 would not surprise me, please raise your hand. All the
6 hullabaloo in the morning was my realizing that I couldn't
7 see over the podium. I was going to stand at the podium and
8 use the microphone there, but that wouldn't work out unless
9 I stood on a table or about ten telephone directories.

10 I'm going to talk to you briefly about our
11 office's proposed LSS development schedule. Of course, I
12 should point out to you that until a decision is made by the
13 Commission on assumption of responsibilities for the LSS and
14 OMB makes its decision on budgeting the LSS and funding it,
15 this schedule is really a shooting target. We can't fix it
16 at this point in time, but we've done the best we can to
17 prepare a schedule.

18 I'm going to be talking from this handout, LSSA's
19 Proposed LSS Development Schedule. That is what you should
20 refer to. The purpose of my presentation is really twofold.
21 One is to inform all of you of the details of our schedule,
22 something about the schedule itself, the assumptions that
23 underlie it, etcetera; secondly, to answer any questions
24 that you may have and to obtain any comments that you may
25 have on the schedule.

1 MR. DONNELLY: Lynn, let me remind the panel
2 members that at the last meeting, I believe Boyd Alexander
3 and perhaps others raised a question about the schedule that
4 was briefed at that time in terms of whether or not it was
5 really achievable. What Lynn is going to present to you, I
6 hope I'm not stealing your thunder here, is not a radically
7 different schedule from what was presented last time.

8 It does allow more time for certain aspects and
9 she will be explaining that to you. I didn't want you to
10 think that if the Commission was to assume responsibility
11 for the LSS design and development, that we were going to
12 take a whole new radically different approach, because we're
13 not. We've never had a problem with the DOE plan for the
14 procurement and development of the system.

15 MS. SCATTOLINI: I wanted to share with you our
16 major objectives. These are program objectives that I have
17 pulled out of a larger document. They are those program
18 objectives that relate specifically to the LSS schedule.
19 With respect to the schedule, our objectives are really
20 multi-fold. One is we want to create and follow a schedule
21 that is realistic relative to DOE's repository program.

22 Secondly, we would like to ensure that those
23 documents that are the highest priority to users are
24 available to users for technical review and discovery
25 purposes for a sufficient period of time before DOE submits

1 its license application.

2 Thirdly, we want to meet database availability
3 requirements that are mandated in the rule; that is that the
4 database essentially be loaded six months prior to DOE
5 submitting its license application. Lastly, we would like
6 to ensure that the schedule fully supports all aspects of
7 repository licensing.

8 Next, I would like to briefly discuss with you the
9 program planning assumptions that we have that relate to the
10 schedule. The first item is that the application is
11 submitted no later than 2003. We are still assuming, of
12 course, that DOE is going to submit its application in 2001.
13 That is the current repository schedule. What we are saying
14 here is if there is a delay in the application beyond 2003,
15 we feel that we would have to take another look at the
16 schedule that we are currently proposing.

17 The second assumption is that resources will be
18 available in amounts that are needed to sustain the
19 schedule. Like any major program, there are activities that
20 we are planning to take place in certain fiscal years and,
21 in some fiscal years, those activities entail a good amount
22 of resources. In order for us to sustain the schedule, the
23 resources, that is the funding would have to be available.

24 Third, we are assuming here no major problems in
25 acquiring, designing, developing and implementing the system

1 beyond a two-month delay. By major problems, I mean a real
2 snag, not the normal problems that you tear your hair out
3 over that just come with the territory of putting in place a
4 system like this. The two-month delay is a timeframe that
5 we have built in our schedule to accommodate a potential
6 procurement protest.

7 We are assuming that the number of pages that have
8 to be loaded by March 2001 is approximately 20 million
9 pages. That falls within the range estimated by SAIC, the
10 low number of pages and high number of pages for that
11 particular year.

12 We're also assuming that DOE is going to do nearly
13 full processing, pre-processing; i.e., indexing documents,
14 cataloging documents, creating ASCII text; and that in doing
15 so, they're going to adhere to the standards and the
16 guidelines that the LSSA will be issuing that deal with
17 document identification and preparation and submission, and
18 that their work is going to be of a sufficiently high
19 quality that, with little rework or delay on our part, we
20 will be able to load the database.

21 Lastly, we're assuming that the computing facility
22 that is going to be put in place at UNLV will be available
23 when we need it.

24 What are some of the key parameters in the
25 schedule? One I have already mentioned to you. The

1 repository license application is going to be submitted in
2 2001. That is a big driver in the schedule because the
3 database has to be essentially loaded by that date.

4 Secondly, we look at the schedule as part of an
5 overall program management approach that we're developing in
6 this office. We are developing a program management plan.
7 We have a strategy in place and a detailed cost model. We
8 anticipate that we will be monitoring performance and
9 schedule and resource utilization against this program
10 management plan.

11 Thirdly, and this is very important, we are
12 assuming a single competitive procurement to both design and
13 develop the system and to operate and maintain the system.
14 We feel that this will give us more accountability on the
15 part of the contractor than would have been possible with
16 two separate procurements.

17 Lastly, the schedule provides for a small-scale,
18 but fully functional system to be implemented for some
19 period of time before we implement a full-scale version of
20 the LSS. I will give you some specifics about that. We
21 will be discussing that in Slide 7.

22 I will just mention to you that there are several
23 purposes for proposing a small-scale system. One is it will
24 allow us to refine and tune the system in a low-cost
25 environment before we go to full-scale implementation.

1 Secondly, we believe it will reduce risks and increase the
2 likelihood that the LSS will be able to meet end user
3 requirements.

4 What are the major activities associated with the
5 schedule? If you could, go to the very end of this
6 presentation, the end of your slides, and kind of pull out
7 the development schedule that is attached to it. You will
8 actually see two schedules here. One, the immediate one
9 that you see, is a high-level schedule. It's a general
10 schedule. Then there is a second schedule that is just an
11 amplification of that general schedule that is a little more
12 detailed in nature.

13 Behind these two documents our staff has an even
14 more detailed schedule that lays out activities on the day-
15 by-day, month-by-month basis. That is really what was used
16 to prepare these more general schedules for you. What I
17 would like to do is talk about these schedules a little bit,
18 the activities in the schedules.

19 The first major activity that you see here is
20 requirements definition. Part of that activity is for our
21 office to obtain a program support contractor. Dan and
22 Barbara Cerny from DOE talked to you at the last meeting
23 about DOE's plans to acquire FEDSIM as a program support
24 contractor to assist them, particularly in the area of
25 acquisition support.

1 Likewise, we have a small staff in our office and
2 in order to carry out the activities that are laid out in
3 the schedule, we are going to need additional support. So
4 our first step is to have the Commission make a decision on
5 the LSS so that we can move forward with obtaining a program
6 support contractor.

7 Once a program support contractor is in place, we
8 intend to spend a good amount of time defining the balance
9 of LSS requirements. What do I mean by this? In order to
10 prepare a procurement to produce functional specifications,
11 for a procurement to design and develop and operate and
12 maintain the LSS system, we must have information with
13 respect to what our requirements are and what the functional
14 baseline is.

15 SAIC has gone a long way in working with DOE to
16 produce that, but SAIC's focus was not on the operation and
17 maintenance and management of the system. So if we are to
18 have a single procurement to design, develop, operate and
19 maintain the LSS, we need to define what our requirements
20 are in those areas. We need to also further define for all
21 of the functions that the system is going to perform what
22 our requirements are with respect to the performance,
23 availability, integrity and security of the system.

24 I should also mention to you that the SAIC design
25 deliverables that were provided to you discuss one possible

1 solution or approach to designing the LSS. Our intention is
2 to put out a functional RFP. So we want to ensure that the
3 RFP that is put together does not have a particular design
4 solution bias.

5 After we complete defining the requirements, we
6 will then be in a position to prepare the functional
7 specifications for the RFP. In addition to preparing a
8 statement of work, you all who are familiar with the
9 procurement process know that quite a bit of effort has to
10 be put into defining evaluation criteria and determining
11 what the performance validation methodology is going to be,
12 as well.

13 In our case, when proposals come in, we are going
14 to request that proposers that are within the competitive
15 range provide us with both operational capability
16 demonstrations and live test demonstrations. That will take
17 quite a bit of time. Finally, when we complete the
18 evaluation process, we will be in a position to award the
19 contract to a systems integrator and operator and get on
20 with putting the system in place.

21 The next major set of activities deal with
22 developing the software and the procedures needed for the
23 LSS. This is a pretty straightforward process as laid out
24 here in terms of activities because you follow a system life
25 cycle methodology. We will have the contractor prepare a

1 detailed system design, go out and acquire the hardware, the
2 software that are needed, and then develop the application
3 software that is going to link packages together, integrate
4 the system, and provide a common use or interface.

5 Of course, in the meantime, the UNLV computing
6 facility has to be prepared by UNLV in order for us to
7 install the equipment. The software itself has to be tested
8 and documentation and training materials have to be
9 prepared. On another occasion, we would like to give you a
10 presentation on what we envision the role of this Advisory
11 Panel might be during the entire acquisition, development
12 and implementation cycle and to solicit your views on how
13 you would like to participate in that process.

14 It's our view that if you do not have heavy end
15 user participation in systems, they tend to not meet end
16 user requirements. So it's very important to us that we
17 have the LSS Advisory Review Panel participants and end
18 users involved in the life cycle process.

19 MR. HOYLE: Lynn, we certainly do want you to give
20 us such a briefing and we'll be scheduling it at the
21 appropriate time.

22 MS. SCATTOLINI: Good. Finally, with the software
23 developed and the hardware in place, we would be at the
24 point to accept the system, do system acceptance testing,
25 and operate a fully functional, but small-scale system. I

1 have a separate handout here that gives you a little bit of
2 the details of a proposed LSS small-scale system.

3 It identifies the purpose of the system, what it
4 would consist of and, on the second page, tells you a little
5 bit about the number of workstations and how they would be
6 distributed. The idea here is to, as I mentioned, operate
7 the LSS on a small scale, use this opportunity to refine the
8 end user interface by working with the users to do rigorous
9 system acceptance testing, and to seize in the operations
10 and support personnel and refine procedures so that when we
11 do implement a full-scale system, we can do it in a much
12 smoother cost-effective manner.

13 As you can see here, the small-scale system would
14 truly be small-scale. We're talking about only storing
15 about two million pages of full text, images and headers and
16 having users from all of the major organizations access the
17 system remotely from a number of workstations.

18 MR. DONNELLY: Lynn, excuse me. I'd like to
19 suggest that people look over at this point the latter part
20 of that handout that has "Enclosure 7" in the upper
21 righthand corner, under details. Please review that now and
22 see if you have any comments.

23 I might point out that one of the things that we
24 would like to have to get to this point would be to have DOE
25 operating one of their capture facilities in conjunction

1 with the one at UNLV. A real desirable aspect of setting up
2 this small-scale system wouldn't be a requirement, but the
3 idea of having another station operating and perhaps
4 transmitting output electronically would be a good thing to
5 include in that test.

6 MR. HOYLE: Lynn, why don't you briefly cover each
7 of the items under details as we read through it? Not quite
8 read it to us, but give us each item.

9 MS. SCATTOLINI: Okay. The small-scale system
10 would be located at Las Vegas. We say here that it would
11 provide the full functionality of the LSS. By this, we're
12 not just talking about a prototype. The software would have
13 been fully developed for the LSS at that juncture and we
14 would be providing the users access to a sampling of
15 documents, including the full text of those documents, the
16 optical image of those documents, and the cataloging and
17 indexing of those documents.

18 In addition, users could, of course, perform
19 searches and request documents on-line that they would like
20 the hard copy of. So it will include a hard copy
21 distribution function, as well. As Lloyd mentioned, we
22 would like DOE to operate one of its capture facilities. At
23 that point, DOE may have all of its capture facilities on-
24 line. We'll have to hear what Barbara has to say. I know
25 they're going to make great strides in their internal

1 document management system.

2 But we would like DOE to operate at least one
3 capture facility in which DOE would pre-process its
4 documents in accordance with the requirements of the rule.
5 We would then take the documents, the output of DOE's
6 processing, and do the necessary quality control, add
7 whatever fields are required and load those documents, both
8 the indexing and the full text and the image of them onto
9 the system for the end users to be able to access.

10 On Page No. 2, I already mentioned to you that the
11 small-scale system could store up to about two million hard
12 copy pages. This means that we would not have to go out and
13 acquire the CPU for the mainframe system at this juncture.

14 MR. COPENHAFFER: Could I ask a question about the
15 relationship between the UNLV processing facility and what
16 you ultimately expect to develop and install? Is this the
17 point of intersection? Is there sufficient capacity
18 available at UNLV for you to, in effect, walk in and
19 establish the small-scale system?

20 MS. SCATTOLINI: That's a good question. What
21 UNLV will be providing for the LSS is the physical plant,
22 the building, the air conditioning, the power for the LSS.
23 As part of this procurement and in order to have a small-
24 scale system, we would have to procure from a vendor the
25 hardware and software necessary to run this small-scale

1 system. That hardware would be used for the LSS when we
2 expand the system.

3 MR. COPENHAFFER: Thank you.

4 MS. SCATTOLINI: As you can see here, what we are
5 proposing is that all of the major user organizations have
6 access to workstations and an opportunity to exercise the
7 system. This is very important to us that the system be
8 used during this period and that we get input and feedback
9 from the users in order for us to refine the system and
10 ensure that we can deliver something that is acceptable to
11 the user community.

12 MR. DONNELLY: Lynn, excuse me. I would like to
13 interject two things here. The current thinking is that the
14 final design could well have two replicated image stores,
15 one on the east coast and one on the west coast, for two
16 purposes; one, to keep the telecommunication costs down from
17 transmitting large files all the way across the country,
18 and, secondly, one could serve as a backup to the other.

19 Whether this is in the final design or not I don't
20 predict, but one of the things we were thinking of doing in
21 the small-scale, if that was part of the design, is having a
22 small-scale image retrieval capability both on the east
23 coast and west coast to exercise that part of the design.

24 The second thing with respect to connecting users
25 and getting feedback, most everybody I have talked to tells

1 me that no matter how much users are involved in designing
2 the interface and describing their requirements and working
3 along with system design and development, when you get there
4 to actually try it, things aren't exactly the way you
5 thought they were going to be or what you thought you wanted
6 in a design isn't what you wanted.

7 So this is an opportunity not to go back and
8 ratchet everything, but I would say to fine tune what we
9 might want to do in the way of the interface to make it more
10 effective. During this small-scale test, that is one
11 critical component that we would look at.

12 MR. COPENHAFFER: Is the image part of the system
13 limited primarily to documents which don't lend themselves
14 easily to being digitized or is it a replication of the
15 ASCII material, as well?

16 MS. SCATTOLINI: It's the optical image of every
17 page of the document that can be imaged.

18 MR. COPENHAFFER: Is there a particular reason for
19 keeping it in two formats?

20 MS. SCATTOLINI: You mean ASCII and image?

21 MR. COPENHAFFER: Yes.

22 MS. SCATTOLINI: ASCII is needed to do full-text
23 search. You can't search a bit-mapped image.

24 MR. COPENHAFFER: Right. But once you have it in
25 ASCII, why replicate it in an image format, particularly if

1 you're concerned about the communications and even storage?
2 Communication and storage of image material is resource-
3 intensive.

4 MR. DONNELLY: I'd like to respond to that, not
5 that Lynn can't, but I have been reviewing technical
6 documents that have been generated largely in connection
7 with the high level waste program and largely ones that are
8 generated in NRC or by its contractors. I have found such
9 cases as a 500-page technical report where 30 of the 500
10 could be fully captured in ASCII and the other 470 required
11 some kind of imaging pickup, formulas, drafts and other
12 material.

13 Now, that's an exaggerated case, but I would
14 venture to say that maybe half of the material in every
15 report would have no meaning to the community if they
16 couldn't get the image. I think that's the primary factor.

17 MS. CERNY: Let me just give one other. That's
18 the reason that it came out looking like it did. This is to
19 be used solely as a document discovery and the lawyers are
20 very concerned that they have signatures.

21 MR. DONNELLY: The third factor, Dave, is that no
22 paper is to be maintained once the processing has been done.

23 MR. COPENHAFFER: Thank you.

24 MS. SCATTOLINI: Unless we have any further
25 questions, I think that is sufficient time on the small-

1 scale system discussion.

2 MR. HOLSTEIN: Under this possible east/west
3 formulation that was described, has a location been
4 tentatively identified for the east coast facility, question
5 number one? Question number two is I gather the Las Vegas
6 facility is the west coast?

7 MS. SCATTOLINI: Not exactly west.

8 MR. HOLSTEIN: And on the east coast question?

9 MS. SCATTOLINI: It's really premature to identify
10 a facility. It would probably be in Rockville or Ft.
11 Washington, D.C. The two principal user communities that
12 we're serving are DOE and NRC in this area. SAIC proposed
13 an east coast facility to bring down, to reduce
14 telecommunication costs, because it is very costly to
15 transmit bit-mapped images of documents over long distances.

16 Also, we think it makes good sense to have an east
17 coast facility from the standpoint of providing user
18 services to the users that are in this area; for example,
19 training. It would make a lot more sense to have a training
20 facility here than to send all of the DOE and NRC folks out
21 to Las Vegas to be trained or send the trainer here.

22 So there are a limited number of services that we
23 feel it would be cost-effective to provide both on the east
24 coast and the west coast. Also, of course, we have to
25 contend with the time differences which can get quite

1 interesting when you think about it, because I'm sure this
2 is the case with DOE and it is with NRC, the technical and
3 legal staff and administrative staff are on flex time.

4 So people can come in as early as 6:30 in the
5 morning and leave as late as 7:00 p.m. just for NRC. Then
6 when you think about the three-hour time difference and
7 serving the Las Vegas users, we would end up hiring support
8 staff, training staff, hotline staff to work 24 hours a day,
9 which I realize in Las Vegas might not be as odd as it would
10 be on the east coast. But that is proposed as a more cost-
11 effective approach to accommodate the user communities that
12 exist in just their geographical distribution.

13 Finally and lastly, we're at the point that we've
14 all worked for and that is to put in place an LSS system
15 that can be used by the full user community, to begin the
16 process of loading the database so that it can be
17 substantially loaded by March 2001 and to provide the full
18 range of user services and functionality that are identified
19 in the rule.

20 This completes my presentation of the LSS
21 development schedule. I would welcome any questions that
22 you have or if you have comments that you would like to
23 provide to us later after you have had an opportunity to
24 review this material, we would also welcome hearing from
25 you.

1 MR. HOYLE: Thank you very much, Lynn. Are there
2 any questions for Lynn at this point?

3 MR. COPENHAFFER: Lynn, can you describe a little
4 bit the activities that will have to take place at the
5 capture center? Will they receive both perhaps diskettes as
6 well as paper copies? Will the originators of the documents
7 have even minimal responsibility for identification, adding
8 header information? How much processing are those people
9 going to have to do?

10 MS. SCATTOLINI: This is a good question and the
11 answer is that it depends. It depends on who the party is
12 that is creating and submitting the documents and at what
13 point in the licensing process it is taking place. The
14 responsibilities of the participants are laid out in the
15 rule.

16 The primary generator of documents is DOE. So I'm
17 going to refer part of this question to Barbara so she can
18 explain to you DOE's responsibilities with respect to
19 document pre-processing.

20 MS. CERNY: What I would like to do is I would
21 like to put off the answer to that until I give my
22 presentation, because that's really the essence of what my
23 presentation is about.

24 MR. COPENHAFFER: I can wait.

25 MS. CERNY: Very good.

1 MR. DONNELLY: I think, Dave, that an incomplete
2 answer is each participant will do some degree of pre-
3 processing to include header information. Some of it will
4 be very complete, others of it will be a minimal header, a
5 paper copy of a document.

6 MR. COPENHAFFER: ASCII diskettes or files?

7 MR. DONNELLY: In some cases.

8 MR. PITTS: Another question.

9 MS. SCATTOLINI: Yes.

10 MR. PITTS: One of the reasons to do a duplicated
11 database was a financial consideration, is that true,
12 because of the communication costs of transmitting bit-
13 mapped material?

14 MS. SCATTOLINI: Yes.

15 MR. PITTS: That compares cheaper with the
16 national duplication of all the hardware that would be
17 required to have two active databases running at one time?
18 Like the CD systems and stuff are cheaper for 700 gigabytes
19 of information than communication costs?

20 MS. SCATTOLINI: Yes. That's a short answer to
21 that question. One of the deliverables that was produced by
22 SAIC, which we will be happy to share with you, was an
23 alternatives analysis study and SAIC looked at, within the
24 confines of the conceptual design in the rule, a number of
25 different architectures.

1 In the revised cost analysis, SAIC specifically
2 costed out an architecture which included replicating the
3 optical image database and placing it on the east coast and
4 the telecommunication cost savings were substantial. My
5 recollection is something like \$10 million. Is that
6 correct, Dan? In the tens of millions of dollars.

7 MR. GRASER: That's over the life cycle of
8 operating the system. You have to remember that once you
9 buy into that telecommunications infrastructure, operating a
10 system is going to go on beyond the licensing period.
11 You're talking over a million dollars a month for a T3 line.

12 MR. PITTS: Thank you.

13 MR. GRASER: That's not a precise number.

14 MR. PITTS: Exactly.

15 MR. GRASER: I'm trying to convey a sense of
16 magnitude and duration.

17 MR. PITTS: Right.

18 MR. HOYLE: Barbara, in your presentation, are you
19 going to mention anything about numbers of documents or
20 numbers of pages? We're still using SAIC's number. That's
21 still the number we're using.

22 MS. SCATTOLINI: Are there any other questions
23 with respect to the development schedule?

24 [No response.]

25 MR. DONNELLY: May I ask the panel members or the

1 panel selectively, in light of the comments made last time
2 about the questioning of whether the schedule was
3 achievable, I would specifically ask John to solicit, as a
4 minimum, your comments with respect to the achievability of
5 the schedule that we proposed relative to your experience.

6 We don't have all answers to all schedule
7 questions. You try to put a schedule together, you bring
8 your experience to bear on it. That is part of the purpose
9 of having this panel, to bring your experience to bear. We
10 certainly want to take it into account and I want to be able
11 to tell the Chairman and the other Commissioners that the
12 schedule that we are proposing is not just one that looks
13 achievable to us, but looks achievable to a group.

14 I haven't talked to Boyd Alexander, by the way,
15 about it to coordinate it with him. We've made some changes
16 in the schedule based on his comments, but I certainly would
17 like to have the comments.

18 MS. SCATTOLINI: I neglected to mention and should
19 mention that this schedule was reviewed by FEDSIM, by GSA, a
20 number of system integrators, that it does fall within the
21 timeframes that it is taking the Federal Government to do
22 information technology procurements of a similar magnitude
23 to the one we're proposing here.

24 MR. COPENHAFFER: I would say, to a certain extent,
25 you're probably better off to set an aggressive schedule and

1 expect some slippage. The work will expand to fill the time
2 available. I don't think that there is great likelihood
3 that you will always stay on schedule. Two months for a
4 protest is pretty optimistic. I think you'd probably get
5 more done if you set even some aggressive goals and if it
6 slips, it slips.

7 MR. DONNELLY: Dave, I will comment on that. I
8 agree with you. I wouldn't say our schedule is necessarily
9 aggressive, but I don't think it has any slack in it. One
10 of the concerns that I have in terms of March 2001, if that
11 date holds, is that we've got everything in that database in
12 there with quality at that point in time.

13 Slips in the procurement, the development, the
14 implementation translate into a more compressed loading
15 schedule, which is a pretty aggressive one now. I believe,
16 if the number is correct, if we carry out the schedule that
17 has been presented to you today, we're in the order of
18 19,000 pages processed and loaded into the database every
19 day, average, which means you're not going to do that every
20 day, average, and you're going to be well up over 20,000,
21 22,000 some days to sustain that average.

22 I'm really concerned about that. I'm concerned
23 about it not perhaps that it isn't technically achievable on
24 the very high end, but I don't know that I want to operate
25 on the highest end of anything that's achievable. Secondly,

1 I don't know anybody that is pumping data in, full text
2 images and headers at that rate. I haven't been able to
3 find anybody that is.

4 I've talked to Data Central who cranks about as
5 much full text, I think, as anybody and they're in the range
6 of 8,000 to 16,000. So I just want to make that point.
7 That is one of the reasons that even though we have nine to
8 ten years between now and March of 2001, I hesitate to say
9 how many people look at that timeframe and say you can buy a
10 system in a couple to three years, you don't need nine to
11 ten years to do it. It isn't until you take that tremendous
12 loading into account and the four or five years that it's
13 going to take to do that that you realize that we should be
14 going today.

15 There is no question in my mind about it,
16 notwithstanding the different views about it.

17 MR. HOYLE: Lynn, thank you very much. Lynn
18 Scattolini from the LSS Administrator's Office at NRC. Our
19 schedule shows a break at this point, but before we take
20 that break, let me just recognize two other Committee
21 members who have come into the room or I didn't recognize
22 initially. Joining us at the table is Elgin Holstein, who
23 represents the Nye County Board of Commissioners. Elgin,
24 welcome.

25 In the audience, and we will put your name tag up

1 on the table so you can join us, is Peter Cummings from the
2 City Manager's Office in Las Vegas, Nevada. So we'll see
3 you at the table after the break. Let's take 15 minutes,
4 please.

5 [Recess.]

6 MR. HOYLE: I think in the interest of moving
7 along, we will get started on the second half of the
8 morning. The next presentation will be conducted by Jim
9 Shields, also a member of Lloyd Donnelly's staff in the
10 Licensing Support System Administrator's Office. His
11 subject is LSSA Procurement Strategy and Approach, Use of
12 SAIC Deliverables. Jim.

13 MR. SHIELDS: While I'm talking, I'm going to hide
14 behind this coffee pot, but I thought I would at least stand
15 up so you can see who you're hearing from. You should have
16 a handout in your package talking about LSSA's proposed
17 procurement strategy. This may not be a real long
18 presentation because, for one thing, Lynn hit about half my
19 points, but she does that sometimes. That's the breaks.

20 I think the thing I would say to begin with, too,
21 kind of goes along with Lloyd's remarks about our
22 procurement schedule and so forth. I don't think you will
23 find anything radically different in here from DOE's
24 procurement strategy, with the exception that we're bundling
25 more things into the procurement. We're talking about doing

1 operations and maintenance, as well as systems development
2 and so forth.

3 Moving right along on this, we're talking about a
4 full and open competition. We'd like to go out and get the
5 benefit of the expertise that a lot of large systems
6 integrators have, teams of companies. We'd really like to
7 go out and see what the market has to offer, although
8 obviously we want to get qualified bidders and so forth.

9 We are talking about a single procurement to
10 design, develop, implement, operate and maintain the system.
11 We're talking about initial operation and maintenance
12 because we want the people who develop the system to know
13 that they're going to be responsible for operating the thing
14 and they can design it in that way.

15 In the long term, there would probably be a fully
16 competitive contract for follow-on operation and
17 maintenance. Once again, we're talking about focusing
18 accountability on one contractor to achieve full systems
19 integration, as well as making something that is operable.

20 Now, a big point here, and Lynn mentioned this
21 earlier, is appropriate involvement of users at all phases
22 of the life cycle. Ultimately, if the users of this system
23 can't use it effectively to meet their needs, to find the
24 documents they want, to get the information they want, then
25 this is all a wasted effort. So from start to finish, we

1 want people involved as much as possible so that there are
2 no surprises and so we get a better system in the long run.

3 The procurement, of course, would be managed by
4 the LSSA staff. We envision it being a Trail Boss
5 procurement under the auspices of that program. You have
6 probably heard about it as being a recommended vehicle for
7 large procurements and advocacy of team approaches and so
8 forth. It apparently proved out very well for some agencies
9 for procurements even a lot larger than the LSS, for that
10 matter.

11 Continuing on to the next slide, we envision
12 crafting a request for proposals with well-defined
13 functional specifications. I'm sure we all have ideas here
14 about how the system should operate. There is probably a
15 lot of overlapped consensus in those ideas. If we're not
16 real careful to get it in the functional specifications, we
17 won't get it.

18 We want to do a functional procurement to allow a
19 variety of innovative and cost-effective solutions. We know
20 that technology is changing. We know that new techniques
21 are being developed. We want to be able to get the best of
22 what the market has to offer. We do want to maximize
23 competition among contractors and vendors. We do want to
24 get the best overall buy for the government.

25 One of the ways that we feel it's necessary to do

1 this, and all the vendors very much tell us this, is to do a
2 draft RFP, get it out on the street, get comments back, see
3 if we're on the mark or not, see if we're limiting
4 competition more than we should, see if we're ruling out
5 solutions that might well meet our needs better than ones
6 that we've thought about and so forth.

7 Coming back again to the long-term aspect of this,
8 as Dan was mentioning earlier, we want to encourage vendors
9 to bid approaches that will minimize the long-term
10 operational costs. A very large part of the costs of this
11 system are going to be operation, maintenance, and, of
12 course, document preparation, much more so than the original
13 capital outlays for hardware, software and software
14 development.

15 Knowing this is going to be a long-lived system,
16 we want to have a mechanism set up for taking advantage of
17 the latest technologies as they become available. We want
18 to be able to ideally put in play as new equipment becomes
19 available, as larger capacity, higher density storage
20 devices become available, as higher speed computing devices
21 become available. We want to be able to get the best buy
22 for the government on that.

23 We don't want to continue buying old equipment,
24 maybe even equipment that's going out of production, because
25 it's the only thing that will work with our system. So

1 we're going to try to be quite careful about that.

2 Going on to the next slide, there comes a thing
3 that's just really a key, developing and applying rigorous
4 evaluation criteria. We may all have in our mind what we
5 want in the system. We may put it in the functional
6 specifications, but if we don't have an evaluation plan, if
7 we don't have specific evaluation criteria for assuring that
8 we get it, judging how we get it, figuring out how to
9 discriminate among vendors, proposals, their costs, their
10 solutions, we may well wind up picking the wrong vendor,
11 picking the wrong solution.

12 So we've got to put a lot of time and effort into
13 this. This is one of the biggest areas where if you don't,
14 you may have to go back up, you may have to issue
15 modifications, you may get protests. Just all manner of
16 things can happen to you if you're not careful in the areas
17 of defining your statement of work and developing your
18 evaluation criteria and then, of course, applying them the
19 way you told people you were going to.

20 In a system like this that's a large system,
21 that's really on the critical path to licensing a
22 repository, it's going to be used by a lot of people, we
23 feel that it is absolutely necessary that vendors show their
24 operational capability, that we can conduct live tests, that
25 we really have as good a feel as we can that they can

1 deliver the performance and the features that they're
2 promising on paper.

3 We're going to try as much as possible to require
4 that the awardee on this contract have a record of
5 designing, developing and maintaining large systems like
6 this. We don't really want to be the test case for
7 somebody. We're going to try to work very closely with the
8 Division of Contracts and with GSA and all the people
9 involved to see that we structure a procurement that can do
10 this as much as possible, protect the government's interests
11 as much as possible, and get the system we want for the
12 price we can pay for it.

13 Really, like I said on those, I think no big
14 surprises there, good common sense, Federal procurement type
15 situation. Some of it is in the government's best interest;
16 hopefully all of it is. Some of it we have to live with,
17 but, in any case, we think it's practical and doable.

18 Having slipped right through that in about five
19 minutes flat, I'd like to go on a little bit and review some
20 of the DOE work that's been done to date, really more just a
21 list of what has been done, to remind you of things that
22 have been accomplished. A lot of these things have been
23 documented in deliverables that you have from the SAIC
24 contract.

25 SAIC has done an awful lot of good work, a good

1 job of documenting their work, and they have developed very
2 comprehensive, we think, needs analysis, data scope
3 analysis, conceptual design. They've done very good work on
4 a cost model, the first one, I think, in 1987, the most
5 recent one in 1990, which incorporated a lot of ideas that
6 they had researched, prototyped, tested, all kinds of things
7 to see that things really worked and what's really the most
8 cost-effective.

9 The concept of operation that they have developed
10 is a little bit incomplete in that SAIC's task was really to
11 worry about developing the system. In the long run,
12 NRC/LSSA was going to operate the system. So we feel that
13 there probably are some things that could be added to the
14 concept of operation on operation and maintenance and user
15 training and so forth, things that were somewhat outside the
16 scope of SAIC's work.

17 The same thing is true on system level
18 requirements. There are some things that we feel would need
19 to be beefed up on O&M and so forth. As I am sure you all
20 know, SAIC has done a very detailed and rigorous design of
21 the capture system; not just hardware and the software to
22 connect it together, but a complete design of all the
23 processes of how a document could be processed from when it
24 comes in on the loading dock, gets an identification number
25 put on it, how it's stripped apart, how it goes to various

1 stations to be OCR'd, scanned, quality checked, the whole
2 complete thing.

3 They have also done a functional design on the
4 search and image system, on the communication system. I
5 think if you've looked at the documents on those, you had to
6 have been impressed at the degree of detail, the extent to
7 which the various processes were not only listed, but
8 examined to see how much processing time they'd likely take,
9 how many times a day they'd be run, how many simultaneous
10 processes would be run.

11 The communications system has a very complete
12 simulation of the communications environment; how much
13 traffic from various nodes, the speed of lines needed to
14 achieve the response time and so forth. So a lot of very
15 good work, some of it geared toward a fairly specific
16 design, but a lot of it very much valid regardless of
17 however the LSS is actually implemented.

18 So that much work has been done. We certainly
19 look at it as a framework on which to build. The thing we
20 can do, I think, is go on ahead to the next slide and talk
21 about the additional work that we see would need to be done
22 to come up with an integrated functional baseline; that's a
23 baseline that includes operation and maintenance, a baseline
24 from which we could let a contract to implement and operate
25 the LSS.

1 So it's sort of following up on the things I
2 mentioned before. We would want to expand the concept of
3 operation to include operations and maintenance. We would
4 want to refine, expand, maybe augment some of the design
5 deliverables to allow a little broader type solution than
6 perhaps SAIC specifically described. There have certainly
7 been changes in technology and there is just always the
8 point of wanting to see what the market has to offer.

9 We don't want to go overboard on this, realize.
10 We want to have something that's manageable. We don't want
11 to get 10,000 proposals with 20,000 solutions and get in a
12 situation where we can't in any shape, form or fashion
13 evaluate which one is really the best deal for the
14 government. But we want to try, within reason, to allow
15 industry to propose their solutions and within a framework
16 where we can compare them and fairly and accurately figure
17 out which one seems to be the best for the government.

18 To do a lot of that, we have to expand the system
19 level requirements. We have to address some things in more
20 detail, like system performance, reliability, availability,
21 integrity. I think we all know that we want a system to be
22 available and reliable. I think the specific design
23 proposed by SAIC would indeed provide such a system, but I
24 think for contractual reasons we have to be careful that we
25 specify acceptable bounds on things like reliability, on

1 things like availability; can the system really be allowed
2 to go down for an hour during the hearing or can it only be
3 allowed to go down for ten minutes, or if it goes down for
4 two hours, what is the real burden on everyone.

5 In my view, at least, that's the kind of thing
6 that we'd be coming to you folks and other people to find
7 out about, because you are the people that would really be
8 affected by this.

9 Now, the second part of my presentation really is
10 a discussion talking about the SAIC design deliverables and
11 so forth, but I wonder if I ought to pause here and see if
12 we have any questions about our strategy and so forth before
13 we leap on into talking about that. Does that sound
14 reasonable, John?

15 MR. HOYLE: Sure.

16 MR. COPENHAFFER: The acquisition support that you
17 get, I assume some of it is contract-based. Is the
18 contractor providing acquisition support prohibited from
19 bidding on the job itself?

20 MR. SHIELDS: I would certainly think so.

21 MR. COPENHAFFER: Were those the terms under which
22 you have or will acquire acquisition support?

23 MR. SHIELDS: I would think so.

24 MR. DONNELLY: We believe that will be a legal
25 decision, but we would prefer and wholeheartedly support a

1 legal decision that said if you're going to support the
2 acquisition, you're not going to be able to.

3 MR. SHIELDS: I think it is fair to say, too, that
4 we certainly don't have any particular contractor in mind to
5 build the LSS system. We certainly do mean it when we say
6 we plan a full and open competition and so forth. One of
7 the reasons why we're having an acquisition contractor help
8 us craft the procurement is so that we can run a procurement
9 that is as objective as possible. We really have no
10 interest whatsoever in cutting any inside deals with people
11 or favoring any particular vendors or solutions or any such
12 thing.

13 MR. COPENHAFFER: Can I maybe make a point or even
14 offer some advice on the evaluation criteria? You talked a
15 little bit about the need for certainly rigor and extensive
16 evaluation criteria. My own experience tells me that you've
17 got to be careful in that regard; that if you put out a long
18 formal list of evaluation criteria, you can actually end up
19 almost mechanistically locking yourself into an evaluation
20 of an offer that you really don't want.

21 You need to have evaluation criteria that stand
22 behind and support perhaps a more generalized list of
23 evaluation variables that you will tell people. If you
24 start off with broad categories, a technical approach, a
25 management approach, a cost piece, and then within that

1 maybe three or four items, but you'd be making a big
2 mistake, I think, to publish a long list of evaluation
3 criteria. As I say, that becomes the sole vehicle for
4 evaluation.

5 In the course of reading the documents, you really
6 find that the things that attract you to one offeror or puts
7 you off from another offeror aren't there and you don't
8 really have the ability to make an evaluation of the things
9 that you're finding are important to you. So you want
10 everybody singing from the same hymn book and looking at the
11 same things and treating the evaluation criteria fairly.

12 I would suggest that you don't put out a great big
13 long list.

14 MR. SHIELDS: I think we would agree with that 100
15 percent. We realized the need to strike a balance between
16 having your criteria so vague that you really can't
17 discriminate or having them so specific that you rule out
18 people you don't want to, and then you get tempted to make
19 the award on something other than the evaluation criteria,
20 and then you get into big trouble real quick.

21 MR. COPENHAFFER: That's right. You really have to
22 leave yourself adequate, but legally acceptable flexibility.

23 MR. SHIELDS: I agree with that. Do we have any
24 other questions on the acquisition strategy?

25 [No response.]

1 MR. SHIELDS: Let's move on to the next slide and
2 talk about SAIC design document review. These documents
3 were sent to panel members for review in December of 1990.
4 I believe letters that went out in April or thereabouts
5 reminded people that these would be discussed in this
6 meeting here in July.

7 From participating in some of the design review
8 meetings with DOE and SAIC, I know the documents are quite
9 extensive, but I can assure you there is a lot of good
10 information in there. I'm sure you observed as much. What
11 we would like to do is discuss these documents pretty much
12 from what you did or didn't get out of them, looking at it
13 from a point of view, as you are, being potential users of
14 the system.

15 We certainly want to identify any errors or
16 omissions. We want to request any clarification, if
17 necessary. We have stated that there are some things that
18 could be beefed up, like O&M and maintenance and user
19 support and so forth. So I don't think it's necessary to
20 talk too much about that today.

21 I think the thing that we would all be interested
22 in now, later in written comments, later in discussions if a
23 procurement goes forward, is how you as a user saw those
24 design documents as documenting and meeting the needs that
25 you think you will have when you come to use the LSS.

1 Anything that you think was left out, stated erroneously or
2 omitted, we'd be happy to talk about that.

3 We are very fortunate today in that Barbara is
4 here from DOE. Dan Graser, the Project Officer for the SAIC
5 contract is here. So I'm sure one way or another we should
6 be able to if not answer questions, at least have some good
7 healthy discussion on anything on that topic the panel
8 members would be interested in.

9 MR. HOYLE: Jim, I don't think you roused us into
10 action at this point. I have not received any comments to
11 date from any of the members. The offer is still open to
12 supply me written comments, if anyone would wish to. I
13 don't know that there are any further comments right now.
14 Barbara, is there anything that you would like to add about
15 those documents?

16 MS. CERNY: No.

17 MR. HOYLE: They are final documents, as far as
18 DOE is concerned.

19 MS. CERNY: That's right.

20 MR. HOYLE: Dan?

21 MR. GRASER: I would like to make one brief
22 comment. I had a discussion with Jason at the break. He
23 indicated to me that he would be especially interested in
24 having a copy of at least one document that may not have
25 gone out with the set of the rest of the documents that I

1 did send out in December. The document he was interested in
2 was SAIC's final revised cost estimate document.

3 I would just like to reiterate to the members of
4 the panel that if there are additional pieces of information
5 that you are specifically interested in, please feel free to
6 get in contact with me and I can make copies of those
7 specific documents available. There is a final revised data
8 scope analysis that was revisited toward the end of the
9 design process.

10 That final revised benefit cost analysis, there
11 was some specific documentation examining cost issues on
12 telecommunications, for example. So there are some
13 additional pieces of documentation that are available. If
14 you want them, I will be glad to provide them.

15 MR. HOYLE: Thank you, Dan.

16 MR. SHIELDS: I would make one comment on that,
17 too. As we have alluded to earlier, that final cost
18 analysis makes some very interesting points about what
19 alternatives do and don't save money. I think it's very
20 informative reading for anyone who has curiosity about why
21 the possibility of two image stores or why some of the
22 architectural features are put together the way they are.

23 SAIC did some very interesting and convincing
24 analyses on the costs and benefits of a lot of those things.

25 MR. HOYLE: Any further comments on Jim Shields'

1 presentation?

2 [No response.]

3 MR. HOYLE: Thank you very much, Jim. At this
4 point, we will turn to DOE's presentation, with Barbara
5 Cerny. The subject is Information Management in DOE and its
6 Relationship to the LSS.

7 MS. CERNY: I hope you can all see these, but if
8 you can't, you can follow along. I'm really very glad to
9 have this opportunity to speak today and to give you a
10 status report on what we have been doing over at DOE. I
11 think we are really starting to understand the shape of our
12 problem and have taken a lot of very positive steps to move
13 us forward in their solutions.

14 That is what I want to talk about today. I want
15 to give you a sense of the way we see the information
16 management environment, the way we see our problems, the way
17 we think we have to solve them, have really changed since
18 the time of the negotiated rule. Frankly, we didn't
19 understand it that well then because the program was at the
20 place where the program was.

21 As the program has matured, I think our
22 understanding has also and also the support that we have
23 been able to put in place. I really, for about the past
24 year-and-a-half, have been working on a framework for
25 getting the contractors that I need, the bits and pieces of

1 work from various people. Now we have an integrator. All
2 that just took a while to put in place. So I'm really very
3 glad to tell you where we are.

4 This will have three parts to it. I want to tell
5 you about the concept against which we are building, against
6 which we are thinking, the schedule that we see for
7 developing this environment, and then management operations
8 and procurement, which really has implications for the LSS
9 and how we proceed and with the interaction that we will
10 have with Lloyd and his procurement as it goes ahead.

11 We lovingly call this doors and drawers. Our goal
12 is to engineer a new information management architecture
13 that effectively and efficiently integrates our nationwide
14 information resources. We mean that in the broadest sense
15 of information resources, textbook, the data, the
16 information, the hardware, the software, the tools, the
17 architecture.

18 So if you will go to the next one, you open up
19 your doors and drawers, you start to see the conceptual
20 framework that we've developed and against which we are
21 implementing. It has to do with the applications and office
22 automation tools and telecommunications, the
23 hardware/software, all put together in an architecture with
24 input process, output access and storage ongoing to keep
25 that up on the lefthand side. I will speak to that, because

1 I think it starts to lay out quite clearly this concept.

2 All of this, of course, supports the data that, as
3 we look functionally across the program, we have
4 programmatic, very broadly programmatic technical, financial
5 and institutional data. Not that these are databases,
6 they're logical breakdowns. We have called this
7 Infostreams, which is our information storage, retrieval,
8 access management system.

9 The concept behind this is that all our program
10 information has to be treated in a way that is integrated.
11 In some cases, it's only using the same platforms. In some
12 cases, it's an integration of data. But that information
13 will start breaking itself down into streams of information
14 that will be processed in various ways.

15 We will have input coming into the program. We
16 will have outputs from the program. We will store in
17 certain ways. We will have access by the users internally,
18 externally. We set up our networks to disseminate this
19 information. As information comes in, we start to screen it
20 for relevancy into these streams of information and then
21 perform different processing on these streams depending on
22 the relevance of that information to certain parts of the
23 program and then treat its output and its storage, also
24 depending on what the information is to be used for.

25 The approach, then, on this viewgraph is that

1 we're managing both technology and information and that
2 we're adding value to the processing of this information as
3 we break it down into these streams and as we screen it and
4 as we process it. When I talk about the maturation that
5 we've gone through and I think an understanding of the LSS
6 is to be, what we really have to focus on is not that
7 records are pieces of paper, but, rather, that they have a
8 content.

9 It's the content of the document that determines
10 the level of treatment that we will be giving it. Once you
11 start taking that perspective, you start having to look at
12 the world, the environment you live in quite differently.
13 With that philosophy, then, we have started conducting an
14 intensive information architecture assessment. This is, in
15 a very broad sense, what this architecture looks like. How
16 are we going to get from where we are to there is where this
17 assessment is taking us.

18 The major pieces of this are that we want to
19 reevaluate and re-engineer our records management, our
20 office automation, and our networks. The records
21 management; we started with our records management system.
22 I've been in the program now for four years and it predates
23 me by a little bit. We brought in a system to support
24 litigation.

25 It had a real litigation support flavor. All of

1 the pieces of paper that we've processed we have put in
2 there and it was successfully used. You know the attorneys
3 bitched about it, but, basically, it was successfully used
4 as it was intended, and we treated all the information that
5 went in in the same way. But we're beginning to realize
6 that we have to look at differential treatment of that
7 information.

8 All the pieces of paper that come through the
9 program are not equally important and should not all be
10 treated the same way. In this regard, we're talking now
11 about assuring efficient processing, information retrieval,
12 and data integrity through this intelligent document
13 management. In this concept, then, the LSS information
14 represents but one Infostream.

15 We will screen the information. If it is
16 determined to be LSS information, it will go through a
17 process of indexing, as close as we can come to the LSS
18 headers, full text imaging, we'll output in that form, and
19 we will then provide an audit trail for these LSS records.

20 Now, in this context of Infostreams, there isn't
21 just information that comes into us, there is also
22 information that we create. Word processing, documents that
23 we send around for concurrence, that is going to be a
24 stream. Through the local area networks, users will have
25 access to these documents, will be able to route them

1 automatically for concurrence. When all that is collected,
2 then they will go into another stream; are they LSS
3 documents, what is their eventual disposition.

4 We'll put them on records disposition schedules.
5 Some documents will be kept for the life of the republic and
6 some will be disposed of very shortly. But it all ties into
7 records management, and so there are then streams coming out
8 of these streams. The LSS information, we will be
9 generating optical disks and tapes, completely consistent
10 with the rule, that we will be able then to give to the LSS
11 Administrator.

12 Also in this scheme of things, the first action
13 we're going to perform on documents is that we're going to
14 scan them. So we'll get a bit-mapped image of them. We
15 still have to produce microfilm because the National
16 Archives requires microfilm. But if we scan the documents
17 and use a COM process, we can produce microfilm for that
18 stream of documents that has to go over to the National
19 Archives and be kept in that form.

20 We can, from these bit-mapped images, of course,
21 put the images on optical disks if they're part of the LSS
22 stream or, as is becoming very important in the program, if
23 we go forward with a monitored retrievable storage system
24 and this information is wanted in that form, we can also
25 then segregate one of those streams into an MRS stream or a

1 transportation screen and treat that information in an
2 appropriate way, both in terms of processing through the
3 program, eventual disposition of the information, the
4 storage format that it goes into, and then, of course, being
5 acted upon internally within DOE as appropriate.

6 Then to ensure this content-driven design,
7 development and implementation, there are two key concepts
8 here; document relevancy and differential indexing. I've
9 been talking about the relevancy. We are actually starting
10 some pilot programs to look at content of documents and
11 trying to develop some rules.

12 One of the key points, the little head that we
13 have up there, is that we want to overlay an expert system,
14 a rule-based system on this to do as much as we possibly can
15 in an automated way. As John Bartlett is fond of saying,
16 we're providing the institutional record for the program and
17 the program will go on long after all of us have moved on
18 somewhere else.

19 So it's very important that we don't just have
20 subjective judgmental rules that we're applying to this
21 relevancy, but rather we try really to be as objective as we
22 can to quantify, to qualify these and to be able to list
23 them. So we have actually started a pilot program with some
24 of our internal information to see if we can come up with a
25 rule-based system, to come up with the rules that will turn

1 into a rule-based expert system for determining relevancy.

2 The differential indexing, I think I alluded to a
3 little bit, is every piece of paper that comes through the
4 program is not worthy of being treated in the same way.

5 That information that is LSS that will support the license
6 application will have to have the full range of indexing,
7 will be in full text, will have its images.

8 We get letters from sixth graders that we answer.
9 Those are important relations with the public, but those
10 letters really don't have to be kept for the same length of
11 time that the LSS information does. So we will then treat
12 the way we index that information and the disposition
13 schedules we put it on in different ways. So that is what
14 we mean by differential indexing.

15 Like I always do, I just go ahead and talk and
16 forget that I have viewgraphs that say the same thing.
17 Let's see what I forgot. It's a filtering process that
18 assures the appropriate level of treatment is assigned to a
19 document depending on its relevancy to our mission. It's
20 the ability to separate documents by program element and to
21 anticipate future needs. Then we can do this efficient
22 processing that I talked about.

23 Differential indexing, of course, will decrease
24 document processing costs and it will give us the ability,
25 then, to handle say travel reports differently than study

1 plans. Now, if that's the management of information, then
2 underlying that, of course, there has to be hardware and
3 software that provide this functionality. We're
4 establishing a migration path now from the office automation
5 environment that we have in place to this information
6 management processing.

7 As part of this, we are evaluating office
8 productivity tools that are capable of handling large
9 volumes of data and images. Electronic mail, we now have
10 mainframe-based mail. We want to get that down to a local
11 area network. We're looking at electronic concurrence and
12 document routing and it's very important to our QA forms to
13 be sure that we get that review process automated as much as
14 we can so that we provide -- always in the back of our minds
15 is providing an audit trail.

16 Electronic forms management, that is something
17 that DOE is putting in place; travel forms, 500 or 5,000,
18 however many forms it is that they use. We are tapping into
19 DOE-wide initiatives wherever we can to bring that down into
20 our local environment. As I mentioned, it's very important
21 that we start to create an audit trail for these quality
22 records through this process.

23 Now, the networks that we have in place; local
24 area networks in headquarters. We have had that for some
25 time. We are now upgrading it to fiber, and this is all

1 happening now, so that we can handle large volumes of data
2 and information. We're putting in image-capable terminals.
3 There will be full connectivity throughout the program. We
4 are putting the same system in place in Nevada. We have a
5 wide area network up. Then if we get an MRS site, we
6 replicate this.

7 Our contractors then have to be compatible with
8 this architecture that we have specified. So we will link
9 network to contractors, national labs, other sites. That
10 will enable us to support access to information systems, MIS
11 systems, project management systems. There is quite an
12 interest in going Nevada to headquarters, for example, in
13 MIS systems and new cost scheduling data, for example.

14 We are viewing the records system as one system
15 with a number of nodes; at first two nodes, one in
16 headquarters and one in Washington, one in Nevada; and we
17 will be using our network then to check duplicates across
18 this network. So if a document comes in in one place, we'll
19 use the network to check through the basic indexing. We're
20 having this program developed right now so that we don't
21 store duplicate information.

22 Then we can do image transfer and support data
23 transfer for scientific analyses as we get further into GIS
24 systems and they get linked. We will want to be able to
25 support within our local network environment these

1 requirements for data transfer and video conferencing
2 services. We have that up now.

3 The next page is the implementation schedule. I'm
4 not going to go into this, but I just want to show you that
5 this isn't fantasy, we're really doing it. The only thing I
6 really want to speak to is the first line, which is the
7 information architecture assessment. That is where we're
8 aiming up there, our Infostreams. We expect to have a good
9 specification in order to start implementation of those
10 processes by the end of September.

11 We will have a readiness review on are we ready to
12 go with phases of that. So this is coming up right now.
13 That's our information concept and the infrastructure that
14 we have to support that. There is another whole layer that
15 really has to be taken into account if you're working in a
16 Federal environment in order to make this happen.

17 As I said, I've spent the past year-and-a-half
18 trying to get the pieces in place, the contractors, the
19 expertise, lining all that up, getting that critical mass
20 that we have now. What you have to look at then are
21 management, operations and procurement. Since the
22 negotiated rule, there are really some unanticipated changes
23 that we just couldn't have known about. This is part of the
24 maturation that I think we've gone through.

25 They do have implications for the LSS, the way the

1 procurement is done. I'd just like to go through these a
2 little bit. They may seem a little obscure in cases, but
3 bear with me. They're really, really critical pieces of
4 this puzzle.

5 This is the one that might seem a little obscure,
6 but, trust me, it isn't. The first unanticipated change, of
7 course, is the delay in submission of the license
8 application. I think Lloyd and Lynn and everyone has spoken
9 to that. I don't have to go into that. We have awarded an
10 M&O contract. In February, the final award was made to TRW
11 and it's a ten-year contract that will provide integration
12 across the program.

13 It's very large. It's where all our support is
14 going to come from, almost all our support. We'll still
15 have some contractors, but the idea is that we're trying to
16 integrate across the program and we have one contractual
17 vehicle that will do as much as possible of that. The
18 implication of that, of course, is as TRW comes on and ramps
19 up, we started working with them in June. They are doing
20 the integration for our architecture and our design and
21 integrating all these pieces I've had in place. They are
22 the ones that are going to present their readiness review at
23 the end of September for the go-ahead for the implementation
24 of our Infostreams.

25 Then, of course, as other of our ADP and

1 information support services contracts expire or are
2 transitioned, I will get all my support then from -- not all
3 of it, but that's what this is about -- as much as I can of
4 it from our M&O contract. Now, there are some real
5 implications of this and it has to do with the structure of
6 these contracts.

7 There are procurement requirements that are
8 imposed by contractual vehicles. So if you look at our
9 contractual framework now, we have the M&O contract and M&O
10 contracts are to integrate and perform tasks to satisfy
11 program mission. That is one definition of what they are to
12 do. So they will have a presence at headquarters, at Yucca
13 Mountain and any other sites that we might have.

14 What they cannot do is provide support services.
15 So what we're putting in place now is I have support
16 services provided by some of these other contractors. If I
17 need a computer facility run, if I need telecommunications
18 networks managed, support services, I can't get that from
19 the M&O because it's not in the contract.

20 MR. COPENHAFER: What does M&O stand for?

21 MS. CERNY: Management and operation. As I said,
22 this may seem a little obscure, but it is truly fundamental
23 to the points I'm going to make here. What we're doing is
24 putting a support service contract in place. I've divided
25 the processing up that we're doing so that the ADP and

1 telecommunications support services contractor will provide
2 our computer facilities, our network management. Our local
3 area networks are all provided and supported and the hotline
4 by that form of contract, also.

5 So I will have that structure, basically those
6 that I'm working in. Now, what the M&O will be tasked
7 to do is to manage our information, develop the architecture
8 for these Infostreams and do the initial processing, do the
9 processing of information, as much of it as they
10 possibly can, as a series of tasks.

11 Inherent in these contracts, in an M&O contract,
12 is that we as a program task them to do something, like
13 processing, and then they go out and they procure the
14 computer equipment required to do that processing so that it
15 satisfies their tasking. They follow a different set of
16 regulations than do support services contractors.

17 They have an approved procurement system. We
18 cannot specify what equipment they buy. In the words of the
19 FIRMR, those of you who know and love the FIRMR, the
20 specification of equipment is incidental to the performance
21 of their work. What that means is we will give them a task.
22 They will perform what basically the LSS capture station is
23 performing, and I will get to why I'm saying that in a
24 minute. So hold onto that.

25 So we cannot just bring equipment in and say use

1 this. We could if that was all they were doing, but the
2 fact that we view this information management problem across
3 the program, that it has to be totally integrated, that the
4 LSS is but one Infostream coming out of this, means that the
5 equipment that they go out to procure has to satisfy all of
6 these requirements.

7 Now, the other unanticipated change is that I
8 think we really understand what the impact of a quality
9 assurance program is on our institutional records
10 management. I did not come from a nuclear background. I
11 didn't know what a quality assurance program was. I had
12 heard the words.

13 But having worked with that in the past two years
14 and since I have the quality records and I do have some
15 quality effecting work, in helping develop that program, I
16 really understand that it's all about what it traces and
17 pedigrees of information and that as you produce your
18 documentation, as you produce your information, your data,
19 your documentation, it all has to be done under these
20 procedures that are auditable and traceable.

21 So the reason we start at the beginning with the
22 information that is produced in one form or another that
23 comes into the program, that we produce on word processing
24 files, that we control as controlled correspondence, all of
25 this, if it is going to effect quality, if it's quality-

1 effecting work, it has to be subjected to this pedigree
2 process.

3 So what, then, are the implications of this for
4 the LSS? Well, I see that we can produce disks and tapes
5 consistent with the rule. The output of what TRW was
6 producing for us, the LSS Infostream, we're totally
7 supportive of the rule and of this way of processing
8 information and of handling information and we always have
9 been.

10 We've been talking about getting the disks and
11 tapes and the output and having indexed it and put it in a
12 format that's consistent with the rule, and that is what we
13 can transmit as it's produced, in a timely manner, to the
14 LSSA. But we also can't separate that from our own internal
15 processing. If you look at what the LSS capture station is
16 to do, it no longer is clear. This is something I look
17 forward to working with Lloyd and his staff on.

18 It is no longer clear what the LSS capture station
19 can add that we are not going to be doing internally because
20 we have to in order to provide the pedigree for information
21 as it comes through our program. If you start taking pieces
22 of paper, the way the LSS was first envisioned, that we
23 would either send tapes or disks or pieces of paper or
24 something over with some level of indexing and they would be
25 QC'd and further indexed, if you start taking that out of

1 context -- after all, we have 80 to 90 percent of the
2 information and if you start taking that process out of
3 context, all the information we're producing in the program,
4 I think it has lesser value than if we go and process it as
5 I am describing through our Infostreams.

6 So the value added, to me, that the LSS capture
7 station process can provide is no longer so clear to me.
8 Further, because we're finally moving at great speed here,
9 we're going to start having some things come out in Fiscal
10 Year 1992, Fiscal Year 1993 timeframe.

11 I discussed this. The processing equipment
12 functionality is not necessarily as specified in the design
13 documents. We are using those. We put a lot of work, a lot
14 of effort into those documents. We think they are very
15 good. I think there is no disagreement in this room that
16 SAIC did a superb job. We're incorporating everything we
17 learned into our new architecture.

18 I mentioned we have to support to all Infostreams,
19 that this establishing document relationships and the
20 quality control has to be done as part of our internal
21 processing. Now, what are some of the other implications of
22 this. To us now, the LSS mission focuses on the
23 distribution and dissemination of information. If we are
24 capturing that percentage of it and if we are doing it in a
25 way, as I will talk about in a little bit, that I think

1 could be acceptable to everyone, then the LSS mission is
2 distribution and dissemination and, of course, the capturing
3 of those parties' information, the remaining ten or 15
4 percent, whatever it is.

5 If NRC were to be compatible in how they capture
6 information with us, we'd probably have 95 percent of it.
7 When you start talking about distribution and dissemination,
8 I think -- and we came and talked to Lloyd and his staff
9 about this a year ago and I don't know if this has ever been
10 followed up or not, but it makes sense to us to look at the
11 possibility of not procuring a mainframe and going into the
12 information dissemination business, but, rather, very
13 consistent with A130, OMB A130 guidance on the
14 implementation of the Paperwork Reduction Act, to give to
15 the private sector that which the private sector can add
16 value to.

17 That is certainly the approach that the SEC has
18 taken. That is what these companies are in business to do.
19 If we were to get our information in LSS format and then to
20 have it -- do either of two things with it, have it loaded,
21 give it out to a Mead Data Center -- some years back, I was
22 working with Chem Abstracts, since they were putting their
23 scientific and technical network up, they can handle some
24 forms of technical data, depending what we want to do, how
25 this thing goes.

1 It's something I think worth looking at to say
2 does that make more sense, because when you start looking at
3 what is really involved in this distribution and
4 dissemination of data, it's not just loading tapes. It's
5 all the invoicing, it's the customer service, it's the
6 maintaining of networks, it's the business that these people
7 are in.

8 The other thing that seems to become more and more
9 reasonable to us is that we may well want to disseminate
10 subsets of this database on a subscription basis on CDROM.
11 So you could have two forms, our very preliminary thinking.
12 As I said, what we came over here last year and talked about
13 is that there are at least two forms that we could
14 disseminate information in that would not have the
15 government in the business of being a large information
16 service, which I just don't know how consistent that really
17 is with what the government's mission should be. I think
18 it's something we ought to look at.

19 Having said all that, there are some recommended
20 rule changes. If the NRC takes over the design and
21 development of the LSS, then there are going to have to be
22 some rule changes anyhow because that isn't the way the rule
23 reads. If they go into that rule change, then I think we
24 ought to look closely at what we're doing internally and
25 that that design and development should be consistent with

1 our internal processing.

2 The way we see we have to handle the information
3 and with the capture stations that we have, the procedures
4 that we are using are integrated into their design and
5 development efforts. If we have our M&O then doing the
6 intake process, possibly a role for the NRC in this is that
7 they certify -- this is the last bullet here -- that they
8 certify our information processing paralleling the review
9 and audit process for qualification of the QA program.

10 We have learned a lot about how to put these
11 procedures in place. We have audits against them. When you
12 start thinking about it, when you start thinking about the
13 Infostream process and about the pedigreeing of data and
14 information, it is an extension of the QA program that we
15 already have in place now.

16 Since the NRC has come in and certified our QA
17 program, has said we are ready to start doing technical
18 work, it makes sense then to ask the question could we not
19 certify our information processing in the same way, because,
20 after all, you collect your scientific data, you put it into
21 some form, you put it into packages, you feed it into the
22 LSS. So that's one of the tasks that I have in place, is to
23 start looking at how this really fits into the QA process,
24 because, to me, it's inextricably intertwined.

25 We already have a quality records center and all

1 those quality-effecting records which will eventually go
2 into the LSS we have under these procedures. So could we
3 not extend that Infostream and its associated processing
4 that feeds into the LSS, could we not qualify that in the
5 same way and then allow us to use the equipment that we're
6 using that our M&O has procured to fulfill certainly the
7 intent of the rule, if not in exactly the way that was
8 proposed back a few years ago when I maintain we really
9 didn't have such a clear picture of what was involved.

10 Questions?

11 MR. PITTS: So you are already going to have 95
12 percent of the material on a computer-disseminated
13 information system?

14 MS. CERNY: No.

15 MR. HOYLE: Would you repeat the question?

16 MS. CERNY: Let me repeat the question. The
17 question is are we going to have 95 percent of the
18 information on a computer --

19 MR. PITTS: Disseminated information system.

20 MS. CERNY: On a computer-disseminated information
21 system. DOE will, we estimate, have 80 to 90 percent of the
22 information that will go into the LSS. The other parties
23 will have ten to 20. We will have to capture that
24 information through this process I am describing internally
25 within DOE and we are preparing to do that.

1 MR. PITTS: So basically, before the LSS system
2 was implemented, a lot of the past information would already
3 be on your current Infostream system.

4 MS. CERNY: It's all there. I am going to produce
5 disks and tapes and I would like to do them in the LSS
6 format under procedures that are approved ala the QA
7 process.

8 MR. PITTS: That was my question.

9 MS. CERNY: I can then give the disks and tapes to
10 the LSSA to do with what they want.

11 MR. PITTS: That was my question. Thank you.

12 MS. CERNY: Phil?

13 MR. ALTIMARE: Can I follow up on that question?

14 MS. CERNY: Sure.

15 MR. ALTIMARE: When you say you're going to have
16 80 to 90 percent of that and you're going to put it all on
17 disks and tapes --

18 MS. CERNY: Yes.

19 MR. ALTIMARE: Are you also going to be accessing
20 your own system for that information that you're giving to
21 the LSS?

22 MS. CERNY: Sure. This is our internal system.
23 We will do all sorts of things with this. That's why we're
24 looking at it in this way. Those disks and tapes are one
25 stream that come out that can be given to the LSSA. The

1 thing about this architecture is the next phase of this, the
2 whole issue of technical data and access to different
3 databases and it all will fit in here. So we can separate
4 that, which is consistent with the rule, into an LSS stream,
5 but we have the ability to tie that information to other
6 information as is required within the program.

7 MR. ALTIMARE: The question was that you will have
8 that information on your system and you will be accessing it
9 through your system.

10 MS. CERNY: I don't know, Phil. I know we will
11 generate disks and tapes and what we do with that I cannot
12 tell you that, because the disks and tapes are a requirement
13 of the LSS rule.

14 MR. ALTIMARE: Will you be using the same headers?
15 Is that the plan now?

16 MS. CERNY: Yes. I will use the headers. If we
17 can decide everything about the LSS format, that is how
18 we're going to do this, because that's what makes sense.
19 Why does it make sense to do it in some other way when we're
20 just designing the architecture now and we have this freedom
21 right now to do it?

22 MR. CAMERON: After you turn out the disks and
23 tapes and turn them over to the LSS either to feed into a
24 total system that is procured separately or through the data
25 approach, would people be able to get access to the full

1 text and images of the disks and tapes, the records that you
2 turned over to the LSS through DOE also?

3 The reason I ask is because one of the things that
4 we crafted in the rule which was how to get people to
5 voluntarily comply with generating this database before the
6 license application came in and before we had jurisdiction
7 to make them do that, was this quid pro quo about if you
8 comply with the requirements of the rule, then you're going
9 to have full text access and image access.

10 Now, if people can also tap into what DOE has, it
11 seems like that quid pro quo goes away. I haven't thought
12 it all out, but I just wonder what that does to the
13 underpinnings of the system and I wonder if you had thought
14 about what's going to happen with access to your records
15 separately from the LSS.

16 MS. CERNY: These are policy questions that I
17 can't begin to answer. It's back to the what kind of
18 external access are we going to give to other parties into
19 DOE systems. It's a policy issue I can't address. But I
20 can't really see DOE being in the business of providing
21 access to anybody who wants to get in. That's why I think
22 there will be some dissemination or put it out to someone
23 else, just because it gets to be a very complicated policy
24 question.

25 MR. CAMERON: I think that is one thing that we

1 have to keep in mind when we're going down the road in the
2 implementation to be sure that we don't accidentally knock
3 some of the underpinnings out of it.

4 MS. CERNY: I'm in complete agreement with you.
5 As I said, we really support this. We think this is a very
6 good idea. We have from the beginning. It's just, as I
7 said, I think our understanding of it has matured and I have
8 no desire to knock out any of the underpinnings, believe me.
9 That's why I think this idea of being able to generate disks
10 and tapes and then to give them to the LSSA and however this
11 works out is really consistent with the intent of the rule.

12 We are just looking at a different scenario where
13 we are much more in the QA framework than we are with
14 equipment off someplace that's done in isolation.

15 MS. SHELBURNE: Barb, you talked about giving out
16 disks and tapes to the LSS. Do you intend to load the full
17 text and image on your system, as well as generate data for
18 loading onto the LSS for these types of records?

19 MS. CERNY: Betsy, I really don't know the answer
20 to that. It's what we all work out. If this is the
21 direction we go -- what kind of use am I going to have
22 internally; what kind of system are you going to put up. I
23 don't know the answers to those yet.

24 What I am proposing here, we're as far as saying
25 this is the concept, this is the direction I think we should

1 take.

2 MS. SHELBURNE: The reason I'm asking is what you
3 just said, the idea of we're assuming so many users in the
4 design and supporting the DOE access to technical
5 information, the idea of using the LSS. Once you work
6 through your program, we would like to know that.

7 MS. CERNY: Again, we come to understand this.
8 The LSS data, the whole Infostream concept being the
9 automation we're putting in place to support it says that
10 we're going to be able to access different kinds of
11 information. Now, the LSS is a bibliographic database.
12 Where does technical data fit into that? I can certainly
13 see internally within DOE as this concept matures we will
14 have access to certain technical databases that are pointed
15 to by records that go into the LSS, though the technical
16 data does not.

17 Internally, then, what will the scientists want to
18 do? Will they want these linked together for their use
19 because they will want to have that kind of a trail? We
20 haven't gotten far enough yet on this, but that's why I
21 can't really answer that question, because the LSS, as I
22 said, is no longer, to me, just this -- it sits out there,
23 but, rather, it has to support all these other programmatic
24 requirements that we are beginning to understand.

25 So maybe they'll go out to the bibliographic

1 database for some uses and maybe they will want it linked
2 internally.

3 MR. HOLSTEIN: Barbara, in view of the time, I
4 wonder if we could ask you to move on to the last bullet, to
5 expand on that in a couple of ways. For example, I'm
6 interested to know a little bit more particularly about the
7 first sub-bullet there and a little bit more about the
8 timing and schedule for that sort of recommendation and how
9 that might happen. Is there any more light you can shed on
10 that?

11 MS. CERNY: No, there isn't. As I said, these are
12 ideas that really have been evolving and that I think we
13 have to work with Lloyd's office with, with you people with,
14 just to see how this could be played out in such a way that
15 everybody would be happy with it once we start getting into
16 rule changes.

17 Lloyd was talking about doing a rule change if
18 they take over design and development. All I'm saying is
19 when that process starts to happen, I think we ought to look
20 at internally where we are and where we're going and to do a
21 rule change that's consistent not only with Lloyd taking
22 over design and development, but also consistent with the
23 processing that we're putting in place.

24 I don't have a schedule. That's really maybe a
25 question for Lloyd.

1 MR. HOLSTEIN: I guess my admonition on this, at
2 least speaking for Nye County, is that it strikes me as
3 being useful to keep in mind that this panel was formed
4 obviously out of the original process of developing the rule
5 in the first place. So that the sooner we can begin to see
6 option papers or discussion memos or what have you for any
7 possible contemplated rule change down the road, the better,
8 for purposes of giving us the sort of background we would
9 need to participate meaningfully in that kind of discussion
10 of any options you might put before us.

11 MS. CERNY: No. I certainly agree with that. I
12 think there are just so many things up in the air right now
13 about the direction this is taking. As soon as some of
14 these get solved, I think then -- is that not right, Lloyd?
15 You would then want to look at rule changes? It just has to
16 do with the form that the LSS takes. It has nothing to do
17 with what I have to do anyhow. That's right.

18 But it does have to do with the LSS capture
19 process and that if we do it internally, as we understand we
20 have to, then what really is the role of the capture station
21 sitting out there. That used to make sense and I don't
22 think makes as much anymore.

23 MR. DONNELLY: Let me comment on my observation.
24 In all the infrastructure that you're putting in place
25 currently, it seems to me that, put very simply, you are

1 going to do internally what you were planning to do
2 externally for using LSS capture stations. We've always
3 talked about DOE doing this kind of full processing and end
4 products sitting on tapes or disks or whatever as an input
5 to the LSS.

6 To me, it sounds like the same disks and tapes
7 will be generated internally rather than using the LSS-
8 procured equipment. The same equipment or similar equipment
9 will be procured through different vehicles to do the same
10 job.

11 MS. CERNY: That's exactly right. It just does
12 have an impact on the procurement then because we can't use
13 that capture station because we're going to be doing it
14 through, I hope, approved procedures through the process
15 that we have put in place. That's right. That is the only
16 issue.

17 MR. HOLSTEIN: With regard to the second sub-
18 bullet, let me just add this point, and this is really just
19 a point of information at this stage for everyone involved
20 in the development of the LSS. That is that the Department
21 of Energy is working, I'll speak specifically for Nye County
22 here, is working with some of the affected parties to
23 develop what can be thought of as divisions of labor with
24 respect to certain basic data-gathering in some aspects of
25 this program.

1 Some of this is being incorporated into actual
2 formalized protocols that are being negotiated between the
3 Department and the affected parties and formally approved by
4 the governing boards of the parties, as well as by the
5 Department of Energy.

6 Some of those programs entail submission of that
7 work, of that data-gathering to QA review and requirements.
8 So that could well become an issue with regard to the second
9 sub-bullet here. I just mention that as a point of
10 information for us to keep in mind, but also for us to be
11 kept posted on any developments on that point, if you feel
12 that it's something we ought to know about.

13 MS. CERNY: Certainly. That's right. The data-
14 gathering is all subject to QA requirements right now. This
15 issue of how we actually go about this and if this is the
16 way we do it, we have gone no distance in specifying this at
17 all because we have to all have agreement that that's the
18 way we want to head. Then we can start working out the
19 details of it and what it means. I'm just raising this.
20 I'm really today just trying to give a status of where we
21 are and where our thoughts are and the directions that we're
22 heading in and certainly that, as I said, is something we're
23 just playing with at this point.

24 MR. HOLSTEIN: Thank you.

25 MR. HOYLE: It sounds like to me, Lloyd, that you

1 and Barbara do need to get together, understand completely
2 what it is she's talking about and make sure that you're as
3 comfortable as you seem to be now on that point. Dave?

4 MR. COPENHAFFER: I'm still unclear, Barbara, as to
5 what is happening on the image side. Are you or are you not
6 assuming any responsibility for image input?

7 MS. CERNY: I'm sorry. Image input or output?

8 MR. COPENHAFFER: Input. In other words, you're
9 replacing the capture station, to the extent that the
10 capture station had responsibilities for getting into LSS,
11 both ASCII and image information.

12 MS. CERNY: Right.

13 MR. COPENHAFFER: You're going to be turning over,
14 at least from what I've heard or what appears to be
15 certainly the ASCII portion, but I'm still not sure what is
16 happening on the image side.

17 MS. CERNY: We're going to be turning over the
18 images. We're going to do the process as specified in the
19 rule on image, header and ASCII. It is the capture station
20 process and then we will turn over the disks and tapes and
21 the images to the LSSA, just as a capture station would do.

22 MR. COPENHAFFER: I understand. So that DOE, as an
23 entity, is, in fact, buying into internally the maintenance
24 of both image and ASCII databases.

25 MS. CERNY: Yes. We feel we have to do this not

1 just for the LSS, but internally for the program. We not
2 only have the LSS, the repository. We have monitored
3 retrievable storage, we have transportation as major program
4 areas. We have national laboratories who now are producing
5 a lot of their information on optical disks and, at this
6 point, they're being forced to convert part of it back into
7 hard copy because of our requirements and we would like to
8 be able to handle that information as it comes to us anyhow.

9 So this is not a requirement. It's an LSS
10 requirement, but it's also something we feel we need for
11 other reasons.

12 MR. VONTIESENHAUEN: I have a question. Your
13 records management is presently under QA control. Will this
14 system basically replace records management?

15 MS. CERNY: No. Records management, only the
16 quality records are under QA control. We have a separate
17 quality records center from the rest of the program records
18 center. What I am recommending here is that we use a
19 process that is similar to the review, surveillance and
20 audit of procedures, processes against procedures that we
21 use for QA and for certification, to certify to have the LSS
22 certify that we are following those procedures.

23 That is what the LSS capture station external to
24 all the parties, that was to be that job. But given that
25 this was also intertwined with some quality records, some

1 not quality records, it just makes sense to try to put that
2 kind of a certification surveillance process in place
3 internally. How that exactly interacts with QA I cannot
4 tell you yet, but it must.

5 MS. WRIGHT: You made one statement and I want to
6 make sure I'm understanding it correctly. You said
7 something about the LSS being a bibliographic database and
8 you weren't certain how the scientists would want to
9 interact that with technical documents. Am I understanding
10 the technical stuff is not going to be in the LSS?

11 MS. CERNY: The technical data, any reports will
12 be in the LSS.

13 MS. WRIGHT: Raw data will not be.

14 MS. CERNY: Raw data only in bibliographic form.
15 If we have a field notebook that gets imaged and put in the
16 LSS, what we're working on now is packages of how we trace
17 all that stuff and how we put it in.

18 MS. WRIGHT: I wanted to clarify that we were
19 going to have --

20 MS. CERNY: That's right. But we do not have the
21 technical data that you use in the models, that they want to
22 manipulate. That's the backup that will be pointed to in
23 these packages. It comes from a certain database. But you
24 can't access that through the LSS. However, internally, I
25 can see that can be a big issue for the scientists to want

1 to be able to get at that and understand the audit trail of
2 where that came from, which are the LSS records.

3 MS. WRIGHT: And our board might be.

4 MS. CERNY: Yes. That's this whole rather open
5 architecture that we're trying to design now that will allow
6 that kind of support.

7 MS. WRIGHT: Thank you.

8 MR. HOYLE: Any further questions?

9 [No response.]

10 MR. HOYLE: Barbara, thank you very much. I
11 appreciate your bringing this to our attention at this time.
12 It's a very important moment, I think, for us to understand
13 just what it is you're now doing. And all of us, not just
14 Lloyd, but I do ask Lloyd especially to have a look at your
15 plans to see what impact, if any, there is on the LSS in the
16 rule.

17 MS. CERNY: Thank you very much for the
18 opportunity.

19 MR. HOYLE: Before we break for lunch, which we
20 are scheduled to do at 12:15, I understand that Tom Nartker
21 is in the audience. Tom has talked to us before. He's from
22 the University of Nevada at Las Vegas and is involved in
23 research on information systems. I think we could give him
24 about ten minutes. Tom, why don't you come on up here where
25 Barbara was?

1 MR. NARTKER: Thank you, John. I will kind of
2 review for you what we at UNLV are doing to try and be of
3 help to the LSS system when it's finally developed. We are
4 commissioned as part of our contract with the DOE to try and
5 improve key technologies that dominate the costs of and
6 benefits provided by the LSS system when it's built.

7 In general, the two key technologies are optical
8 character recognition technology and full text retrieval
9 software technology. We are, in fact, mounting technology
10 improvement programs in both areas and I can tell you what
11 has happened in the last six or eight months. We have made
12 some progress.

13 First, let me tell you that we are sponsoring an
14 annual conference in this area. We have out a call for
15 papers and I will circulate a couple copies of these right
16 now. This is our call for papers. Our first annual
17 conference in this area will be held March 16 through 18 of
18 1992. It's scheduled for the Tropicanna Hotel in Las Vegas.
19 We are soliciting papers on character recognition, on
20 document analysis, and on information retrieval.

21 I have other call for papers available here.
22 Please, if you know anyone who is doing research in this
23 area, take a copy and pass them on. We are anticipating our
24 first conference will probably gather small attendance, but
25 there has been no annual conference in the character

1 recognition area or in the text retrieval area in this
2 country or anywhere.

3 There are annual conferences where people present
4 papers on pattern recognition in general, but the specific
5 technologies that control LSS are subsets of those
6 conferences and this is the first time there will be
7 conferences on these specific technologies, an annual
8 conference on these specific technologies and this is the
9 first one.

10 We have gotten started conducting this conference.
11 We have also begun to mount a technology improvement program
12 in character recognition. Our plans for our text retrieval
13 program have sort of second priority at the current time.
14 We probably won't have a text retrieval experimental engine
15 running until next year sometime.

16 We have gotten started on establishing an
17 experimental environment which we hope will improve or make
18 it possible to improve character recognition efficiency in
19 less than a five-year timeframe. We have acquired one copy
20 of each of the optical character recognition hardware
21 devices that exist in the world, that we know about anyway.
22 We have a Kolara-9000, we have a Kurzweil-5200, a Toshiba
23 Express Reader, and we have a CARE reader also. All of
24 these machines are up and operating.

25 In order to automate research on these

1 technologies, we are installing them on a file server at
2 UNLV, along with, on the same file server, a copy of the LSS
3 prototype database that was developed by SAIC, which we have
4 taken possession of and are beginning to install. We have a
5 machine that, on the one hand, has the LSS prototype
6 database installed and, on the other hand, is connected to
7 one copy of each of the OCR technologies.

8 We're beginning to put together an environment
9 where character recognition researchers from anywhere in the
10 country or potentially anywhere in the world can log onto
11 our machine and run very sophisticated experiments very
12 easily by simply filling in a menu that directs our machine
13 to conduct an experiment, which may take literally days to
14 perform because of the speed of OCR technology.

15 So at the moment, as of this week, we have about
16 9,000 pages of the LSS prototype database loaded on a file
17 server. We have the four character recognition technologies
18 installed. The hardware technology is installed, as I
19 mentioned to you, and we are starting to acquire software
20 technologies, OCR technologies and install them.

21 We have defined a vendor-independent interface to
22 those technologies which enables us to a way we can easily
23 do some very specific local programming each time a new
24 character recognition device is introduced in the
25 marketplace. We can do some very small local programming to

1 implement this vendor-independent interface and add this
2 technology to our experimental environment and naturally be
3 able to apply any of our research programs to it, as well.

4 That vendor-independent interface is defined and
5 operating for those four technologies. We have actually
6 begun to run experiments. Things are pretty small, but we
7 have taken six of the 9,000 pages I mentioned and very
8 carefully gone through these six pages and corrected them,
9 brought them to a state of 100 percent correctness on a
10 character-by-character basis, and actually run an experiment
11 where we, through programs, submitted all six of these pages
12 to all four machines and statistically compared the
13 character-by-character output from each machine to the
14 ground truth text that we produced manually and produced a
15 statistical report showing the level of correctness of each
16 of these technologies versus a 100 percent correctness
17 level.

18 As a matter of fact, I don't have a slide for you,
19 I came prepared to listen and not to talk, but I actually
20 have in my briefcase some printed output I can show you for
21 these six pages comparing the efficiency of the Kurzweil
22 versus the Kolaria versus the CARE versus the Toshiba
23 technologies in these areas.

24 So we have our vendor-independent interface
25 operating and we have each of the devices operating and we

1 have some data on-line and we have people employed -- there
2 are about five graduate students working. We have hired two
3 full-time people in the last six months. We have probably
4 five of our computer science and electrical engineering
5 faculty members involved in summer projects. So there's
6 quite a lot of activity that's begun.

7 I think the most important thing that we have
8 achieved is that we have enough programs written and enough
9 infrastructure added to our file server. We have, for
10 example, a copy of the Ingress Relational Database
11 Management System installed on this file server and our plan
12 is to store the LSS header records and the LSS pages by page
13 property in a relational database so that experimenters can
14 select pages by page property to study, to perform
15 experiments.

16 For example, the kind of thing that you may wish
17 to start out by saying I want to study the character
18 recognition aspects of these technologies, but I don't want
19 to study right now their correctness with regard to
20 mathematical symbols or the ability of the character
21 recognition to translate mathematical equations or chemical
22 symbols or chemical equations and you may want to say give
23 me only pages that don't have those on them or you may want
24 to study pages that have very small fonts on them because
25 the smaller the text font, the harder it is for character

1 recognition technologies to correctly recognize characters,
2 or you may want to study pages with four columns of print or
3 pages with graphs or pages with pictures or without graphs
4 or without pictures or so forth.

5 So we have the Ingress Relational Database System
6 up and running and we're beginning to be able to do that,
7 but we don't have pages stored by page property at the
8 moment. We're just at the beginning stages of getting the
9 pages loaded, getting the technologies installed, beginning
10 to be able to do automatic experiments.

11 If there is anything that is really significant
12 we've done, it is that we have actually been able to run a
13 first experiment taking six pages out of a database,
14 submitting completely under computer control all six pages
15 to all four technologies that we have, and comparing it
16 automatically, comparing the output of those technologies on
17 those six bit-mapped images to the ground truth text and
18 producing a statistical report completely under computer
19 control.

20 That is a key functionality of our experimental
21 engine, is to be able to sort of automate large-scale
22 research and character recognition on a large amount of
23 data. We're beginning to be able to do that. We have
24 started to do some work on text retrieval also. We have
25 acquired a copy of Basis Plus and we have a program. We are

1 also looking at Excaliber and Topic and BRS Search and we
2 have a program outlined to begin probably next year to
3 compare and experiment with full text retrieval
4 technologies.

5 That's a little further away. Perhaps our most
6 significant achievement in the last six months is actually
7 to acquire some additional financial support for this work.
8 We have gotten a grant from the Central Intelligence Agency
9 to extend our work into -- well, partly to support our work
10 and to look into extending our experimental environment into
11 some foreign language text which they have requirements for.

12 So there are other government agencies that, of
13 course, have requirements for character recognition
14 technology, just like the LSS does, and for text retrieval
15 technology, just like the LSS does. We, in fact, are
16 beginning to solicit support from other agencies to try and
17 expand this program and to accelerate hopefully some
18 successful work so that we can reduce the costs of building
19 this LSS database a few years from now and also increase the
20 benefits by providing text retrieval software tools that
21 will be more efficient than those in existence today.

22 If you're in Las Vegas, please give us a call.
23 We'll be glad to show you what we're doing. All of our
24 progress is small at this point, but I think it's
25 significant that we have actually run one experiment that is

1 completely automated, that's done by the computer, and we
2 clearly have enough infrastructure to be able to generalize
3 that now.

4 Our task for the next few months is to get more of
5 the database, get the prototype database installed and bring
6 it up to a higher level of stage of correctness, to get some
7 of the page properties installed in an ingress relational
8 system. We should, by Christmas, be able to -- we might be
9 able to run experiments on a major scale. It will be
10 probably a year at least before we have the entire prototype
11 database out, but we've made a lot of progress just in the
12 last few months.

13 If you're in our area, please come visit. That's
14 all I have. Any questions?

15 MR. HOYLE: Tom, thank you very much and for the
16 invitation, as well. If we have a meeting out in that area,
17 I'd very much like to come by and visit with you.

18 MR. COPENHAFFER: Let me ask you one question.
19 Have you been in touch with Kurzweil or Toshiba or any of
20 the others who are involved on the OCR side and are they
21 doing anything in the area of reversing the process and
22 being able to search from pattern recognition?

23 MR. NARTKER: We plan to be in closer touch than
24 we have been. I think the answer is probably no. Surely we
25 have in dealing with Kurzweil and acquiring a copy of their

1 device. But I think in the sense in which you asked the
2 question, we really haven't yet. Quite frankly, we plan to
3 solicit some support for research from those vendors when
4 the time comes.

5 We currently plan to get the LSS prototype
6 database up and running in an experimental environment that
7 we think will sell itself. We haven't contacted vendors
8 either to impact their research yet, because within a year
9 we hope to have our first technology assessment reports out,
10 which will, from our point of view, tell them how good we
11 think their equipment is. We think we'll get their
12 attention when we're able to do this kind of experiment.

13 I should take just one minute and explain to you
14 the experimental environment we're building. The plan is to
15 have this database, to have one copy of every OCR device in
16 the world hooked onto our machine; one copy of every
17 software package, one copy of every character recognition
18 hardware device; and to have hooked to that same machine the
19 LSS prototype database which was built by SAIC, virtually
20 104,000 pages of data, it's a huge database, and about a
21 quarter of a gigabyte of ASCII text and to enable someone
22 from Boston, Massachusetts to log onto our machine and to
23 crank up an OCR experiment in about a ten-minute
24 interaction, by filling in a menu on the screen, and over
25 maybe ten or 15 minutes of interaction with our file server

1 over the network, they should be able to direct our machine
2 to conduct an experiment.

3 The idea is that they will be able to log off and
4 go fishing and come back two weeks later and find that, in
5 fact, that our machine has completed their experiment. A
6 typical experiment will almost surely take more than 24
7 hours. Running constantly by the computer 24 hours a day, a
8 typical experiment would take 24 hours because it takes 30
9 seconds to OCR one printed page of data for one machine. If
10 you want to do experiments on 500 pages, it's going to take
11 250 minutes per machine to do that one experiment. That is
12 our goal, is to make possible very large-scale, high volume,
13 high accuracy research in this area.

14 The scenario would be as follows. A researcher
15 from anywhere in the country should be able to log onto our
16 machine and fill out a menu which would enable him to select
17 pages by page property. He may be interested in
18 experimenting, as I said, with small fonts or may be
19 interested in experimenting with just random pages, should
20 be able to select pages by page property and then optionally
21 apply image processing routines to those pages; perhaps
22 speckle detection and speckle removal routines or skew
23 detection and skew removal or other kinds of image
24 processing, contrast enhancement, brighten his kind of image
25 enhancement routines.

1 Thirdly, then to submit all the data streams so
2 constructed to any given subset of the OCR technologies we
3 have on-line. He may want to compare the performance of the
4 Kolaria to the Kurzweil to the CARE or something like that or
5 may want to submit all of those data streams to all of those
6 OCR devices. Once the researcher then selects his pages,
7 specifies what image processing he wants applied to those
8 pages and specifies which technologies those data streams
9 are to be submitted to, then he can log off and go fishing
10 because the machine would then automatically produce those
11 character streams, produce those image files, submit those
12 image files to each of the OCR machines, receive the
13 character streams back from each OCR device, automatically
14 compare those produced text streams to the correct text
15 streams, and produce a first level statistical report of the
16 correctness of each of those devices and then mail that
17 statistical report via E-Mail back to the researcher, so
18 that when he comes back from his fishing trip and he logs
19 onto his machine, his machine says you have mail from UNLV
20 and the mail says your experiment was completed on July 15
21 at 4:00 in the morning and here is a report of the
22 correctness of these devices on your data stream.

23 So it's actually quite an unprecedented level of
24 research equipment for this kind of area. One thing that
25 has made it possible, this LSS prototype database, it's a

1 very valuable asset for us and we think once we can get an
2 environment like I've just described running, that we will
3 be able to impact character recognition technology in a
4 fairly short period of time. We hope less than five years,
5 maybe in two to four years.

6 We have done a number of manual tests. Especially
7 we've been working with Roger Bradford at SAIC. Most of the
8 experiments that Roger has gotten started there and we've
9 participated in a little bit have been done manually. One
10 of the things we have done is just to hook up the, so to
11 speak, each of these OCR technologies in parallel and to do
12 a sort of M-out-of-N voting and to see if the technologies
13 are correlated or de-correlated.

14 If the technologies are highly de-correlated and
15 we just do an M-out-of-N voting, we have postulated that we
16 might actually produce a new OCR machine out of just hooking
17 current technologies together and, whenever they disagree,
18 choosing as the correct character to translate the one that
19 three out of five of the machines agrees on.

20 It turns out it's working, surprisingly enough.
21 We actually have some manually-generated results that show
22 that we might, in fact, reduce more than 50 percent of the
23 errors that are made by the best single technology by simply
24 hooking five or seven of the technologies in parallel and
25 doing M-out-of-N voting.

1 I didn't mention Barbara happens to know that
2 Roger and I wrote a paper and submitted a paper to the
3 International Conference on Document Analysis and
4 Information Retrieval held in France in October of this year
5 that was accepted. In our paper, we presented some initial
6 results on M-out-of-N voting using all of the technologies.

7 So far there is some indication we might actually
8 be able to reduce 50 percent of the errors by that simple
9 technique, without any additional knowledge built in. It
10 turns out there are a lot of opportunities to improve this
11 technology. Barbara knows the opportunities to improve the
12 technology are just immense.

13 There isn't a lot of research going on, except in
14 very few places, there isn't a lot of research going on in
15 character recognition and there is a lot of opportunity to
16 improve it.

17 MR. HOYLE: Any further questions?

18 [No response.]

19 MR. HOYLE: Very interesting, Tom. Thank you very
20 much. We will take a lunch break. Let's try to start at
21 1:45.

22 [Whereupon, at 12:25 p.m., the meeting was
23 recessed for lunch, to reconvene this same day at 1:45 p.m.]

24

25

AFTERNOON SESSION

[1:45 p.m.]

MR. HOYLE: I think we'll begin the afternoon session, please. Let's get started, please. Before I ask Lloyd to begin his presentation, I would like to note that NRC's new Director of IRM, Information Resources Management, is in the audience with us today, Gerald Cranford. Gerald, sorry I didn't do that this morning. He was with us all morning taking it all in, taking lots of notes.

MR. DONNELLY: I'm glad you came today, Gerald, because, as you and I have talked, if NRC were to assume design and development responsibility, we're going to have to work closely together on areas that we haven't done in the past.

This might seem like an odd subject for the ARP meeting, but it's one that is very important to me and I will tell you why I think it should be important to you. When Chip Cameron and I were the first two people to walk through the door and be a part of the Office of the LSS Administrator, one of the first discussions we had was how we were going to get organized, how we were going to do business.

I would say we struggled for a few months trying to sort out an approach that we were both comfortable with and we thought would work. What I want to do is to tell you

1 about that today so that, A, I hope you will be equally
2 comfortable that we've got our hands around our
3 responsibilities that we're currently assigned and if we
4 were to assume design and development responsibility, we'd
5 have them around that, as well; secondly, a key aspect of
6 what I'm going to tell you relates to your involvement in
7 planning certain processes, participating in certain
8 processes, and getting the right results out of certain
9 processes.

10 Unless you can see that structure and understand
11 it, if I were you, anyway, I'd kind of wonder what's going
12 to happen next and when am I going to be involved and am I
13 going to be involved in the right way at the right time. I
14 think what we are proposing is going to satisfy our internal
15 management desires, as well as suit you well. So I'd like
16 to do that for that reason. If you see any places where you
17 think we could do it better or plan it better to accommodate
18 your needs, we certainly will do it.

19 As I mentioned, we had a new office, new
20 responsibilities, a lot of which hadn't been fleshed out.
21 At least Chip and I felt very strongly on the need for
22 structure. We also felt like we wanted to get comprehensive
23 coverage of what we needed to do. We didn't want anything
24 to fall through the crack. It was equally important to have
25 our staff understand their responsibilities as they

1 pertained to our total office mission and to be accountable
2 for those components that we expected them to manage.

3 The next point is the one I already addressed with
4 you. It isn't just a matter of the people who are managing
5 processes. It's all those people who are involved in them
6 that are equally important. We wanted to know what we were
7 aiming for, know if we've hit the mark and if we haven't hit
8 the mark, what we've got to do to get back on track or to
9 improve what we're doing.

10 I'm a believer that a lot of us need a forcing
11 function to do what we either can't find time to do or human
12 nature doesn't allow us to do. Oftentimes we make the
13 excuse we're too busy and frequently we are too busy. I
14 want to avoid a tendency to take a piecemeal approach and
15 fight fires, because oftentimes without planning, you end up
16 in the throws of implementation and find out that you're not
17 really providing the kind of direction you want, you're just
18 trying to solve problems.

19 So we started first to adopt a work breakdown
20 structure. It seemed a way for us to achieve the
21 comprehensiveness, the hierarchical approach, define
22 different phases of our work with discreet beginning and end
23 points so that we knew what was encompassed between those
24 points. I will be referring to those as processes as we get
25 into the discussion here.

1 For those of you that haven't been involved with
2 work breakdown structures, there is no magic to them. I
3 throw this up just to illustrate in the building of a house,
4 you can segment the major portions of the job any way that
5 it looks manageable to you. What we have thrown up there
6 you could take issue with because maybe you think you need
7 to go further and outfit the house on the inside before
8 you're done.

9 But basically it's starting to define broad areas
10 of responsibility that encompass everything that you're
11 doing and then breaking that work down from that point. So
12 what we did is spend a great deal of time getting that
13 structure in place. What we have arrived at is five major
14 mission areas. There is nothing magic about them, but we
15 know where they begin and we know where they end. To the
16 best of our knowledge at this point, they encompass
17 everything that we need to do.

18 The grouping of them are in related areas, as you
19 will see on the next slide. When you break those down to
20 the next lower level, and I'm not going to go through all of
21 these with you because I don't think you're that interested
22 at this point, the concept is more important than the
23 content. Taking the first area, we then subdivided that
24 into four processes that need to be completed to achieve the
25 work that we're doing in that area.

1 In this case, it's document identification,
2 preparation, submission and the compliance program. As you
3 can see, each area was broken down and we have 22 what we
4 call Level 2 areas that I will now refer to in the balance
5 of the discussion as processes.

6 In a work breakdown structure, it tends to be that
7 the higher levels are structural and the lower levels are
8 tasks and activities and sub-tasks that have to be performed
9 in order to complete the entire area. We have in our
10 efforts so far broken all of these areas down into tasks and
11 sub-tasks to the level that we can.

12 When you first start out, you realize early on you
13 don't know enough to do the kind of job you'd like to do.
14 So you go as far as you can and then as you get better
15 information, different inputs, you keep refining it. We'll
16 probably be doing that as long as we're in operation. Let
17 me stop here and ask if all of this is kind of
18 understandable and consistent with the way you look at the
19 world? Okay.

20 Listing tasks and sub-tasks and activities does
21 nothing for you, other than give you a sense of confidence
22 that you are able to pretty well define broad areas of work
23 that you need to accomplish. What we decided upon next was
24 a scheme for actually managing the work that went on. That
25 scheme is a fairly simple one and it's one that probably

1 many of you have seen before, one of looking at a process
2 not only in terms of what goes on within it, but in terms of
3 the suppliers that provide information to the process or
4 products or services and the outputs of that process to the
5 customers, and the feedback loops that are needed so that
6 suppliers know what they're expected to provide and so that
7 customers can know what they can expect to receive.

8 The important part of this is that sometimes we
9 jump into the process and we don't worry too much about
10 inputs and outputs or we do it only in a haphazard way, and
11 we wanted a structured way to look at that. First, you need
12 to, in our judgment, establish realistic objectives for what
13 you want to get out of the process. You need to define the
14 process that's going to produce that output and you need to
15 have a way of measuring whether you're getting the kind of
16 results you want and, if you're not, have a commitment to go
17 ahead and make corrections and improve what you're doing.

18 So this is sort of the framework within which we
19 are developing our quality management approach. I hesitate
20 to use that term sometimes because everybody is throwing
21 around total quality management and other things these days
22 as the popular thing to do and I'm not doing it for that
23 reason.

24 For each one of our processes that you will have
25 varying degrees of involvement in, we are planning and we

1 have started on the first four to go through a step-by-step
2 approach to, first of all, analyze and define what we really
3 mean by those processes before we start implementation.

4 We want and we'll be seeking when we get down
5 through about Step 4 key, a key component of this is to go
6 to those involved in the process, whether they're players or
7 suppliers or they're just receivers of the output, to say
8 does this make sense to you, does this look like this is the
9 way this should unfold, are you plugged in in the areas that
10 you should be plugged in at the right times.

11 So we start with Step 1 having some five
12 components. Process definition is important to begin with
13 so that we do know the beginning and end points of each
14 process so that one person isn't looking at it thinking it
15 ends here and somebody looking at it and thinking it ends
16 there, and to roughly define what goes on in between.

17 The next step is to identify those people who
18 supply that process and those who are customers. Similarly,
19 the participants in the process themselves and what their
20 role is. This is a pretty high level. We then want to take
21 a look at what do we want to get out of doing this, what is
22 the bottom line here, and what is our strategy for doing it.
23 I'll give you an idea of what I'm talking about in terms of
24 strategy.

25 Sometimes things like the LSS rulemaking lay out

1 the strategy for you. In terms of document identification,
2 the strategy is to rely on the generator of the information
3 to do a proper job of identification within the topical
4 guidelines and other guidance put out by the Commission.
5 Another strategy could be to do it differently.

6 But it's important that that strategy be
7 documented and that everybody look at it say, yes, this is
8 sort of the way the game plan for this process ought to be
9 or I don't think that's the way the game plan ought to be.
10 So we believe that's a good point to stop and take a look
11 and say are we happy with what we've got so far.

12 We kind of do that internally. In fact, we have
13 some contractual support in this area and we have, based on
14 input we've given to contractors, had them do Step 1 and
15 we've reviewed it and then we go on to Step 2. There is no
16 point in doing some of the things in Step 2 if at least we
17 and those people working for us don't understand or we don't
18 have common agreement, I should say, on Step 1.

19 At that point, we want to develop process flow
20 diagrams to show the interconnection of the activities that
21 go on in the process. We want to know what measures are we
22 going to extract from that process to know if we're getting
23 the results that we want to get. We take the next step to
24 identify the actual data that we'll need to establish those
25 measures and finally a data collection plan.

1 It's all well and good to establish objectives,
2 but if you don't measure your progress toward completing
3 them and you don't have the data to measure that progress,
4 then you never will do it. So that's Step 2. Once we have
5 done that and we are satisfied that we've done as well as we
6 can at that point, one of the things that we've built in
7 here is to step back from that and take a look at two areas;
8 one that I think we should do and another that's required by
9 OMB Circular A123 on internal controls.

10 That's just to look at risks, waste fraud and
11 abuse potential and see if the processes as they are laid
12 out take care of those concerns. If there is opportunity
13 for waste fraud or abuse, they should be identified and
14 whoever is managing that process should be satisfied that
15 whatever controls are in place are adequate so that we don't
16 get into some kind of problem in that area.

17 It's at that point that we need to maybe go back
18 and make some changes and reassess whether everything is
19 hanging together and whether we really think we're going to
20 do the job. It's at that point that we want to coordinate
21 with you, perhaps in some cases with people in your
22 organizations who are part of those processes to say does
23 this look like the way you think it ought to work; does it
24 look like you should be involved; if we all do this the way
25 we're supposed to, is it going to come out with a final

1 product; are our objectives right; if we need information
2 from you, can you supply that information.

3 I believe if we do that and we do it well, we are
4 all going to have a road map and an understanding of what's
5 involved at that point and we won't get into some of the
6 difficulties later on of miscommunication or
7 misunderstandings or different people thinking that other
8 people are going to do things that they are now expected to
9 do.

10 I'm only going to quickly go through the following
11 steps here. I don't expect everybody to see eye-to-eye on
12 what we propose. If I did, it would be a miracle. I want
13 to take your views into account. We'll make changes. We'll
14 go back and rethink how we're doing things and get as
15 closely to a consensus view of how it should be done as we
16 can. We'll make improvements, we'll change the process, and
17 we'll get issues resolved.

18 One of the things that we've discovered is that as
19 you start to lay out a process and want to link certain
20 activities in the process to other activities, you find out
21 that there are issues in the way that don't allow you to do
22 that until those issues are resolved. They should be
23 identified and you should start working on those or you'll
24 never get the process through to an implementation stage.

25 After everyone is kind of on-board and we

1 hopefully get things coordinated, people need to understand
2 what is expected of them. It's at Step 8 that that is done.
3 If people need to provide information or provide inputs to
4 the process, then they need to know that. They need to know
5 exactly what is expected and what it is.

6 Then, of course, you start implementing. One of
7 the whole purposes of the TQM or quality management focus is
8 not on what I've gone through, because many times it's
9 applied to existing processes. The idea there is just to
10 make sure that you take a look at how you're doing. You get
11 a team approach to look at the results and you take a team
12 approach to solving the problems.

13 If you keep doing that and trying to make
14 improvements along the way, I think we'll be successful in
15 all of the areas that we're involved in. Each one of my
16 staff members is responsible for the oversight and
17 management of each of those 22 areas. They know which ones
18 they are. It's up to them to get a proper process
19 established and to establish the management framework to
20 oversee them.

21 That's it. So what's next? What's next is we are
22 working on four of these. We will be at the Step 4 stage,
23 where we will be wanting to come to you and say how does it
24 look to you in those four areas sometime within the next
25 three to four months. So we'll be doing that. At that

1 Jim starts. Those of you who have not yet signed in on the
2 sign-in sheet in the back, please do that on your way out
3 this afternoon. Thank you.

4 MR. SHIELDS: This is pretty much a follow-on
5 presentation to Lloyd's. Let's go on to the first slide and
6 talk about the need for an automated project management
7 system. I think it's fairly obvious in a project of this
8 size. We have a lot of things to track. We want to
9 document our schedule. We want to update the schedule,
10 track related changes.

11 We are obviously going to have to provide
12 reporting for various levels of management. We want to be
13 able to provide timely information to the ARP on the program
14 status. We want to be able to tell you folks activities
15 that you need to be involved in, when you need to be
16 involved in them, and so forth.

17 This diagram shows that the work breakdown
18 structure is really a starting point for developing an
19 automated project management system. The work breakdown
20 structure is really just a list of tasks and activities. To
21 that we want to add other very important information, more
22 complete descriptions, all the organizations involved in
23 particular tasks, the date of tasks, their durations, what
24 other tasks they depend on, what tasks have to be completed
25 before a particular task can be initiated, the resources

1 that are required to complete these tasks, and if a task
2 produces output that goes to another task, what those
3 outputs are and so forth.

4 So what we did was we loaded all that into a
5 particular software package. This one is called Timeline
6 from Symantec. Quite a few people in the industry use it.
7 What we're able to obtain from that are schedules, printouts
8 of schedules, pert diagrams which show graphically the
9 interconnection between various tasks, follow-on tasks, what
10 task depends on another task and so forth, Gantt charts
11 which show the timelines and milestones for the duration of
12 tasks, completion of tasks and so forth, and various other
13 management reports.

14 So without boring you at this point about the
15 thousand or so tasks that we loaded into this system, I
16 decided to just take a little fragment of a work breakdown
17 structure. Lynn pointed out to me this morning that it is a
18 fragment and that there is a word or two missing on the last
19 line, but fortunately we're interested in the lines higher
20 up.

21 This is from our 1.0 mission area. We're talking
22 about developing guidance and so forth. So these are just
23 the work breakdown steps. Now, to show you on the next
24 slide how we get that into the automated project management
25 system, here is a screen from Timeline. You notice that

1 there is information about the name of the step and then
2 what type of activity it is, what the duration is, what the
3 status is, start date, end date, the WBS number, the
4 organizations involved, which includes the LSSARP, for that
5 matter.

6 As Lloyd said, we have a lot of information loaded
7 in there on a draft basis. Time has already caught up with
8 us on some of this stuff. These dates are out of date.
9 This is one of the ones that we have to update. So at any
10 rate, we have gone through a fairly formidable data entry
11 task. We've done a little screen like this on each of these
12 thousand or so tasks. So what can we get from that?

13 On the very simplest level, this is a little pert
14 view of the particular task. You can see how Task 1.1.3.3
15 follows on to 1.1.3.4 or maybe, in a little more English,
16 review the draft and revise the draft and the arrows go on
17 and so forth. This is only a very small block you can see
18 on the screen.

19 One of the things that we have done is we can
20 generate laser printed output and we can generate these big
21 huge charts that are like five feet high and ten feet long
22 where we can show all the tasks in an entire mission area.
23 We can see the dependencies or we can go ahead and generate
24 Gantt charts, show the timelines and so forth. So that's
25 really pretty much the technical aspect of it.

1 Without boring you too much about what the package
2 does, because I think it does all the normal things, I'd
3 like to go ahead and talk a little bit more about what do we
4 plan to do. We have this information loaded into the
5 system. We need to go ahead and update and refine it.
6 Obviously, with a thousand tasks, we can't just jump right
7 in and do all thousand tasks, particularly since some of
8 them deal with things quite far out in the future, like
9 operation and maintenance and so forth.

10 So we're going to start refining our information
11 on a priority basis. We're probably going to do a lot of
12 work back in this area, one mission area which includes
13 things that are happening right now, and then we intend to
14 use this information to track the progress of the program,
15 generate charts, generate reports. Hopefully that will be
16 useful not only for our own internal purposes, but for
17 keeping folks such as you informed and hopefully ultimately
18 make the program work better and more smoothly.

19 That is pretty much it for now. We would
20 certainly entertain questions. If anyone has interest in
21 the software, we have it up on several of our computers and
22 so forth.

23 MR. COPENHAFFER: Jim, do you have a person devoted
24 full-time to this? My point is, and I commend you for doing
25 it. There is actually nothing more painful than doing one

1 of these things and keeping it up. You almost end up with
2 not only a person almost whose sole job that is, but you
3 almost need another person who understands it almost as well
4 in case number one leaves or is gone for a while. It's a
5 real resource consumer.

6 MR. DONNELLY: Lynn, Betsy and I are responsible
7 for keeping it up in our own mission areas. We do
8 fortunately have one person who administers the system and
9 implements the updates and I shouldn't say sits around
10 waiting, but what it comes down to on the laser printer is
11 you get your requests all going and then you sit around
12 waiting for the laser printer to crank them all out and then
13 has to tape them together so they can make sense of it and
14 so forth.

15 So we are fortunate to have someone who
16 administers that and keeps the three of us straight on the
17 system and so forth.

18 MR. COPENHAFFER: Thank you.

19 MR. DONNELLY: I'm sensitive to the point you
20 bring up. In other words, don't become slaves to the
21 project management system. You could be because if you get
22 overly aggressive on loading them up, you do become slaves
23 in maintaining them. We just don't know yet how much of a
24 burden it is going to be.

25 One thing that we've thought about is to try and

1 keep our system at a fairly high level for management
2 purposes. Each individual, if they want to have a separate
3 timeline file and drive it down to a lower level, that helps
4 them do their job, they can do that. But we're going to
5 consciously keep it contained, if we can.

6 MR. COPENHAFFER: Don't misunderstand me. I
7 believe you need something like that. It's just that I
8 think you've already seen it takes a tremendous amount of
9 effort to keep it current and to use it in a manner in which
10 the features and functions of a lot of those packages
11 provide. But it sounds as if you've got the resources to
12 handle that.

13 MR. HOYLE: Anything else?

14 MR. DONNELLY: John, I would just like to close
15 out by saying that the purpose of giving you these
16 presentations is not to wile you with what we've done, because
17 there's nothing really to wile you with. The purpose of it
18 basically is to give you a sense, I hope, of confidence that
19 we have our act together and we're going to manage what
20 we're doing in an organized way, hopefully in a successful
21 way. If we do take on greater responsibilities, we'll have
22 the framework in place to do that.

23 If you didn't have that confidence, then I
24 certainly want to know. If you didn't have that confidence,
25 then I don't know how you can start dealing with the other

1 aspects of this system if you didn't think it was going to
2 be well managed to begin with.

3 So we're not going to be doing this time and time
4 again. There was some interest expressed at the last
5 meeting in some of these areas. Therefore, we came prepared
6 to do it this time.

7 MR. HOYLE: Thank you, Lloyd. That is how it
8 developed. We had a brief discussion in the last meeting
9 and while we had various bits and pieces of briefings from
10 Lloyd and his staff previously, we never really had a good
11 look at what his organization was and what it does.

12 As you know, Lloyd, in his role, even though he
13 wears an NRC hat and is in an office that reports directly
14 to the Commission, he's got a responsibility to all of the
15 participants, all of the users of the LSS. In that respect,
16 he's an independent office from the NRC, which is also a
17 user of the system.

18 I certainly appreciate, Lloyd, your giving the
19 panel this kind of background. It's not the greatest after-
20 lunch material, but --

21 [Laughter.]

22 MR. HOYLE: Yes, sir?

23 MR. VONTIESENHAUEN: This is my first meeting
24 here, but I think it's encouraging that this amount of
25 planning is going in ahead of the startup of the main

1 project rather than trying to catch up someplace in the
2 middle.

3 MR. HOYLE: We are moving right along. It's not
4 quite 2:30. We were going to give you a little longer, Jim,
5 but you hadn't needed it.

6 MR. SHIELDS: We get a longer break, right?

7 MR. HOYLE: I don't feel a need for a break. Does
8 the panel? Why don't we move on. The next item is
9 finalization of the Header Working Group recommendations.
10 Kirk Balcom has been the leader of the working group and has
11 sent me the latest product from the working group which I
12 sent out to the members of the Committee on May 23. Kirk
13 will run us through that right now, please.

14 MR. BALCOM: And this is really entertaining
15 after-lunch material.

16 [Laughter.]

17 MR. BALCOM: You will remember from the last
18 meeting how entertaining. You have in your packet an
19 attachment to -- there's a letter in there with my name on
20 the top and the attachment to that is this very simple half-
21 page document that says "additional fields for headers." At
22 the last meeting, if you remember, we had a fairly thorough
23 discussion of the loose ends and the headers that we had
24 agreed on.

25 We had decided as a group to drop the need for the

1 Copy E and the Copy E organization and that's pretty well
2 documented in the notes and transcript. At that time, we
3 added two fields; the package ID and the copyright field.
4 There are descriptions of those attached. Hopefully they
5 are pretty self-explanatory.

6 I don't even know where to take this from here,
7 John, whether we should open this up for discussion or just
8 say that here they are in the form that you would expect to
9 see them and a list of headers and you can read this along
10 with the original schedule of all the header fields and
11 simply consider it an attachment. We have already agreed as
12 a group, the panel anyway had agreed as a group to add these
13 two fields.

14 If there is any discussion, I would think it might
15 hover around what a package ID is. There is no end to the
16 mystery of a package ID. If anyone wants to know about it,
17 we've got some authorities here, of which I'm not one.

18 MR. HOYLE: I think we are open to discussion on
19 the matter, but I'm not sure that I see any need for it.
20 All of the other aspects of the header the panel approved
21 before and if I call for a vote on approving these two at
22 this point, then we've dispensed with the header; forever,
23 we hope, but everything is open for reconsideration, I
24 suppose.

25 In that case, unless there is further discussion,

1 I would propose that we approve the fields as recommended by
2 the working group and reflected in the attachment to Kirk's
3 May 23 memo. I see heads shaking and we have a consensus on
4 that. Thank you very much.

5 Continuing to move along. There is an item on the
6 schedule which I put on myself. It's called Update on
7 Revised Topical Guidelines. The reason I put it on there
8 was because we had a spirited discussion at the last meeting
9 which resulted in approval of a letter to NRC in which the
10 panel commented on revisions which the NRC had proposed in
11 the topical guidelines.

12 We suggested in that additional rationale, in our
13 letter to the NRC, and the additional rationale for what
14 they were doing was recommended. I just wanted to state for
15 the record of this meeting what's going on. Simply, it's
16 this; that the NRC staff of the Division of High Level Waste
17 Management has the panel's comments and is addressing them
18 even as we speak. It is anticipated that the draft
19 regulatory guide will be forwarded to the Commission for
20 review in late August of this year.

21 We have one more item on the schedule called
22 Update on Technical Data.

23 MR. HOLSTEIN: I'm sorry. I'd like to return to
24 that issue.

25 MR. HOYLE: Yes, sir.

1 MR. HOLSTEIN: I want to make sure I understand
2 the procedures that will flow from that point on, since that
3 was an issue that brought about not just lively discussion,
4 but near unanimous feeling. Once the draft reg guide is
5 presented to the Commission, you said in late August, what
6 will happen after that and what opportunities do you foresee
7 for this group to have input, if any, after that point?

8 MR. HOYLE: I may have to answer after
9 understanding the situation better. Reg guides are usually
10 issued by the staff. In this case, I guess the staff is
11 going to ask the Commission to approve it because of the
12 Commission's interest in this matter.

13 I don't see directly another opportunity for the
14 panel to interact on the document before it comes out as a
15 final reg guide.

16 MR. HOLSTEIN: Those reg guides, I'm trying to
17 recall, they do provide an opportunity for public comment
18 normally.

19 MR. HOYLE: Can anyone help me on this?

20 MR. ALTIMARE: I was trying to recall a situation
21 with the reg guide. I guess a reg guide is a reg guide.
22 Since this is a topical report, I would anticipate that it
23 would be put out for public comment. We'll have to look
24 into that, John. I'm not sure of the actual procedure in
25 that.

1 MR. DONNELLY: I'll go find out an answer, John.

2 MR. KILLAR: Can I basically request that we ask
3 the Commission to provide us with a draft before it becomes
4 final?

5 MR. HOYLE: Provide it as a draft to the panel?

6 MR. KILLAR: So we can see it once again before it
7 becomes final.

8 MR. HOYLE: Does the panel support that?

9 MR. HOLSTEIN: In other words, you're asking that
10 there be a public comment period or, if not that, at least
11 an opportunity for the panel --

12 MR. KILLAR: We had a lot of concern with it and
13 we can make sure that our current concerns are addressed.

14 MS. SHELBURNE: Can I just speak from my
15 understanding of reg guides, in general, being the former
16 head of the public document room? They come out in draft
17 and are noticed in the Federal Register for public comment.
18 That is my understanding, in general, of the reg guides. As
19 Lloyd said, he's going to check and see on this process, but
20 my understanding is it will come out and be noticed in the
21 Federal Register as a draft for comment and the Commission
22 solicits comments.

23 MR. DONNELLY: We really know what we're doing
24 here, don't we? Phil thinks that it was put out as a draft
25 for public comment, those comments were received, and then

1 the ARP's comments were solicited, as well. If that's the
2 case, my understanding would be that the scenario that John
3 outlined is that it would be published once the Commission
4 made the decision. If that's not true, then it certainly
5 would go for public comment, from what I can tell.

6 MS. CERNY: So we may have already gone through
7 that.

8 MR. HOYLE: Well, we lack clear knowledge. Let's
9 hope we're in session today long enough to get the answer to
10 that. Let's hold your request in abeyance, Felix, until
11 Phil gets back. It may resolve it. Elgin, can we move on
12 to the other one and come back to this?

13 MR. HOLSTEIN: Yes. I don't think there is any
14 need to discuss the substance of it anymore. It's just the
15 process might certainly be a question, in my mind.

16 MR. HOYLE: Then the last item on our schedule is
17 an update on technical data, which Betsy Shelburne of the
18 LSSA staff is going to present. The term "technical data"
19 is a little confusing, at least to me. I think we used the
20 word non-documentary material the last time we talked about
21 it.

22 MS. SHELBURNE: I just wanted literally to give a
23 brief status report of what has been happening since the
24 last meeting. At the last meeting, the contractor, the
25 Center for Nuclear Waste Regulatory Analysis has been

1 working with us and they gave a presentation at the last
2 meeting, giving sort of some plans on what they intended to
3 do in the development, working with us, what has been termed
4 in the rule access protocols to technical data.

5 If you will remember, in the last meeting there
6 was a discussion about the problem with that term, how DOE
7 used that term and how that issue of the handling of non-
8 textual and, in some cases, not even non-imageable
9 information was going to be handled in terms of the LSS
10 providing knowledge of and access to that information.

11 Basically, at that meeting, the center gave a
12 progress report on what they had done and what they planned
13 to do. Since that meeting, we have gotten a draft report
14 from them which documented their knowledge after talking
15 with many of the organizations, DOE, visiting Yucca Mountain
16 Project Office, talking to Barbara and some other users
17 about two aspects; their current planning and infrastructure
18 and future plans for the submission and providing access to
19 this kind of documentary material.

20 Also, they proposed definitions to try to handle
21 some of this problem with the terminology of technical data,
22 non-image, as it dealt with the LSS. They did some
23 preliminary thinking and proposed some header fields. We
24 just finalized the header, but really we just finalized the
25 header for those fields which are applicable to what might

1 be called normal documentary material.

2 It has been acknowledged there may be the need for
3 additional fielded information to assure the capture of
4 information about this material and capture of information
5 which would lead users to access to material that was not
6 stored on the LSS. This report that has been presented by
7 the center to us has been reviewed. They raised some very
8 good issues that we are currently considering.

9 We have talked to them and they are doing
10 additional work, most specifically which will involve you
11 all in the fact that some of the issues they raised are
12 going to require them to go back to some of the holders of
13 technical data and, based on some of the stuff Barbara
14 talked about today, this issue of their finding some
15 information about the infrastructure.

16 So they will be coming back to us in mid-September
17 with a report and we will be sharing some of that
18 information with you at the next meeting. We expect in our
19 planning to have this issue finalized by the first of next
20 year. Part of that process will be giving you a chance to
21 comment on this critical issue, which is making sure that
22 the LSS provides the right access points to this material,
23 because only through the header will you get knowledge of
24 this material.

25 It may lead you to an image on the system or it

1 may lead you to some holding area for this material that is
2 not physically able to be stored on the LSS. So that is a
3 brief status report.

4 Are there any questions?

5 MS. CERNY: Just a request, Betsy. This is work
6 that I am very involved in right now. Since this is really
7 a critical issue for us right now, if I could request that
8 we be able to work along with the center people.

9 MS. SHELBURNE: Based on some of the things they
10 said in the report, I said you've got to go back and make
11 sure this is really how it's going to work. Based on some
12 of the stuff you said today, I'm glad they haven't come to
13 you because it really is -- we have sort of a two-pronged
14 concern here. Mostly I'm concerned about access, but I am
15 very concerned about making sure that any requirements on
16 this kind and all the indexing is integrated within the
17 infrastructure of the participants.

18 It is clear to me, it has always been clear to me,
19 but also based on the last meeting that the interest is
20 getting access to the material at the Yucca Mountain project
21 and the alternate levels of treatment of that material in
22 terms of making sure people -- I guess my biggest problem
23 with some of the stuff the center proposed is there is
24 access to making sure you get material that is packaged so
25 that you link related material through an easy interface to

1 come up with the package of material.

2 That's one area of treatment. The other area of
3 treatment is making sure that there is consistent treatment.
4 If a type of document or a form of document or a map or some
5 collection of information is in a package, I want to make
6 sure it is not treated any differently than it would be if
7 it was out of a package. So when you search for that type,
8 you're not missing things embedded. There are two aspects
9 of the level of treatment. I've asked them to do some work.

10 Before we present anything, we will work -- this
11 is sort of like what Lloyd was talking about in reality
12 about these Step 4 meetings for quality management, getting
13 the participants involved in the process and making sure
14 that the burdens and the products are going to come out and
15 that the suppliers can provide them efficiently.

16 MS. CERNY: We have to, the essence of what I was
17 trying to say earlier, look within the context of our
18 program and how we are generating information and how it
19 flows through the program and what makes sense as we come to
20 it from that perspective may not be exactly what somebody
21 from the outside looks at it and says.

22 I know Bobby and the people at the center were
23 very much in agreement. So I would just like to make sure
24 that that dialogue --

25 MS. SHELBURNE: Some of the phone calls about us

1 getting together and working on making sure that we're
2 moving along the same track. That was one of the very
3 specific reasons that part of the center's statement of work
4 was to understand the infrastructure of organizations that
5 hold technical data and their current infrastructure for
6 providing access and their future infrastructure, that scope
7 of their work. We will be working together.

8 MR. HOLSTEIN: This is education for me. I
9 certainly understand the distinctions between documentary
10 material and non-documentary or non-textual material. Could
11 you give me a couple of examples, however, of this other
12 distinction we're talking about; that is to say things
13 you're describing as somehow being either not on the LSS or
14 somehow not available? Is the non-availability tied to some
15 characteristic of the material or is it tied to the source?

16 MS. SHELBURNE: I think the issue is the whole
17 idea of access protocols. It will be available. The issue
18 of the protocol is making sure how it will be available and
19 that people know how to do it. An example would be if the
20 background information for an investigation and the final
21 report from an investigator at the site included a data
22 tape, 16 bpi data tape. Rock samples is another example;
23 large schematic maps, color maps; those issues where the
24 information may be scannable, but is it useful.

25 One of Lloyd's classic examples is a lot of NUREGs

1 that we've put out, NRC technical reports, it's 30 pages of
2 text and 400 pages of numeric listings, computer code.
3 That's imageable. Is it useful? I don't know.

4 So if there is material that falls into the
5 definition of documentary material, then the requirements
6 under the rule very generally are you will do a header to
7 describe it. If it is this kind of material, and this deals
8 with the issue of additional fields, do we want a media type
9 or do we want -- are we going to use existing fields, like
10 comments.

11 So it may not be that we need a new field. It may
12 just mean indexing rules so that information -- and this is
13 one of the things that we're asking the center to do for
14 their technical expertise, to give us their proposal,
15 because they will be users, is what kind of information do
16 you want to know. Do you need to know that a 16 bpi or 200
17 bpi is a Unix or whatever, things that I personally don't
18 know. So they are looking at the characteristics of the
19 material, looking at the users and trying to represent them
20 to propose the use and also look at the burden; what is
21 sufficient, what do the users need and what is the burden to
22 do that.

23 The discussion at last October's meeting had to do
24 with the use of the table of contents and who would write
25 the table of contents and all of those issues. The center's

1 report laid out a lot of proposed things and it had a whole
2 bunch of issues that we're going to have to grapple with to
3 make sure that there is a balance for that stuff.

4 MR. HOLSTEIN: Thank you.

5 MS. CERNY: I would just like to make a comment on
6 this. I am very pleased this work is going on because I
7 think if we can work at the level together of coming up with
8 an understanding of, as Betsy says, what is useful, what
9 isn't useful, what is worth doing, what isn't worth doing,
10 before we put our system in place, this will be very useful
11 to us.

12 MR. HOLSTEIN: Do you have any feel for the cost
13 implications of this work? In other words, if they can
14 successfully come up with some usable and consistent
15 criteria to use, do you anticipate major savings or is that
16 hard to quantify at this stage?

17 MS. SHELBURNE: I'm not sure. What we're talking
18 about is part of the finalizing and part of the compliance
19 requirements; what do submitters of information have to
20 submit. The rule says you will do a header and all of
21 those. We have to set those standards. In terms of cost
22 savings, I don't see that as an issue. It is certainly an
23 issue in how we implement the access protocols, in terms of
24 making them do everything versus a minimum thing.

25 Again, I'm looking at it in terms of the users.

1 but I also look at it from the terms of the burden on the
2 submitters. Also, there is an issue at which you can place
3 all sorts of requirements, and we talked about this in
4 abstracting, on the submitters, but can you really enforce
5 the implementation to actually getting what you would like
6 to have. It would be nice to have all authors abstract all
7 their documents, but that's not going to happen.

8 The issue is we would like to have all the
9 investigators do the table of contents all the same way.
10 Well, half of the table of contents have already been done.
11 You can't go back and impose it. So this is looking at
12 those issues and making tradeoffs between automated ways and
13 other ways of making sure you can see -- I think the biggest
14 issue is making sure that if you find one document, can you
15 find related materials.

16 There is packaging in a physical way. You put it
17 in a box. Then there is a packaging in an automated way
18 where no matter when it comes in, it's linked.

19 MR. PITTS: Isn't that what Barbara talked about
20 as indexing her technical data in an LSS standard so that if
21 you had a technical query and it wasn't part of the LSS
22 system, couldn't it theoretically, if it was important
23 enough, contact the DOE and see if that related document was
24 available or could be dumped to a Mead Data Central for a
25 review of the other investigators?

1 MS. SHELBURNE: If it is related, it should be in
2 the LSS.

3 MS. CERNY: That's right. But if it is a numeric
4 database, it won't be. Then there will be access protocols
5 to get through it.

6 MR. PITTS: That's the whole deal of getting the
7 LSS indexing the same for all the NRC and the Department of
8 Energy, correct?

9 MS. CERNY: Exactly. From what I have seen in
10 this work going on, the people who are doing it are really
11 pretty much in a agreement as to you don't have the Federal
12 budget at your disposal to do everything, as Betsy said, you
13 would like to do. There are some things that reasonable
14 people do and there are some things that reasonable people
15 don't do. I think t.at's really what we're talking about
16 here.

17 If we can come to agreement at this point, because
18 we are putting the system in place, driven by certain other
19 constraints that I was talking about, we really would like
20 to have this kind of agreement up front that the LSS
21 Administrator's Office agrees with that, that it is also the
22 recommendation of their consultants, and that we move on
23 ahead and don't belabor a lot of this. It does deal with
24 these nitty-gritty kinds of issues.

25 The rule was written so generally a the time, we

1 just can't cope with this now. There is too much there,
2 it's too complex, and it is a question of maturation of the
3 program.

4 MS. SHELBURNE: The rule, I'm glad, didn't tell us
5 exactly how to do everything. We just have to figure out
6 how to implement it.

7 MS. CERNY: If anybody could have figured it out
8 at that point, I think it would have been a lot more
9 specific. But we honestly didn't know.

10 MR. DONNELLY: I don't know if it's clear to
11 everybody, but I want to make it clear. What we want to do
12 is work out as many problems as we can between the primary
13 contributors, but other contributors of technical data and
14 come up with, if we can, what we think is a good common
15 sense solution to providing good access, providing
16 consistent access in the same way you would find other
17 information in the LSS.

18 We will come back to the ARP with that
19 recommendation and discussion of pros and cons and issues of
20 costs as appropriate. Then you can look at it, again, I
21 keep saying it, from the user perspective and you may say,
22 well, that may be the most common sense, most balanced view
23 that you can come up, but I still think we need this.

24 We want to get that input and we want to take that
25 into account and we'll try to do like we did on the header

1 here, try to work things out so that we're generally
2 satisfied we've got a good approach that's a cost-effective
3 approach.

4 MR. HOYLE: Anything further?

5 MS. SHELBURNE: That's it.

6 MR. HOYLE: Going back to the topical guidelines
7 issue. Phil?

8 MR. ALTIMARE: On the topical guidelines, the
9 panel commented on a draft that the staff had put together.
10 The staff has taken those comments and is looking at them
11 and is preparing a Commission paper that says how they plan
12 to address these comments. If the Commission agrees that's
13 the proper way to address the comments, it will be prepared
14 into a NUREG document, noticed in the Federal Register for
15 public comment.

16 MR. HOLSTEIN: Therefore, the draft that this
17 panel commented on is the formal staff draft, not part of a
18 regular public comment period. Thank you.

19 MR. HOYLE: I can stand corrected, but I don't
20 think that the public-at-large got a crack at what the panel
21 had a crack at. Felix, is that all right?

22 MR. KILLAR: That's fine, as long as we have
23 another crack at it.

24 MR. HOLSTEIN: Let me just say why I think that's
25 important not just to have another crack at it, but because

1 of the way in which the comments from this panel were
2 provided. We chose to do it and we all agreed and I
3 certainly don't regret it that we do it letter form, as I
4 recall, but it was by no means the detailed comments that
5 individual parties with different emphases might have wanted
6 to lend to their own views an opportunity that would be
7 available in a public comment period. So I think that's
8 good news.

9 MR. HOYLE: At this point, we usually talk about
10 the timing for another meeting and what we might talk about
11 at the next meeting. I guess I'm not prepared to talk about
12 much. We did hear from Lloyd early on today that the
13 Commission is probably going to be asking them to do some
14 more with regard to the paper that he sent to them,
15 including coming to us for comment.

16 So I would think that will be the next thing on
17 our agenda, should it take place. Talking to Lloyd after
18 lunch, perhaps early September would be the timing for the
19 Committee to get some comments back. Whether we need to do
20 that in a meeting or not, I think I need to evaluate when we
21 get the instruction from Lloyd.

22 I believe the meeting context is the best way to
23 handle things like that; get people around the table and
24 talk about it. I can't be more specific at this point,
25 until we get that guidance. Otherwise, I think we're

1 talking about toward the end of the year that other products
2 that we heard bits and pieces about today might be ready for
3 further consideration by the panel.

4 Any comment on that?

5 MR. BALCOM: I would say, John, also, maybe the
6 product on technical data might be a driver for our next
7 meeting, too, since that's going to be a pretty important
8 document. You talked about the end of the year, beginning
9 of next year.

10 MS. SHELBURNE: What I would hope to do is send
11 you a package of material prior to the meeting so that you
12 can look at it and think about it and then we can discuss it
13 in the meeting.

14 MR. BALCOM: I would say at least a month prior to
15 the meeting.

16 MS. SHELBURNE: Yes.

17 MR. BALCOM: A long enough period so we can look
18 at it.

19 MS. SHELBURNE: Our plan is to have the access
20 protocols finalized during the next year. Again, we've got
21 a rough schedule here and we're working with the center on
22 their operations plan. It is important that we get your
23 input because these protocols -- that's what a protocol
24 means; we all agree this is how it's going to work.

25 MR. HOYLE: I guess I'm a little fuzzy on whether

1 we're talking about the January timeframe or February
2 timeframe.

3 MS. SHELBURNE: I would say February timeframe.

4 MR. HOYLE: If you would, let me correspond with
5 you on the phone or in writing as I get a better feel for
6 topics and the need to come together on those topics. We've
7 been kind of alternating meetings between here in the
8 Washington area and Nevada. Is there a great hardship for
9 those of you that came to Washington this time to do that at
10 the next meeting or should we alternate like we've been
11 alternating and have the NRC and DOE and others travel out
12 to Nevada?

13 MS. SHELBURNE: One thing I just wanted to -- I
14 can't remember if we did bring it up. I know we thought
15 about it. Lloyd gave a presentation on quality management
16 process and he talked about this issue of having meetings
17 with the participants and the suppliers and the customers.
18 I have a very specific example of this. The area that I am
19 responsible for is the issue of setting the standards for
20 identification and preparation and submission and, more
21 specifically, how we're going to set up the compliance
22 evaluation strategy.

23 We are anticipating in the fall, in the October
24 timeframe, getting participants involved. So that is
25 another -- it does not necessarily have to be an ARP

1 meeting, but everyone here is a participant, a supplier or a
2 customer or all three or represents those people. So that
3 is another heads-up for timing.

4 MR. HOYLE: There are times when it's useful to
5 get a sort of collegial consensus on certain things, I
6 guess, and there are times when you need to hear
7 specifically from individual users.

8 MS. SHELBURNE: This will be a collegial session.
9 It does not necessarily have to be an ARP meeting. It is
10 process participants.

11 MR. DONNELLY: I think there are certain levels of
12 -- let's use technical data as a good example, where it's
13 both a participant issue and a user issue. Use Barbara's
14 example of the primary participant in the area of
15 identifying properly documenting technical data. We have a
16 process, part of our process for doing that would involve
17 their process for providing that information to us.

18 It could involve other contributors of technical
19 data, as well. Let's say we could determine whether it was
20 NRC, DOE, State of Nevada. Others might, but there is no
21 indication that they would at this point. We might suggest
22 getting together with them as the primary participants in
23 that process, talking through what we see as a way to get
24 this job done. We would do that independent of the ARP.

25 We got the point of making a recommendation as to

1 how it would be in the system from a user standpoint would
2 clearly come to the ARP to get that input. I didn't want
3 anybody to be left with the impression we were going to try
4 to bypass this group on certain issues that this group
5 should be involved in, because we will not do that.

6 MR. HOYLE: I appreciate that clarification,
7 Lloyd. My concern is that we are a Federal Advisory
8 Committee and the activities that we conduct should be
9 conducted in accordance with the Federal Advisory Committee
10 Act, which involves notice of meetings and public meetings
11 and that sort of thing. I don't feel we can do an awful lot
12 as a total group by correspondence alone and me trying to
13 coordination everybody's comments. I'm just putting that in
14 as another element.

15 MS. CERNY: Could I just make a comment on that?

16 MR. HOYLE: Yes.

17 MS. CERNY: With regard to your timing, Betsy,
18 there are some key issues for us that the October timeframe
19 might be very early. I just don't know if we'd be ready to
20 talk about it. We're just not far enough along to know how
21 we're handling our information internally.

22 MS. SHELburne: You and I can talk about that and
23 make sure.

24 MS. CERNY: I'm just saying for purposes of this
25 group that we're thinking about coming back for such a

1 meeting, I don't think we'd be ready to contribute then.
2 We're just not far enough along in the process.

3 MS. SHELBURNE: In terms of the -- I'll defer to
4 Lloyd here, but in terms of the quality management concept,
5 we are talking at a very high level verifying our
6 understanding of the process that we have to manage and
7 others' involvement, an agreement that that is an agreed
8 upon layout of the process. It doesn't make any decisions
9 in terms of exactly what the product is or what the task is.
10 It is a high level discussion to agree that this is the
11 process, this is your role in the process, this is the -- if
12 you are a supplier, this is the supply that we expect, on a
13 high level, to agree in the process, because the process is
14 making decisions.

15 Part of the process is making decisions. The
16 contractor that's working with me on this has very clearly -
17 - we've all come to the realization that there is the
18 designing the process and the example we have, let's say, is
19 document preparation. I have a responsibility for ensuring
20 that. It is the participants who are going to be preparing
21 their documents and submitting their documents.

22 I have a process to come up with the standards.
23 There is a process involved with coming up with the
24 standards and then there is a participant process in
25 implementing the standards. So it's understanding all of

1 those things at a very high level that we're talking about.

2 MR. HOYLE: Okay. I will communicate with
3 everyone as far as timing of the next meeting. As I say,
4 the next item I think on our agenda will be operating on an
5 instruction that we would get from the Commission, from
6 Lloyd, and the timeframe for that would probably be late
7 August or early September. So let's work on that first.
8 These other agenda items will develop and come along in
9 their own time.

10 I guess I would tentatively say we will go to
11 Nevada for the next meeting, just to keep up an alternating
12 process. Anyone else have anything?

13 MR. DONNELLY: I have one thing. I want to thank
14 the panel for their sustained participation in light of the
15 degree to which the program has been up in the air. We have
16 had some subjects of substance to deal with and we dealt
17 with them well, I think.

18 I think once we get a decision and we start moving
19 out, there's going to be a lot of substantive matters for
20 you to look at. In the interim, I thank you for bearing
21 with us. I also want to publicly thank Dave Copenhafer for
22 agreeing to be on the panel and we appreciate his experience
23 and contribution. It's a great pleasure to have him.

24 MR. HOYLE: Lloyd, thank you for bringing that up.
25 I just would echo Lloyd's comments. We stand adjourned.

1 [Whereupon, at 3:10 p.m., the meeting was
2 recessed.]

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

in the matter of:

NAME OF PROCEEDING: Licensing Support System

DOCKET NUMBER:

PLACE OF PROCEEDING: Bethesda, Maryland

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Mary C. Fisher

Official Reporter
Ann Riley & Associates, Ltd.

LSSA'S PROPOSED LSS DEVELOPMENT SCHEDULE

PRESENTATION FOR THE LSSARP
JULY 17, 1991

PURPOSE OF PRESENTATION

- * INFORM PANEL MEMBERS OF DETAILS OF LSSA'S PROPOSED LSS SCHEDULE
- * OBTAIN PANEL COMMENTS ON LSS SCHEDULE

MAJOR OBJECTIVES

ESTABLISH AND MAINTAIN A SYSTEM DEVELOPMENT AND DATABASE LOADING SCHEDULE THAT IS:

- * REALISTIC RELATIVE TO DOE'S REPOSITORY PROGRAM
- * MAKES HIGHEST PRIORITY DOCUMENTS AVAILABLE FIRST
- * MEETS DATABASE AVAILABILITY REQUIREMENTS
- * FULLY SUPPORTS ALL ASPECTS OF REPOSITORY LICENSING

MAJOR ASSUMPTIONS

- * APPLICATION SUBMITTED NO LATER THAN 2003
- * RESOURCES AVAILABLE TO SUSTAIN SCHEDULE
- * NO MAJOR PROBLEMS BEYOND 2 MONTH DELAY
- * NUMBER OF PAGES APPROXIMATELY 20 MILLION *by 2001*
- * DOE WILL DO NEARLY FULL & HIGH QUALITY DOCUMENT PRE-PROCESSING *5116*
- * UNLV COMPUTING FACILITY WILL BE AVAILABLE WHEN NEEDED *11/00*

KEY PARAMETERS

- * ASSUMES HLW REPOSITORY APPLICATION SUBMITTED IN 2001
- * IS PART OF A PROGRAM MANAGEMENT APPROACH
- * ASSUMES A SINGLE COMPETITIVE PROCUREMENT TO CONTRACT WITH SYSTEMS INTEGRATOR AND OPERATOR *development, operation, and maintenance*
- * PROVIDES FOR A SMALL-SCALE FULLY FUNCTIONAL SYSTEM FIRST; THEN EXPAND

MAJOR ACTIVITIES

LSSA SUPPORT CONTRACT & LSS REQUIREMENTS DEFINITION

- * OBTAIN COMMISSION APPROVAL FOR OLSSA PROGRAM SUPPORT CONTRACTOR
- * AWARD PROGRAM SUPPORT CONTRACT
- * DEFINE BALANCE OF LSS REQUIREMENTS

LSS PROCUREMENT

- * PREPARE AND ISSUE RFP
- * EVALUATE PROPOSALS
- * AWARD SYSTEMS INTEGRATION AND OPERATION CONTRACT

MAJOR ACTIVITIES (CONTINUED)

LSS SOFTWARE AND PROCEDURES DEVELOPMENT

- * PERFORM DETAILED SYSTEM DESIGN
- * ACQUIRE HARDWARE AND COTS SOFTWARE
- * DEVELOP APPLICATION SOFTWARE
- * PREPARE UNLV COMPUTING FACILITY
- * TEST SOFTWARE
- * PREPARE DOCUMENTATION, PROCEDURES, TRAINING MATERIALS

MAJOR ACTIVITIES (CONTINUED)

LSS SMALL-SCALE SYSTEM

- * INSTALL SYSTEM**
- * PERFORM SYSTEMS ACCEPTANCE TESTING**
- * OPERATE AND REFINE FULLY FUNCTIONAL, SMALL-SCALE SYSTEM**
 - LOCATED AT LAS VEGAS AT UNLV**
 - DOE AND LSSA OPERATE CAPTURE FACILITY**
 - SYSTEM WILL STORE UP TO 2 MILLION PAGES OF FULL TEXT, IMAGES, HEADERS**
 - USERS REPRESENTING MAJOR ORGANIZATIONS ACCESS SYSTEM REMOTELY FROM 31 WORKSTATIONS**

MAJOR ACTIVITIES (CONTINUED)

LSS EXPANDED SYSTEM

- * EXPAND THE LSS TO FULL SYSTEM
- * LOAD APPROXIMATELY 16,500 PAGES PER DAY INTO DATABASE
- * PROVIDE FULL RANGE OF USER SERVICES
- * ENSURE DATABASE SUBSTANTIALLY LOADED BY MARCH 2001

LSSA'S PROPOSED
LSS PROCUREMENT STRATEGY

PRESENTATION FOR THE LSSARP
JULY 17, 1991

LSSA Procurement Strategy

Full and open competition

Single procurement for system design, develop, implement, operation and maintenance

Focus accountability on one contractor to successfully achieve full system integration

Appropriate involvement of users at all phases of life cycle

Procurement will be managed by LSSA staff using GSA's Trail Boss information resource procurement program

LSSA Procurement Strategy (continued)

RFP will have well-defined functional specifications

Allow a variety of innovative and cost effective solutions

Maximize competition among major system integrators

Industry comments on draft RFP will be solicited and adopted where appropriate

Vendors will be encouraged to bid approaches that minimize long term operational costs as well as providing cost effective hardware/software solutions

Technology refreshment clauses to permit the government to require the introduction of new technology into the system as appropriate

LSSA Procurement Strategy (continued)

Develop and apply rigorous evaluation criteria

Require proposers in competitive range to perform Operational Capability Demonstrations and Live Test Demonstrations

Require that awardee have proven track record of successfully designing, developing, operating, maintaining and providing effective user services for large systems similar to the LSS

DOE Work to Date

Valid Needs Analysis

Valid Data Scope Analysis

Valid Conceptual Design

Detailed Cost Model

Incomplete Concept of Operation

Partial System-Level Requirements (excludes O & M)

Detailed Design of Capture System

"Functional" Design of:

- Search & Image Systems

- Communications System

Additional Work Needed to Develop
An Integrated (Including O&M) Functional Baseline

Expand Concept of Operation to Include Operations and Maintenance

Refine and Augment SAIC Design Deliverables to Produce Functional Specifications That Permit Innovative Solutions

Expand System Level Requirements to Include O&M and Adequately Address System Performance, Reliability, Availability and Integrity

SAIC Design Document Review

Design Documents Sent to Panel Members for Review in December 1990

Members to Discuss Design Documents in July 1991 Meeting

- Identify Errors If Any

- Identify Omissions (Other than O&M and User Support)

- Request Clarification As Necessary

- Provide Any Written Comments to John Hoyle

QUALITY MANAGEMENT

(LSSA APPROACH)

PRESENTATION FOR THE LSSARP
JULY 17, 1991

Quality Management Approach

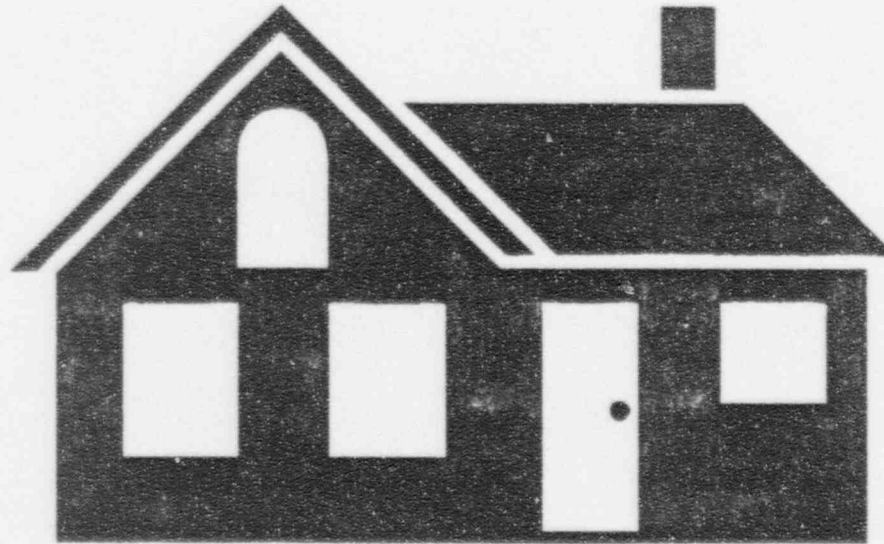
- New Office, New Responsibilities
- Structure Needed for Managing Responsibilities
- Assure Comprehensive Coverage
- Have Staff Understand Their Responsibilities and be Accountable
- Have Others Involved (Outside of LSSA) Understand and Agree to Their Involvement
- Know What we are Aiming For
- Know if we Have Hit the Mark
- Improve Where Possible
- Forcing Function TO DO WHAT WE ARE TOO BUSY TO DO
- Avoid Tendency to Take Piece Meal Approach and Fight Fires

Structure

Work Breakdown Structure

- Comprehensive
- Hierarchical
- Compartmentalized with Defined Start and End Points
- "Processes"

Work Breakdown Structure



Prepare plans

Engage Contractors

Dig basement

Frame house

Finnish exterior & Interior

Slide 3

LSSA Major Mission Areas

1. Compliance Requirements and Evaluation
2. LSS Hardware/Software Procurements
3. Facilities Planning and Preparation
4. Operations & Maintenance
5. Database Searcher Support

LSSA WBS Second Level

1.0 Compliance Requirements and Evaluation

- 1.1 Documentary Material Identification
- 1.2 Documentary Material Preparation
- 1.3 Documentary Material Submission
- 1.4 Compliance Assistance and Reporting

2.0 LSS Hardware/Software Procurements

- 2.1 LSS Procurement
- 2.2 LSS Detailed Design through Implementation
- 2.3 Telecommunications
- 2.4 LSS Small Scale System Expansion
- 2.5 Major LSS Upgrades

3.0 Facilities Planning and Preparation

- 3.1 Overall LSS Facilities Strategy and Plan
- 3.2 UNLV Facility
- 3.3 LSS East Coast Facility
- 3.4 User Site Preparation

LSSA WBS Second Level (continued)

4.0 Operations & Maintenance

- 4.1 O&M Strategy and Plan
- 4.2 O&M Contract
- 4.3 O&M Transition
- 4.4 System Technical Oversight
- 4.5 Document Capture Technical Oversight
- 4.6 Access Management and Control
- 4.7 Maintenance Technical Oversight

5.0 Database Searcher Support

- 5.1 Training Program
- 5.2 Database Searcher Support and Assistance

Breakdown Below Levels 1 & 2

Levels 1 & 2 are Structural

Level 3 Activities

Level 4 Tasks

Level 5 Subtasks

.

.

.

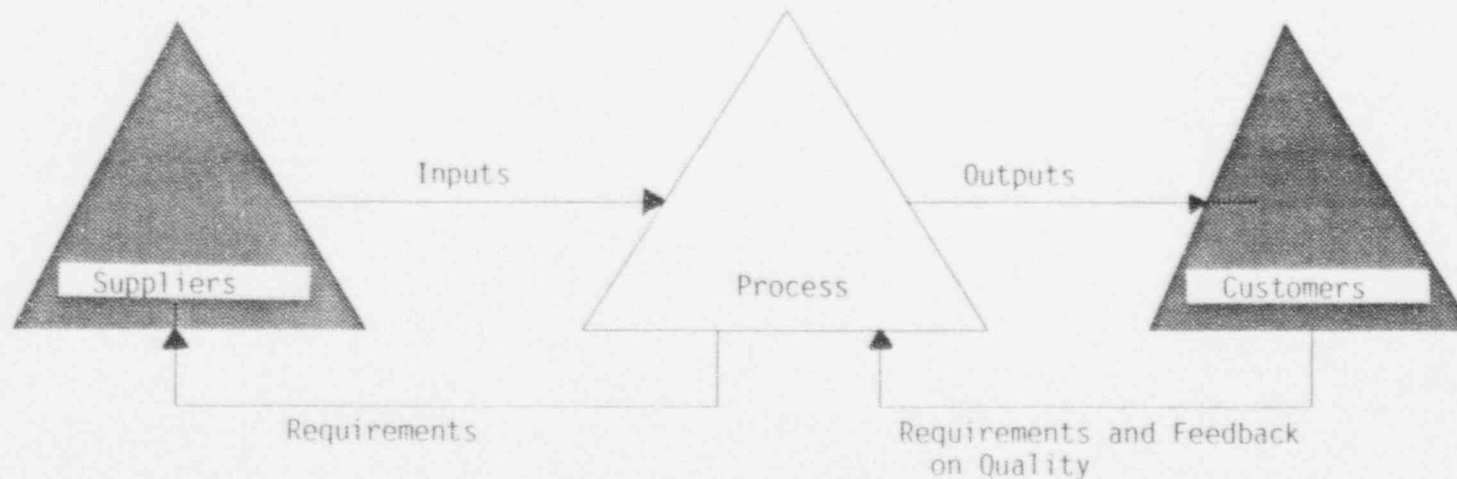
Level n Subtasks

What Does "Managing for Quality" Mean?

Managing for quality means adopting a systematic approach for:

- * Establishing realistic product or service objectives, that can be measured and verified;
- * Defining processes for producing LSS products and services that aim to meet these requirements; and
- * Measuring, analyzing, controlling, and improving LSS/LSSA products and services.

Achieving high quality will be the focal point of LSSA's process management approach. Figure 1 (below) emphasizes that producing high quality is a systematic endeavor that involves overseeing not only the process, but controlling the inputs to the process and most importantly, properly recognizing and reacting to changing customer needs.



Step 1: Design/Define the Process

- * Process Definition
- * Identify Process Suppliers and Customers
- * Identify process Participants and Their Responsibilities
- * State Process Objectives
- * Overall Objective Attainment Strategy

Step 2: Develop Process Flow Diagrams and Performance Measurement Requirements

- * Prepare Process Flow Diagrams
- * State Performance Measures
- * Identify Data Needed to Measure Performance
- * Data Collection Plan

Step 3: Assess risk and Adequacy of Internal Controls

- * Risk

- High Risk
- Moderate Risk
- Low Risk

- * Internal Controls

Step 4: Evaluate Process Coherence and its Ability to Meet Process Objectives

Step 5: Document Issues/Process Weaknesses and Recommend Corrective Action

Step 6: Decide on Process Improvements and Select Issue Resolution Strategies

Step 7: Change Process and Resolve Issues

Step 8: Notify Process Participants of Process Requirements and Procedures

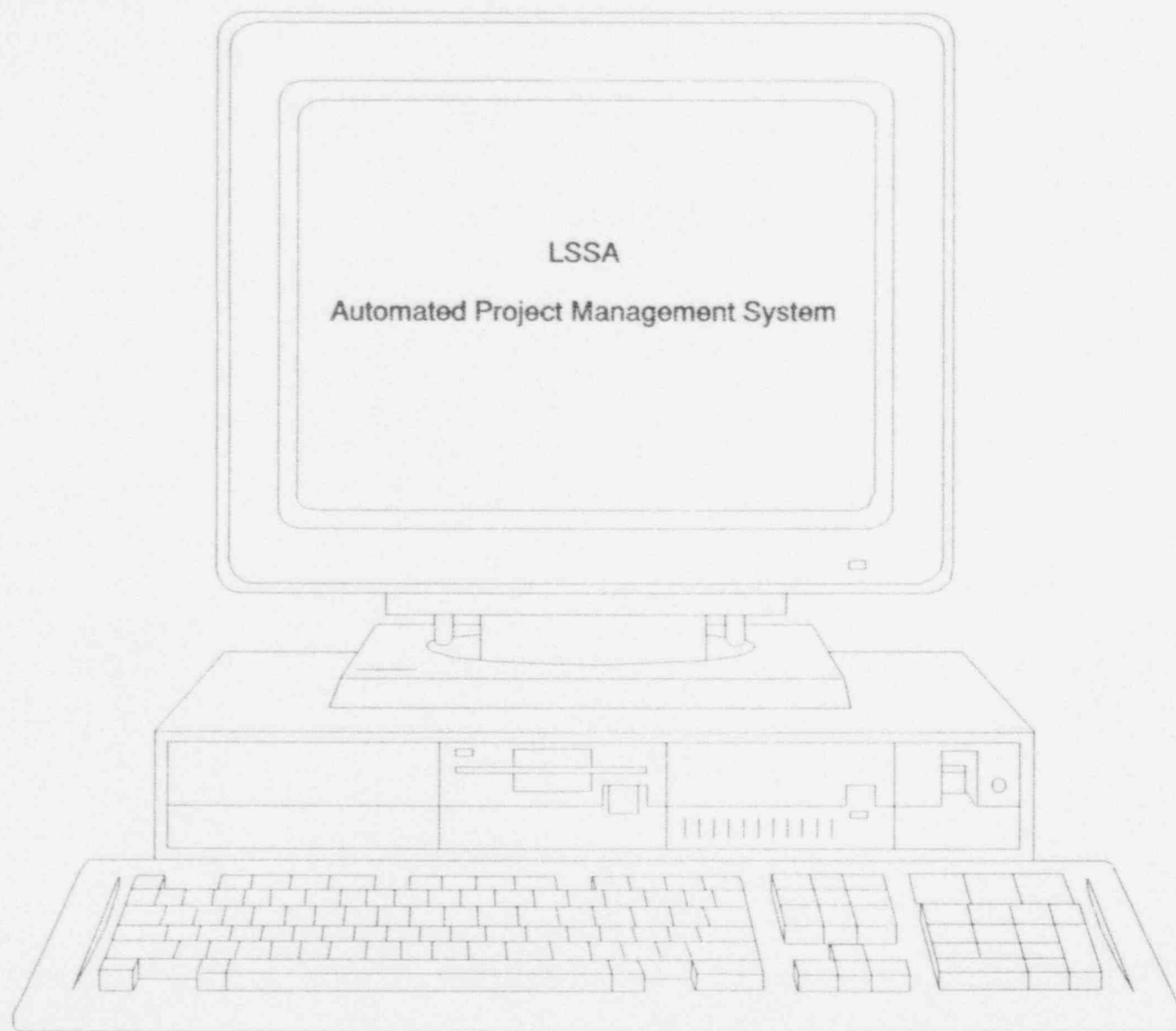
Step 9: Notify Suppliers of Input Standards and Solicit Customer Feedback

Implement Process

Step 10: Periodically Compare Process Results with Process Objectives

Step 11: Recommend Process Improvements if Needed

Step 12: Perform Long Term Process Reviews



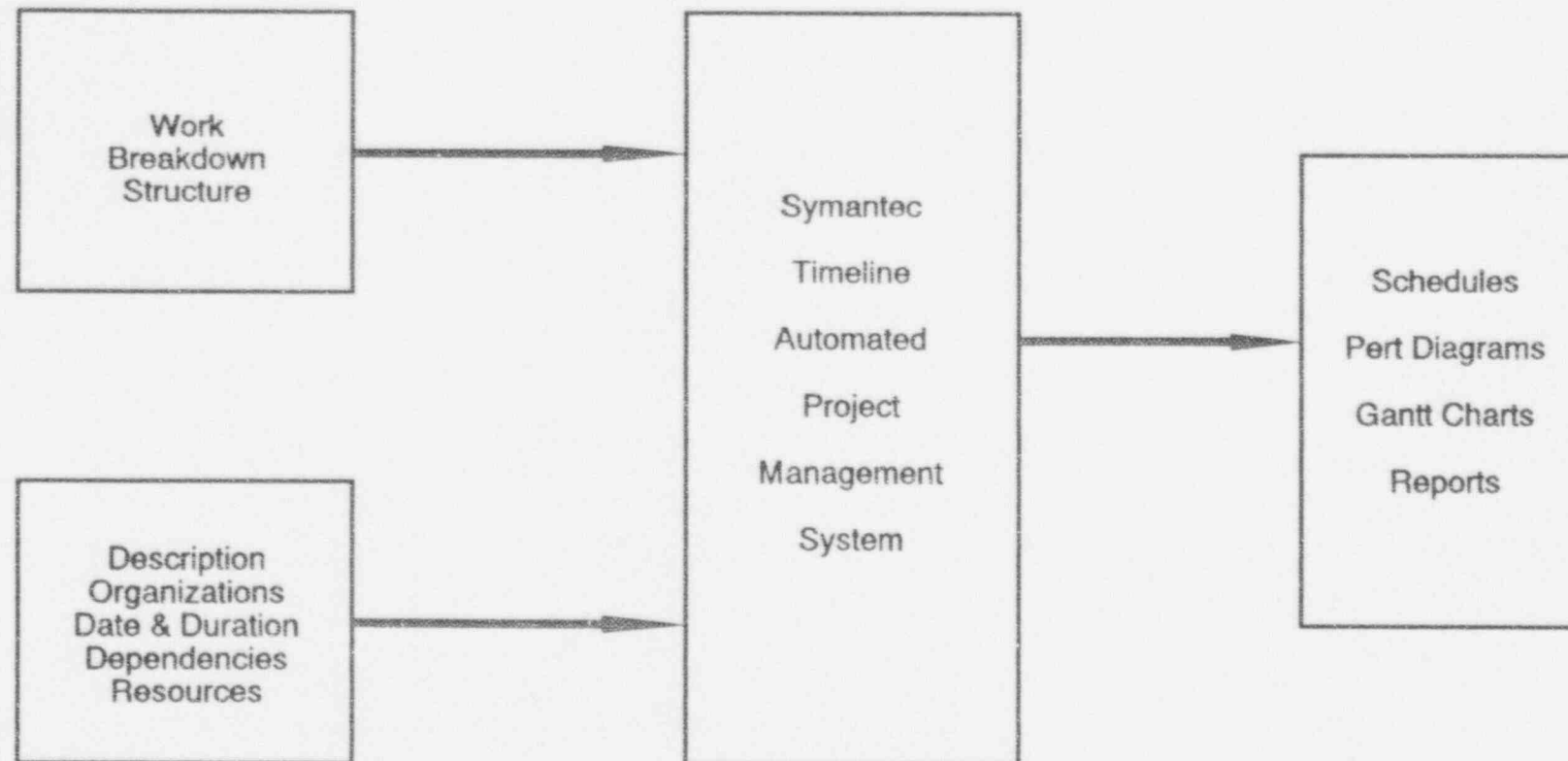
Need for an Automated Project Management System

Document, Update and Track Schedule, Schedule-Related Changes

Reporting for Various Levels of Program Management

Provide Information to LSSARP on Program Status and Needed Involvement

Automated Project Management System Loading



Work Breakdown Structure Fragment

- 1.1.3 Develop exclusion guidance
 - 1.1.3.1 Identify responsible organization for exclusion guidance
 - 1.1.3.2 Develop draft exclusion guidance
 - 1.1.3.3 Review draft exclusion guidance
 - 1.1.3.4 Revise exclusion guidance
 - 1.1.3.5 Decide on exclusion guidance
 - 1.1.3.6 Issue final exclusion guidance
- 1.1.4 Develop LSS documentary material guidance
 - 1.1.4.1 Develop classes of examples for inclusion
 - 1.1.4.2 Develop classes of exclusions
 - 1.1.4.3 Develop guidance on copyright material
 - 1.1.4.4 Determine responsible organization for circulated draft guidance
 - 1.1.4.5 Develop guidance on

This 30-character name identifies the task in the outline.

Ins-Insert Del-Delete Ctrl/Arrows-Move by word Home-First End-Last
Enter or Down-Next Up-Previous F10-Form OK Esc-Cancel form F1-Help

WBS Code Task Name Aux
5

1.1.3 Dev Exc Guid

DRAFT EXCLUSION GUIDANCE Draft Exclusion Guidance

Name : [Rev draft Exc Guid]		Keyword: []	
Note (F2): [Review draft Exclusion Guidance]			
Type : (Fixed, ASAP, ALAP)	WBS: [1.1.3.3]		
Driven by: (Duration,)	OBS: [ASAP]		
Duration : [4] (Mi, H, D, , Mo)	Priority:[0]] Link to file (F2):[]	
Effort : [0] (Mi, H, D, W, Mo)	Resources/Costs		
Status : (Future, Started, Done)	[]	[]	[]
Start : [3-Jun-91 8:00am]	[]	[]	[]
End : [1-Jul-91 9:00am]	[]	[]	[]
Achievements and Expenditures			
Basln: 100 % <No Baseline>	[]	[]	[]
.....	[]	[]	[]
Achvd: [0] 1% 0 days	[]	[]	[]
Spent: 0 % 0 days	[]	[]	[]

Task Form

1_0COMP Recalc [F9]

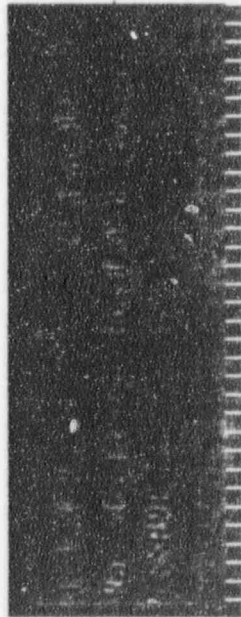
WBS: 1.1.3.3

Task Name: Rev draft Exc Guid

OBS: LSSARP

Start Date: 3-Jun-91 9:00am

Duration: 4.0 weeks



1.1.3.4

Revise Exc Guid

Unknown

1-Jul-91 9:

3.0 months

1.0COMP

Recalc (F9)

Standard

Ongoing Activities

Review Draft Information Already Loaded in Automated Project Management System

Update and Refine on a Priority Basis

Track Program Progress and Generate Charts and Reports as Necessary

Outline of Proposed LSS Small-Scale System

Summary

Under the LSS Administrator's proposal, the LSS would be implemented initially on a small-scale, but fully functional basis. The small-scale system will allow LSSA to refine and tune the system in a low cost environment prior to full-scale operation. It is proposed to reduce risks and maximize the likelihood that the LSS will meet user needs in a cost-effective manner.

Purpose

- * Refine end-user interface and support services based on experience gained in a near production environment.
- * Validate concept of operation before major hardware buys.
- * Validate characteristics of document population and production capacity of capture stations required to perform document conversion and processing.
- * Refine data on type and duration of user activities during typical user search sessions.
- * Perform rigorous system testing and make necessary adjustments to ensure acceptable system performance.
- * Season operations and support personnel and refine operational procedures prior to commencing expanded system production schedule.
- * Provide the Commission with the flexibility to adjust the pace of LSS implementation to that of the repository program (small-scale system can be run on a small-scale only, expanded slowly or expanded quickly as needed).

Details

- * The LSS small-scale system would be located in Las Vegas and would provide the full functionality of the LSS (document capture; remote access to ASCII, images, and headers; hard copy distribution) on a small-scale.
- * DOE and OLSSA would each operate a capture facility one shift per day, processing approximately 1500 pages per work day. DOE's capture facility would be located near its Yucca Mountain Project Office.

- * The small-scale system would have the capacity to store ASCII (full text), headers, and images for up to two million hard copy pages. The images of all the documents in the data base at the UNLV computing facility would be replicated and available for access on the east coast.
- * Remote access to the ASCII and images will be provided from 31 workstations distributed to the following organizations in Nevada, Texas, and Washington, D.C.:

ACNW	Nevada State Government
DOE Headquarters	NRC - CNWRA
DOE - Project Office	NRC/DOE LPDR - Las Vegas
DOE PDR Headquarters	NRC Headquarters
Indian Tribes	NRC UNLV On-Site Representative
LSSA	NRC PDR Headquarters
LSSA Tech Support Contractor	Nuclear Industry
Nevada Local Government	Technical Review Board
- * The small-scale system would have the capacity to allow at least one-half of the workstations to have simultaneous access to the LSS data base.
- * The small-scale system would include the capability to provide a limited amount of hard copy distribution from Las Vegas and from the east coast.
- * The OLSSA capture station components would later be used as the system's correction station when additional LSS nodes were brought on-line.

July 16, 1991
Revision 2

LSS Administrator's LSS Development Schedule*

<u>Activity</u>	<u>Start</u>	<u>Duration Months</u>	<u>End</u>	<u>FY</u>
<u>LSS REQUIREMENTS DEFINITION</u>				
Prepare SOW and obtain Commission Approval for Acquisition Support Contractor	7/1/91	4	10/31/91	91
Award Acquisition Support Contract	11/1/91	4	2/28/92	92
Acquisition Support Contractor Familiarization and Project Planning	3/1/92	2	4/31/92	92
Define Balance of LSS Requirements	5/1/92	7	11/30/92	92/93
<u>LSS PROCUREMENT</u>				
Prepare Draft RFP	12/1/92	4	3/31/93	93
Issue Draft RFP for Comment	4/1/93	2	5/31/93	93
Analyze and Respond to Draft RFP Comments	6/1/93	2	7/31/93	93
Incorporate Comments and Finalize RFP	8/1/93	2	9/30/93	93
Obtain Procurement Approvals	10/1/93	2	11/30/93	94
RFP on Street	12/1/93	3	2/28/94	94
Evaluate Proposals	3/1/94	4	6/30/94	94
Live Test Demonstrations (LTD)	7/1/94	4	10/31/94	94/95
Evaluate Best & Final Offers	11/1/94	2	12/31/94	95
Pre-award Work and Award	1/1/95	3	3/31/95	95
<u>LSS SOFTWARE & PROCEDURES DEVELOPMENT</u>				
Acquire commercial off-the-shelf(COTS) software and develop LSS-specific application software and procedures	4/1/95	9	12/31/95	95/96
<u>LSS SMALL-SCALE SYSTEM</u>				
Install, perform Acceptance Testing, perform Operational Testing, Refine Small-Scale System	1/1/96	12	12/31/96	96/97
<u>LSS EXPANDED SYSTEM</u>				
Expand the LSS and load approximately 19,000 pages per day into the LSS database	1/1/97	51	3/31/01	97/01

*Assumes Commission decision on LSS by November 1, 1991.

STATUS OF

OCRWM'S

INFORMATION MANAGEMENT ENVIRONMENT

July 17, 1991

Barbara A. Cerny

Director, Information Management Division
Office of Civilian Radioactive Waste Management
Department of Energy

STATUS OF OCRWM'S INFORMATION MANAGEMENT ENVIRONMENT:

- Concept
- Schedule
- Management, operations, and procurement: Implications for the LSS

STATUS OF

OCRWM'S

INFORMATION MANAGEMENT ENVIRONMENT

July 17, 1991

Barbara A. Cerny

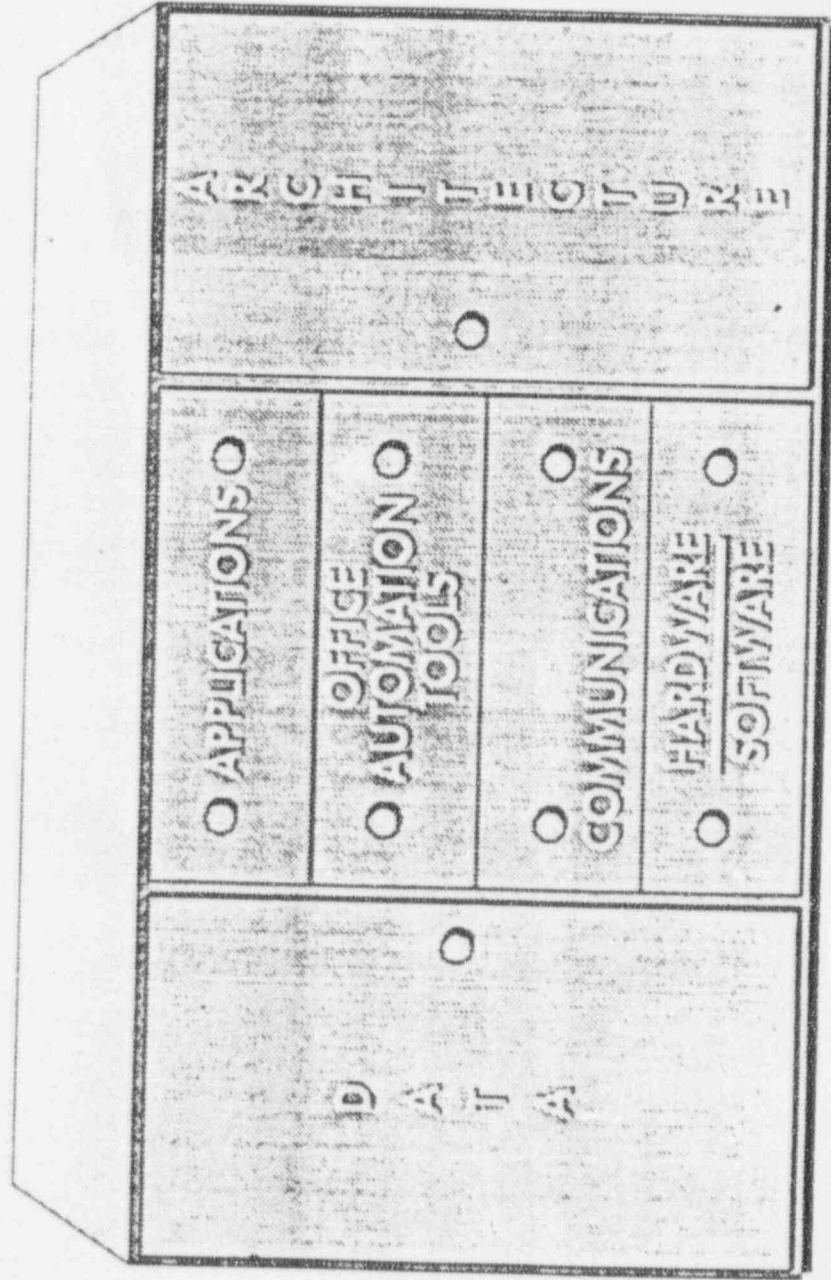
Director, Information Management Division
Office of Civilian Radioactive Waste Management
Department of Energy

STATUS OF OCRWM'S INFORMATION MANAGEMENT ENVIRONMENT:

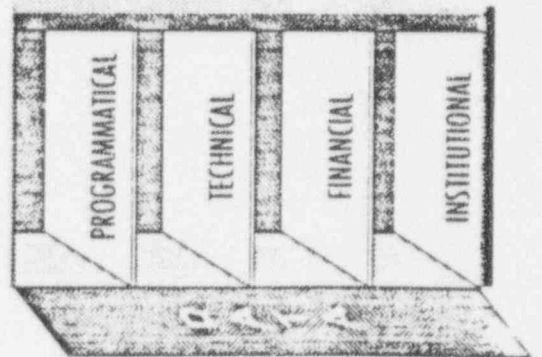
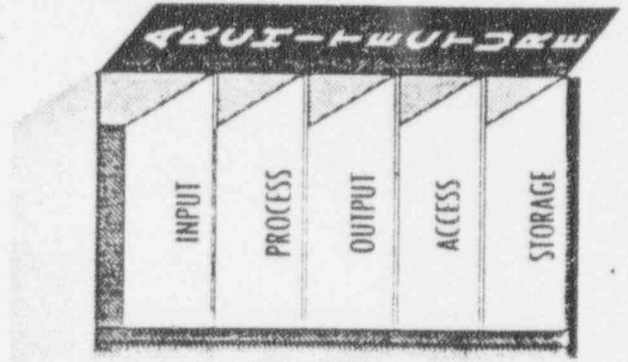
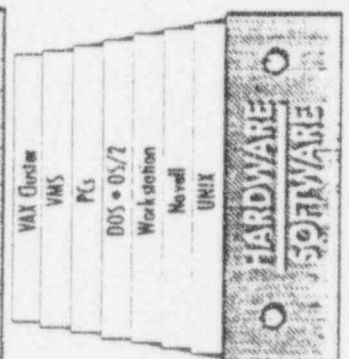
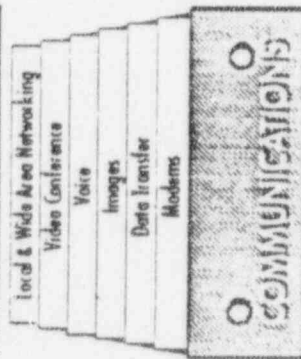
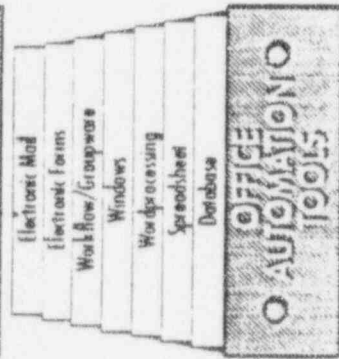
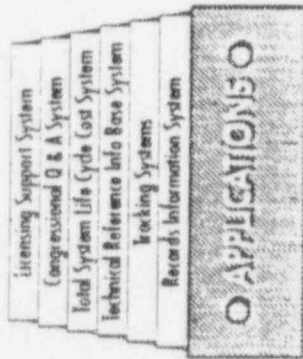
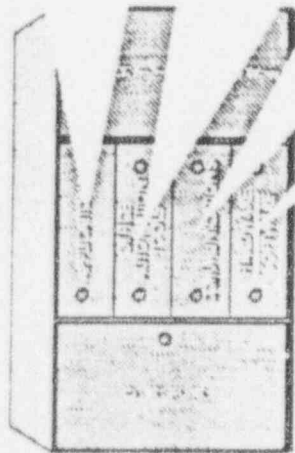
- Concept
- Schedule
- Management, operations, and procurement: Implications for the LSS

Goal:

To engineer a new information management architecture that effectively and efficiently integrates OCRWM's nationwide information resources.

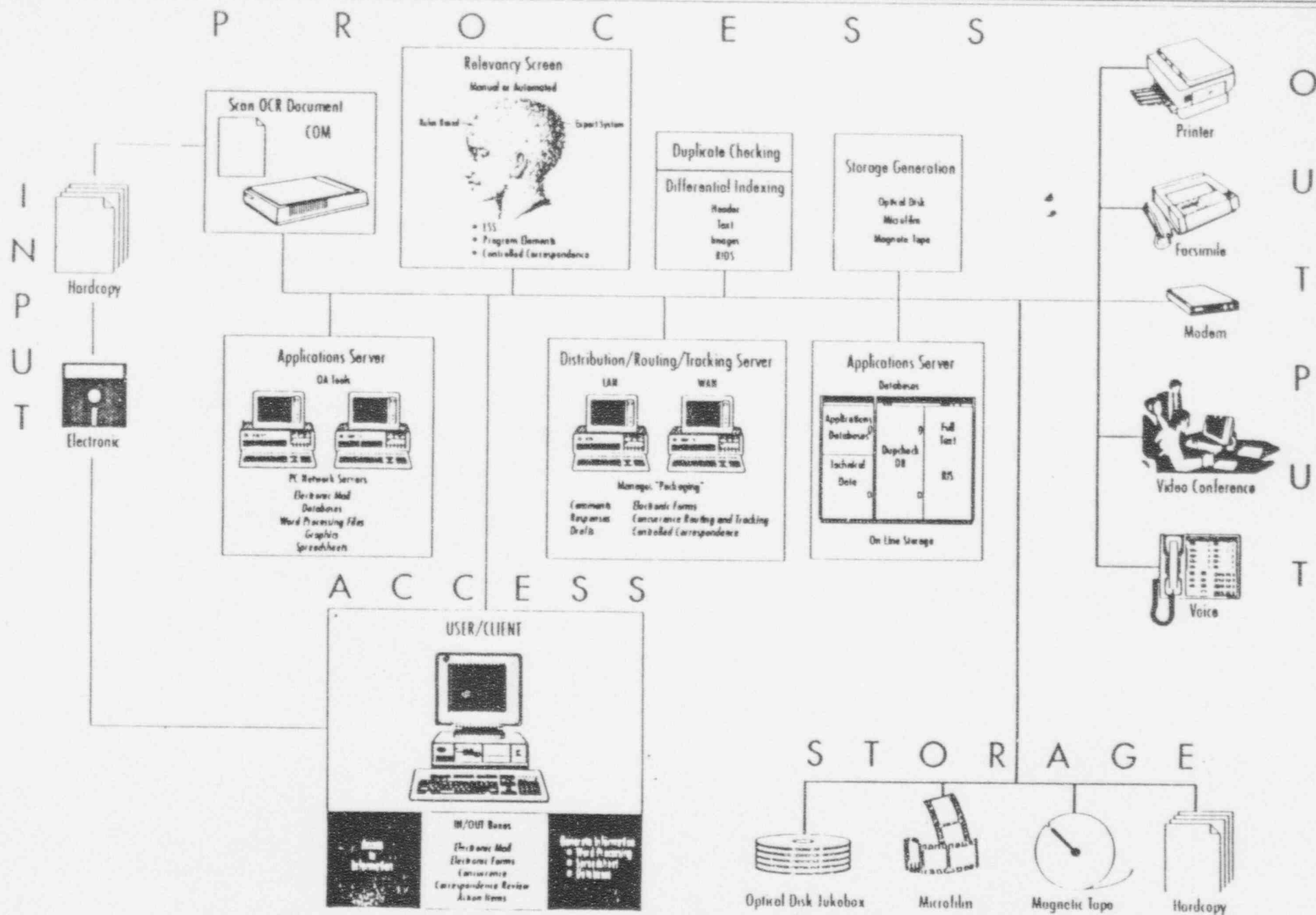


Information Management Conceptual Framework



InfoStreams

Information Storage/Retrieval/Access Management System



GOAL:

To engineer a new information management architecture that effectively and efficiently integrates OCRWM's nationwide information resources.

APPROACH:

- o Manage technology and information:
 - Value-added processing to information
 - Content of document determines level of treatment
- o Conduct an intensive information architecture assessment.
- o Re-evaluate and re-engineer:
 - Records Management
 - Office Automation
 - OCRWM Networks

Records Management

Re-engineer the records management system to ensure efficient processing, information retrieval, and data integrity through intelligent document management.

- o LSS information represents one InfoStream:
 - Output in full text and images
 - Provides audit trail for LSS records
- o Ensure content-driven design, development and implementation through such mechanisms as:
 - Document relevancy
 - Differential indexing

Document Relevancy

A filtering process that ensures the appropriate level of treatment is assigned to a document depending on its relevancy to the OCRWM mission.

- o Ability to separate relevant documents by program element (e.g., repository, MRS, transportation, licensing, QA) and to anticipate future needs.
- o Provides efficient document processing:
 - Differential indexing, full text, images
 - Retention schedules and differential storage
 - Media (optical disk, microfilm, tapes)

Differential Indexing

A process that facilitates efficient document storage, disposition, and retrieval based on the content of the document.

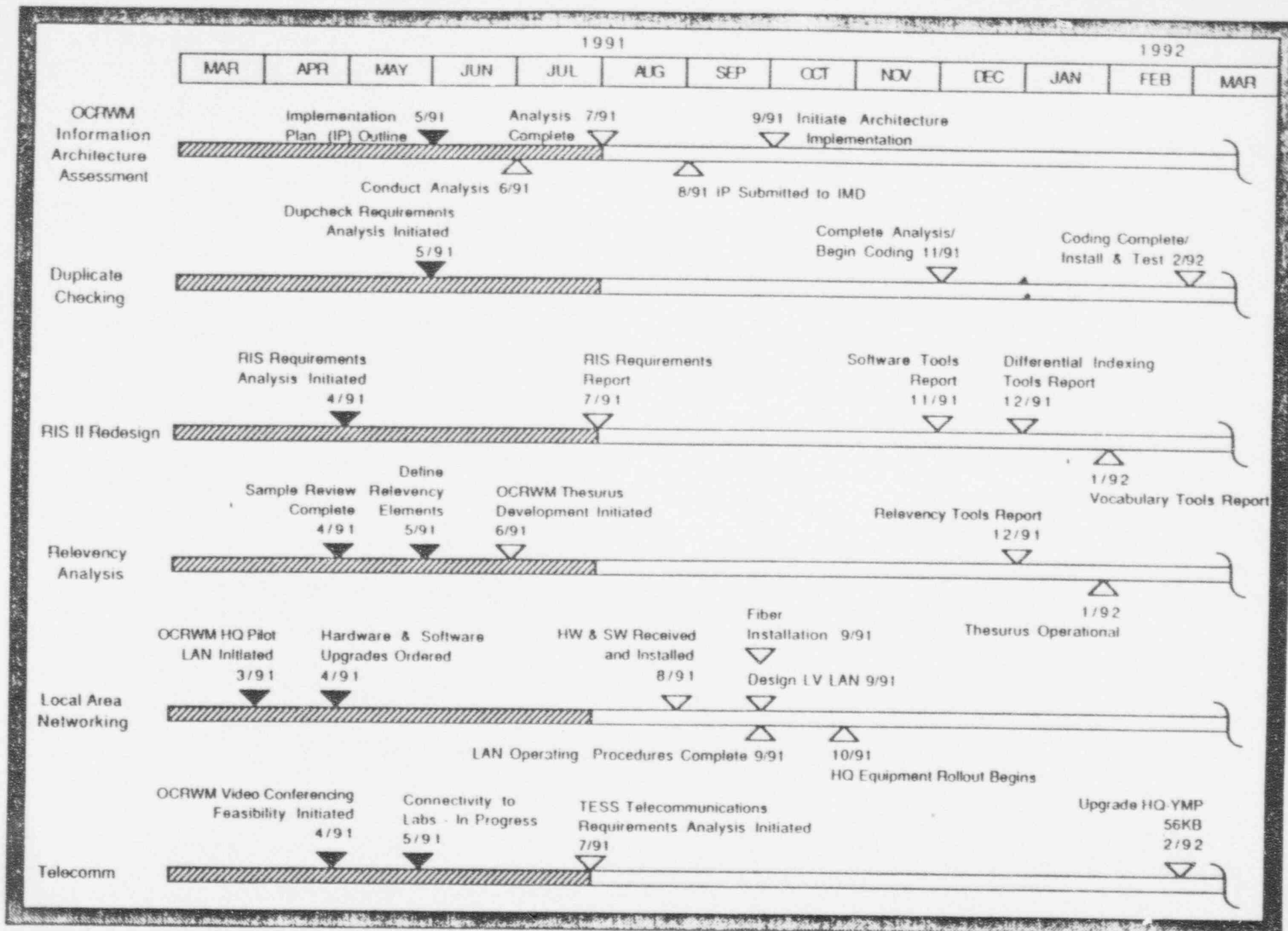
- o Decreases document processing costs.
- o Ensures the length of time a document is maintained and how it is indexed is related to the relevancy of the document to the program.
 - For example, travel reports versus study plans.

Office Automation

- o Establish migration path from the office automation environment to information management processing.
- o Evaluate office productivity tools capable of handling large volume of data and images:
 - Electronic mail
 - Electronic concurrence and document routing
 - QA forms
 - Electronic forms management
- o Enables audit trail to be created for quality records.

OCRWM Networks

- o Local area networks (LANS) - site connectivity and full compatibility.
- o High capacity wide area network link to contractors, National Laboratories, HQ-Yucca Mountain, and other sites.
 - Supports access to information systems (i.e., MIS, project management).
 - Duplicate document checking and image transfer
 - Supports data transfer for scientific analyses.
 - Video conferencing services.



Implementation Schedule

6/24/91

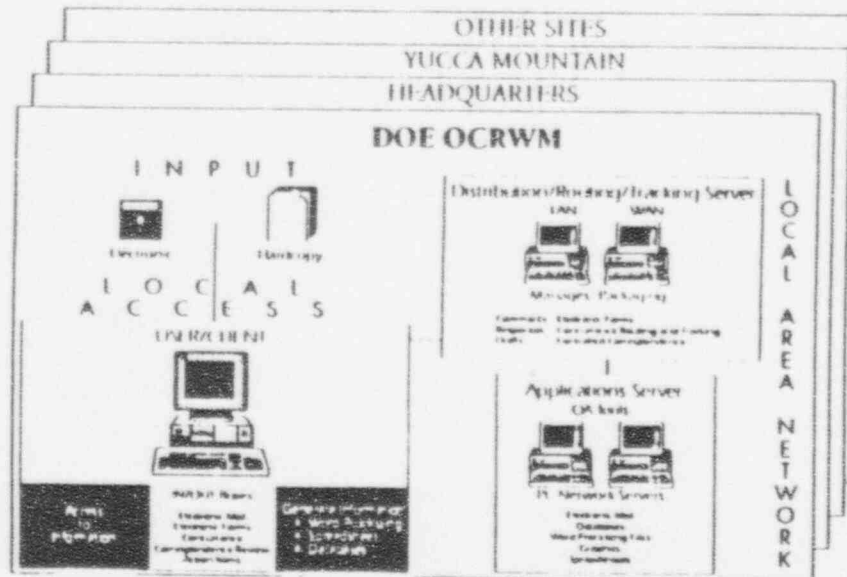
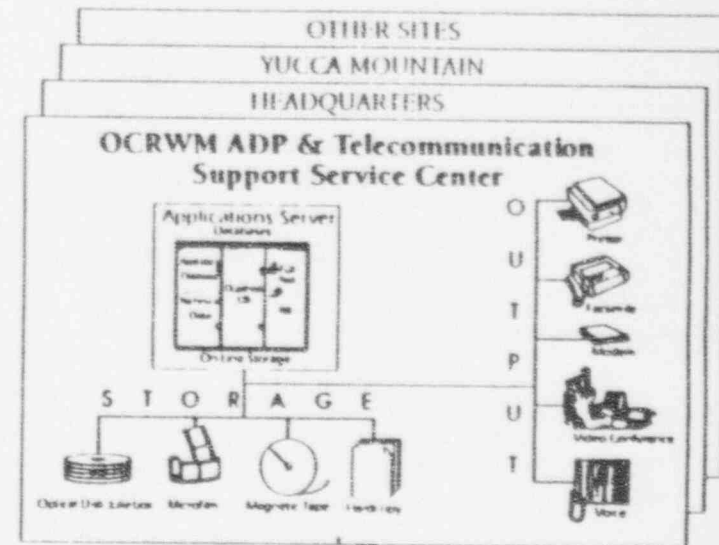
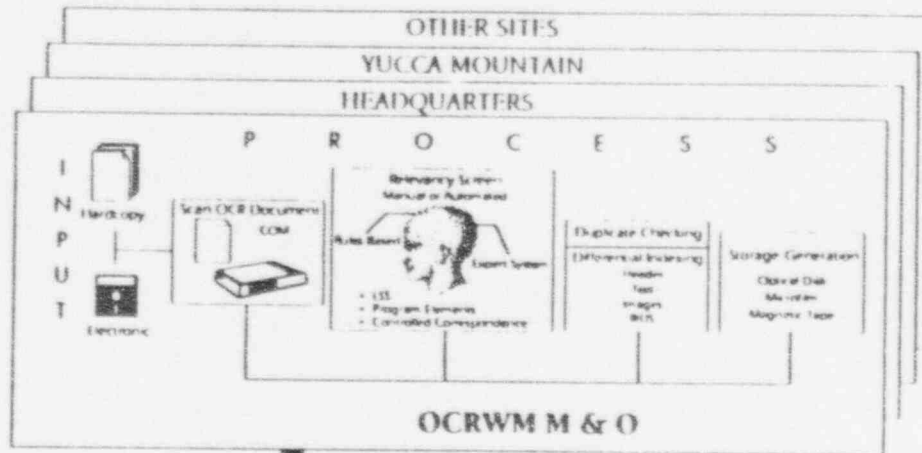
Management, Operations and Procurement

- o Unanticipated Changes Since the Negotiated Rule:
 - Delay in submission of license application.
 - Award of M&O contract.
 - Expiration of OCRWM ADP and information services contracts.
 - Procurement requirements imposed by contractual vehicles.
 - Impact of QA on institutional records management.

OCRWM IRM Contractual Framework

M & O CONTRACT

*Integrate and Perform
Tasks to Satisfy Program Mission*



SUPPORT SERVICE CONTRACTS

*Provide Support Services,
ADP and Telecommunications*

O C R W M W I D E A R E A N E T W O R K

Implications for the LSS:

- o OCRWM production of LSS disks and tapes is consistent with the Rule.
- o LSS disks and tapes can be transmitted as produced in a timely manner to the LSSA.
- o Phase I of InfoStreams operational in FY 1992.
- o M&O processing equipment functionality not necessarily as specified in LSS design documents.
- o All OCRWM InfoStreams must be supported.
- o Establishing document relationships and quality control must be done as part of OCRWM internal processing.
- o LSS mission focuses on distribution and dissemination of information.
- o Recommended Rule changes:
 - NRC takes over design and development of LSS consistent with OCRWM processing.
 - NRC certifies OCRWM's information processing paralleling the review and audit process for qualification of the QA program.



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

OFFICE OF THE
SECRETARY

November 30, 1993

MEMORANDUM FOR: Arnold E. Levin
Licensing Support System Administrator

FROM: John C. Hoyle, Chairman
LSSAPP

SUBJECT: SUMMARY OF OCTOBER 5-6, 1993, LSS ADVISORY
REVIEW PANEL

The Licensing Support System Advisory Review Panel held a two day meeting in Las Vegas, Nevada, on October 5-6, 1993. All participating organizations serving on the Panel were represented except the Securities and Exchange Commission. The agenda for the meeting and list of attendees are attached.

Highlights of the meeting are summarized below.

1. Discussion of the LSS Rule (10 CFR Part 2, Subpart J) - Historical Perspective
Mr. Cameron, Office of the General Counsel, presented a brief refresher on the LSS rule to provide the members, some of whom were new to the Panel, a summary of the major features of the rule.

Commitments: None.

2. Briefing on NRC's Alternative Approach to Development and Operation of the LSS as Part of InfoSTREAMS

Mr. Cranford, Acting LSS Administrator, provided a briefing on NRC's efforts to achieve a viable LSS system at a significant cost reduction by combining LSS development and operation with DOE's document management system known as InfoSTREAMS (Alternative 3 of SECY 93-107). During the discussion after Mr. Cranford's briefing, several members strongly expressed the view that the Panel should have been utilized earlier in the process of deciding whether the LSS design should be reexamined, and in participating on the NRC/DOE Technical Working Group. Those members strongly urged that the Panel be fully used in the future.

9408290437

(See continuation of discussion of Alternative 3 in item 9. below.)

Commitments: The Acting LSSA agreed to determine whether the technical Working Group's draft report of February 1992 could be released to the Panel. Members will be provided a copy when it becomes available.

3. DOE Briefing on InfoSTREAMS as the LSS Foundation

Mr. Graser, Acting Director of OCRWM's Information Management Division, DOE, assisted by Janice Tauser of TRW, briefed the Panel on a number of issues raised in the course of studying technology in the InfoSTREAMS environment and applying lessons learned to the possible utilization of InfoSTREAMS technology for the LSS. They cited a number of passages in the existing LSS rule in which modifications should be considered to avoid words or phrases that in the future may be roadblocks to utilization of desirable technology developments. They also discussed possible impacts on LSS header fields and on the manner in which copyright material might be handled in the LSS.

Commitments: The Header Working Group was reestablished to consider a proposal by DOE to add several new fields to the LSS header record. The Group is composed of representatives of the State of Nevada (Chair), Clark County, DOE and NRC.

4. DOE Briefing on InfoSTREAMS as the LSS Vehicle

Mr. Graser, assisted by George Hallnor of TRW, gave the Panel a presentation on the current state of InfoSTREAMS preliminary design and development.

Commitments: Panel members requested additional cost data for InfoSTREAMS. NRC will provide the cost information provided by DOE during preparation of SECY 93-107. After a final determination has been made on whether InfoSTREAMS is to be used as the LSS vehicle, more definitive cost and scheduling data will be developed by DOE and provided to the Panel.

5. LSS Compliance Assessment and Audit Program

Mr. Cranford, Acting LSS Administrator, presented a briefing on the draft LSS Compliance Program designed by the LSSA office to assess all participants' compliance with their obligations to the LSS program.

Commitments: Panel members were asked to review and provide comments on the LSSA draft within the next few weeks. The Panel elected to defer comments until after resolution of the

Alternative 3 issue. The handling of protected material is to be scheduled as a future agenda topic in connection with possible Part 2 rule changes.

6. Optical Character Recognition (OCR) and Full Text Retrieval

The Panel was provided a briefing on progress being made on OCR technology research being conducted by the Information Science Research Institute (ISRI) at the University of Nevada, Las Vegas. Professor Nartker, Director of ISRI, reviewed the test results obtained by the Institute during the past year utilizing optical character recognition devices available from the industry.

Commitments: None.

7. Text Information Management

Mr. Hallnor, TRW, provided information on efforts by TRW to assess the ability of current and developing technologies in the text information management field to meet InfoSTREAMS and LSS functional needs. Panel members urged DOE to broaden the assessment to find other client server systems for large applications.

Commitments: DOE is to review the text information management systems study for possible release of excerpts to the Panel.

8. LSS Topical Guidelines

At the request of Nye County's representative, the Panel briefly discussed Draft Regulatory Guide DG-3009, Topical Guidelines for the Licensing Support System. NRC staff is seeking public comment on the Draft Guide by October 29, 1993. Panel members noted the revisions which had been made in the draft Guidelines at the Panel's earlier request concerning the topics of environmental information and transportation information. They suggested that additional language appeared necessary for clarification, particularly with respect to the inclusion of socioeconomic information into the LSS.

Commitments: Those portions of the meeting transcript containing the Topical Guidelines discussion will be provided to the appropriate NRC staff.

Panel members should submit comments for their individual organizations directly to the NRC staff as soon as practical.

9. Open Discussion of Approaches to Operation of LSS As Part of InfoSTREAMS

Representatives of the State of Nevada, Nye County, and Clark County expressed the view that Alternative 3 of SECY 93-107 did not appear to be acceptable to their constituent organizations primarily because the capture function and direct control of the LSS would reside with the Department of Energy, rather than NRC or some other independent element. This view was discussed at length. On the issue of document capture, a solution was suggested whereby non-DOE parties would rely on the LSS Administrator for inputting their documents.

On the operational control issue, a variety of additional suggestions were offered which would have the effect of allowing DOE to design, develop, install and test the LSS within InfoSTREAMS, but would place NRC in virtual control of the actual LSS operation. Examples included:

- establish NRC control through a vigorous compliance and audit program;
- transfer DOE's LSS contractor oversight responsibility to the NRC when operation begins;
- use a separate contractor reporting to NRC as a follow-on contractor to DOE's LSS contractor;
- transfer management oversight of DOE employees to the LSS Administrator;
- provide additional control through expansion of the authority and responsibility of the pre-application Licensing Board;
- place control of funding for the LSS portion of InfoSTREAMS with NRC through interagency agreement.

Commitments: The Nye County representative will draft for circulation to the other Panel members a proposed letter to the Commission expressing the concerns of Panel members with respect to Alternative 3.

10. Future Plans

Panel members tentatively agreed that a follow-on meeting should be held in the mid-January timeframe following review of the additional information to be circulated after this meeting.

Enclosures:

Agenda
List of Attendees

cc: The Chairman
Commissioner Rogers
Commissioner Remick
Commissioner de Planque
OGC
EDO
SECY
LSS Internal Steering Committee
LSS Advisory Review Panel Members

AGENDA
LSSARP MEETING, OCTOBER 5-6, 1993

TUESDAY, OCTOBER 5

9:00 - 9:20 Opening Remarks (John Hoyle, NRC, Chairperson)

9:20 - 10:00 Discussion of LSS Rule - Historical Perspective (Chip Cameron, NRC)

10:00 - 10:15 Break

10:15 - 11:15 Status Report (Gerald Cranford, Acting LSSA)

Discussion of events leading up to this meeting. Include NRC/DOE Technical Working Group activities, Commission Decision, Revised Role of the LSSA.

11:15 - 12:30 InfoSTREAMS as the LSS Foundation (Dan Graser, DOE/Janis Touser, TRW)

Includes short presentation topics: Voice annotation; Electronic Documents; Copyright questions, Revised field structures

12:30 - 1:30 Lunch

1:30 - 3:00 LSS Compliance Assessment and Audit Program (Gerald Cranford, LSSA)

Presentation of the planned CAP and audit programs.

3:00 - 3:15 Break (15 Minutes)

3:15 - 4:15 Presentation of InfoSTREAMS as the LSS Vehicle (Dan Graser, DOE/George Hallnor, TRW)

4:15 - Closing remarks end of first day (John Hoyle, NRC,)

WEDNESDAY, OCTOBER 6

8:30 - 8:45 Second day's opening remarks (John Hoyle, NRC)

8:45 - 9:30 Presentation (Tom Nartker, UNLV)

Presentation discussing current OCR projects

9:30 - 10:15 Presentation (George Hallnor, TRW)

Presentation discussing text processing

10:15 - 10:45 Break

10:45 - Review and discussion of open issues, determination of areas requiring further consideration by the Panel, preparation of response to NRC, if appropriate, and closing of Meeting (John Hoyle, NRC)

ATTENDANCE LIST

LSS ADVISORY REVIEW PANEL MEETING
OCTOBER 5-6, 1993

Panel Members

U.S. Nuclear Regulatory Commission

John C. Hoyle, Chairman

U.S. Department of Energy

Daniel Graser
Corinne Macaluso
Linda Desell

State of Nevada

Kirk Balcom

Local Government - Site

Malachy Murphy, Nye County
Lloyd Levy, Nye County

Local Government - Adjacent

Dennis Bechtel, Clark County
Michael Baughman, Lincoln County

National Congress of American Indians

Robert Holden

Nuclear Industry

Jay Silberg
Christopher Henkel

U.S. Patent and Trademark Office

Boyd Alexander

Others

Chip Cameron, NRC
Gerald Cranford, NRC
Elizabeth Shelburne, NRC
Brenda Shelton, NRC
Karen Van Duser, NRC
Joseph Holonich, NRC
Kenneth Kalman, NRC
David Drapkin, NRC
B. Paul Cotter, NRC
Ivan Smith, NRC
Sam Belk, Consultant
Steve Frishman, State of Nevada
George Hallnor, TRW
Carol Hanlon, DOE/YMP
Carl Johnson, State of Nevada
Sally Larimore, Clark County
Chan Pyng Lai, UNLV Visitor
Pamela Lentz, TRW
Ardyce Milton, Clark County
Thomas Nartker, UNLV
Tony Neville, Labat-Anderson Inc.
Howard Nevin, RF Weston
Kitty Russell, Price Waterhouse
Jocelyn Smith, Labat-Anderson Inc.
Joe Speicher, Labat-Anderson Inc.
Janice Tauser, TRW
David Warriner, DOE/YMP
Tom Williamson, CRWMS

ENCLOSURE 5

ENCLOSURE 6

INDEX
TO
TRANSCRIPT OF LSS ADVISORY REVIEW PANEL
OCTOBER 5 AND 6, 1993 MEETING

	<u>Page</u>
Introduction of Members	4
LSS Rule (Historical Perspective)	8
Status Report by LSS Administrator	19
Description of Alternative 3	24
InfoSTREAMS as the LSS Foundation	54
InfoSTREAMS as the LSS Vehicle	119
LSS Compliance Assessment and Audit Program	156
UNLV Activities - Optical Character Recognition	210
Text Information Management Study - TRW	235
Topical Guidelines	252
State of Nevada Deposition Discussion	260
Discussion of Alternative 3	263
Discussion of Future Meeting	313

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Licensing Support System
Advisory Review Panel

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Tuesday, October 5, 1993

PAGES: 1 - 206

4408290440
ANN RILEY & ASSOCIATES, LTD.

1612 K St., N.W., Suite 300

Washington, D.C. 20006

(202) 793-3950

1 UNITED STATES
2 NUCLEAR REGULATORY COMMISSION
3

4 ***
5

6 LICENSING SUPPORT SYSTEM
7 ADVISORY REVIEW PANEL
8

9 ***
10

11 Holiday Inn
12 325 E. Flamingo
13 Magnolia Room
14 Las Vegas, Nevada
15 Tuesday, October 5, 1993
16

17 The panel met, pursuant to notice, at 9:04 a.m.,
18 before John C. Hoyle, Chairman.
19
20
21
22
23
24
25

1 PARTICIPANTS:

2

3 John C. Hoyle, LSSARP Chairman, NRC

4 Christopher Henkel, Edison Electric Institute

5 Jay Silberg, Attorney, Shaw, Pittman

6 Robert Holden, Director, Nuclear Waste Program, National

7 Congress of American Indians

8 Boyd Alexander, Assistant Commissioner, Information Systems,

9 Patent and Trademark Office

10 Daniel Graser, Acting Director, Information Management

11 Division, Department of Energy

12 Linda DeSell, Chief, Regulatory Integration Branch, Office

13 of Civilian Radioactive Waste Management,

14 Department of Energy

15 Corinne Macaluso, Regulatory Integration Branch, Department

16 of Energy

17 Dennis Bechtel, Clark County, Nevada

18 Malschy Murphy, Regulatory and Licensing Advisor, Nye

19 County, Nevada

20 Kirk Balcom, State of Nevada

21 Chip Cameron, Office of General Counsel, NRC

22 Janice Tauser, TRW Environmental Support Services

23 George Hallnor, TRW Environmental Support Services

24 Sally Larimore, Nuclear Waste Division, Clark County, Nevada

25

P R O C E E D I N G S

[9:04 a.m.]

MR. HOYLE: I would ask you to take your seats, please. I see a lot of empty seats down at the end of the horseshoe here. I wonder if I sent them to the wrong building or hotel. We started out thinking we were going to meet at the Alexis Park and did not end up over there.

You probably can't hear in the back too well. Let me remind the speakers to speak directly into the microphone. I think that will help us all. The Court Reporter reminds me that the microphones on the table are for her. They don't feed in through the system here. So those of you who speak at the table, asking questions or making comments, please speak up loudly so all can hear.

There might be a few more coming in, but let's get started. This is the sixth meeting of the LSS Advisory Review Panel. My name is John Hoyle. I'm the representative of the NRC on the panel.

We will have some introductions for those at the table in a moment. Let me remind us that this is a Federal Advisory Committee. We're meeting in open session under the rules set out by the Federal Advisory Committee Act.

Our Committee -- our Panel -- I call it Committee because it's a Federal Advisory Committee, but its name has the word "panel" in it -- was established in 1989 as a

1 result of rulemaking developed by the NRC in negotiation
2 with a committee of very similar membership to this one.

3 There are nine groups or organizations represented
4 on this Panel. We'll find out as we go around the table
5 exactly how many of those nine are represented today. The
6 NRC, the Department of Energy, the State of Nevada, local
7 government of Nye County, and then there's a coalition of
8 local governments of the counties adjacent to Nye County,
9 and the City of Las Vegas.

10 The additional counties are Clark and Lincoln, who
11 were members of the panel from the start. Then joining us
12 since the last meeting are White Pine, Eureka, Lander,
13 Churchill, Mineral, and just last week I was asked to
14 include Esmerelda County, all those counties are in Nevada,
15 and Inyo County, California.

16 The Congress of American Indians also has a seat
17 on the Panel and there's a coalition of units representing
18 the nuclear power industry and we have two Federal agencies
19 with experience with large document management systems, the
20 Patent and Trademark Office and the Securities and Exchange
21 Commission.

22 I think at this point, why don't I ask those
23 seated at the table to introduce themselves and tell us who
24 they represent?

25 MR. HENKEL: My name is Chris Henkel. I represent

1 the Edison Electric Institute, who is representing the
2 nuclear utility industry.

3 MR. SILBERG: I'm Jay Silberg. I'm an attorney
4 with the Washington law firm of Shaw, Pittman. We're
5 counsel to Edison Electric Institute and the Industry
6 Coalition.

7 MR. HOLDEN: I'm Robert Holden. I'm Director of
8 the Nuclear Waste Program of the National Congress of
9 American Indians. The National Congress of American Indians
10 is the oldest, largest national Indian advocacy organization
11 and we represent tribal governments. There are a lot of
12 tribal governments that have cultural and other types of
13 interest in the Yucca Mountain area.

14 MR. ALEXANDER: I'm Boyd Alexander. I'm Deputy
15 Assistant Commissioner for Information Systems in the Patent
16 and Trademark Office. We have put together a system similar
17 to this in complexity with what you're envisioning.

18 MR. GRASER: I'm Dan Graser. I'm currently the
19 acting Director of the Information Management Division at
20 the Department of Energy.

21 MS. DeSELL: I'm Linda DeSell. I'm the Chief of
22 the Regulatory Integration Branch with the Office of
23 Civilian Radioactive Waste Management. My job is mainly the
24 liaison with the Nuclear Regulatory Commission.

25 MS. MACALUSO: I'm Corinne Macaluso. I'm also

1 with the Regulatory Integration Branch of DOE.

2 MR. BECHTEL: Dennis Bechtel. I'm representing
3 Clark County, Nevada.

4 MR. MURPHY: Mal Murphy. I'm the Regulatory and
5 Licensing Advisor for Nye County, Nevada.

6 MR. BALCOM: Kirk Balcom representing the State of
7 Nevada.

8 MR. CAMERON: Chip Cameron, Office of General
9 Counsel, Nuclear Regulatory Commission.

10 MR. HOYLE: Thank you very much. Speakers that we
11 will hear from later are in the audience and I will ask them
12 to introduce themselves at that time and I will introduce
13 them as the time comes.

14 Those of you who are on my right of the table, I
15 think the Court Reporter put numbers on your name tags. In
16 case you speak up and she can't hear you, she might ask what
17 number are you and you can tell her, please.

18 This room reminds me of Zion Canyon. I was just
19 up there over the weekend and I wish it was more a meadow or
20 something here.

21 Around the time of our last meeting, and that was
22 July of 1991, so it's been a while, we had a new Chairman
23 come on NRC's Commission, Ivan Selin. As the new Chairman,
24 he received a number of informal briefings on most of NRC's
25 programs, including the High Level Waste program and the

1 LSS.

2 He looks very hard at our programs and questions
3 us very closely on them about their effectiveness, their
4 cost and their management. At about the same time, DOE was
5 announcing a five-year delay in its high level waste
6 program. Its earlier estimate for completing the site
7 characterization process and submitting an application to
8 NRC, if that was what they had -- what the result was, that
9 would have been in 1996. The new date for that is now 2001.

10 It would have been a rather fast track then for
11 the LSS design and development process and more involvement
12 by this Committee early on became a more sedate-paced
13 activity. But it gave an opportunity to DOE to look at its
14 own need for document management in the high level waste
15 program and it also led NRC to take a more critical look at
16 the situation.

17 Gerald Cranford, the acting LSS Administrator,
18 will pick up on that point as to what NRC has done in the
19 interim. What I would like to accomplish today is to let
20 Gerald describe the new approach to the LSS development
21 which grew out of that critical review, which the NRC
22 Commissioners directed him to pursue.

23 We'll also hear him describe the audit program
24 designed to assure that the system will work, that everyone
25 will have confidence in what's in it and how it operates.

1 We will also hear from DOE about how their
2 internal document management system, which they call
3 InfoSTREAMS, could be used for the LSS. Of course, what we
4 need are the reactions and the comments and the concerns of
5 the Committee members that we can gather and talk about and
6 take back with us to the Commission.

7 Before I ask Gerald to begin his presentation,
8 though, I would like to ask Chip Cameron of our Office of
9 General Counsel to give all of us, and, particularly, those
10 who haven't heard the background, for him to give us a
11 little sketch of the LSS background as originally
12 anticipated by the rulemaking which was established four
13 years ago.

14 That should bring us all more or less back up to
15 an even starting point for breathing new life into the Panel
16 and its activities. So at this point, Chip, I'd like you to
17 come up and give us your briefing.

18 MR. CAMERON: Thank you, John. When I was flying
19 out yesterday, I was on the plane with an older gentleman
20 who said that he was just coming from San Antonio where they
21 had the annual reunion of the Fourth Marine Division, who
22 had fought at Iwo Jima and some of the other places in the
23 Pacific, and I thought that was a pretty good analogy for
24 this meeting, as far as I'm concerned.

25 What I wanted to do was just give a brief

1 refresher on the LSS rule; not get into an exhaustive blow-
2 by-blow of every provision, but look at the major elements
3 of the rule, particularly those that might be pertinent to
4 what we're going to be discussing during the next day-and-
5 a-half.

6 Some of us who are here go back to the beginning
7 of this process when we set out to do a negotiated
8 rulemaking on the subject of the licensing support system.
9 Our goal in the negotiated rulemaking was to attempt to
10 reach a consensus on a proposed rule that would provide for
11 the use of an electronic information management system in
12 the Commission's high level waste licensing proceeding.

13 We had a wide spectrum of interests represented
14 around the table during those negotiating sessions and after
15 a period of about nine months, we did hammer out the text of
16 a rule and the text of the supplementary information to that
17 rule.

18 The rule not only dealt with the use of the LSS in
19 the adjudicatory proceeding on the DOE license application
20 for the repository, but it also dealt with other provisions
21 related to the adjudicatory proceeding that did not have to
22 do with the LSS, but did have to do with making sure that we
23 had a timely and efficient hearing process.

24 I should point out that we did not have complete
25 consensus, unanimous consensus at the end of the negotiating

1 session. We all did reach agreement on the text of the rule
2 and the supplementary information, but in the end, the
3 industry representatives ultimately did not support the rule
4 based on fundamental cost-benefit concerns that the industry
5 had.

6 I'd like to say that I just mention this as a
7 historical artifact, but I'm not sure that that's true
8 either. At any rate, the Commission issued the proposed
9 rule for comment and we responded to comments and we had the
10 final LSS rule in April of 1989.

11 Some of the basic elements of the rule are, one,
12 that the LSS is an integral part of the repository licensing
13 process; the LSS will contain the relevant documents of DOE
14 and NRC, the State of Nevada, if this is where the -- if,
15 indeed, Yucca Mountain is the subject of the licensing
16 application for the repository; and, the other parties to
17 the high level waste proceeding.

18 All of those relevant documents will be in the
19 licensing support system. All parties to the licensing
20 proceeding will have full text access to those documents.
21 To be a party in the high level waste licensing proceeding,
22 an organization or individual, including the Department of
23 Energy, must comply with the document submission
24 requirements in the LSS rule.

25 The broad objective, again, here is to facilitate

1 the thorough and efficient review by the Commission of the
2 DOE license application, including meeting the three-year
3 construction authorization review period that's specified in
4 the Nuclear Waste Policy Act.

5 The way that this thoroughness, efficiency, and
6 the proceeding was going to be accomplished by the LSS rule
7 is through a number of means. The LSS would establish a
8 centralized, current and comprehensive database of relevant
9 licensing information.

10 The LSS would provide for full text search
11 capability of this database to allow quick identification of
12 documents and relevant material within those documents. The
13 LSS would provide for the identification and availability of
14 discoverable documents before the DOE license application is
15 submitted and thereby eliminate one of the most burdensome
16 and time-consuming aspects of the traditional system of
17 document discovery, which is the physical production of
18 those documents after the license application is submitted.

19 The early availability of documents was also
20 intended to allow sufficient time for all the parties to
21 prepare for the hearing and also to allow the use of the LSS
22 by those parties before the hearing in related technical
23 review efforts.

24 I should also point out that the LSS rule provides
25 for the electronic filing of pleadings and orders during the

1 hearing itself and thereby eliminates the delay associated
2 with the physical delivery of those documents.

3 There are three major aspects to the rule. One is
4 the framework for documents submission and access. A second
5 element is the non-LSS provisions that I won't spend any
6 time on now. The third major aspect is the institutional
7 framework for developing and implementing the LSS. That's
8 mainly going to be the subject of this meeting today.

9 In terms of document submission and document
10 access, the parties to the high level waste proceeding have
11 a responsibility to submit documentary material to the LSS
12 for entry into the system, and documentary material is
13 information that is relevant to or likely to lead to the
14 discovery of information that is relevant to the licensing
15 of the likely candidate site for a geologic repository.

16 There is a wide range of documents that will be in
17 the system; not only the license application itself and the
18 NRC safety evaluation report, but also memoranda, research
19 reports, field notes, things like that.

20 Documentary material is guided by what we call the
21 topical guidelines and I believe there is a reg guide that
22 should have been distributed that sets forth the topical
23 guidelines. In terms of the form of submission of
24 documents, this differs according to who the party is and
25 which stage of the licensing proceeding we're going to be

1 in. For the NRC and DOE, all relevant documents have to be
2 submitted in image, and that's not an electronic image, I
3 would note for Jay's benefit. I remember that. A header
4 for the individual document and Betsy Shelburne, the master
5 of headers, is here to, I guess, talk about that at some
6 point.

7 You couldn't refrain from talking about that,
8 Betsy. The document has to be in machine-readable form, in
9 ASCII. In terms of the other LSS participants, an image has
10 to be submitted, a header, and before there is access to the
11 LSS, there is no requirement that ASCII be submitted for
12 those documents. That was going to be the job of the LSS
13 Administrator to essentially capture those documents in
14 machine-readable format.

15 After a party gets access or an LSS participant
16 gets access to the system, then they also have the ASCII
17 submission requirement, as well as the image and header. I
18 think it's important to keep in mind that often it's
19 confusing when you go through the Commission paper that's
20 the main subject of the meeting to distinguish between
21 capture -- in other words, putting the document into
22 machine-readable form, making sure the header is correct --
23 and the loading of that document into the search and
24 retrieval system. I will talk a little bit about the
25 responsibilities for those in a minute.

1 In terms of access to the LSS, the provisions
2 differ according to who you are and what stage of the
3 proceeding we're in. LSS participants are given full text
4 access to the documents in the licensing support system,
5 both before the license application is submitted and,
6 naturally, after the license application is submitted.
7 Remote access is provided from personal computers and also
8 from selected designated terminals.

9 In terms of the public, there is full text access
10 to the headers for the documents in the LSS during the pre-
11 license application phase from terminals that would be
12 located in the NRC public document rooms and local public
13 document rooms, as well as at the Department of Energy.

14 After the notice of hearing, the public can have
15 access to the full text of the documents in the LSS. There
16 is a history of that behind this design and if anybody needs
17 clarification on that, we can talk about that.

18 But who gets access to the LSS, to the full text
19 of the system before the license application is submitted is
20 determined by a pre-license application licensing board that
21 is part of the Atomic Safety and Licensing Board panel.
22 This board is supposed to be established by the Commission
23 six months before the licensing support system will be ready
24 for access.

25 The board rules on requests for access and also

1 disputes on the relevance or privilege of a particular
2 document, also on the development and implementation of the
3 LSS and DOE compliance with the LSS rules.

4 In terms of the third major element of the rule,
5 which is the institutional framework, the rule established
6 the LSS Administrator and the Nuclear Regulatory Commission
7 to manage and administer the LSS and to provide for the NRC
8 capture of all non-DOE documentary material.

9 The Administrator is responsible for the
10 administration and maintenance of the system, responsible
11 for ensuring compliance of all parties with the document
12 submission requirements of the rule. As John mentioned,
13 Gerald Cranford, who is the head of the Office of
14 Information Resources Management at the NRC, is the acting
15 LSS Administrator at this point.

16 DOE retains substantial responsibility under the
17 LSS rule to design and develop the LSS in consultation with
18 the LSS Administrator. Finally, the last major element of
19 the institutional framework is this Committee, the Advisory
20 Review Panel, composed of potential users of the system and
21 Federal agencies with expertise on the system.

22 The role of the Advisory Review Panel is to advise
23 not only the LSS Administrator, but also the Department of
24 Energy. The first meeting of the panel was in December of
25 1989.

1 In terms of the LSS development schedule, it was
2 geared to the repository licensing schedule, which
3 originally had a license application coming in in 1995. I
4 believe that the original plan based on that schedule was to
5 have the LSS available for access in January of 1992.

6 After the rule went final, there were some changes
7 to the Department of Energy's repository development
8 schedule. For example, the license application was moved
9 from 1995 to 2001. So this sort of threw the LSS
10 development schedule into limbo at that point. I believe
11 that this meeting and the recent Commission actions on the
12 Commission paper that you all have are really the first
13 steps towards establishing a new schedule and getting
14 started on the implementation of the LSS.

15 I think that's probably a sufficient overview for
16 our purposes at this point. Would you like me to answer any
17 questions, John, or just move on? Does anybody have any
18 questions or comments on any of this?

19 [No response.]

20 MR. CAMERON: Thank you.

21 MR. HOYLE: As usual, Chip, you wowed them.

22 MR. CAMERON: It makes me worry when this crew
23 doesn't have any questions.

24 MR. HOYLE: We had expected to have some new
25 members here today. Dennis Bechtel, the representative from

1 Clark County, reminded me that there's a conflicting meeting
2 going on. So perhaps many of them are there. But we do
3 have a quorum, I want to assure everybody. If we need to
4 vote on anything, we do have a quorum here today, because we
5 have representatives from DOE, the nuclear industry, Nye
6 County, which is the host county, the State of Nevada, Clark
7 County, which would represent the adjacent counties, the
8 National Congress of American Indians, and the NRC.

9 As many of you have discovered, there aren't any
10 restrooms that are easily available in this building. I'm
11 told if you go on out into the corridor and out towards the
12 main building, when you're outside, you will see a pool on
13 the right. If you go through the gate, there are some
14 facilities over there. Don't linger. Come on back to the
15 meeting. Of course, there are some near the lobby and I
16 guess that's where the coffee is that we'll need to get.

17 MR. HENKEL: Another problem, John, is getting
18 back into the building.

19 MR. HOYLE: I think we've arranged that that end
20 door will be open now. We are moving smartly ahead, as I
21 thought perhaps we would this morning. The introduction by
22 myself and by Chip I didn't think would take as long as
23 we've set time aside for, but we didn't know how many
24 questions we were going to get.

25 So I'm prepared to let everybody take a quick

1 stretch now, unless you think we ought to press on and
2 listen to Gerald first. Stretch it is. Fifteen minutes,
3 please.

4 [Recess.]

5 MR. HOYLE: Let's get started again, please. Our
6 first presentation today will be by Gerald Cranford, the
7 Director of the Office of Information Resources Management
8 at the NRC. He's also the acting LSSA Administrator.
9 Gerald is going to give us a status report on the events
10 leading up to this meeting within the NRC.

11 I do want to make an announcement before I ask
12 Gerald to come forward. That is for the afternoon session,
13 if you will see your schedule, after lunch, we are scheduled
14 to start with Gerald's presentation of the audit program,
15 and that will be followed by the second DOE presentation on
16 InfoSTREAMS as the LSS vehicle.

17 I think we're going to switch those. So we'll
18 hear from DOE next after Gerald this morning, take a lunch
19 break, and then get the other DOE presentation, and then
20 Gerald again in the afternoon at the end.

21 One other announcement. Someone told me they
22 still have trouble with the locked door out here. There is
23 a side door on my left that we could use that I understand
24 does not lock when you go out.

25 MR. MURPHY: They've posted a sign on the door

1 down there asking you not to use that side door, to exit
2 through the outside doors.

3 MR. HOYLE: Thank you. All right. Gerald, if you
4 would, we'll have your presentation, please.

5 MR. CRANFORD: Thank you, John. I would like to
6 point out, though, that this is my night job, the acting LSS
7 Administrator. My real job is the Director of the Office of
8 IRM.

9 I'm going to be assisted by Dave Drapkin, who is a
10 member of the LSSA staff at the Nuclear Regulatory
11 Commission.

12 As John pointed out, my discussion this morning is
13 going to be to fill in the blanks between when this group
14 last met in July of 1991 to bring us up to date, where we
15 stand in the LSSA activities as of now.

16 As John pointed out in his opening remarks, in
17 July of 1991, Dr. Ivan Selin was named the Chairman of the
18 Nuclear Regulatory Commission. I'm sure some of you are
19 aware of his background, but he founded a systems
20 integration company, ANS, and has a very strong interest and
21 background in systems analysis, design, automated systems,
22 information resources management.

23 So when he saw the LSS proposal and its fairly
24 sizable price tag, of course, he became interested in that.
25 So I believe it was August of 1991, Dr. Selin, in concert

1 with Dr. John Bartlett, then the Director of OCRWM, mutually
2 decided that maybe it was time to take a look at the current
3 design for the LSS from a technological standpoint,
4 realizing that the system had been in existence for several
5 years and there were some really fairly radical changes that
6 were taking place in the document processing arena.

7 So Dr. Selin and Dr. Bartlett commissioned a group
8 to reexamine the LSS. This group was called the Technical -
9 - the LSS Technical Working Group. The group was comprised
10 of members of the Office of IRM. There were three members.
11 I was appointed the Chairperson of the group. Also on the
12 group was a member from the LSSA. The Department of Energy
13 was represented by -- OCRWM had a member and also a
14 contractor for DOE was also represented on that group.

15 The recommendations that the group would come up
16 with were to be sent to the LSSA Administrator and Dr.
17 Bartlett for consideration and then ultimately they would be
18 forwarded to the Commission for final disposition.

19 The Technical Working Group had fairly discreet
20 responsibilities. You can see for yourself what they are.
21 I'll fill in a little bit more detail. Basically, to look
22 at the design; was the SAIC design still valid from a
23 technological standpoint; have new technologies been
24 developed that would either make the design more efficient
25 or reduce or avoid cost.

1 Another major consideration that had taken place
2 was the announcement by DOE OCRWM of their InfoSTREAMS
3 system. Keeping in mind at this point that InfoSTREAMS was
4 not a fully and as yet is not a fully developed system, but
5 from a conceptual standpoint, the components had been laid
6 out and they had made some significant progress in
7 developing InfoSTREAMS, as Barbara Churney spoke to you when
8 she addressed this group in 1991.

9 And there's another thing to consider. Are there
10 advantages to be gained from implementing some of the
11 InfoSTREAMS technology and software as a substitute for part
12 or all of the LSS design?

13 They were also charged to look at ways to reduce
14 cost. Some of the examples were was 100 percent full tax,
15 was that really necessary. These are the things that we
16 were charged to look at.

17 The working group looked at eleven options or
18 alternatives to the existing design. The first one was
19 capturing DOE's LSS materials using InfoSTREAMS. Again, the
20 question was was InfoSTREAMS a viable alternative to the
21 SAIC design.

22 Another question was could the InfoSTREAMS
23 capability be expanded to perform search and retrieval. The
24 way it was originally designed, it wasn't designed as a
25 large database reservoir type system. So that would be a

1 major consideration; could it be expanded to meet that need.

2 We also looked at ways to minimize the non-DOE
3 document capturing cost; eliminate the need for DOE to
4 distribute special document capture technology; eliminate
5 the need to develop additional document capture software and
6 systems; limit on-line images, as I said; also, to consider
7 the early availability of the LSS.

8 This, of course, would reduce hardware and
9 software maintenance cost, reduce cost for software,
10 licensing fee agreements, reduce communication cost, other
11 considerations along those same lines.

12 The key options that were recommended by the
13 group, there were six that were recommended. I'm just going
14 to talk very briefly about two of the key ones. The first
15 one is the avoidance of cost by using the InfoSTREAMS to
16 capture the DOE LSS material. Another recommendation would
17 have been to adopt InfoSTREAMS' search and retrieval
18 capability.

19 In February of 1992, the Technical Working Group,
20 in a draft document, listed their recommendations, but,
21 unfortunately, the recommendations were pending -- have been
22 held pending the resolutions of broad issues. The Technical
23 Working Group recommendations could not be implemented
24 unless some larger LSS program and budget responsibilities
25 were resolved.

1 So in May of 1992, the Commission directed the
2 staff to prepare a paper addressing the LSS program and
3 budget responsibilities. As a result of that, the LSS
4 Administrator developed a set of recommendations for
5 Commission consideration.

6 Among those was a proposal that the NRC develop,
7 operate and maintain the LSS. Of course, this is a
8 departure from 10 CFR Subpart J. The LSS Administrator
9 proposed that the cost would be shared by NRC and DOE based
10 upon OMB Guidance A-130, which basically says that if you
11 timeshare or use a major automated system, that the cost of
12 use of that system would be reimbursed. There would be a
13 charging algorithm for using that particular system.

14 The Commission rejected the recommendation and
15 directed the staff to basically examine some yet additional
16 alternatives that would expand DOE's program and budget
17 responsibility; also, to evaluate alternatives to the
18 organizational placement of the LSSA function and to examine
19 options for funding the NRC's LSS funding responsibilities.

20 In November of 1992, the Commission approved the
21 reconstitution of the Office of the LSSA Administrator under
22 the Office of IRM. So all of the LSSA functions and the
23 existing staff at that point was placed under the Office of
24 IRM. I believe that was in late November of 1992.

25 Also, a position of Deputy Director for IRM, LSSA

1 Administrator was established and I am pleased to say that I
2 believe we have just recently completed the selection
3 process and this person will be reporting full-time
4 somewhere around the middle of this month, the middle of
5 October. So we will have an LSS Administrator and this
6 person will be responsible for the NRC's LSSA function.

7 I should also point out that as part of that
8 arrangement, the LSSA Administrator reports directly to the
9 Executive Director for Operations, which is the NRC's,
10 basically, chief day-to-day executive officer in matters
11 regarding LSS compliance, whether or not the rule is being
12 complied with from the LSS perspective.

13 The day-to-day operational responsibilities, the
14 individual would report to the Director of IRM, but in far
15 reaching major issues, the individual reports directly to
16 the Executive Director for Operations.

17 In April of 1993, and everyone on the Committee
18 hopefully has received and reviewed this paper, the staff
19 recommended and the Commission approved, in SECY 93-107,
20 what I'm going to talk about is Alternative 3, which is a
21 significant departure from the existing rule, under which
22 DOE would design, develop, operate and maintain the LSS and
23 also the information storage and dissemination features of
24 the LSS.

25 They would use InfoSTREAMS in order to do this.

1 Clearly, the reason is the large potential cost avoidance of
2 adopting or adapting InfoSTREAMS as a replacement to the
3 SAIC design on LSS. DOE would also capture all LSS
4 material, non-DOE and its own.

5 NRC, in turn, would fund LSSA system oversight,
6 audit and QA activities. This topic will be discussed in
7 much greater length in my afternoon discussion. We talk
8 about the proposed compliance program.

9 Also, the NRC would conduct audits and install a
10 quality assurance program. DOE would fund all other system-
11 related activities. I think during Dan's presentation, when
12 he talks about Info-Streams, some of the things or some of
13 the topics may come up during his presentation.

14 When we looked at it, there appears to be a
15 potential \$63 million cost avoidance. This cost avoidance
16 would be based upon an InfoSTREAMS coming on-line in the
17 1997-98 timeframe. Of course, all this is conjecture at
18 this point because we've got a lot of issues that we need to
19 talk about simply because of the changes that would be
20 introduced as a result of 93-107.

21 I'd like to talk briefly about the pros and cons
22 of Alternative 3. The pros, as we found out or at least we
23 believe, InfoSTREAMS is a technically feasible alternative.
24 Significant progress has been made since July of 1991, the
25 briefing that Barbara gave on InfoSTREAMS. It would also

1 provide the LSSA more control over LSS functionality. Of
2 course, this would require changes to the existing rule.

3 It reduces the resources expended for the LSS.
4 There obviously are economies of scale, no separate capture
5 system, no separate storage and retrieval system. It will
6 all be an integrated part of InfoSTREAMS. It also
7 consolidates ownership of the LSS design, development and
8 implementation.

9 It eliminates the problems of two different
10 organizations trying to develop something that hopefully
11 would meet in the middle when it was time for
12 implementation.

13 As far as cons are concerned, this might be an
14 unacceptable proposal, particularly DOE document capture.
15 This is one of the primary reasons why we're here today to
16 talk about this whole concept. Some participants may be
17 unwilling to have DOE operate and maintain the LSS. The
18 final point is InfoSTREAMS future development, of course, is
19 tied to future budgets. It's not a completely developed
20 system at this point and, again, Dave will talk probably a
21 little more about this.

22 So obviously we're tied to the vagaries of the
23 Federal budgeting process, but in my most recent discussions
24 with DOE, at least in the foreseeable future, InfoSTREAMS is
25 definitely a go.

1 So at this point, that completes my presentation
2 and I will attempt to respond to any questions that you
3 have. The questions that I can't respond to, maybe some of
4 the staff in attendance will be able to answer. Any
5 questions we can't answer on Option 1 or 2, of course, we
6 can go back and huddle and provide some written response or
7 some answer to you at some future point in time.

8 Any questions?

9 MR. MURPHY: Yes. I have a couple of questions.
10 Mal Murphy, representing Nye County. First of all, and I
11 understand that this decision was made by the Commission,
12 not by staff, but I think we need to make a record on it
13 anyway. Why did the NRC consider it necessary to establish
14 a DOE/NRC Technical Working Group which, in itself, that
15 decision in itself, to me, was a violation of the LSS rule?

16 This body, the LSSARP, was established in the rule
17 and negotiated by the parties and envisioned by the parties
18 to perform precisely that function, to advise the NRC and
19 DOE on development and implementation of the LSS.

20 Why, in your opinion, was it felt necessary to
21 exclude the parties who had engaged in that negotiation and
22 who have made some important and significant compromises in
23 reaching the consensus, those of us who did reach a
24 consensus, and, yet, we're not permitted to take part in
25 this process?

1 MR. CRANFORD: I think the thrust of that group
2 was really to look at the technical versus the functional
3 features of the LSS.

4 MR. MURPHY: But that's the function of the
5 LSSARP. That's why people like Kirk Balcom, for example,
6 are members of the ARP, because of their technical expertise
7 and background in this area. That's what the rule says this
8 body is supposed to do. It's supposed to provide it to the
9 two primary Federal agencies.

10 MS. SILBERG: Let me make a statement from my
11 standpoint. My own personal view is I agree with Mal. I
12 think this group should have been involved earlier. I don't
13 think that this group, though, is necessarily the only
14 entity that can make these discussions. It is certainly
15 contemplated in the rule that they will serve that function,
16 but I don't think that the rule prohibits other people from
17 getting together, although I think it would have been nicer
18 for these discussions to have occurred somewhat earlier in
19 the process.

20 MR. MURPHY: Yes. I accept everything you say,
21 Jay. I'm not suggesting that this is the exclusive forum
22 for discussing those topics, but it certainly was envisioned
23 as a forum to do that.

24 Then, secondly, another question I have -- and,
25 again, I understand that the staff was carrying out

1 Commission directive here and its own original
2 recommendation was given the back of the hand by the
3 Commission.

4 Why didn't -- among the 11 alternatives that were
5 examined, and maybe I'm inaccurate in my assumption here,
6 but why didn't the staff at least examine, let alone
7 recommend that the United States Government stick to its
8 rule which it had negotiated with the parties and keep its
9 promise and just implement and administer the LSS rule as it
10 had been negotiated?

11 As I review these documents and based on my
12 discussions, informal discussions over the last couple of
13 years with staff, that alternative was not even ever put on
14 the table and examined.

15 MR. CRANFORD: Status quo.

16 MR. MURPHY: Well, not necessarily the status quo.
17 Obviously, we were going to have to push things further into
18 the future because of the delays in the program, but not
19 precisely the status quo, not availability in 1992. That
20 was a pipedream from the beginning, obviously.

21 But why not just say, okay, we have negotiated the
22 LSS with the parties who have essential and critical
23 interests involved in this entire program, the state, the
24 local governments, the INdian tribes that have significant
25 interests involved, let's keep our promise. Let's do what

1 we said we would do when we encouraged these folks to make
2 the compromises they did.

3 MR. CRANFORD: I guess the only response I could
4 make is that the fact that InfoSTREAMS seemed like such a
5 viable alternative and also if you consider the potential
6 cost savings that InfoSTREAMS would afford, if you look at
7 the situation with Federal budgets at the time and
8 continuing, that would be the rationale that I would offer
9 as to why those particular steps were taken.

10 MR. MURPHY: On that point, I guess the only
11 criticism I think I would make of your handout is the use of
12 the words "might be" and "may be" in the cons. It was among
13 the parties to the original LSS negotiation.

14 One of the, if not the most fundamental issues was
15 the fact that this system would not be placed under the
16 control of the Department of Energy, that the Department of
17 Energy would not be inputting other participants' documents
18 and controlling the system.

19 I can't speak for anyone else. I was representing
20 the State of Nevada at the time of these negotiations. I'm
21 representing another party now, but I cannot imagine, under
22 any circumstances, that many other parties at this table
23 will ever enthusiastically endorse using InfoSTREAMS or any
24 other system which is under the exclusive control of DOE,
25 regardless of the quality -- and I'm not questioning or

1 debating, we'll discuss it this afternoon regardless of the
2 quality of the oversight and audit function that you folks
3 performed.

4 It was an essential ingredient. As a matter of
5 fact, and Chip can confirm this, it was a walking issue to
6 the state and other participants in the LSS negotiation that
7 if the NRC and DOE did not agree that this system would not
8 be under the control of DOE, that negotiation would have
9 ended in about the second meeting.

10 So it seems to me that when the proposal to let's
11 take a look at using InfoSTREAMS was first broached
12 internally within the staff and within DOE, I don't
13 understand why people didn't say that's fine, but we're
14 going to have to change it in such a way that it won't be
15 controlled by us or by DOE, because the rest of the parties
16 won't accept that and we, the United States Government, made
17 a promise to the rest of these parties that they would not
18 be required to accept it.

19 MR. HOYLE: If I may comment, Mal. I appreciate
20 your reminding us of the history here and perhaps Chip could
21 add to anything that I say, but I think you're talking in a
22 way that things were carved in stone in such a way that they
23 shouldn't even be reconsidered.

24 I believe what we're bringing to the table today
25 is an opportunity to look at what was carved in stone and

1 see if there isn't some room for some reconsideration. The
2 Commission certainly thinks so and we're willing to take the
3 Committee's views back and their comments and the pros and
4 cons of not doing anything different now that we see an
5 opportunity to do something different and to have a fairly
6 large cost avoidance.

7 We still want to hear from you and from all
8 members of the Committee. That's our purpose today, to
9 explore this.

10 MR. MURPHY: Are you saying, John, that if this
11 Panel returns a recommendation through you to the Commission
12 that Alternative 3 is not acceptable, that the Commission
13 will say that's fine and we'll go back to the LSS rule or
14 we'll start over again and reexamine the rest of these
15 alternatives and we will bring the members of the original
16 negotiating team or other interested participants, people
17 who are going to be directly -- who represent organizations
18 or governments who will be directly effected by this
19 program, we'll let them have their say at the beginning
20 rather than examine an alternative which appears, to many
21 people at least, if not to be cast in stone, to be so close
22 to the preferred model that the Commission wants, that
23 discussing and going back to the original LSS rule is
24 probably frugal.

25 MR. HOYLE: Well, I can't speak to what the

1 Commission would do with recommendations from this
2 Committee, but the Commission is very interested in this
3 Committee and keeping it in being and listening to it.

4 One of the things that President Clinton did when
5 he first came in office was issue an Executive Order saying
6 that all Federal agencies should reduce their advisory
7 committees by one-third. The NRC has five advisory
8 committees that are not statutory. We have one statutory
9 committee and that's the Advisory Committee on Reactor
10 Safeguards. So that one was excepted.

11 But of the other five, okay, we've got to reduce
12 by one-third. That's 1.6 committees. This Committee was
13 looked at very hard in that context because it hadn't met
14 since July 1991 and the Commission wanted to consider
15 whether it was proper to continue.

16 The Commission did that and did decide to continue
17 it. It was set up on the basis of a negotiated rulemaking.
18 The Commission recognized that. The Commission has used
19 that as an argument to OMB for continuation of the
20 negotiated committee development aspect.

21 So all I can say is the Commission is interested
22 in hearing from this Committee, is aware of what it has
23 done, but wants to hear from the Committee. Chip?

24 MR. CAMERON: I guess I would say that I don't
25 believe that the Commission has a closed mind in terms of

1 what alternative is pursued here. It does want to hear what
2 the Advisory Review Panel has to say and I think that's
3 important role for the Panel during this meeting, to decide
4 what type of report it wants to send back to the Commission
5 on Alternative 3; if not a consensus report, a majority and
6 minority report, including we should reconsider Alternative
7 3.

8 I think that that would carry a lot greater weight
9 if we did have a full discussion of whether some of the
10 options that might mitigate some of the concern over DOE
11 operating the system were thoroughly explored, some of the
12 options that were set forth in the Commission paper in terms
13 of auditing.

14 So there would be a record of -- these things are
15 just not going to give us, the state, the counties
16 whomever, the assurance that we need under Alternative 3.

17 In terms of the working group issue, I know the
18 Panel would like to have been involved earlier on these
19 issues. As you can see from Enclosure 1 to the Commission
20 paper, it's additional background on licensing support
21 system program, I think everybody has that in their package.

22 You can see some of the protracted discussion and
23 history that the NRC has had with DOE on the LSS development
24 schedule and on cost, who's going to pay for implementation
25 of the LSS, and OMB got involved in this and gave certain

1 directives to DOE in terms of what they could have in their
2 budget.

3 We also had a new Chairman come in. As I remember
4 the formation of the Technical Working Group, it was more of
5 an objective of providing a reality check, a quick reality
6 check in terms of what functionalities needed to be involved
7 in the LSS, do we still need to have the full
8 functionalities that were originally laid out in the rule,
9 so that we could develop some background information for the
10 Chairman in terms of how we should proceed to try to solve
11 the roadblocks -- maybe I shouldn't say roadblocks -- but
12 try to solve some of the impasse that we had with DOE and
13 with the OMB over the development schedule.

14 So it wasn't really meant to try to exclude
15 anybody or to make major decisions on the staff level at
16 that point. But bottom line is even though the Commission
17 has selected Alternative 3 here, the Advisory Review Panel
18 has to put their advice into the Commission, even though it
19 might be strong advice to the contrary of what the
20 Commission thinks should be done.

21 That's what should come out of this meeting, I
22 think.

23 MR. CRANFORD: That's what we hope to get. I'll
24 expand on a little bit of what you said, Chip. I think our
25 original schedule, the Working Group's original schedule, we

1 were convened in September. We were supposed to have a
2 report by November that same year. Of course, we slipped,
3 but it wasn't going to be a protracted study. It really was
4 just to look at the technology moreso -- technology and cost
5 moreso than functionality.

6 MR. HOYLE: Further comment?

7 MR. HENKEL: I have a question. Chris Henkel from
8 Edison Electric Institute. My question isn't nearly as
9 profound as Mal's were, but in your presentation, on Page
10 No. 9, you focused on funding in a couple of the bullets.

11 I understand the controversies that have occurred
12 over the last couple years regarding funding, but I'm
13 curious as to what the focus on funding is all about given
14 that this money all comes from the same source. To me, it
15 was almost DOE should manage the certain areas as opposed to
16 funding them.

17 Do you want to comment on that?

18 MR. CRANFORD: Dan, do you want to say something
19 or should I?

20 MR. GRASER: I can give you at least a perspective
21 from the way we see it within DOE, at least the way I see it
22 within DOE. Part of the problem about how to get money out
23 of the waste fund comes out through an appropriation. The
24 question kind of boils down to if the money is coming
25 through the DOE appropriation, we go through a request and,

1 for example, we will ask for X number of dollars and by the
2 time Congress gets finished with us, we get Y number of
3 dollars.

4 The problem becomes if you have a system like this
5 and if NRC -- if we were just taking the funding we get from
6 the waste fund and forwarding that over to NRC, then the
7 money they would be relying on for maintenance and operation
8 every year of the system would fall within our budget
9 request from Congress.

10 So it becomes a situation of our program for
11 whatever motives Congress may choose at the time to take
12 shots at the budget, potshots at the budget. What happens
13 is that if we took, for example, across the board, 20
14 percent decrement for the rest of the program's activities,
15 transportation, whatever the case may be, we would still
16 have to preserve and protect the request for the money that
17 NRC would need to maintain and operate the system at the
18 expense of making up any 20 percent shortfall, because the
19 monies that would be required for the maintenance and
20 operation cannot be subjected to a 20 percent cut, such as
21 the normal Federal budgetary process is.

22 So from our perspective, one of the problems boils
23 down to the actual flow of the money getting into the hands
24 of the people who will be charged with the annual operation
25 of the system, with enough assurance that they will be able

1 to do their job, on the other hand, contrasted with who is
2 going to take the -- who is going to make up the difference,
3 who is going to cover the delta when we get something such
4 as an across-the-board cut for the program.

5 MR. SILBERG: How does that differ from the normal
6 funding of NRC's oversight and regulation of the waste
7 program, all of which comes out of the nuclear waste fund
8 anyway? Why is that any different?

9 MR. MURPHY: You just made a great argument for
10 taking the whole thing off budget.

11 MR. SILBERG: We agree.

12 MR. MURPHY: So do I.

13 MR. HENKEL: To understand what the benefit is
14 here by splitting up the funding.

15 MR. SILBERG: And why treat the LSS different than
16 all the people who work in NMSS and are reviewing site
17 characterization reports and CA applications to be in
18 topical -- you know, all the technical folks at NRC? Why
19 should that part of it be treated any different than the
20 LSS?

21 MR. GRASER: Those are excellent questions. I can
22 speak only from the perspective of what it would take to
23 ensure sustained operations. From a technical aspect,
24 that's what I can speak to. In terms of making a great
25 argument for why things should be taken off budget, I'm not

1 chartered to speak to that, Mal.

2 MR. HENKEL: Let me rephrase the question, then.
3 Under the concept that was outlined here, which I know we
4 haven't gone into much detail yet and we will later, how
5 does this new concept of breaking up the funding help to
6 ensure the operation of the LSS?

7 MR. GRASER: In terms of having a single
8 organization responsible for it, one of the benefits of that
9 is that the advocate for maintaining and sustaining that
10 budget is, in fact, the person who would be the recipient of
11 it. Unless NRC were in a position to go forward during the
12 DOE budgeting process and be the advocate for money that
13 would eventually flow down, it's kind of the question, well,
14 who can be the best advocate of preserving and protecting
15 that budget during the numerous budget cycles that the
16 Federal Government goes through. Not that it could not be
17 worked.

18 MR. SILBERG: One of the cons you have listed here
19 is that InfoSTREAMS' future development is tied to future
20 budgets. Basically, that's true for any government project
21 no matter who has got it.

22 I guess implicit in your statement is DOE's
23 budgets are more vulnerable than NRC's budgets, and that may
24 or may not be true. I don't know. If that's where you're
25 coming from, I --

1 MR. CRANFORD: The point that I was trying to make
2 is the fact that InfoSTREAMS, in its present state, is not a
3 fully developed system. That was the point. In order to
4 complete the development of InfoSTREAMS.

5 MR. SILBERG: That's going to be true of any
6 system. There is no system now which is fully developed.

7 MR. CRANFORD: That's true. When you look at pros
8 and cons, that has to be a con.

9 MR. SILBERG: For every system.

10 MR. CRANFORD: Yes. That would be true, sure.

11 MR. CAMERON: Just to add some more to the budget
12 issue, one of the problems that DOE and, consequently, the
13 NRC and LSS development ran into under the previous
14 Administration was the OMB direction that program and budget
15 responsibilities should be in the same place.

16 So in other words, if the NRC had responsibility
17 for operating and maintaining the system, that that money
18 should not be coming out of DOE's budget. Now, I don't know
19 what the rationale was for that, but that was a roadblock
20 that we ran into there.

21 If you look at the Commission paper --

22 MR. MURPHY: Can I just --

23 MR. CAMERON: Yes.

24 MR. MURPHY: Again, I know this is history, but
25 that specific concern was discussed, as you recall, fully

1 during the negotiations.

2 MR. CAMERON: Right.

3 MR. MURPHY: OMB was there in the room and,
4 nevertheless, the negotiating committee overcame that and
5 the NRC adopted the rule in the face of those OMB concerns.

6 MR. CAMERON: That's right. I think Jay pointed
7 out the fact that some of these costs or some of these
8 problems would apply to any alternative. It shouldn't be
9 singled out as only applying to Option 3. Maybe one of the
10 things that would come out of this meeting is that the
11 Review Panel might indicate, if that's what transpires, that
12 the budget issues should not be a driving -- do not need to
13 be a driving force in terms of what alternative is selected.

14 MR. HENKEL: I wouldn't suggest we word it that
15 broadly, Chip.

16 MR. CAMERON: But I would just direct you to the
17 Commission paper, again, in terms of the discussion of
18 funding options. For example, if you look on Page 13,
19 Option 1 --

20 MR. MURPHY: The second one. 93-107?

21 MR. CAMERON: Yes. Is that what it is? 93-107.
22 If you look at the con under Option 1, this will give you an
23 idea of the fact that within the Commission, there was
24 concern -- I mean, even though we're talking about money
25 coming out of the waste fund and we were looking at that in

1 terms of DOE and NRC, you can see that there was some
2 concern in the Commission that the LSS budget might have a
3 negative impact on the funds available for high level waste
4 technical work.

5 So, again, all of this may not really amount to a
6 whole lot when you really parse it through, but it just is
7 an illustration that there are concerns.

8 MR. SILBERG: Gerry, I have a number of minor
9 questions. First of all, can you identify who the LSSA
10 designate is?

11 MR. CRANFORD: Who the new acting -- I'm sorry --
12 the new LSS -- yes, I can. His name is Arnold Levin.

13 MR. SILBERG: And where is he now?

14 MR. CRANFORD: He's now at the Bureau of the
15 Census.

16 MR. MURPHY: When will he be coming on board?

17 MR. CRANFORD: He'll be coming on board the 18th -
18 - well, I guess officially the 17th of October. His first
19 work day will be the 18th of October, which is a Monday.

20 MR. SILBERG: Another question. The February 1992
21 draft document by the Working Group, I assume that has never
22 been finalized.

23 MR. CRANFORD: Right.

24 MR. SILBERG: Has that document been released?

25 MR. HOYLE: It has not been released. I guess the

1 Committee could decide whether it would like to ask for it.

2 MR. SILBERG: I don't know whether it's as big as
3 a bread box or three pages long or whether it's of interest
4 to anybody.

5 MR. MURPHY: You don't have it, Jay? You didn't
6 ask whether you -- you said had it been released. I thought
7 you meant could I pull it out of my briefcase.

8 MR. SILBERG: It's in the LSS.

9 MR. MURPHY: No. It's in InfoSTREAMS.

10 MR. GRASER: Oh, no it's not.

11 MR. MURPHY: I would agree with Jay. I think if
12 this process is going to continue for more than a day-and-
13 a-half, at some point in time, we'd probably want to look at
14 that.

15 MR. SILBERG: Is that an easily comprehensible,
16 manageable document or is it 84 volumes?

17 MR. HENKEL: I believe it's an easy,
18 comprehensible management. I think we can do it.

19 MR. HOYLE: Let's see if we can get it released to
20 the Committee.

21 MR. SILBERG: And one of the pros you gave for
22 Alternative 3 is that it provides the LSSA more control over
23 functionality. Could you expand on that a little more? I'm
24 not sure I understand why it's more than under the base
25 system.

1 MR. CRANFORD: Of course, it would require a
2 change to the rule.

3 MR. SILBERG: Right. Assuming that you made all
4 the rule changes.

5 MR. CRANFORD: Under the present rule, I think our
6 responsibility is to consult with DOE on LSSA requirements.
7 Under the rule that we would propose under Alternative 3, it
8 is that we would have the ability to approve the
9 requirements that DOE develops for the LSS.

10 I think the word "approves" has more bite to it
11 than "consult."

12 MR. MURPHY: On that subject, that reminds me. Is
13 this group, for example, going to be able to get involved in
14 the -- I'm not suggesting that we start a brand new
15 negotiation like the old one, but would the ARP have input
16 into that rule before it was sent to the Commission?

17 MR. SILBERG: You didn't see what's in your
18 package of papers? It's already here.

19 MR. MURPHY: I've read some. Is it? Okay.

20 MR. SILBERG: I don't know. This is the first
21 I've seen of it.

22 MR. HENKEL: Just because it's already here
23 doesn't mean we're going to have input to it.

24 MR. MURPHY: No. That's not the proposed rule.

25 MR. CAMERON: That's the final rule.

1 MR. MURPHY: That's just the LSS rule.

2 MR. CAMERON: In user-friendly form.

3 MR. SILBERG: I see.

4 MR. CAMERON: The letters are bigger, I guess.

5 MR. SILBERG: Some letters are highlighted and I
6 thought that was magic for your making changes.

7 MR. CAMERON: I don't know. It isn't the intent
8 of it.

9 MR. HOYLE: DOE will describe what that is. It's
10 an example that will be -- this is part of their
11 presentation.

12 MR. MURPHY: In other words, if you want it in
13 technical terms, are we talking about just a good old garden
14 variety notice and comment rulemaking? Would there be an
15 advanced copy under notice and comment rulemaking or would
16 the Commission staff envision bringing to -- assuming that
17 this body says, yes, we think this is -- let's stay in
18 business, let's keep talking about this, would the
19 Commission staff envision then bringing -- either bringing
20 to the ARP the language of the draft rule to implement its
21 recommendation or this body's recommendation or perhaps an
22 alternative would be having this body develop the language
23 of a draft rule to implement Alternative 3.

24 MR. HOYLE: If I could respond. I think the
25 Commission would agree to either alternative. I think if

1 the Board has some comments or has some suggestions for a
2 proposed rule, we ought to take them back.

3 The agency would bring a draft to this body before
4 it gets final Commission approval.

5 MR. CRANFORD: From my perspective, I think that's
6 why we're here. Any other questions?

7 MR. HENKEL: Yes. Chris Henkel, again. I have
8 another question regarding budgetary matters. I was
9 suggested that this new alternative may save up to \$63
10 million. I'm just concerned as to whether, in making that
11 cost estimate, the additional burdens of the NRC oversight
12 that would be required to perhaps satisfy some of the other
13 participants here were integrated into that cost estimate.

14 MR. CRANFORD: Let me hear the question again.

15 MR. HENKEL: In estimating that you might save \$63
16 million by using the InfoSTREAMS system, did that include
17 the costs that would be imposed upon that system based on
18 the additional NRC oversight necessary to make certain
19 groups happy with the fact that DOE was operating the
20 system?

21 MR. CRANFORD: I don't know if we looked at that
22 particularly. I don't know.

23 MS. SHELburne: I'm Betsy Shelburne, Staff the LSS
24 Administrator. If your question whether or not the cost of
25 the oversight program was included in the overall cost and

1 was factored into the \$63 million, the answer is yes.

2 MR. HENKEL: Not only the cost that the NRC would
3 incur, but the additional burdens that that oversight would
4 impose upon DOE in their operation of the system.

5 MS. SHELBURNE: I'll have to --

6 MR. HENKEL: In other words, I could envision this
7 cost estimate having been developed by DOE minus the
8 consideration of the oversight and then NRC said our
9 oversight will cost an additional sum of money. Those two
10 sums were totaled to come up with the cost savings, when, in
11 fact, when you add the QA burden on top of DOE's operation
12 of the system, that may, in fact, increase DOE's cost in
13 compliance with the various requirements that NRC may put on
14 them.

15 MR. GRASER: We did not consider a delta or add
16 cost for any increased or enhanced DOE performance in
17 meeting the expectations of being audited by NRC. We did
18 not add any add cost into that. The numbers that were
19 developed in terms of what the cost of operating a
20 consolidated system, they were straightforward costs. They
21 were not adding any factor for considerations such as that.

22 MR. HENKEL: So you were not expecting any NRC
23 oversight when you came up with those costs.

24 MR. GRASER: We always have. I'm saying there was
25 no delta added to anything that we had anticipated based on

1 the way the rule is structured right now.

2 MR. SILBERG: Have you looked at this draft
3 compliance -- what is it called -- compliance assessment
4 program to see what that would do to your assumed level of
5 DOE activities, to see whether, in fact, that would add
6 costs?

7 MR. GRASER: The cost estimates were developed
8 months and months ago. The compliance program first came
9 into our hands last Friday. So the answer is no. We did
10 not have the opportunity to do that.

11 MR. HENKEL: I'd like to point out that that would
12 be a significant concern of ours, that that may
13 significantly chop into that \$63 million savings.

14 MR. CAMERON: I think that what needs to be
15 factored into that, too, is what types of efforts the NRC
16 would have been imposing in its consultation role --
17 imposing is perhaps a wrong word. But what we would have
18 been doing under the consultation role in terms of system
19 design, what we would have been doing in terms of documents,
20 I take it you're talking about the document compliance
21 audits; in other words, the audits to ensure that if DOE was
22 capturing the non-DOE documents.

23 MR. SILBERG: It's all the compliance activities
24 are laid out in this draft program.

25 MR. CAMERON: Then the easier general statement is

1 that there were certain types of auditing requirements that
2 were going to be happening anyway in terms of documents and
3 in terms of the system. What we need to do is to factor
4 those in to see what the delta is. I don't think that we -
5 - as Dan said, I don't think that that -- that definitely
6 hasn't been done.

7 Is that right, Betsy?

8 MS. SHELBURNE: I think in terms of what DOE
9 factored in, I can't speak to that. We factored in the cost
10 to NRC, which, as Chip said, a lot of that was already in
11 place and factored in for assuring the quality of the
12 documents and the completeness of the collection.

13 The new functions would be the oversight of DOE's
14 operation and maintenance of the system. We factored that
15 in. Whether TRW, in doing the cost estimates, included any
16 new elements of cost, I can't speak to that.

17 MR. CAMERON: I think that the point is we need to
18 do this in some sort of a disciplined manner so that it's
19 evident. Why not, right?

20 MR. MURPHY: Maybe it's more appropriate to talk
21 about that this afternoon after you make your presentation
22 on the compliance program.

23 MR. CRANFORD: Again, the compliance program that
24 I'm going to present is a draft proposed almost hot-off-
25 the-press program. So the intent is to get your comments,

1 get your participation so that we can develop the best
2 possible program to make this thing work.

3 MR. SILBERG: One of the comments you made early
4 in your presentation was that the Commissioners wanted you
5 to look -- this Technical Working Group to look and see
6 whether all the functions that have been laid out for the
7 LSS were really required.

8 MR. CRANFORD: Right.

9 MR. SILBERG: What was the result of that?

10 MR. CRANFORD: The result was that, yes, we did
11 find that all the functions that were laid out by the
12 original design were required. We didn't really suggest
13 that any of the major functions or any functions be dropped.

14 MR. HENKEL: That review was based on a technical
15 look rather than a legal or a regulatory look. Just purely
16 from a technical standpoint, you decided that all those
17 functions were still appropriate.

18 MR. CRANFORD: No. We did have some internal
19 discussions with staff to get their feelings as to whether
20 or not they felt the LSS minus these things would be a
21 functional tool. The response was no, that it would not.

22 MR. MURPHY: By that, you mean a functional
23 licensing tool.

24 MR. CRANFORD: Right.

25 MR. MURPHY: Which is what it's supposed to be

1 anyway.

2 MR. HENKEL: On that note, I'd just like to
3 endorse what Mal said earlier. I think that that's a prime
4 example of maybe where this Committee should have been
5 involved.

6 MR. HOYLE: Dennis?

7 MR. BECHTEL: Just a point of clarification. The
8 technical document that you're talking about releasing, is
9 that the document that evaluates the 11 options?

10 MR. CRANFORD: Yes.

11 MR. BECHTEL: Okay. I would recommend that we be
12 able to see that.

13 MR. HOYLE: Okay. We have that.

14 MR. MURPHY: Just to add to what Chris said, I
15 think that you would have probably found a fair amount of
16 support from the members of this panel for the proposition -
17 - well, I know you would have and I know even before the LSS
18 rule was finally -- before quasi-consensus was reached and
19 the rule was finally presented to the NRC, that members of
20 the negotiating committee, who then became members of this
21 Panel, were very uncomfortable with the system that SAIC was
22 at that time designing for DOE.

23 Some of us were informally advising DOE that that
24 was too expensive, that it was never going to be funded, it
25 wouldn't fly, and that it was beyond what we really felt we

1 needed as potential participants in an NRC licensing
2 proceeding.

3 So as Chris said, I think if you had come to the
4 LSSARP and asked here's what DOE or here's what a contractor
5 has designed for DOE, do we really need all of these
6 functions, you would have gotten some valuable input. Or do
7 we need all these bells and whistles in order to provide
8 this function, I guess, is a bit more accurate way to say
9 it.

10 MR. SILBERG: I think this whole discussion,
11 though, shows that if you go and create a group, you have to
12 expect that the people who volunteered to serve on the group
13 want to play the role that the group was formed to carry
14 out.

15 I think the Commission made a tactical error in
16 the way they've used this group. I hope that's a lesson
17 that will be borne in mind for the future, to the extent
18 that the LSSARP continues. If you want us here, use us. If
19 you don't want us here, then I can understand that, too.

20 MR. HOYLE: Okay. I appreciate that. Any further
21 questions for Gerald?

22 [No response.]

23 MR. CRANFORD: Thank you.

24 MR. SILBERG: Let the record show an unparalleled
25 amount of agreement between Mal Murphy and this side of the

1 table.

2 MR. CAMERON: The last time I was with you, you
3 and Susan were agreeing. Now it's you and Murphy.

4 MR. MURPHY: You're excluding DOE from that side
5 of the table.

6 MR. HOYLE: NRC has heard the criticism that its
7 taken this morning for not coming to this Panel and I will
8 certainly take that back. I want to thank Gerald for all
9 the work that he has done and his staff has done to prepare
10 for this meeting and also for his very valuable service as
11 acting Administrator.

12 It sounds certainly like this will be the last
13 meeting that he will be the acting Administrator. I can
14 announce one in the Federal Register and get it scheduled
15 before he leaves.

16 MR. MURPHY: The LSSA will continue to report to
17 Gerry, though, right?

18 MR. HOYLE: Yes. And for the audit program,
19 directly to the EDO, to the Executive Director.

20 MR. MURPHY: So that to the extent that the new
21 LSS Administrator screws up, we can always still go back to
22 Mr. Cranford.

23 MR. HOYLE: Yes. Now, we will hear from Dan
24 Graser of the DOE and those who will help him with his
25 presentation. Dan is the acting Director of Information

1 Management Systems at the Office of Civilian Nuclear Waste.

2 As you know, as some of you recall, Barbara
3 Churney was the Director of that office and is on another
4 assignment at the present time.

5 Dan?

6 MR. GRASER: Thank you all very much. The
7 presentation that we have prepared for this morning is a
8 presentation that, in case my tongue slips, I want you all
9 to understand that I'm talking about InfoSTREAMS. Every
10 once in a while, I tend to commingle InfoSTREAMS and
11 licensing support system.

12 That's natural because I've been involved in the
13 licensing support system and InfoSTREAMS. One of the
14 aspects of the design of InfoSTREAMS is that it, in fact, is
15 based on the findings that we walked away from the original
16 LSS prototype. A lot of that technology and a lot of our
17 thinking and a lot of our strategy and a lot of our approach
18 incorporates what we found in the LSS prototype drill.

19 So, in fact, whether it is a conscious decision to
20 reuse InfoSTREAMS' technology, as long as I happen to be
21 with the program and carrying my institutional history with
22 me, you can expect that a lot of the things that we learned
23 on the LSS prototype and incorporated into InfoSTREAMS may,
24 in fact, find their way into the LSS design that the
25 Department of Energy eventually is going to be recommending.

1 I have a couple of additional comments before I
2 turn the first part of the presentation over to Janice
3 Tauser, who is here with us from the TRW Environmental
4 Support Services, who is the M&O contractor and who is also
5 supporting us in our InfoSTREAMS design effort.

6 Before I turn that over to Janice for the first
7 part of the presentation, I'd like to make some comments.
8 First of all, you do need to understand that this afternoon
9 we are going to be making a presentation about the
10 InfoSTREAMS architecture. That presentation is going to go
11 into some very specific aspects of the architecture, the
12 hardware and the software that we are looking at for our
13 InfoSTREAMS development activity.

14 This morning's presentation, I'd like to address -
15 - Janice and I together will be addressing things that we
16 have found as a result of working through the InfoSTREAMS
17 development process. Some of the things that we have found
18 will force the group to consider future technologies and the
19 fact that the rule, as it was developed in the late 1980s,
20 in fact, may put some technological constraints on us for
21 systems that are being built in the mid-1990s and utilized
22 into 2000 and XXX.

23 So some of the things that you are going to be
24 seeing are merely our bringing these issues to your
25 attention. In some cases, we have some recommendations, but

1 I do not want anybody to misinterpret these recommendations.
2 We have, for example, a handout where we have gone through
3 the existing version of 10 CFR 2 and have suggested what
4 sort of very specific verbiage might have to be changed, for
5 example, to address what we are doing in InfoSTREAMS.

6 So if there ever was an agreement to utilize
7 InfoSTREAMS technology, this is kind of a heads-up to give
8 you an appreciation for the sorts of things that we would
9 eventually have to address, the Panel will eventually have
10 to address. We're only presenting a lot of this in terms of
11 examples and recommendations for the Panel to be
12 considering.

13 The second thrust of the presentation that we're
14 doing here, of course, is to look at the ramifications that
15 could be expected if, in fact, InfoSTREAMS technology is
16 reutilized. The reason we are pointing this out is because
17 we are aggressively looking at technology and, as aggressive
18 as we are, we are still falling behind the power curve. It
19 seems that people are inventing things and employing things
20 and delivering software that five years ago looked like
21 bells and whistles and right now they look like under the
22 \$29 cuts off the package, off the shelf packages.

23 In fact, we had always anticipated that technology
24 was going to do this to us and we all expected that there
25 would be ramifications in terms of the overall price tag for

1 what the technology would be providing for us.

2 But one of the things that we have found in our
3 development of the InfoSTREAMS environment to support the
4 program is that we are having to address what technology is
5 forcing us to address. Within our own internal records
6 management environment, for example, we are getting people
7 who walk into our office as an IRM shop and say to us when
8 are you going to do voice annotations on a document.

9 You have no idea what kind of migraine headaches I
10 get trying to anticipate how I'm going to get a voice
11 annotation on a document into the licensing support system,
12 the way technology had been described in the LSS. For each
13 example of voice annotation, we have additional types of
14 information objects that are floating out there that
15 obviously have never been anticipated under the rule and
16 we'd like to take the opportunity to surface some of those
17 issues, as well.

18 The third agenda that we have in presenting some
19 of these issues is to let you know that, in fact, we have
20 InfoSTREAMS design issues that are still pending our closure
21 on the InfoSTREAMS design based on the sort of feeling that
22 we have that InfoSTREAMS may or may not become the
23 foundation for LSS. If, in fact, there are major show
24 stoppers that say don't do it, don't count on it, don't
25 anticipate it because you don't have consensus, then I need

1 to know that, because I am holding off in terms of
2 developing and deploying information technologies for the
3 program, trying to determine whether or not I need to size
4 that for the use for InfoSTREAMS or size it for the use in
5 LSS.

6 So I would certainly like to raise these issues
7 and let you know that these are not the sorts of things that
8 I, in my hat as an IRM person for the Department of Energy,
9 cannot let those sorts of things sit for two more years, for
10 example. We need to go on and support our program. So one
11 way or another, we will be in a situation of having to do
12 that.

13 In the first section of the presentation, Janice
14 is going to talk about what you might want to call or
15 characterize as roadblocks to technology insertion. So
16 these are very specific examples of what we have found in
17 our internal InfoSTREAMS development that you may, in fact,
18 see would need to be addressed if any substantial
19 reutilization of InfoSTREAMS is going to be anticipated.

20 With those remarks, I will turn it over to Janice
21 Tauser now.

22 MS. TAUSER: In talking about these roadblocks to
23 technology insertion, I will address two different
24 viewpoints; first, the unnecessary technology constraints
25 which were included in the actual language of the rule, as

1 well as some technology levers which were overlooked.

2 Typically, when you specify a computer system, you
3 specify the functional requirements that that system is
4 supposed to fulfill. However, in this case, in several
5 instances, the rule specifies the implementation rather than
6 the functional requirements. That is exemplified in three
7 different areas.

8 The first is the use of the term "ASCII." The
9 rule specifies ASCII as the format for text files. This is
10 a little bit of a drawback in that in the conversion to
11 ASCII, you lose all your format and your bold and your
12 underlining and then what you're looking at no longer looks
13 similar to that document image that you would see.

14 In the future, possibly, SGML, which is the
15 standard generalized markup language, might be a better
16 solution for text files than ASCII. Another example is the
17 reference for dial-up for remote access. That also might
18 not be the best solution. Networks are also a viable
19 alternative.

20 Under the definition of the image, it specifies
21 optical and magnetic media. The way technology is advancing
22 today, that also might not be the best solution. It could
23 be replaced with something else within the next two to five
24 years.

25 So we're suggesting that we simply replace these

1 implementations with the requirements. Why would this be an
2 advantage to us? It would allow us to increase InfoSTREAMS'
3 reusability so that we could take advantage of best use of
4 whatever the current technology is at the time.

5 It would also enable us to reduce the cost of
6 building the system by reducing some implementation
7 constraints.

8 MR. SILBERG: What do you mean by reusability?
9 You say increases InfoSTREAMS' reusability. What does that
10 mean?

11 MR. GRASER: The InfoSTREAMS architecture right
12 now is anticipating storing the image of the majority of the
13 documents that we have from X date on forward onto optical
14 disk media. For example, if you go specifically at the rule
15 and you say what do we have the obligation to deliver, we
16 have the obligation to deliver an image. Does that mean I
17 have to take my optical store and download it onto paper or
18 microfilm in order to meet a specific type of logical
19 statement about delivering the image or would it be academic
20 that if I already have it on optical and we eventually
21 reused the InfoSTREAMS technology to satisfy LSS
22 requirements, why constrain me to take it out of optical,
23 into paper, back onto optical?

24 MR. ALEXANDER: I'm sorry, but could I ask that
25 question again? I didn't quite understand that myself.

1 MS. TAUSER: I'll give a different --

2 MR. ALEXANDER: Are you talking about that,
3 basically, you have a system in InfoSTREAMS that's designed
4 and you have hardware and software already in place or being
5 put in place and you don't want to change that? Is that the
6 basic concept you're trying to make, that you can use what
7 you have already without major modifications to either the
8 hardware or the software?

9 MS. TAUSER: That's part of it. Also, as we're
10 evolving InfoSTREAMS and continuing on with the design, we'd
11 like to be able to look at some other potentially better
12 options, like in the instance of ASCII, possibly not having
13 to convert the images to ASCII, but, rather, convert them to
14 another text formatting.

15 MR. ALEXANDER: The ASCII I understand, but the
16 optical to paper to optical doesn't make a whole lot of
17 sense. If you have it on optical and you need it on
18 optical, why would you have to -- does it say you have to go
19 to paper in the rule?

20 MS. TAUSER: The requirement is to deliver image
21 and the definition of image calls for either. But optical
22 five years from now might not be the best technical solution
23 and that's all we're trying to bring up. Optical might not
24 be it. I think George is going to address some of the
25 future features later on in his talk.

1 MR. ALEXANDER: We wouldn't do anything silly is
2 what you're saying.

3 MS. TAUSER: Right.

4 MR. ALEXANDER: Or expensive.

5 MR. SILBERG: Could I ask a general question about
6 InfoSTREAMS? This, I assume, is an OCRWM-unique system or
7 is this a DOE-wide system?

8 MS. TAUSER: This is OCRWM-unique.

9 MR. SILBERG: Does every part of DOE have its own
10 system? Is this being developed only for OCRWM? Where are
11 the interfaces between the rest of DOE and what is being
12 done to learn the lessons so that OCRWM isn't funding
13 something that's already going on in EH or NE or some other
14 part of DOE?

15 MR. GRASER: The short answer to that is we're
16 four-and-a-half light years ahead of the rest of the
17 Department of Energy. In terms of reinventing something or
18 concurrently inventing something, we're, I guess, in an
19 enviable situation. Two years ago, in response to a GAO
20 audit on the state of records management within the
21 Department of Energy, there was a call by John Meadows, I
22 believe, at that time, for the entire Department of Energy
23 to get its act together and to submit record schedules off
24 to the National Archives.

25 The due date that was placed on that two years ago

1 was October 1, 1993 and the OCRWM program, to the best of my
2 understanding, is the only program within the Department of
3 Energy that was able to prepare and submit on schedule the
4 records management disposition plan.

5 The reason we were able to do that is because we
6 happened to be four-and-a-half light years ahead. That
7 doesn't mean that we're out in front. That just means that
8 we're where we should be and the rest of the organization is
9 behind.

10 MR. SILBERG: Does every part of DOE have its own
11 unique system that they're developing? Is there no attempt
12 to develop an agency-wide system?

13 MR. GRASER: There are agency-wide systems, for
14 example, for E-Mail and telecommunications between and among
15 the organizations, but the historic development of the
16 Department of Energy, for example, if you went out to the
17 operations office, you would see that they are primarily
18 Vax-based activities, and that is because of the latitude
19 that the directors of the various operations offices have
20 had over the years to build their own support structures.

21 If you go to a headquarters element, you will find
22 that the headquarters activity is primarily an IBM shop. So
23 that in some areas, programs have been given the latitude to
24 directly implement the technology and the infrastructure
25 that they need to accomplish their very specific mission.

1 There are other programs within the Department of
2 Energy who have nowhere near the types of requirements that
3 we have that have been placed upon us because we have to
4 comply with NQA-1 type requirements.

5 The InfoSTREAMS environment has been developed
6 specifically to address the requirements of NQA-1 and
7 specifically to address the requirements of 10 CFR 2, which
8 don't apply to the majority of the other Department of
9 Energy activities.

10 Features of the system, for example, place a very
11 strong emphasis on the ability to lock down documents, on
12 the ability to capture circulated, but unsigned draft
13 versions of the documents, which normally would not be
14 considered a Federal record because they have not been
15 signed. They have not made it through concurrence.

16 But in order to respond to the requirements of 10
17 CFR 2, we had to design a system that gives them quasi-
18 records treatment. So that's the long answer. There is
19 quite a bit unique about the OCRWM program that causes us to
20 be at a completely higher plane above where the majority of
21 the rest of DOE needs to be right now.

22 MR. MURPHY: That's is kind of off the subject, I
23 suppose, and we shouldn't extend this meeting to consider
24 it, but I find it a little -- and I'm sure Dave probably has
25 the same feeling. I find it a little amazing that the rest

1 of DOE, and I think specifically about the Weapons Complex
2 cleanup folks, are not thinking about the same sort of
3 records management issues, in order to demonstrate to the
4 Environmental Protection agency and the State of Washington
5 or the State of Colorado or the State of Ohio that they've
6 done what they promised to do.

7 I wouldn't be so quick as to say that the rest of
8 DOE does not right now require something similar to this.

9 MR. GRASER: I didn't mean to imply that. In
10 terms of technology, there are numerous organizations across
11 the Department of Energy who are right now on the threshold
12 of looking at optical systems and the feasibility of using
13 WORM and other sorts of optical technologies in lieu of
14 going into paper storage or microfilm and archival type
15 requirements.

16 But, for example, the OCRWM program was the first
17 organization, I believe, within the Department of Energy to
18 actually sit down and negotiate with the folks from the
19 National Archives about our intention to have optical disk
20 storage as our primary storage medium, until such time as we
21 do have to turn over to NARA, who has the ability to output
22 in microfilm, we could even put it back onto paper if they
23 so chose.

24 So I know there are a number of people doing it,
25 but I think, in a lot of respects, we're the first ones who

1 were actually getting out front and doing the agreements and
2 implementing the systems.

3 MR. HENKEL: Let me just take this in a slightly
4 different direction. I'm a little bit concerned that there
5 appears to be no coordination within DOE in the development
6 of these systems and I can easily see it happening where the
7 weapons program develops a different system and given the
8 relative size of this program compared to the weapons
9 program, five years from now, this program is forced to
10 convert over to the weapons program type system and the work
11 that we've done here in the meantime is rendered relatively
12 useless.

13 I've actually seen it happen to a smaller degree
14 within OCRWM. Well, I guess it almost happened. It didn't
15 actually happen on the PAC system. Yucca Mountain developed
16 a project management control system. Headquarters almost
17 proceeded to develop their own independent system and then
18 enforce it upon Yucca Mountain.

19 So it almost happened on that smaller scale. I
20 can see it happening on a larger scale much easier. Are
21 there any plans to integrate the DOE program so that there
22 is some coordination there?

23 MR. GRASER: You're asking the wrong person that
24 question. You should probably be talking to Jerry Chappel,
25 who is the -- he's the IRM guy for the entire Department of

1 Energy and he's the one who sets policies and requirements
2 DOE-wide. We're in conformance with the DOE requirements
3 and policies.

4 In terms of their ability to force us into
5 specific micromanaged requirements, to knee jerk response to
6 the way somebody on the weapons side of the shop is doing
7 something, that's not within the corporate culture in my
8 five years experience at Energy. I don't view it as a
9 particular threat, because, again, in many regards, it's
10 more a question of the Department of Energy looking at the
11 OCRWM program as being one of the early leaders in
12 identifying and implementing the technologies. That's from
13 my perspective.

14 You're really talking about what is DOE going to
15 be doing to try to get the people to conform at a technical
16 implementation level and I don't have much expectation that
17 that is logical or rational or even the expected type of
18 thing that's going to be happening.

19 MR. CAMERON: Let me just follow up on that.

20 MR. GRASER: Take that one. They call me an
21 acting and it may stay that way.

22 MR. CAMERON: You talked about the size of, for
23 example, the environmental restoration and waste management
24 cleanup program compared to OCRWM as somehow driving what
25 might be done to the InfoSTREAMS program in the future. Are

1 you talking about size in terms of numbers of documents,
2 numbers of dollars spent influence -- because some of the
3 size differentials wouldn't necessarily dictate a change in
4 the InfoSTREAMS design, I wouldn't imagine.

5 MR. HENKEL: No. What I'm concerned about is that
6 the two programs may develop completely independent document
7 systems and that somewhere down the road, some future
8 secretary or perhaps even the present secretary may decide
9 we need to have a DOE-wide universal system.

10 And because the cleanup side of the house is so
11 much bigger on the annual budget process, it's decided that
12 their system is the one that's adopted and, therefore, OCRWM
13 has to convert to their system.

14 I wish there was some more coordination early on
15 so that perhaps that doesn't occur.

16 MR. MURPHY: I think what Dan is saying is that
17 they don't have a system.

18 MR. HENKEL: That doesn't mean that what I'm
19 concerned about won't happen in the future.

20 MR. MURPHY: I understand and I share your
21 concern.

22 MR. GRASER: Then we're in a situation of them
23 having to do a cost-benefit analysis to explain why it is
24 it's cheaper for us to undo history since 1986 in order to
25 accommodate the new boys on the block.

1 In a typical litigation, if you get there the
2 firsttest with the mostest and you have the documents in your
3 hand and the other guy doesn't, who is in the stronger
4 position? We will have InfoSTREAMS in place. We will be
5 responsive to the requirements of 10 CFR 2. We will have
6 the Nuclear Regulatory Commission and the ARP's active
7 interest to ensure that the progress made to date doesn't
8 get thrown on a junk heap because somebody makes an
9 arbitrary capricious decision, I hope.

10 MS. TAUSER: Now, what I want to do is just look
11 at some suggestions for modifications to 10 CFR 2, Subpart
12 J. In your packages somewhere you have the modified
13 document that Dan referenced earlier. It looks something
14 like this. I've extracted from that document some examples
15 for you here on briefing slides.

16 On the briefing slides, the lines through are your
17 typical strike-outs, suggested deletion. The italics show
18 suggested changes to the text. So the first suggestion
19 would be to remove the term "ASCII" and replace it with the
20 term on the bottom, "text file," to make that definition be
21 a little bit more generic for the kinds of computerized
22 files that are required.

23 The second would be to take out the optical or
24 magnetic media phrase and the definition of image and,
25 instead, replace that with a generic industry standard

1 terminology to allow whatever the standard might be at that
2 point in time.

3 Again, under searchable full text, you'll see that
4 "ASCII" is stricken and replaced with the generic term,
5 "standard text format."

6 MR. MURPHY: This is really picking nits, but why
7 take out the word "indexed?"

8 MS. TAUSER: As far as I'm aware, all the text
9 retrieval systems today use indexing, but, again, that might
10 change in the future. We just don't know. So I was just
11 recommending that we don't necessarily tie us down to a
12 current implementation of text management systems. I don't
13 feel that it would hurt anything to remove that word.

14 MR. SILBERG: You don't define the term "standard
15 text format" or you don't need a definition for that.

16 MS. TAUSER: That's probably a good suggestion.
17 No, it was not.

18 MR. GRASER: In response to Jay's comment, I was
19 just doing a side comment that verbiage to the effect of the
20 standard being promulgated by the LSSA be the standard,
21 whatever the case the standard was at that time.

22 MS. TAUSER: Any more questions?

23 MR. MURPHY: I assume the "TBD" means what
24 everybody thinks it means.

25 MS. TAUSER: Yes.

1 MR. MURPHY: To be determined.

2 MS. TAUSER: To be determined.

3 MR. CAMERON: Maybe this is just a point of order.
4 Jay, the subject we were talking about, about getting the
5 Panel input to these definitions, should we do that
6 systematically and in each one ask if there's any comment?

7 MR. SILBER: I don't think you can do that. You
8 need to look at any changes in the context of the whole
9 rule. I don't think it's fair for any of us to sit down
10 here and noodle these without the opportunity to see how
11 they fit in.

12 I appreciate the effort just as an example of the
13 kinds of changes that might that might be implemented to
14 make this a functional rulemaking rather than -- a
15 functional rule rather than an implementation rule.

16 MS. TAUSER: That's all this was intended, just to
17 give you all some food for thought for later determination.

18 MR. HOYLE: Yes. NRC agrees with Jay's point. We
19 need to look at them, also.

20 MS. TAUSER: Page 6, now. For some of the text
21 modifications, there are relatively few and relatively
22 simple. Again, it's just simply replacing the term "ASCII"
23 with "text file" and under the access portion of the rule,
24 to change the text from full text search capability through
25 dialogue access to strictly from remote locations; again, to

1 not nail in an implementation.

2 Now, to get into the technology levers that were
3 omitted in the language of the rule, I want to give a couple
4 of examples that demonstrate that the electronic era is
5 rapidly approaching and is being generally accepted.

6 Today, the banking industry transfers funds
7 regularly electronically. The shipping industry also
8 utilizes a totally electronic environment with its
9 manifests. Even the IRS, although they're a little behind,
10 they're allowing tax returns to be filed electronically.

11 So in a system that relies on notification of
12 service via electronic mail, where it's considered complete
13 when the electronic return receipt is delivered, it's a
14 little inconsistent that the filings require paper hard copy
15 followup.

16 What we would like to recommend is to capitalize
17 on the technology by recognizing in the rule a totally
18 electronic environment, to allow either hard copy or
19 electronic submissions. This would provide consistency with
20 the Federal Rules of Evidence.

21 In order to support this, the definition of
22 document should be expanded possibly to show the evolution
23 of a document in a fully automated environment. That would
24 include routing the document for comments, gathering the
25 comments, routing it for concurrence or approval, gaining

1 electronic signatures on that document, and even
2 distribution of the final approved document electronically.

3 This is a viable alternative in the light of the
4 emerging Federal standards on electronically digital
5 signatures. With these electronic signatures, data's
6 integrity and security is increased. The document is locked
7 down at the time of signature, which ensures that none of
8 the data on that document can be or has been changed since
9 that signature was applied.

10 MR. HENKEL: Excuse me. Are you suggesting that
11 all of the comments made on the document are captured in the
12 system from its draft to its final stage?

13 MS. TAUSER: That currently is the way InfoSTREAMS
14 is heading and the way the DOE is intending to do business.

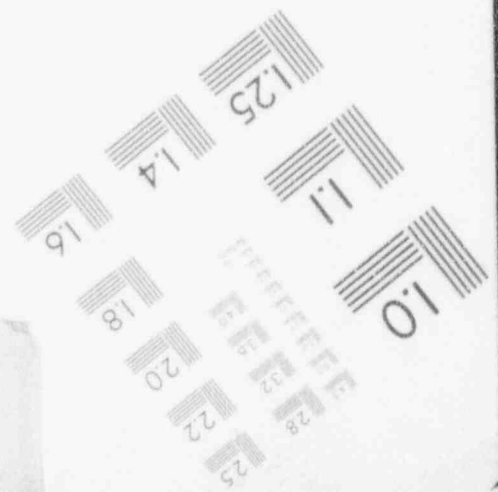
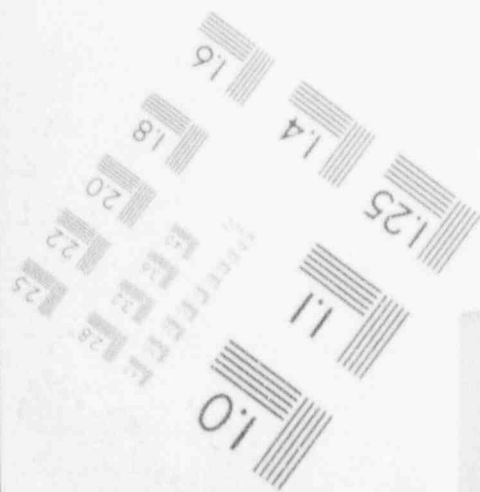
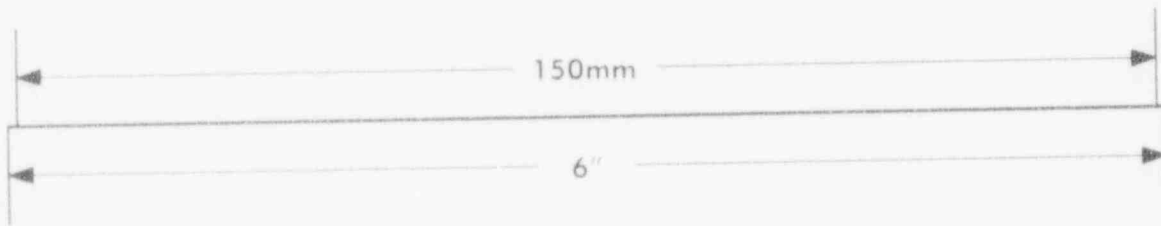
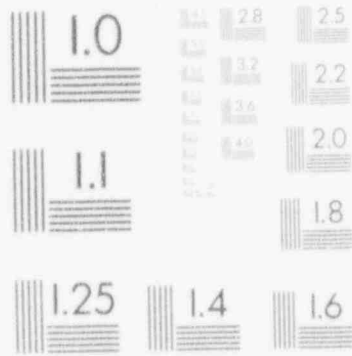
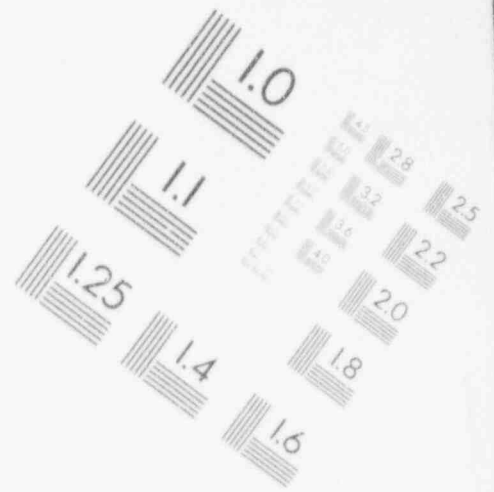
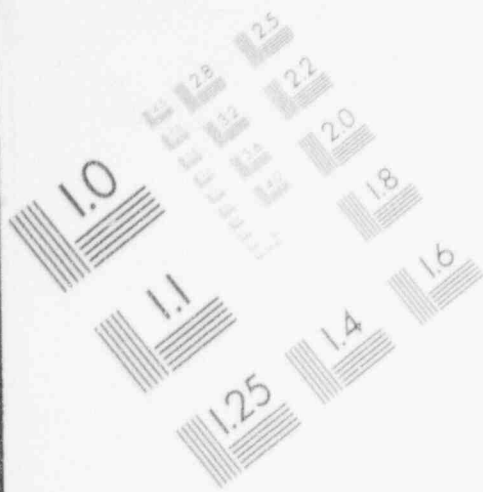
15 MR. CAMERON: I guess one point there is if you
16 look at all of the other parties and how they do business,
17 that it might well fit for changing certain definitions in
18 terms of, of DOE and InfoSTREAMS, in terms of the document
19 comment business, but that might not be consistent with the
20 way it works in other organizations.

21 MS. TAUSER: What we're suggesting here is to
22 allow both, not prevent it from going the hard copy route,
23 but to be sure that the definitions are broad enough to not
24 preclude having it in an all electronic environment.

25 MR. SILBERG: I may have forgotten -- I have

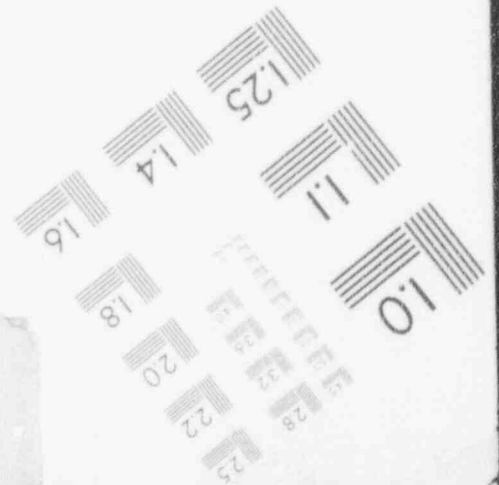
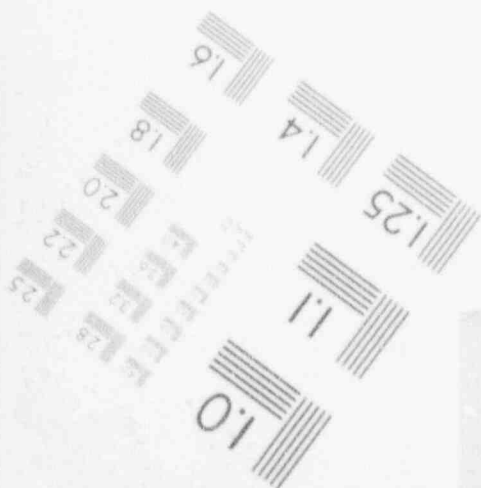
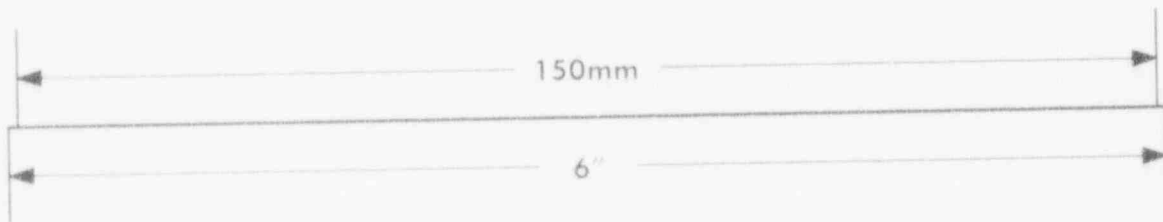
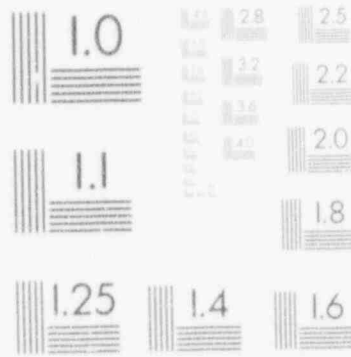
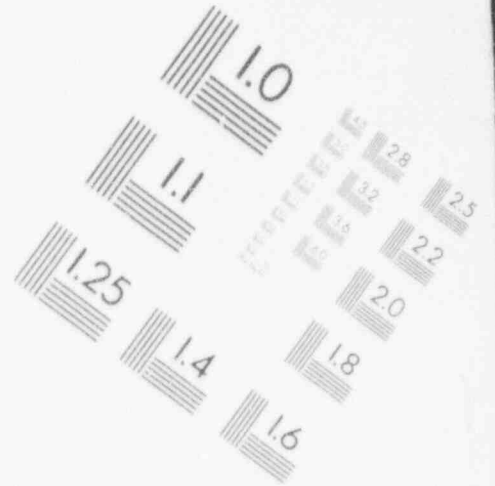
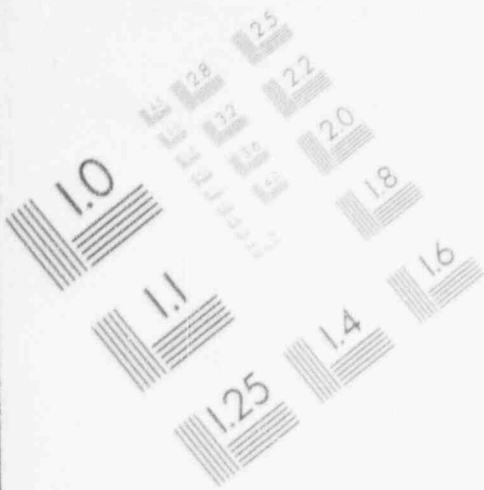
1

IMAGE EVALUATION
TEST TARGET (MT-3)



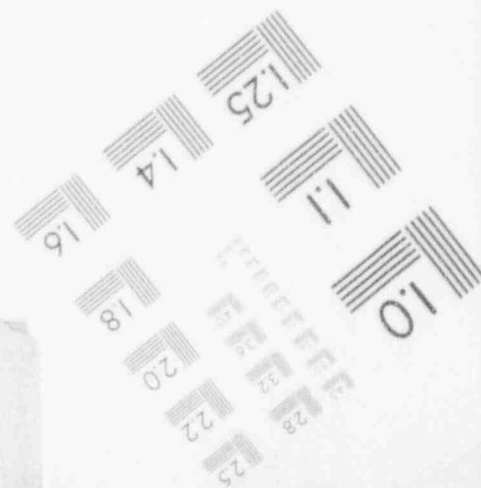
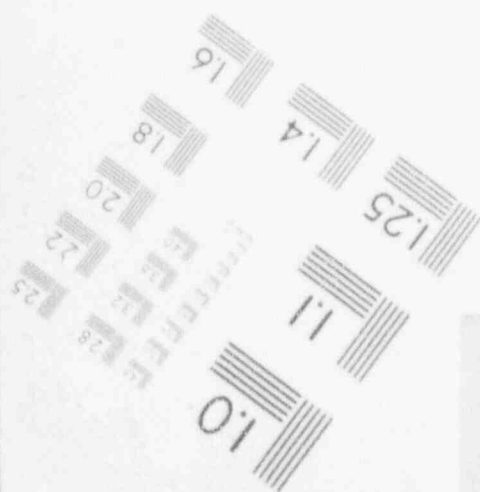
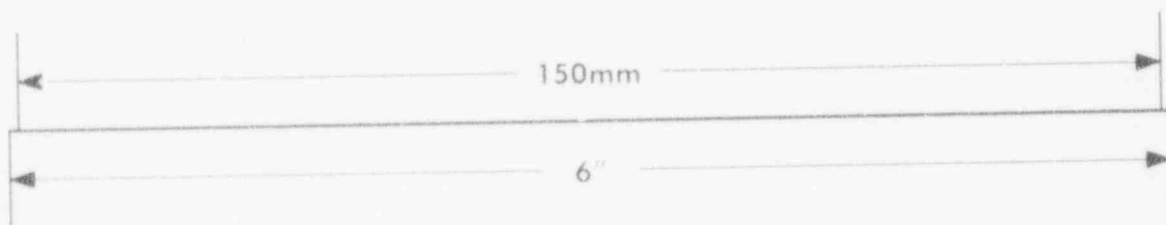
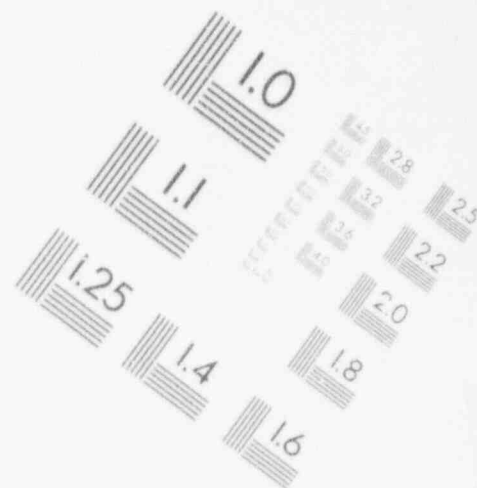
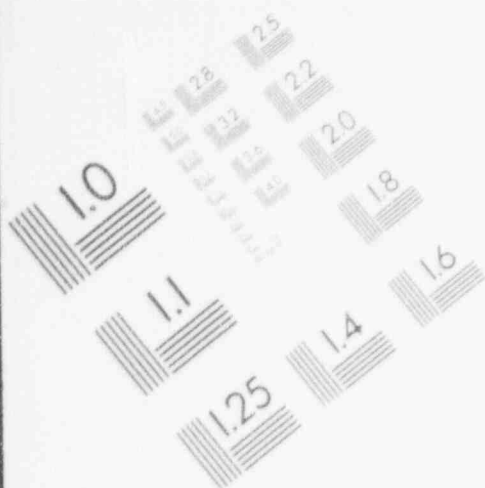
1

IMAGE EVALUATION
TEST TARGET (MT-3)



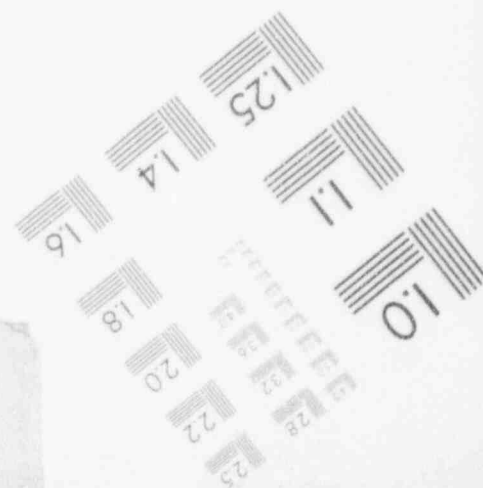
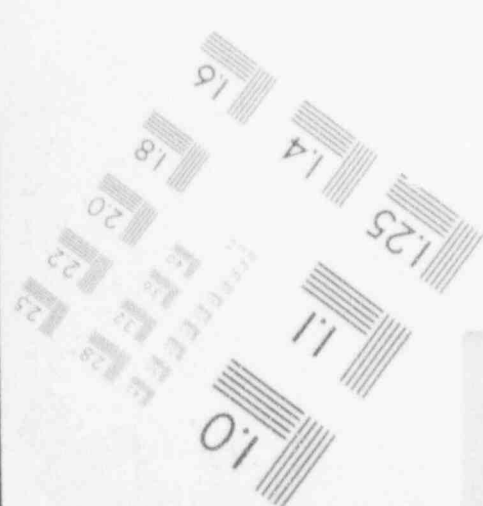
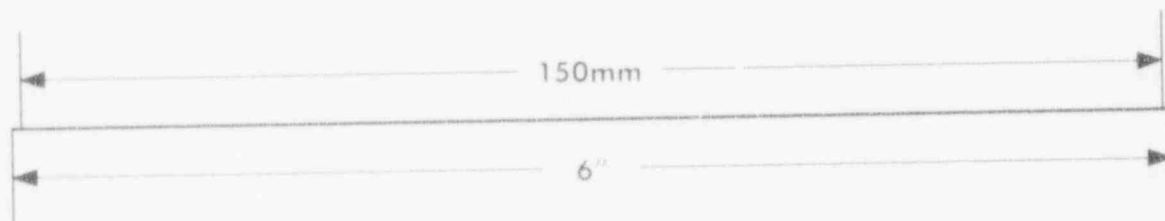
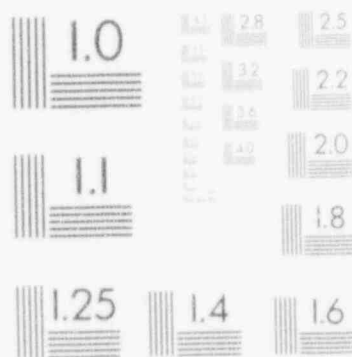
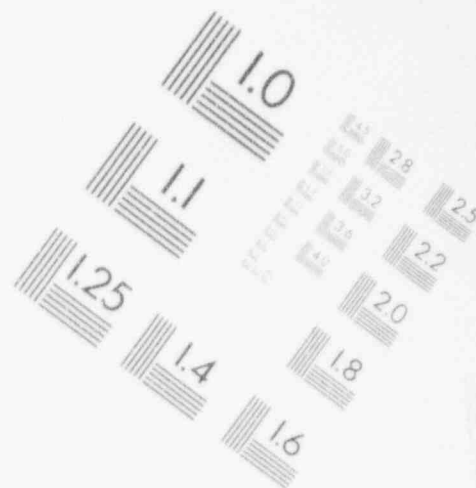
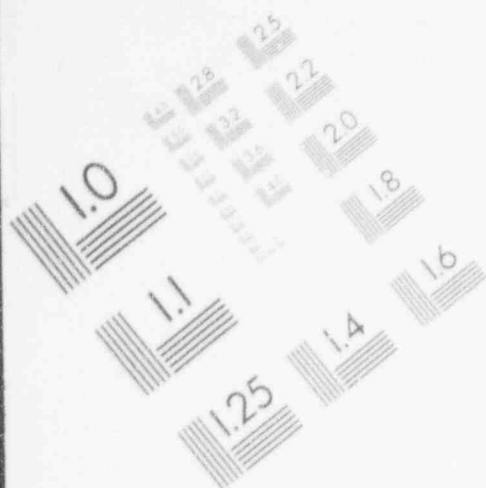
1

IMAGE EVALUATION
TEST TARGET (MT-3)



1

IMAGE EVALUATION
TEST TARGET (MT-3)



1 forgotten a lot of what's in the LSS rule, but I thought
2 that comments on documents, unless they were a separate
3 document, I'm not sure that those would necessarily be
4 captured unless it was one of these dissenting views when
5 you had a draft non-concurred document.

6 MR. CAMERON: You're thinking about what is called
7 marginalia. If something is written on the document as
8 opposed to a separate document comments, it would not be
9 initially captured in the LSS. It might come in through
10 what's called derivative discovery.

11 In other words, if a deposition was taken of a
12 particular person and that person had to bring documents
13 that were not in the LSS, a document that had marginalia on
14 it would be a separate document that would be brought in and
15 then that would be entered at that point.

16 MR. SILBERG: But were we requiring that all
17 drafts with marginalia be preserved?

18 MR. CAMERON: No.

19 MR. SILBERG: I thought we were leaving that up to
20 the particular party's document system.

21 MR. CAMERON: That's right. Under the existing
22 rule, that's true.

23 MR. SILBERG: Yes.

24 MR. MURPHY: But they're saying that InfoSTREAMS
25 is being developed to do that. Is that correct?

1 MS. TAUSER: Correct.

2 MR. SILBERG: But are you doing that because of a
3 constraint that you see in the rule or because DOE thinks
4 that that's the appropriate way to do business?

5 MR. GRASER: Some of it is in response to QA
6 requirements in terms of walking a document through the
7 process of being a QA qualified document. All the comments
8 made on a particular document, we have to answer to the
9 higher authority. In this case, it happens to be the QA
10 requirement that we have to capture the comments made on
11 that document. All the comments need to be resolved. The
12 sheet indicating that they've been resolved needs to be
13 signed off at every step of the way.

14 In that regard, the whole flow -- once it is
15 determined that it is not a preliminary draft document; for
16 example, if it falls under the QA protocol, then, in fact,
17 yes, InfoSTREAMS is designed to take those things and force
18 them through the pipeline so that by no method can somebody
19 prevent them from actually getting their way into the LSS.

20 MR. SILBERG: But there is a provision that, at
21 some point, a document is too preliminary to require that
22 every version show up in the --

23 MR. GRASER: If it's marked as a preliminary
24 draft, that is in the exclusion list and I believe it is
25 also in the definitions.

1 MR. CAMERON: Can I just ask a clarification to
2 see if we're really talking about the same thing here?
3 There are two ways at the NRC or anywhere, I guess, that
4 people comment on drafts. One, they will develop a separate
5 memo and they will send it to the person who originated the
6 document. Now, that is a separate document.

7 The other way is to edit the document and then
8 just send them that document back, and that's the marginalia
9 that we were talking about there. In terms of this
10 electronic version that we're talking about, does the
11 concept of marginalia really have any vitality?

12 MR. GRASER: There will still be situations where
13 you do have a paper artifact and somebody chooses to
14 scribble on the paper and send the answer back that way. Is
15 that what you're asking? The answer is yes. General
16 Counsel, for example, is outside of the OCRWM program. If
17 something went out that required General Counsel, for them
18 to give the comment back, they would have to send a piece of
19 paper outside of an external environment.

20 Not the whole world is going to be on InfoSTREAMS.

21 MR. CAMERON: Could they take your -- if you have
22 an agency-wide E-Mail, though, you can transmit the document
23 to the General Counsel through E-Mail and instead of the
24 General Counsel sending back a separate memo on that
25 document, the General Counsel could go into that document

1 and do a line-in/line-out, which is essentially electronic
2 marginalia, and ship it back to you.

3 So I guess it does still have the vitality.

4 MR. GRASER: It depends on the point in the
5 process that you're talking about. If it's a draft of the
6 document that's been circulated for supervisory -- what's
7 the term? If it's been circulated for supervisory review
8 and approval, I believe was the term in the rule, yes, then
9 you have that situation where it falls under the rule and we
10 have to capture that, whether they scribble it on a piece of
11 paper or whether they send an E-Mail message back, whatever
12 the case may be.

13 What we're trying to do with InfoSTREAMS is to get
14 the predominant number of those types of transactions within
15 the program at least on an automated pipeline that's going
16 to force them into a disk that gets delivered to the LSS in
17 order to meet that.

18 MR. BALCOM: Dan, do you know if the compliance
19 assessment program, or maybe this is a question for NRC, as
20 well, is anticipating this electronic routing slip and
21 approval process in terms of oversight, in terms of
22 management of design?

23 MR. GRASER: Yes. I think I can speak for Jerry
24 right now and say that, yes, they are aware of that and some
25 of the discussions we have had in terms of the specific

1 technology, the enabling technology, is that there is an
2 entire archive level tracking system behind the entire
3 InfoSTREAMS environment that gives you an audit trail, when
4 it went out, who saw it, when did they return to it, did
5 they comment on it, did they approve it, did they not
6 approve it, did they send back through E-Mail a whole new
7 memo or did they mark up the original draft.

8 There's a whole audit system behind that. We've
9 had technical discussions with Jerry and I believe they're
10 probably already anticipating that that audit trail, that
11 routing and concurrence, and, in fact, this is one of the
12 later presentations, the enhancements to the header records
13 that we're going to suggest be investigated based on our
14 design approach would indicate that there's additional
15 information that we can provide that would go a long way
16 towards looking at the whole document environment rather
17 than just the paper artifact that you end up seeing because
18 we have the image of the document.

19 MR. SILBERG: Let me come back to this question on
20 capturing the comments. You said that preliminary drafts
21 were excluded. When I looked back at the rule, preliminary
22 draft is any non-final document that's not a circulated
23 draft. So preliminary draft is very -- as I understand it,
24 is a very large category of non-final documents.

25 In fact, most non-final documents are going to

1 fall in that definition, as I understand it. From what I
2 hear you saying, InfoSTREAMS is going to capture most non-
3 final documents. It seems to me if your description is
4 correct, you're not really following the definition of the
5 rule in terms of what InfoSTREAMS is and is not going to
6 capture.

7 MR. GRASER: We are following the definition of
8 the circulated -- the definition that you find in the
9 circulated draft where it specifies that if it is being
10 circulated for --

11 MR. SILBERG: Concurrence or signature.

12 MR. GRASER: -- concurrence or signature.

13 MR. SILBERG: In which the original author or
14 others in the concurrence process have non-concurred.

15 MR. GRASER: Right. A circulated draft meeting
16 the above criterion includes a draft of the document that
17 eventually does become final and a draft of the document
18 that does not become a final document due to either a
19 decision not to finalize the document or the passage of a
20 substantial period of time in which no action has been
21 taken.

22 MR. SILBERG: But it has to have a non-
23 concurrence.

24 MR. GRASER: And on a document that has been --
25 that meets the definition of the circulated draft, those are

1 all covered under the system design. If it is not a
2 preliminary draft -- in other words, if it is some type of
3 draft and it meets the requirements of the circulated draft,
4 then the InfoSTREAMS is going to grab it and snatch it out
5 of the backdoor and drop it into the records system and it's
6 going to have a flag on it that says this is LSS-required
7 delivery.

8 MR. SILBERG: Okay. But to be captured, it has to
9 have a non-concurrence.

10 MR. GRASER: No.

11 MR. SILBERG: That's the definition of a
12 circulated draft. It requires a non-concurrence.

13 MR. GRASER: But we also have documents that do
14 eventually become a final document.

15 MR. CAMERON: That's modified by the --

16 MR. SILBERG: Documents don't become final
17 documents that have a non-concurrence of it. It's not all
18 documents that become final documents.

19 The first sentence of the definition is key. You
20 have to meet both the first sentence of the definition,
21 which is have a non-concurrence, and half of the second
22 sentence, which is either one that becomes final or one that
23 doesn't become final. But in all cases, it's got to have a
24 non-concurrence for it to be a circulated draft. If you're
25 capturing things that don't have non-concurrence, you're

1 capturing a lot of stuff that is in the definition of
2 preliminary draft and is not supposed to be in the LSS.

3 MR. CAMERON: To give you just a little bit of
4 history on this, circulated draft is a --

5 MR. SILBERG: Term of art.

6 MR. CAMERON: -- misnomer. Term of art is
7 probably the --

8 MR. SILBERG: Charitable.

9 MR. CAMERON: Charitable, yes. But the idea was,
10 at the time, we don't want to have the system clogged up
11 with every draft that's done, but we do want to make sure
12 that if there is a so-called smoking gun out there, to use
13 the type of terminology that Murphy uses all the time, that
14 that would be in the system.

15 So the compromise was, although the word was not
16 changed, because originally we started to use -- we wanted
17 to put any draft that would go out of a branch or a division
18 that is a circulated draft would be in the system.

19 We drew back from that and only wanted to put in
20 the drafts that had the objection or non-concurrence in it.
21 But for some reason, we kept the word "circulated draft" on
22 there. The finality thing had to do with -- it's explained
23 in the supplementary information. It was more addressing
24 the problem of could the agency just sort of sit on the
25 thing. It would never become a final document. So that you

1 wouldn't have that smoking gun put in the system.

2 So as Jay points out, the first sentence is
3 operative in terms of the modifier.

4 MR. GRASER: That's fine, but the direct effect of
5 all of that circular thinking is to put us in a position of
6 we don't know when the document is going to stall.

7 MR. SILBERG: It doesn't matter, but you know when
8 a document has a non-concurrence.

9 MR. GRASER: But in terms of --

10 MR. SILBERG: And until it has --

11 MR. GRASER: It we won't know until it has a non-
12 concurrence. So until then, I have to make the assumption
13 that the minute it comes from the author of the document and
14 is being circulated with the request for review and
15 concurrence and approval, that I will not know until such
16 time as it either makes it all the way through or it doesn't
17 get a concurrence what is going to happen to that document.

18 So, yes, from a systems point of view, I have to
19 take that document right at that point in time and start
20 accounting for that document, not knowing what the eventual
21 outcome is going to be. So it is forcing us to build an
22 internal system design that is looking at the requirement to
23 say once we watch it, the decision tree could go any number
24 of different ways at any different point in the process, but
25 I have to be able to say that when it happens, I have the

1 version that was circulated and I have an explanation of
2 what caused it to kill.

3 So, yes, it put us into a situation of having to
4 collect very sophisticated tracking of what do we say, it is
5 no longer a preliminary draft document in order to meet the
6 requirements of the rule. Yes. It put us in a situation of
7 having to collect a lot of that stuff and be very precise
8 with the system design about exactly what somebody is doing
9 at what point in the document.

10 MR. CAMERON: I guess I don't understand why you
11 need to do that to meet the rule. In other words, why would
12 you want to capture -- why don't you wait till there is --
13 if I understand this, why don't you wait till there's a
14 final document and then capture that?

15 MR. SILBERG: You don't even have to do that. The
16 main point is you won't --

17 MR. GRASER: I don't have a final document. I
18 have a document that was in a draft that stalled and sat on
19 somebody's desk for four-and-a-half months with no action.
20 That still meets the requirement.

21 MR. SILBERG: No, it doesn't, not unless there's a
22 non-concurrence.

23 MR. GRASER: I'll have to change the terms a
24 little bit.

25 MR. SILBERG: No, no. The rule is --

1 MR. GRASER: It stalled for no action.

2 MR. SILBERG: The rule is very clear. It's only a
3 circulated draft if it stalls and if there's a non-
4 concurrence.

5 MR. CAMERON: That's right.

6 MR. SILBERG: Until there's a non-concurrence, you
7 don't pick up that document. Now, the question is how do
8 you know when there's a non-concurrence. If you get a memo
9 that just says I non-concur in document X, now you've got to
10 go back and find document X. But I don't think that's
11 likely to happen.

12 I think if there's a non-concurrence, it's going
13 to accompany that document and, at that point, the document
14 and the non-concurrence go into the system and from there on
15 you keep track of the document. Up to that point, you don't
16 put it in the system. Otherwise, we're going to have this
17 system overrun with documents.

18 If we thought that ten million documents was high
19 three years ago, you've increased that by a factor of ten,
20 given the levels of review that these documents get in the
21 M&O and in DOE. It's crazy.

22 MR. MURPHY: I don't think that the second
23 statement is necessarily true, Jay.

24 MR. SILBERG: No. I believe that it's crazy.

25 MR. MURPHY: No, no, no. The factor -- it is

1 crazy, I agree with that. The factor of ten I don't agree
2 with. But because you guys are so concerned about cost, I
3 would suggest that this system is going to be overloaded
4 with documents in any case.

5 There's nothing any of us here are going to be
6 able to do with that. There's just going to be tons and
7 tons of --

8 MR. SILBERG: We've just heard, though, of
9 something that's going to increase by -- I think it's going
10 to be --

11 MR. MURPHY: I think in the final analysis, it is
12 less expensive to do it the way Dan is suggesting and grab
13 that document at its inception rather than have to go back
14 later on, four months, six months, a year-and-a-half later
15 and say, well, you know, we had this document floating
16 around and now it's become a circulated draft and we didn't
17 know whether it was a circulated draft, so now let's
18 everybody stop and go find that document and let's get it
19 into the system.

20 I think there may be more paperwork involved, but
21 in terms of ultimate expense to the nuclear waste fund, my
22 guess is, this is just sort of a visceral reaction, it's
23 less expensive to do it from the outset than it is to try to
24 go back and --

25 MR. CAMERON: It's not just the capture, though,

1 of the document. You have to think about the other end of
2 the thing, which is you're going to have a header for each
3 of these documents and they're all going to be in the search
4 and retrieval system. So you're going to be, in some cases,
5 searching -- you know, there's going to be ten drafts in
6 there that you're going to be doing a full text search in.

7 And, believe me, if you want to talk about cost,
8 can you imagine trying to sort out like whether this is the
9 draft or what version?

10 MR. MURPHY: But that's a cost to the participant.

11 MR. SILBERG: Mal, let me propose --

12 MR. MURPHY: That's a cost to the person who's
13 doing the searching.

14 MR. SILBERG: Mal, let me propose something here.
15 I think what we heard is a misunderstanding at least of what
16 we think the rule is and I think any reading of the rule
17 would support that. I would ask Dan and your folks to go
18 back and look at the system architecture you've created, or
19 whatever you call it, the process, the capture procedures,
20 and see if you can't read the rule the way we think it ought
21 to be read and see if there's a better way to design your
22 system that will capture at a higher level without getting
23 all these drafts until the non-concurrence occurs, and then
24 everything kicks in.

25 I think you will screen out a tremendous mass of

1 documents at the bottom if you can do that. So I would
2 leave this as a -- I don't think we can solve the problem of
3 whether they do or not, but I would ask them to look at that
4 and see whether it's doable, bearing in mind your comment.

5 MR. MURPHY: That's true and I think your point is
6 well taken, but if you remember the negotiations, what
7 they're doing now is what we originally wanted done and we
8 compromised a way to the circulated draft. So stick to your
9 guns, Dan.

10 MR. CAMERON: And, Dan, you don't have any OCRWM-
11 specific reason to do it this way. You're just --

12 MR. GRASER: Sure do. Yes, we do.

13 MR. CAMERON: So in other words, you'd want to do
14 this anyway, even if the LSS rule --

15 MR. GRASER: Certainly. The way you have to
16 approach it is to recognize that a situation where you're
17 talking about proliferation of X number of versions of the
18 draft documents, that's already happening in the paper mode.

19 MR. CAMERON: But that's capture. You wouldn't
20 want to put all these in -- would you put all these in the
21 LSS because of the OCRWM --

22 MR. GRASER: No, no.

23 MR. SILBERG: That's not what he's saying.

24 MR. GRASER: But I'm saying once you have a
25 document that is not a preliminary draft, it's in a draft

1 mode, I have some actual conditions that I need to address.

2 MR. SILBERG: But the definition in Part 2, and
3 that ought to be the same definition as your QA, it remains
4 a preliminary draft until it becomes final or it becomes a
5 circulated draft.

6 MR. GRASER: That's correct.

7 MR. MURPHY: Maybe we're not all understanding
8 exactly what it is you're saying, Dan. If I understand it
9 correct, and this is based partly on what I've read, partly
10 on what you're saying today, and partly on what Barbara
11 started telling me a couple years ago, you're going to
12 capture that document at its inception in InfoSTREAMS under
13 your QA requirement, but that won't necessarily be an LSS
14 document at that moment.

15 MR. GRASER: That's correct.

16 MR. MURPHY: And at some point in time -- if, at
17 some point in time in the future, that document becomes a
18 final draft or a circulated draft or otherwise meets the
19 definitional requirements of the LSS rule, then you push
20 another button and, zip, it goes over and becomes an LSS
21 document.

22 MR. GRASER: It's not even a matter of pushing the

23 --

24 MR. MURPHY: Well, yes, but --

25 MR. GRASER: If you launch a document in a certain

1 desktop area of the InfoSTREAMS environment, it's going
2 whether you push a button or not. Once it meets a logic
3 test and says is this a preliminary draft, is this still a
4 preliminary, the answer is no. Then you say --

5 MR. SILBERG: Under your current scheme, when does
6 it cease to be a preliminary draft?

7 MR. GRASER: When does it cease to be a
8 preliminary draft? When it is routed for supervisory review
9 and concurrence.

10 MR. SILBERG: But then you'd leave out the second
11 part of that sentence, in which the original author or
12 others in the concurrence process have non-concurred.

13 MR. GRASER: When do I start tracking it? I start
14 tracking it at the point where it's a draft document that
15 somebody is launching it off for a supervisory review and
16 concurrence. Now, when I launch it, two things can happen.
17 I can either get a non-concur or I can get a concurrence all
18 the way through the point of signing the document.

19 The rule says I have to deliver the ones that
20 either fail because they didn't get a concurrence or the
21 ones that fail because somebody just didn't act on it. So
22 from the systems point of view, if I'm automating the
23 process, I have to have it automated at the point where my
24 decision tree says these certain LSS conditions could start
25 to it and, if they do, I need to deliver it anyhow, even

1 though it's not a Federal record, so to speak.

2 MR. MURPHY: Yes. And the operative word is
3 "could."

4 MR. GRASER: Right. There is decision logic
5 through the whole thing. We have followed the verbiage in
6 the rule in that regard.

7 MR. SILBERG: Maybe we shouldn't spend more time
8 on this. I don't think you have or maybe I don't understand
9 fully what you're doing or maybe both, but I'd like to at
10 least have some further discussions with you guys on that.

11 MR. HOYLE: Let me just tag onto that. What
12 you're describing to us now is what you're going to be
13 putting into InfoSTREAMS. You haven't yet told us of that
14 group what's going to be tagged for the LSS or how that
15 mechanism is going to work.

16 Isn't it true that everything in InfoSTREAMS will
17 not be a candidate for LSS?

18 MR. GRASER: That is correct. InfoSTREAMS is the
19 environment for all of the Federal record documentation in
20 the program, whether it's LSS bound or not. The LSS bound
21 are a subset.

22 MR. HOYLE: So what this panel is interested in is
23 making sure that those that are earmarked for the LSS will
24 follow the rule.

25 MR. GRASER: Absolutely. That's what needs to be

1 audited.

2 MR. BALCOM: Dan, could there be some situations
3 where materials are appropriate for the LSS that are not
4 going to find their way into InfoSTREAMS?

5 MR. GRASER: Yes.

6 MR. BALCOM: Other than the obvious core samples,
7 stuff like that, documentary materials.

8 MR. SILBERG: You mean DOE-originated.

9 MR. BALCOM: Right.

10 MR. GRASER: Sure. There are many classes of
11 materials that typically fall into special handling type
12 situations. You will not see them in InfoSTREAMS. One-of-
13 a-kind that could not be microfilmed or could not be imaged
14 or whatever matter, like physical artifacts, core samples.

15 There will be certain materials which, because
16 they are of Personnel Act coverage, we will not include in
17 the InfoSTREAMS environment because they have to fall under
18 the DOE Systems 80 or the new DOE Systems 24 personnel
19 system, and that has limited access and that could not find
20 its way into InfoSTREAMS.

21 MR. SILBERG: Those aren't LSS documents, are
22 they?

23 MR. GRASER: The QA qualifications are personnel
24 records. They have to be delivered. If you want to look at
25 the qualifications of somebody who actually dealt with the

1 reports, you would say, well, what are the qualifications of
2 this guy for doing that.

3 The actual personnel records, there are Privacy
4 Act limitations on who can see it. I think in the LSS
5 design, it was anticipated that those types of documents
6 would be given to the LSS Administrator, we may have a
7 header for it, but the actual resume or vitae of the person
8 would be locked up in the file.

9 A similar situation would be safeguards
10 information, talking about the specific safeguards that
11 would be taken for perimeter security or whatever else the
12 case may be. We cannot put those into the InfoSTREAMS
13 environment and we cannot put them into the LSS environment
14 because we'd be walking into a raft of -- it can't be
15 unclassified system at that point if you put the safeguards
16 information in there.

17 We might be able to put a header in there, but
18 that stuff would also have to be off in a separate satellite
19 file somewhere. So there are a number of examples of
20 documents that eventually would have to find their way into
21 LSS process that couldn't make their way there through the
22 InfoSTREAMS simply because of either special handling or
23 some other reason.

24 MR. BALCOM: And I'm going to assume that we're
25 going to address that, maybe not today, but sometime soon,

1 because there are a lot of gray areas when you get into the
2 electronic collection of documents that I think certainly
3 can effect --

4 MR. GRASER: In fact, I think in many cases,
5 though, they are the sort of things that could be addressed
6 in a fairly straightforward manner by the LSSA establishing
7 the protocols under which certain categories of data need to
8 be delivered; exactly how do you drive up to the back door
9 with safeguards information.

10 MR. BALCOM: I was thinking also in terms of the
11 compliance assessment program, as well.

12 MS. TAUSER: Some of the things as far as future
13 automated technology that InfoSTREAMS is currently looking
14 at, as we've talked about already, is the totally electronic
15 document. That's the normal way that DOE would like to do
16 this. Computer-based training is currently being
17 implemented for our training program and for on-line help.
18 It possibly is going to -- well, it is definitely going to
19 be looked at to include things as video objects and voice
20 annotations in the future.

21 MR. SILBERG: What is voice annotations?

22 MR. HENKEL: Could you define both those terms?

23 MS. TAUSER: You could click on an icon, for
24 instance, and hear the system telling you -- in a training
25 scenario, for instance. So an icon would launch a voice

1 output. And the same with video. An icon would launch a
2 video.

3 MR. HENKEL: So in other words, a press report
4 that ran on the program I would capture. Is that what
5 you're saying? I mean a videotape of news might be captured
6 in here?

7 MS. TAUSER: One current practical example of that
8 would be the technical data environment where they videotape
9 core samples. So you have this header for this core sample.
10 You could theoretically click on the icon and see the video
11 that pertains to that core sample or to that tunneling
12 experiment or something along those lines.

13 MR. CAMERON: So if you tuned into the header for
14 that --

15 MS. TAUSER: Yes.

16 MR. CAMERON: -- and you click on and see the tape
17 or hear a voice annotation.

18 MS. TAUSER: Yes.

19 MR. BALCOM: How about the possibility of voice
20 that's not an annotation, but simply is voice response to a
21 document that may be tied to a specific document? Do you
22 foresee something like that?

23 MR. GRASER: Yes. Technologically, the same board
24 that allows you to hear the video is a board that you could
25 put into the machine and make a voice commentary on a

1 document. In that case, the file that you're capturing is
2 an object as opposed to a print or ASCII representation of
3 the file.

4 MR. SILBERG: I might suggest we have microphones
5 at every desk at DOE and record everything that everyone
6 says.

7 MR. GRASER: The point is that what we're trying
8 to highlight is that this kind of technology that would
9 enable these sorts of things is either here right now or on
10 the very near horizon. If you look at the licensing support
11 system as a static paper-based environment, you're going to
12 have to come to grips with what how you expect to see that
13 information delivered, with the expectation being that if
14 you have a video click that you condense that down into
15 freeze frames and have the frames digitized for
16 representation or for voice annotation, sometime five years
17 from now, that some voice recognition, automatically convert
18 that into a readable type text or would you simply, looking
19 at the InfoSTREAMS environment, say, well, hell, if the guy
20 can put it in verbally, I can listen to it verbally and I
21 can know what the voice annotation said.

22 So it's just a question of raising where
23 technology is going on the near horizon and trying to
24 extrapolate the sorts or things that we're going to have to
25 come to grips with.

1 If the consensus is those are bells and whistles
2 and Cadillacs, we just want to see it condensed down into
3 text, searchable type material, so be it, I can follow that
4 guidance. I'm just trying to raise the awareness about the
5 sorts of situations that the future technologies are going
6 to bring to us.

7 MR. BALCOM: I have a more basic question. Can
8 one of the two of you define technology lever for me?
9 That's a new phrase for me.

10 MS. TAUSER: Let me do that. I wrote that slide.
11 What I was meaning with that were just examples of
12 technology that were possibly precluded from the rule, one
13 example being an electronic signature, where the filings
14 require that hard copy be the signature. So we want to be
15 able to lever some of these upcoming technologies.

16 MR. ALEXANDER: A question. When you do this and
17 you're planning for this in InfoSTREAMS, have you made
18 estimates on the cost of the communications capacity
19 required to ship video clips out to somebody sitting at a PC
20 in the field or voice or for storing that anyplace?

21 MS. TAUSER: No. Like I said, these are just some
22 future thoughts. They're not currently in the design, but
23 it's just little things that we're keeping our eye on for
24 the future.

25 MR. ALEXANDER: Those are big grabbers of

1 capacity, both for communications and storage and it would
2 be costly to do it.

3 MS. TAUSER: Absolutely. They're just figments of
4 our imagination so far.

5 MR. MURPHY: I have another question that just
6 occurred to me and I think, Dan, you probably need to
7 address it. Maybe this has all been -- I hope it has all
8 been thought of already, but how does -- since InfoSTREAMS
9 is an OCRWM system, it isn't yet Department-wide, how are
10 you -- are you taking any steps to ensure that the Defense
11 side documents which may someday become relevant to the
12 licensing process for the repository, such as documents
13 relating to the vitrification process for high level waste,
14 for example, high level waste container information, that
15 kind of stuff, how are you ensuring that that material will
16 be inputted into InfoSTREAMS and thus become available for
17 the LSS?

18 How does it get into the LSS?

19 MR. GRASER: The materials you're talking about,
20 the actual custody of those materials can be transferred
21 into the OCRWM custody. We have a draft implementation plan
22 for actually how we're going to go about doing the exchange
23 of the custody and then once those materials come into the
24 custody of the program, how would we treat them in terms of
25 scrutinizing them for potential LSS need and so forth.

1 MR. MURPHY: You will get custody only of -- and I
2 use this term loosely now -- final documents, right?

3 MR. GRASER: Paper.

4 MR. MURPHY: Paper, right. So that all of the
5 rigmarole that Jay is concerned about, we would not have
6 access to even the circulated draft within Defense systems,
7 outside, any non-OCRWM circulated draft. Presumably, you
8 guys wouldn't even get into InfoSTREAMS. Maybe I shouldn't
9 limit it just to -- I mean, material that's produced in the
10 secretary's office doesn't get into InfoSTREAMS until
11 somebody turns it over to you, right?

12 MR. GRASER: That's correct. From the records
13 perspective, the source organization is the organization
14 responsible for getting that material into a records
15 disposition schedule and collecting the records, from the
16 records perspective.

17 So if it's created by the secretary, if it gets
18 sent to us, in all likelihood, we will capture it because it
19 ends up in somebody important's reading file. They have it
20 in their reading file and it falls under our schedule. So
21 it would end up in both places.

22 MR. MURPHY: So that right now, it's --

23 MR. GRASER: Defense materials in terms of
24 preliminary type -- not even preliminary. Draft materials,
25 for example, and comments. Not having seen the nature of

1 the way they collected their paper collections, I can't
2 really say what to expect in that regard.

3 MR. MURPHY: So that right now, there is a large
4 body of information within DOE which fits the definition of
5 document or relevance, whatever it is, in the LSS rule,
6 information or documents that may potentially become
7 relevant and admissible in a licensing proceeding which are
8 not being captured by InfoSTREAMS, but which will be
9 required to be put into the LSS to meet the requirements of
10 the rule.

11 MR. GRASER: That's correct.

12 MR. MURPHY: How is DOE addressing that issue?

13 MR. GRASER: Well, if we bring them into our
14 custody, for example, we are not going to be microfilming
15 them. We will only do microfilm as an output product to
16 meet their requirements. We would bring those documents in
17 en masse in a whole collection, 150 boxes at a time, and go
18 through those materials and put them through our capture
19 stations and begin the process of getting a bit map image of
20 those documents.

21 MR. MURPHY: But until it meets the definition of
22 a circulated draft under the LSS rule, if there's a memo
23 circulating on the other side of the aisle in DOE saying
24 that the computations with respect to the leach rate of
25 borosilicate glass are bad and it's going to leach

1 radionuclides at a factor of ten greater than we're saying
2 it is and that doesn't become a circulated draft, right now
3 that doesn't get into InfoSTREAMS and, therefore, does not
4 get into the LSS.

5 Is that what you're saying?

6 MR. GRASER: If it's in a program external to
7 OCRWM right now, it does not get into InfoSTREAMS.

8 MR. MURPHY: But it's not in a program which is
9 external to the Department of Energy and the Department of
10 Energy -- it's the Department of Energy's responsibility to
11 meet the requirements of the LSS.

12 MR. GRASER: Yes.

13 MR. MURPHY: And it's the Department of Energy
14 which will be the license applicant to the NRC.

15 MR. GRASER: That is correct. And as I said
16 before, I cannot speak to the state of the files that they
17 have to date, not having gone through them. They haven't
18 been in our custody, so we haven't had an opportunity to see
19 if, in fact, they did retain paper copies of the circulated
20 drafts.

21 MR. MURPHY: But eventually you guys are going to
22 be responsible to satisfy the QA requirements on that kind
23 of documentation. The LSS QA requirements, not the
24 technical.

25 MR. GRASER: Yes, yes.

1 MR. BALCOM: Dan, I was going to raise this later,
2 but it sounds like the time is appropriate to talk about the
3 concept of using natural language or water-based filters to
4 look at a computer-based program that would make some
5 decision about whether the language in a document includes
6 it in the collection or not.

7 Can you say something about that?

8 MR. GRASER: It was something that we had been
9 looking at in terms of future technology. It was something
10 that we had anticipated would be the foundation for what
11 we're calling our Increment 3 capability. That is to have a
12 document -- the ASCII screen be able to go through the same
13 sort of products used for text search and retrieval and use
14 those products as a front-end analytical engine to analyze
15 the content of a fairly large technical document and to do
16 that in a consistent and relatively fast manner, once you
17 anticipated that the document had a likely prospect of being
18 an LSS document.

19 The intent was to have that software look at the
20 document and do things like assign key words and descriptors
21 and so forth based on an analysis of the occurrence of terms
22 in a document and so forth. Some of the thinking in that
23 regard is still ongoing and we haven't come to a conclusion
24 as to whether or not that is the correct place to start the
25 analytical process.

1 It may very well be that there are certain
2 preconditions that if you meet those preconditions, you
3 don't need to exercise the documents against that software
4 to determine whether or not it's potentially LSS relevant
5 and whether or not it meets the topical guidelines.

6 If you look at a document, for example, and it has
7 a QA status stamped on the top righthand corner of the
8 document, you can continue on past go and collect your \$200
9 because you know the document in all likelihood will be LSS
10 bound.

11 So you wouldn't go to the cost and expense of bit
12 map imaging and OCR converting the document in order to have
13 something to run through that sort of filter. So we've been
14 looking at the technology, but in terms of when it would be
15 appropriate and cost-effective to use that technology is
16 still very much an open issue and we're looking at that as
17 our Increment 2.0 list of technology features that we're
18 going to be examining in that prioritization.

19 MR. BALCOM: Like a year from now, two years from
20 now?

21 MR. GRASER: Yes. I would say sometime within the
22 next two years. But depending on where it falls in terms of
23 our program requirements, it may fall toward the outside of
24 that two-year envelope.

25 MR. GRASER: Shall we try one more time?

1 MS. TAUSER: The final two slides in my part of
2 the presentation, again, are just some suggestions for
3 changes to the text of the rule, the first being the
4 definition of a document, to expand, to specifically allow
5 total electronic document generation and signature.

6 For the text portion of the rule, the suggestion
7 would be to remove the mandatory hard copies, to allow them,
8 but don't mandate them.

9 MR. SILBERG: How does NRC feel about that?

10 MR. HOYLE: Well, this is the first time we've
11 actually seen a suggestion that that be deleted. We're
12 watching the technology, too. I think the Secretary right
13 now would be uncomfortable till he sees something more in
14 the field to let this go, but he knows it's coming. He
15 knows the courts are beginning to accept electronic
16 signatures.

17 MS. TAUSER: The final suggestion for modification
18 is to eliminate the terminology "paper copy" and replace
19 that with the term "image." The definition of image already
20 includes either paper copy or a bit map image. So it's
21 covered by merely using the terminology "image."

22 If there are no more questions, I'll go ahead and
23 let Dan stand up and stay up.

24 MR. BALCOM: Would "image" possibly prelude the
25 text file? In other words, if you go from "paper copy" to

1 "image," will the technology allow you then to hand that to
2 OCR to put it back into machine-readable form so it can be a
3 full text document? I'm thinking about depositions. I just
4 don't want you to box yourself in there, or us.

5 MR. GRASER: Do you want to rephrase that?

6 MR. BALCOM: I'm thinking of the term "image" as
7 narrowing the possibility of having a machine-readable text
8 file which then can go into a search and retrieval system
9 and be indexed.

10 MR. GRASER: Yes. That's a good point. In fact,
11 that just kind of validates the process that this needs to
12 be looked at by more than one set of eyes.

13 MR. BALCOM: I would suggest this definitional
14 stuff is appropriate to be addressed here at some point. I
15 don't know when.

16 MR. GRASER: You can see the sorts of issues that
17 it's raising. For example, the whole thing about electronic
18 documents depending on which supposed experts you have to be
19 talking to at a given point in time. They say, well, it's
20 all perfectly legal right now, we just haven't got it in
21 appeals court and a decision to affirm any of this, but
22 nobody has thrown out a case based on using electronic
23 evidence, electronic signature, blah, blah, blah.

24 I don't know what the answers are going to be.
25 From a certain perspective, I can say it's easier to forge a

1 piece of paper than to forge an electronic document because
2 it then requires some collusion conspiracy or very high
3 powered access to undo an encrypted electronic signature
4 versus picking up a pen.

5 Give me five minutes and I could make my signature
6 look somebody else's quite simply. And if you have a paper
7 artifact and, culturally, you'll have more confidence in the
8 piece of paper right now. I'm saying five years from now,
9 culturally, we may have more confidence in the electronic
10 version of that.

11 But a lot of it has to do with acceptance and what
12 somebody chooses to accept. Some of the early decisions I
13 had with some of the Administrative Judge and people over at
14 the Nuclear Regulatory Commission, the indication was if you
15 submit your motions practice electronically and then follow
16 it up with a piece of paper with a signature scribbled on
17 it, we may choose at the time just to rely on the electronic
18 version anyhow and they will address that at a later time.

19 So a lot of it is a cultural sort of thing. Over
20 here it's an awareness issue. Certainly there's a lot of
21 work that could be done and it just depends on the extent of
22 -- if you're going to be going into the rule, do you want to
23 be doing cosmetic things or do you want to be going back
24 into the heart and soul of what took three years to hammer
25 out.

1 MR. MURPHY: But another problem that John alluded
2 to is that the NRC has an obligation, if there's an appeal
3 from one of their decisions, to deliver a "record" to the
4 Court of Appeals down the street. Since the Federal courts
5 are moving to accept electronic submissions of everything,
6 before this license application is filed, things are going
7 to change.

8 But right now they have to deliver a record and
9 that record has to be made out of paper.

10 MR. GRASER: I just don't want to get nine miles
11 downstream and then have somebody turn around and say why
12 did you guys do this.

13 MR. MURPHY: Right.

14 MR. GRASER: Because then there's many dollars at
15 stake downstream to do that sort of a decision. The next
16 small section that we were going to discuss was some of the
17 things that we've come across in terms of our definition.

18 There was a header working group that was
19 assembled and went through the effort to identify 28/29
20 fields of information that everybody agreed would represent
21 the LSS header record. In the course of developing
22 InfoSTREAMS, we have come across some additional types of
23 information that, if we were going to use InfoSTREAMS as the
24 foundation, we would like to draw to your attention.

25 Some of those fields -- Chart No. 13 shows the

1 original 28 fields. Chart No. 14 presents some additional
2 suggestion of proposed fields that we could look at. We
3 also handed out a summary table that gives a bunch more
4 specific information about each of those fields as they are
5 incarnated in the InfoSTREAMS design. You can read that on
6 the long flight home.

7 MR. SILBERG: That's what you call the proposed
8 LSS field definition summary table.

9 MR. GRASER: Right, that's it. Again, this is
10 food for thought. The bottom line recommendation on this is
11 that if, in fact, InfoSTREAMS is going to be used as a
12 foundation, it may be appropriate to reconstitute the header
13 working group, such as was originally constituted, and have
14 experts from various participant organizations again go
15 through the drill of examining these fields and their
16 appropriate use within the LSS environment.

17 From our perspective, though, we think there's a
18 certain amount of win-win situation reflected in these
19 suggestions. Some of the fields are, in fact, just
20 housekeeping, but in the non-imaged document world -- in
21 other words, a totally electronic, you never have a paper
22 artifact. In the non-imaged document world, how you
23 establish the equivalent of the cc list, if we never reduce
24 the document out of its electronic version, we won't have to
25 confront how do you know who saw a document when.

1 Distribution lists and cc lists are critical to
2 having that tool available to you. Since there is no paper
3 artifact, other things, not just the concurrence tables, are
4 also susceptible to that sort of analysis.

5 In addition to those sorts of considerations,
6 other developments within the program in terms of document
7 management, technical data management, have led us to
8 develop internal processes and procedures for linking work
9 that has been done on a specific research topic or on a
10 specific work package level of down to the specific study
11 guide level, the configuration management within the program
12 is consolidated enough that we've agreed on methodologies
13 for assigning configuration identifier and document
14 identifier numbers for configurable items within the
15 program.

16 For example, if there is a specific aspect of
17 technology that you are interested in, all of the
18 documentation, all of the products, all of the even physical
19 items that are related to that particular activity will be
20 marked and labeled using a standard configuration item
21 identifier.

22 So when you look at these things and, for example,
23 you look at a QA document, you understand what is involved
24 in developing a QA document, you will realize that when you
25 see the QA marker at the top of the document and you say,

1 oh, I have a document here that was developed under the QA
2 program, I can make some assumptions about how much more
3 effort I should expend researching that particular activity.

4 Some of the assumptions you could make, for
5 example, would be understanding the fact that the person
6 doing the work has had QA training. The qualifications of
7 that individual have been investigated. It agrees they have
8 been certified and so forth.

9 So the recommendation is to look at a number of
10 the fields that we've come up with, the QA record, the
11 traceability number, traceability code, those sorts of
12 pieces of information that would readily be accessible in
13 the InfoSTREAMS environment, we'd like to be able to make
14 them available to the LSS, as well.

15 MR. SILBERG: Before you get off that, when you've
16 identified these new header topics, have you determined
17 which ones are going to be required or proposed to be
18 required for non-DOE and NRC participants?

19 MR. GRASER: I could give you an opinion, but I
20 think it would be most appropriate to have the whole
21 Committee examine that.

22 MR. SILBERG: That is something. There's supposed
23 to be a minimum set that's required for the non-governmental
24 parties, at least. I don't want to get into a situation
25 where you guys, for InfoSTREAMS' purposes, are creating a

1 very long list that you're then going to load up on Nye
2 County, Nevada and PDIU Waste and whoever else.

3 MR. GRASER: For that matter, the way you can look
4 at it, Jay, is that we have a list that's probably
5 approaching 50 fields with InfoSTREAMS and we're only having
6 to deliver a small subset of those. So whether or not you
7 choose to build it on the foundation of the InfoSTREAMS
8 environment, I already have that many fields myself.

9 Again, if we get into a situation where we start
10 to consider that electronic versions of documents may be
11 created out there in the future, everybody is eventually
12 going to have to come to grips with it.

13 I don't want to impose my judgment on what I feel
14 would be most appropriately done by having that header
15 committee reconvened.

16 MR. HOYLE: We'll talk about it later.

17 MR. GRASER: The next short topic we have is
18 copyrights and royalties. Again, this is kind of an
19 internal problem that has surfaced that has potential LSS
20 ramifications. During the LSS prototype, we found documents
21 that had specifically printed on the front of them "This
22 document shall not be used or replicated or included in any
23 electronic system," da-da-da.

24 Essentially what happens is that any documents or
25 reports that are not generated by a DOE-funded organization,

1 one of our participant organizations, if a citation has been
2 made to one of those documents and it is not generally
3 available and we do have to include it in the LSS, we have
4 to figure out a way of recognizing that the document may
5 have copyright restrictions placed on it and what are we
6 going to do about that.

7 Our initial inclination was to say, well, maybe we
8 should look at the copyright law and say are we not, in
9 fact, in the LSS environment, doing a functional job of a
10 research library and that is one of the exemptions, a fair
11 use exemption from the copyright law.

12 If that didn't carry any weight, the other way we
13 could look at it is to say, well, what is the LSS if it is
14 not the docket of a legal proceeding and legal use and legal
15 proceeding also falls under one of the fair use exclusions
16 under the normal copyright law.

17 We thought that that was a fairly reasonable
18 position to take. When we asked the fool's question of
19 General Counsel, of course, we got an appropriate answer for
20 that. The bottom line was they said, well, if you're going
21 to be including material that is copyrighted in a system
22 like that, then you have to make arrangements for doing
23 royalty payments, etcetera, etcetera, etcetera.

24 This could turn into a very, very costly
25 administrative drill.

1 MR. MURPHY: Dan, your first alternative is the
2 only one to pursue. Either get the General Counsel to
3 change his position or get a new General Counsel.

4 MR. GRASER: I'll take that under advisement.
5 Thank you.

6 MR. SILBERG: They just got a new one. So get him
7 while he's fresh.

8 MR. GRASER: We didn't verbalize the position very
9 well the first time, I think. So we're going to have to
10 take a second bite at that and see if, in fact, we can have
11 them reconsider that. But depending on who else is charged
12 with the responsibility for maintaining and operating it the
13 way the rule currently says it's done at the NRC, the advice
14 we got from our General Counsel was to say, by the way, make
15 sure NRC's General Counsel recognizes that they have to ask
16 for the permission, etcetera.

17 MR. MURPHY: Your General Counsel is forgetting
18 something. If the NRC doesn't get all of the information
19 the NRC wants, the NRC says you can't have your license.
20 Then the Secretary can go back to her General Counsel and
21 say not only can't you have your license, we're not going to
22 docket your license application. We're not going to start
23 this process until we get that information.

24 You go back to your General Counsel and figure out
25 how you're going to do that, but you want a construction

1 authorization, you want a license to receive and possess
2 nuclear material, you give us this information. That's the
3 position the NRC is in.

4 The Department of Energy is making a grotesque
5 mistake if they think that they're going to be able to bully
6 the NRC into paying for copyright material. The NRC has the
7 only piece of paper that matters in this process and that's
8 the one that says "license" up on the top of it.

9 MR. HENKEL: You're making a gross mistake if you
10 think Dan can bully the GC.

11 MR. SILBERG: Then you get a new GC. Get a GC
12 that can spell the word "reality."

13 MR. SILBERG: And "copyright."

14 MR. GRASER: As soon as I'm introduced to the
15 General Counsel, I will make those points. That is one
16 option, obviously, to explore that. There are a few other
17 alternatives and let me just touch on them briefly. The
18 first would be to have the verbiage in the rule modified to
19 exclude the requirement for the actual text and images of
20 copyrighted materials.

21 In that regard, just put the header citation in
22 there and that allows somebody to recognize that this item
23 is here and that will be a small subset of the document
24 collection for which we would not have text and image
25 capability, even though the text and the image were

1 available.

2 Another alternative would be to do something in
3 the rule to address cost recovery, perhaps an approach that
4 says under this particular environment, the copyright
5 royalties do not apply. That would certainly be something
6 we would have to explore a couple of different options and
7 alternatives on what can be said within the rule in terms of
8 the cost recovery issue on copyright royalty payments that
9 would be due.

10 In some cases, they can amount to a dollar or two
11 bucks a page and in a 100-page document, that can add up
12 fairly quickly. The other thing is that the mechanisms to
13 be able to track each use of that are just phenomenally
14 expensive. When you consider the fact that you will have
15 the ability to download a document, sort on your C drive,
16 print out any number of copies that you choose at a later
17 time and disseminate them to whomever you choose at a later
18 time and we're the ones who are the administrators of the
19 LSS and are at the initial liability for having our copy go
20 out and have multiple, multiple versions.

21 I don't want to find myself in the situation of
22 having to fight that number of lawsuits concurrently with
23 trying to get the license application in.

24 The fourth alternative I think is one that is most
25 reasonable. That is to look at those particular items and

1 to recognize that the Department of Energy already has two
2 technical information center repositories already
3 established that already deal with this situation. Those
4 are documents which are not produced by our program that do
5 have copyright and royalty type considerations on them.

6 The documents do have cross-reference references
7 into our records information system right now. So access to
8 a number of those documents in the technical information
9 center is already available to our records system and would,
10 therefore, be available to InfoSTREAMS so that it gets to
11 the licensing support system.

12 This would be a variation on simply saying let us
13 put a header record out there and say that if an individual
14 wants a copy of that, they can go to either one of these two
15 centers and follow the normal procedure there in terms of
16 requesting, just like a library requesting a copy of that
17 document and cough up the appropriate payment to cover the
18 royalty.

19 I'm not quite sure how these issues are going to
20 work out. I could make some recommendations in terms of
21 issue closure on all of the things that we've brought up so
22 far. Obviously, a broader context would be to go into the
23 verbiage of the rule and look at it for technology-specific
24 verbiage that is in there and to try to make it more
25 functional, to remove those roadblocks, to encourage

1 recognizing the technology, to encourage technology
2 insertion when it is most appropriate.

3 And if, in fact, we expect to have cost decreases
4 resulting from new technology, we ought to make sure that
5 the rule gives us the latitude to do that.

6 In terms of the header records and the
7 recommendations, if, in fact, you can -- you know, you want
8 to recognize the fact that electronic documents are going to
9 happen to us sooner or later, you may want to consider
10 reassembling the header working group, if, in fact, there is
11 a general understanding that we would be reusing
12 InfoSTREAMS.

13 Third, obviously, is to further develop the
14 copyright strategy. All of these relate to InfoSTREAMS
15 reusability. If, in fact, we're going to acknowledge
16 InfoSTREAMS as the foundation for LSS, these all become very
17 critical. They become critical for us because we have open
18 design issues on InfoSTREAMS that are hanging on whether or
19 not people feel that this is going to be a go.

20 We are kind of holding back on firmly establishing
21 electronic documents as the way the program is going to go.
22 We are holding back on introducing electronic signature. We
23 are holding back on all the steps necessary to make our QA
24 program an electronic QA program. That's a whole set of
25 headaches, if you've ever dealt with the QA folks before.

1 So in that regard, we would like to move forward
2 knowing one way or another whether or not there is going to
3 be a sense of direction as to whether or not these things
4 are doable and when they're doable or even if they should be
5 done. I think some of those more fundamental questions --
6 Jay and Mal certainly are very good at raising those
7 fundamental questions.

8 I want to thank you for the opportunity for us to
9 at least present what we see as a number of the potential
10 issues that will face us if, in fact, we do decide to look
11 at things like Option 3 that we were recommending earlier
12 today.

13 Thank you all very much for your patience. I'm
14 sorry I had to jump up and down so much like this. I didn't
15 plan it that way.

16 MR. HOYLE: Thank you very much, Dan and Janice,
17 for your presentation. We do need to take a break here and
18 get some lunch. It is now 12:40. We've allowed an hour.
19 So I think we'd better do that.

20 Let me, before you break up, invite those in the
21 audience this afternoon to use the chairs that are at the
22 table. You don't have to sit at the table. You can move
23 back a little bit, but bring yourselves forward. If any of
24 you want to bring chairs up in front, you're welcome to do
25 that.

1 This has been a very tough kind of room to operate
2 like this in. So take advantage of the walls and anywhere
3 you want. We'll see you in an hour.

4 [Whereupon, at 12:40 p.m., the meeting was
5 recessed, to reconvene this same day at 1:40 p.m.]

AFTERNOON SESSION

[1:40 p.m.]

MR. HOYLE: Let's get started. As I said this morning, we're switching the two afternoon presentations. So we'll start with the one on InfoSTREAMS as the LSS vehicle. Dan Graser will be back up to do that for us, with help from George Hallnor of TRW.

MR. GRASER: I'm going to speak only very shortly this time, I promise, because I'm heading back to my seat as soon as I get away from the microphone. The presentation, the next round of presentation is going to be presented by George Hallnor, who is with TRW's Environment Support Services. They are the managing and operating contractor for the program.

Within the TRW environment, there is a group specifically charged with the responsibility for being the system architects and engineers for the development of our internal systems. This is an ongoing effort. The InfoSTREAMS activity was actually launched, I would imagine, in about May of 1991. The team has been doing sort of engineering work from ground up for the InfoSTREAMS that is currently employed within the program.

The InfoSTREAMS increment plot does reflect an office automation flavor. One of the foundations we had to lay was to gut the entire program, focus on a single desktop

1 environment using standard software packages, and then once
2 we did that, to deploy some initial applications development
3 for supporting the routing for supervisory review and get
4 concurrence materials that were subject to those sorts of
5 review procedures within the program.

6 We took a lot of feedback from that and
7 incorporated that into a design for Increment 2. The design
8 for Increment 2 is a much different looking user interface
9 than we're going to be presenting to our user community,
10 still focused primarily on the office automation side of it.

11 The next major rounds of development that we do
12 will be to plug that upfront office automation environment
13 into a back-end records management system that will take the
14 desktops and networks and deliver them with markers on them
15 to the records people, indicating what sort of addition
16 process that your disposition needs to be done with those
17 materials.

18 So George is going to get up and he's going to be
19 talking fairly broadly-based, but with specific attention to
20 the breadth and scope of the enterprise that is being
21 developed. He will focus on some of the specific technical
22 aspects of the architecture that is being built for the
23 program.

24 I want to leave the podium to George at this point
25 and I want to leave you with a thought; just to understand

1 that InfoSTREAMS is not necessarily a single product. It
2 has certainly got some product features to it, but it also
3 represents information infrastructure that is being put in
4 place now that will support the program, anticipated to
5 support the program over the next ten years.

6 In that regard, InfoSTREAMS is also an
7 architecture. It is a response to dealing with a QA
8 environment. It is a response to dealing with document
9 tracking requirements. It's a response to management
10 information systems and action item tracking systems.

11 So InfoSTREAMS is many things and you have to keep
12 it all in mind and keep an open mind as George walks through
13 is presentation. At this point, I'll let George get right
14 into it.

15 MR. HALLNOR: What I will do is I will walk you
16 through the background of InfoSTREAMS, why it happened, what
17 it will try to accomplish, go through a functional review of
18 the architecture in some detail so we understand how the
19 system works, and then, lastly, address it in terms of
20 what's near and dear to our heart.

21 In terms of InfoSTREAMS, it obviously was
22 sponsored by DOE or the Office of Civilian Radioactive Waste
23 Management as their document management system. We know
24 clearly that in this license application we're trying to
25 develop, there would be a very large number of documents and

1 pages. We estimate that, based on the SAIC study, over 40
2 million pages will be LSS documents.

3 The Federal regulations require us to migrate
4 records as text and image in the licensing support system
5 and microfilms will be at the National Archives. To do so,
6 we need to develop a document management system that aids us
7 in the long-term collecting of information.

8 MR. SILBERG: The requirement to go to National
9 Archives is in whose regulations?

10 MR. HALLNOR: That's the Federal regulations that
11 certain Federal records have to be archived.

12 MR. SILBERG: And that must be in microfilm.

13 MR. HALLNOR: They have options now for microfilm,
14 paper, and nine-track tape. They just can't handle the
15 quantity of data.

16 In terms of the office automation, we try and
17 provide OCRWM with an integrated and comprehensive
18 capability to generate documents, to review them, to
19 communicate to reviewers, and to maintain this data in terms
20 of the LSS. In terms of the records management, we have to
21 provide OCRWM the capability to identify what needs to be
22 collected, stored, retrieved and also to protect and dispose
23 of documents. They have to keep all materials around these
24 policies, positions, procedures, well documented so we have
25 a logical trace on how these records were created and how

1 they find their way into the LSS environment, both for the
2 licensing process and also for research.

3 Benefits. Clearly, they will see a uniform
4 environment enterprise. The interface will look the same to
5 the user in Washington as it does in -- as a matter of fact,
6 being in travel, you can work on the records in Washington.
7 You will be able to have concurrent generation of the
8 documents to multiple authors who will be able to work on it
9 and always acknowledge that they're working on the latest
10 document.

11 Likewise, document reviewers would have a uniform
12 interface into which they can collect comments and comments
13 would be automatically captured and entered into the record
14 management system. Once again, the reviewers will be
15 assured to always have the latest version of any document
16 that they are reviewing, because the latest version is the
17 only version that has been distributed at the time.

18 Also, with the documents review process, we have a
19 means of setting out items like if a signature is not
20 necessarily required, silence is consent, schedules is much
21 easier for us. You can call the guy and say are you going
22 to make comments.

23 Also, people that generate documents will have an
24 easier time because one repository with all the information,
25 they can search that for data, they can search historical

1 records and collect the information that's required to
2 develop a letter or report that they're working on.

3 Records management, once again, has a single spot
4 where they pick up all the information. They will also be
5 assured through the system that there's no duplicates in the
6 system, which was a big problem in the paper world because
7 they had multiple entry points into the system.

8 In terms of program management, obviously, program
9 management, we have immediate insight into how the process
10 is evolving. They see the schedules of documents, they see
11 the paper response with action items, and they have a very
12 easy time tracking the evolution of the license
13 applications.

14 License preparation is on schedule and we have the
15 benefit of single points where you handle all the
16 information. We also have the search capabilities that
17 allows us to respond to any requests within InfoSTREAMS that
18 NRC or some outside agency may ask us to deliver in terms of
19 documents or pertinent material. Obviously, during license
20 hearings, we'll be able to support any requests for
21 information very easily.

22 In terms of history, we began work on the
23 InfoSTREAMS and -- we did not look only at the DOE needs.
24 We looked at the research requirements to see how to mesh
25 them, because that, in the long run, even if the LSS was a

1 totally separate system, it would simplify this process of
2 handling records. We had LSS in view when we did that.

3 At the time, we decided that the best approach was
4 to do a phased development where the office automation
5 capability would generate documents was the first step and
6 then the generation process also included the document
7 review process. Later increments addressed things like
8 storing things away into permanent storage and also within
9 the search capability you need to have once you start
10 building some volume into the system.

11 In December 1991, we started nearing our first
12 increment, which was permanent office automation and
13 document review increment and started deployment in July of
14 1992. In December 1992, we essentially created the uniform
15 user interface or started the uniform user interface across
16 the enterprise. It was complete and we are currently in the
17 coding and integration phase of that for the deployment in
18 early 1993.

19 In terms of what is in it, some worked long and
20 hard on an acronym, intuitively what it meant and also it
21 also meant something spelled out, such as information
22 storage, retrieval, management system. What it got straight
23 for us is nationwide distributed information management
24 document image, imaging our records archival system.

25 Currently, we provide, as I said, the document

1 creation, dissemination and review using work group
2 processes. Then, as I said, we are building the future
3 increments to address the pre-licensing records management
4 process that provides state-of-the-art capability in the IRM
5 environment.

6 MR. SILBERG: What do you mean by work group
7 computing concepts?

8 MR. HALLNOR: This is where you have the
9 capability to have multiple authors working on one document.
10 They create work groups by access rights. So all members of
11 the work group have access to certain material. You can
12 create your own databases. You have concurrent authoring
13 capability and things like that.

14 It means to electronically do the work that you
15 normally do --

16 MR. BALCOM: Can I go back one slide to your time
17 table?

18 MR. HALLNOR: Yes.

19 MR. BALCOM: Can you give us an estimate of what's
20 next in the next couple of years?

21 MR. HALLNOR: In terms of Increment 3, we'll focus
22 more on the document storage, actually getting documents
23 into the permanent store, capture of documents, and related
24 items of capturing information. Increment 4, right now we
25 still have not laid out the detail functional things, but

1 Increment 4 is directed towards the search capability.

2 MR. BALCOM: That's what I was getting at. The
3 full text search capability wasn't originally part of
4 InfoSTREAMS.

5 MR. HALLNOR: Yes, there is one. The difference
6 between InfoSTREAMS and LSS, I believe, and I will address
7 that a little bit later, is in terms of the capacity. I
8 believe that InfoSTREAMS users, which are primarily
9 generators of the documents, they would inherently use the
10 text search capability, no different than what people that
11 are using the search for supporting the license hearing
12 process.

13 MR. BALCOM: I've heard you talk about Increments
14 3 and 4. Do you have any time associated with that?

15 MR. HALLNOR: We originally had a time schedule
16 that would have Increment 4 completed about two-and-a-half,
17 two years from now. Of course, it depends on what we decide
18 to do here. As I will stress later on, it's kind of
19 important that we get some direction findings in terms of
20 LSS' interest in using the system, in that there are not
21 functional issues, but capacity issues.

22 There are capacity issues that have to be
23 addressed in the architecture; not that it cannot be done,
24 but it's nice to know upfront, because if you don't know
25 upfront, then you may sign yourself into a back alley.

1 MR. BALCOM: Would you say a little bit more about
2 capacity? I am going to guess that this system is going to
3 dramatically -- the LSS requirement is going to dramatically
4 impact the original capacity issues that you have designed
5 for within DOE.

6 MR. HALLNOR: DOE, we estimate is going to have,
7 based on the SAIC study, which was done a few years ago, we
8 estimate that DOE will have processed between 75 and 80
9 percent of all holdings that go into LSS. In addition to
10 that, DOE has processed additional material that's outside
11 the LSS realm. That will all be done with this system.

12 So the major difference is not in terms of
13 management of the data going through. It is the on-line
14 holdings and also the search capacity, in terms of how many
15 searches can you do and what kind of searches can you do.

16 Right now the target that InfoSTREAMS has is five
17 million pages on-line, because we would typically be looking
18 at a time slot window that will address documents in a
19 certain period of time and when it's finished, put them off
20 into the archive.

21 We estimate, based on the SAIC study, a minimum of
22 40 million pages in the LSS and I personally believe that
23 there will probably be substantially more than that, but the
24 architecture we have assigned is capable of handling that by
25 expansion.

1 MR. SILBERG: When you say five million pages on-
2 line.

3 MR. HALLNOR: Right. That is you can get --

4 MR. SILBERG: How does that --

5 MR. HALLNOR: You can get at a page within one --
6 probably less than 30 seconds.

7 MR. SILBERG: Thirty seconds, did you say?

8 MR. HALLNOR: Less than 30 seconds. The typical
9 search times will be five to ten seconds.

10 MR. BECHTEL: You're talking about a rolling
11 timeframe. What happens to the material that's archived?

12 MR. HALLNOR: It goes out to storage and it's
13 still managed in the sense of it now -- the material is
14 stored, what is on the storage can then go on.

15 MR. GRASER: Dennis, the concept behind five
16 million pages always had the assumption that the balance of
17 the materials that have already been completed, once we
18 delivered them to the licensing support system, we wouldn't
19 need to keep them on-line, because if we needed them again,
20 we could go into the LSS.

21 The LSS would always have them. All we needed to
22 keep on-line was the documents we needed for the immediate
23 sections of the license application that we were working on
24 at any given time. But if you're going to use the
25 InfoSTREAMS to do double duty, that assumption doesn't work

1 anymore.

2 MR. CAMERON: Are there any significant user
3 interface implications from the point that you made earlier;
4 that is the typical InfoSTREAMS user being the generator of
5 a document will use different search patterns than someone
6 who is looking from an archival LSS perspective?

7 MR. HALLNOR: In terms of searching, we will
8 address that in more detail tomorrow. In principal, the
9 only difference I see is in terms of the back-end capacity,
10 moving data around.

11 MR. CAMERON: So it quantities and movement.

12 MR. HALLNOR: It's quantities more than complexity
13 of search or type of search or anything like that.

14 MR. SILBERG: When you say the five million pages
15 on-line, that's for InfoSTREAMS purpose.

16 MR. HALLNOR: Right.

17 MR. SILBERG: If it becomes LSS within
18 InfoSTREAMS, then you have to have all the documents on-
19 line.

20 MR. HALLNOR: We have to have all the LSS
21 documents on-line, plus whatever documentation DOE has as
22 internal DOE documentation.

23 MR. GRASER: That's under Option 3, if, in fact,
24 Option 3 is acted on.

25 MR. HALLNOR: Right. But I want to stress,

1 though, that that documentation will be segregated. There
2 will be a number of access levels assigned to each
3 individual using the system. We know that these systems
4 work because we've built several of them already to other
5 customers.

6 MR. ALEXANDER: Did you say that LOTUS NOTES is
7 the foundation software for the whole system?

8 MR. HALLNOR: No, no. This is just for Increment
9 1, which was a quick way to get out the work group concept,
10 to get work groups to work together and to establish the
11 manner of document review by sending electronic copies by
12 attachments through the system and people could work on
13 those. I was a convenient vehicle.

14 It turns out that, in my terms, LOTUS NOTES is --
15 what you've put in here becomes LOTUS NOTES-specific and
16 it's very hard to get it out again without losing formatting
17 information.

18 MR. ALEXANDER: What is the foundation software?

19 MR. HALLNOR: The foundational software is --
20 well, let me get into --

21 MR. ALEXANDER: I don't want to rush you ahead.
22 If you're going to answer it later on, fine.

23 MR. SILBERG: Before you get off that slide,
24 though, you said Increment 1 is essentially office
25 automation and desktop stuff.

1 MR. HALLNOR: Right.

2 MR. SILBERG: What's the description of Increment
3 2?

4 MR. HALLNOR: Let me try that on the next chart.

5 MR. HENKEL: I've got a couple questions here,
6 too, if I could. First of all, have there been any cost
7 estimates for this overall system? I assume there have
8 been.

9 MR. HALLNOR: There have been. I don't have those
10 figures off the top of my head.

11 MR. HENKEL: I would really appreciate seeing
12 those, when possible. Also, I assume there was some
13 decision analysis documentation done when deciding to go
14 with something like InfoSTREAMS as opposed to other options.

15 MR. HALLNOR: What other options are there?

16 MR. HENKEL: Doing business the way it's been done
17 all along, for one option.

18 MR. HALLNOR: Paper.

19 MR. HENKEL: That is an option. That is an
20 option. I'd like to request a chance to see some of that
21 documentation.

22 MR. HOYLE: You're questioning whether DOE thinks
23 it had the option just to continue with paper for its own -

24 -

25 MR. HENKEL: I'm saying that there could have been

1 other options besides just paper. I'm just saying that
2 there are other options besides InfoSTREAMS. To say that
3 InfoSTREAMS is the only way that DOE can do business for the
4 next decade is a pretty narrow-sided outlook.

5 MR. HOYLE: I understand that, but this Committee
6 doesn't have the focus on what DOE is doing for its
7 documents. I'm trying to get it in the context of what
8 we're doing.

9 MR. HENKEL: Except that this InfoSTREAMS is now
10 becoming the basis of the LSS. If you prefer I question it
11 outside this Committee, I'll do that.

12 MR. HOYLE: No, no. I just wanted to be sure, in
13 my own mind, I knew how we were entering the path for more
14 information.

15 MR. HENKEL: My thought process here, and I hate
16 to be the only one focusing on cost here, is that rather
17 than a \$63 million cost savings, what we're really doing is
18 paying for a much more expensive LSS, when you consider the
19 cost of the InfoSTREAMS system and the LSS together.

20 MR. CAMERON: You mean might be paying for a more
21 expensive LSS.

22 MR. HENKEL: Might be. I would like --

23 MR. CAMERON: That remains to be seen, but that's
24 the --

25 MR. HENKEL: You're correct.

1 MR. CAMERON: -- point of your question.

2 MR. SILBERG: You can't know whether there are
3 cost savings until you know what the basis is.

4 MR. GRASER: There was a detailed breakout of the
5 total cost that resulted in \$63 million of cost savings.
6 There was a detailed breakout of the costs that were
7 associated specifically with DOE's requirements to do what
8 it needed to do anyhow to meet its records management
9 requirements. There was a separate breakout that identified
10 that amount of the activity that was specifically towards
11 meeting LSS-specific requirements.

12 That information I'm sure Gerry Cranford and Jim
13 Shields maintained that information, but that was in the
14 original cost backup information in the backups that were
15 provided to the Technical Working Group.

16 So if you really wanted to see the delta costs
17 over what we would normally expect to be incurring for our
18 own internal records management versus the add costs of the
19 offsets for what it would take to make that LSS, the
20 financial analysis is available and it was done by the
21 Technical Working Group and that is in your possession
22 already.

23 MR. HOYLE: I will make sure that the Committee
24 members get it.

25 MR. HOLDEN: Would those costs include in-line

1 users? For instance, I'm thinking of 20 or so tribal
2 governments and what it would cost them to access the
3 hardware, software, so forth.

4 MR. CAMERON: I don't think it included access
5 user costs, did it?

6 MR. GRASER: It was directly analogous to the cost
7 elements that were in the original \$200-odd million estimate
8 from the SAIC study. So the same degree of treatment was
9 given, the same assumptions were made in terms of how much
10 cost would be coming from the waste fund versus how much
11 would be expected from an individual participant. All of
12 those assumptions were the same.

13 MR. SILBERG: I guess the relevant question is
14 whether the costs that would be borne by individual
15 participants would vary if you put LSS within InfoSTREAMS as
16 opposed to dealing with it the way the Subpart J intended to
17 deal with it. I think that's the relevant question.

18 MR. GRASER: All of the alternatives were priced
19 out. At least all of them that ended up in the final
20 cluster. Options 1 and 2 offer varying degrees of
21 reusability and you can see the delta between if we only
22 intended to attempt to utilize the capture system and some
23 of the retrieval software and then Option 2 and then Option
24 3.

25 So all three of those were costed out and you can

1 look at those and make analyses and comparisons.

2 MR. HALLNOR: Let's proceed on with the functional
3 architecture here. Because of the functional hierarchy,
4 InfoSTREAMS does not vary from the way we see LSS looking.

5 Create records package, program records, access
6 documents, those are the major functional elements.
7 InfoSTREAMS, in my mind, falls a little bit to the center of
8 gravity somewhat to the left side here for program records
9 and access documents. LSS is clearly falling a little bit
10 more to the right for the access of documents.

11 In this chart, the black in the rectangular areas
12 illustrates what has been accomplished to date. That is
13 Increment 1 that is now implemented now. We are working on
14 Increment 2.

15 MR. SILBERG: What would that cover on this chart?

16 MR. HALLNOR: We are starting to create -- it's
17 not really creating records yet. It's concentrating on the
18 program license and generate the documents. What we're
19 doing is we're beginning to collect the header information.
20 We do some minimal duplicate checking in the system and we,
21 of course, store the documents that are generated in the
22 native form at this time for WordPerfect files and LOTUS 1-
23 2-3 spreadsheet files and so forth.

24 We also have the distribution of documents. We
25 have the document search and retrieval, where we -- search

1 and retrieval, in this case, means that you can do searches
2 on the header data. We do not have the text search in now
3 and will not until a later increment.

4 Then we have document access and control built
5 into the system such that it cannot override the system and
6 so forth. Of course, we have the communication to be able
7 to do the distribution documentation within InfoSTREAMS.

8 In terms of specifics here, I want to point out
9 that the header creation, as Dan pointed out earlier, we're
10 looking at tools there to aid in the development of the
11 header, by doing some key searches and so forth and putting
12 some expert systems in. Right now we have very
13 knowledgeable people that go by a set of rules on assigned
14 documents and we think we can help them by providing the
15 sorting and then let them do the fine sorting that is
16 required.

17 We will also start very quickly to scan images
18 into the system from paper and then look into using OCR, and
19 Dr. Nartker will talk a little bit about that tomorrow. The
20 duplicate check will be enhanced in Increment 2. Once the
21 full text search is in place, it will start to be
22 implemented.

23 In terms of the data, we have -- on the lefthand
24 side, you see a number of the users themselves, other
25 participants and external originators cannot get access to

1 the systems. The InfoSTREAMS users that create internal
2 record packages using the InfoSTREAMS systems, they do
3 distribution, control distribution list. We have set up a
4 list that has known individuals on it that is used to
5 distribute the documents for access control and so forth.

6 These lists are not out by the authors. I have to
7 actually requests lists to be sent out for specific
8 purposes. We have good control over those items.

9 In terms of items coming in from the outside, we
10 have a room that accepts paper copies that will be scanned
11 in and we will also set up stackers for putting today in
12 electronic form and that is currently being done.

13 The program item database is our structured
14 information holding for management of documents. It
15 contains essentially all the other LSS-relevant fields and
16 this is the database in the picture. It is implemented and
17 gives is the capability to structure data, title, date of
18 creation, author, organization, key words, abstracts.

19 Also, it contains the access controls that each
20 individual user is assigned, so that we don't give
21 unauthorized use or access.

22 What we also associate with that is a disposition
23 process that we will put into place so that we won't hold
24 records which are leaving, but only beyond disposition
25 records in the LSS. Out of the program item database, we

1 transfer information to the LSS, program records, as we also
2 do on the document holdings.

3 Recipients of the data, of course, are other
4 InfoSTREAMS users, other participants, external data
5 requestors, NRC, LSS, and our office, specifically data on
6 microfilm.

7 MR. ALEXANDER: Have you done any studies to date
8 or any models to determine if this system is -- the
9 scalability of this system -- in other words, to be able to
10 grow it to support the LSS with what you're currently
11 building?

12 MR. HALLNOR: I believe so. It may be clearer
13 from the next picture when I go through the structure.

14 MR. ALEXANDER: You have modeled it. You know
15 it's going to work and you're not going to have problems
16 with capacity, storage or anything.

17 MR. HALLNOR: The storage is not an issue. The
18 issue is always the communication, how fat is the pipe.

19 MR. ALEXANDER: Are you talking about T1 lines or
20 T3 lines or what are you talking about?

21 MR. HALLNOR: The system is more likely to talk on
22 T1, especially when we actually shift compressed images
23 around. Right now, primarily we've made files which are
24 WordPerfect files, so forth, and we are quite confident --

25 MR. ALEXANDER: The system won't stagger or

1 crumble or response time won't go to minutes instead of 30
2 seconds.

3 MR. HALLNOR: No. Let's get into the physical
4 architecture. What we did very cautiously is to select a
5 system that's -- it's a distributed system used in the
6 architectures. The process network, those whole enterprise
7 is going about mapping transactions and transactions are
8 opened and closed. So you have a full event within one
9 transaction.

10 MR. ALEXANDER: What is the protocol for your
11 client/server?

12 MR. HALLNOR: Protocol in terms of --

13 MR. ALEXANDER: Client/server protocol.

14 MR. HALLNOR: You mean the network?

15 MR. ALEXANDER: Is it Z-39.50 or what is the
16 interface between the client and server?

17 MR. HALLNOR: Right now we're sitting on RPX for
18 the target. The servers map between themselves. We heading
19 for an XR-400 and XR-500 compliance.

20 In terms of the use and the service and the data
21 management library, those are items that are written by us.
22 So they are uniform and tie together the office automation
23 tools in packages, like WordPerfect, Spreadsheets 1-2-3. We
24 have DBASE for the database and a graphics package, all PC-
25 oriented things.

1 The reason we selected PC is that that's a
2 platform that can be had, a very capable machine for less
3 than \$2,000. It is probably, in my opinion, right now,
4 marginal to run images because the image will take some time
5 to put up. But in the timeframe we're looking at for the
6 LSS, even four years from now, you'll be able to buy a 100-
7 MIP machine for the same \$2,000.

8 The world is changing rapidly in that arena.

9 MR. SILBERG: Pardon my ignorance. What is COTS?

10 MR. HALLNOR: Commercial off-the-shelf. These are
11 packages you buy and don't modify. What we do is we use
12 what is known as application program interface to call them
13 up. We write a piece of code that launches WordPerfect with
14 a particular file so you get right into the documents.

15 MR. BALCOM: It's Egghead software.

16 MR. HALLNOR: Yes, Egghead software.

17 MR. SILBERG: What is that INGRES at the bottom?

18 MR. HALLNOR: INGRES is a large database
19 management system. The client talks to the back-end server
20 through a local area network or a wide area network, and
21 we'll look at a little bit at the network in a minute here.

22 They do so through a Digital Equipment Corporation
23 product that is -- two products. One is called distributed
24 services library and one is called storage monitor. The
25 distributed service library is a transaction-oriented system

1 that allows you to access databases on the back-end server
2 in the transaction mode. That does the reviewing of
3 requests. It does the distribution of requests on the
4 database in the background and works quite effectively.

5 They actually have used that in some banking
6 systems, large transaction systems. I think this is the
7 type of software you will see more and more of. They
8 essentially provide you the protocols and transport
9 mechanism in the system.

10 The storage monitor is a specific piece of
11 software that hides the operations of a complete cache
12 management, cache being fast access and data, and the
13 optical system that you store archival data on. So you go
14 in and ask for a document or you put a document into the
15 system and the storage monitor goes out and finds it for
16 you.

17 The storage monitor itself has the capability of
18 holding ten-to-the-18 different items. It's going to be a
19 while before we run out of space there. Of course, you can
20 put multiple of these on the back end so you'd have the
21 flexibility.

22 MR. BALCOM: Which increment are you looking at
23 here with this particular --

24 MR. HALLNOR: This is Increment 2.

25 MR. BALCOM: Okay. Are we going to get to three

1 and four here later?

2 MR. HALLNOR: This is three and four, as well.
3 The only difference is that in this picture, you do not have
4 a separate system for the text search ending. That is the
5 only thing that's going to be added.

6 MR. BALCOM: That was going to be my question.

7 MR. HALLNOR: I will come to that tomorrow. On
8 the server side, when you get a transaction from the client,
9 the client can be located anywhere where there's access to
10 the LAN or we may also consider a dial-up access as a means
11 to get into the system.

12 The services library, before it gives you access
13 to any of the data, first of all, you have to be able to log
14 onto the system. That is standard system security features.
15 You've got to have a password to get on the system.

16 Even so, when you do a request for a document, it
17 checks your access code against the access code that's
18 stored on the system against the document access level to
19 prevent you from getting a piece of data that you should not
20 have.

21 Furthermore, each transaction to do with moving a
22 document, putting in a document or whatever is logged in an
23 audit trail so we have a record of the activities, major
24 events in the system. In addition, we have implicitly a
25 content audit because in the database, in the comments and

1 so forth, those two documents are captured, as well.

2 The document storage, as we see it today, consists
3 of three elements monitored by the storage monitors. So we
4 have very little to do with it, which is unfortunate,
5 because that's a complex type of code. We have cache. This
6 is the storage you put the document in first and also
7 retrieve documents from.

8 If you try to retrieve a document that is not in
9 the cache, the cash is the fast magnetic storage access,
10 you're talking about fractions of seconds here. If it's not
11 in the cache, the storage monitor automatically goes out and
12 searches its own jukebox, the one it's attached to the
13 certain location you are on, tries to find the document
14 there, finds it, it downloads to the cache and then moves it
15 in automatically.

16 If it doesn't find it at the site to do the
17 initial request, it goes out and searches companion storage
18 monitors and you don't have to do anything. Furthermore,
19 not only does it manage an optical jukebox system, it also
20 manages an optical tape. This is a brand new thing, to tell
21 the truth. On a 12-inch reel, you can store one byte of
22 data. Two reels, \$20,000, would hold close to 15 million
23 bytes, images. The cost of that is less than 500ths of a
24 cent a page.

25 This is just the beginning. Storage costs would

1 drop so fast they would provide optical storage at less than
2 four cents a page. IBM is working with little green lasers
3 that will have a factor of five reduction, less than one
4 cent in less than four years.

5 Ten years, the LSS is going to get out there, it
6 will be down to thousandths of a cent per page. This is
7 very inexpensive storage. The issue is always going to be
8 can we afford to move the data and that is where we have to
9 think of things that may be other than direct on-line
10 access. You may be able to have on-line access for
11 relatively modest amounts of data, but if you want -- you
12 may want to have another means of distributing it, including
13 a search ending with the data.

14 In terms of the problems raised in the DOE
15 networks, it's interesting to note that the network has no
16 amplifications which are of interest to the LSS, as well.
17 It's an easy task to have the existing DOE network become
18 the backbone of an enlarged LSS.

19 So looking at InfoSTREAMS versus LSS, what are the
20 changes there? As I tried to imply, InfoSTREAMS is
21 primarily centered on the document generation, the actual
22 creation of documents, review process, the access of data
23 sufficient enough for you to do your work in creating a
24 document to respond to a specific request and also review
25 the data within the InfoSTREAMS environment.

1 The LSS is primarily a document access, document
2 search and substantially higher capacity complications. So
3 what we have to do is we have to increase the capacity to
4 handle the LSS users. Right now, in the SAIC study, as I
5 recall, there was a number of around 250 of those mentioned.

6 However, I think that is not probably 250 persons.
7 I think that is 250 connection points. That would be a much
8 larger body of people.

9 You would increase the on-line holdings, increase
10 the text throughput and database search endings in the LSS,
11 we can do that parallel.

12 What I want to stress is that we probably want to
13 look at the decision here because the longer InfoSTREAMS
14 goes on, the DOE --

15 MR. CAMERON: In terms of that, I don't know if
16 you or Dan are going to give us an idea at some point about
17 what is the -- Dan, you mentioned a couple years this
18 morning when you were talking. Do you have a timeline on
19 this whole thing about when we should make a decision about
20 using InfoSTREAMS all the way out to when the LSS might be
21 available?

22 You mentioned ten years a couple minutes ago and
23 I'm just trying to get an idea of what we're talking about.

24 MR. HALLNOR: That's the life span.

25 MR. CAMERON: I see.

1 MR. HALLNOR: That's generating documents before
2 the license application.

3 MR. GRASER: I think from the time at which
4 somebody says, okay, move forward and start thinking in
5 those terms, my recommendation would be that once we get the
6 go ahead to do something like that, that we come back to the
7 ARP with a specific schedule, a more specific roll-up of the
8 anticipated costs and whatever else is needed in terms of
9 giving the ARP something more than discussing a potential
10 situation.

11 At that point, we would have to be saying to
12 ourselves, all right, this is going to be our plan, this is
13 our implementation plan, because obviously it's in
14 everybody's best interest to know when they can expect the
15 system; is it going to be real or is this more smoking
16 mirrors. The way to do that is to have the opportunity to
17 do a correct implementation plan.

18 Well, however long it's going to take, it may be a
19 matter of six months because of the amount of groundwork
20 that has been already done just to look at the various
21 options and alternatives and the pricing and all the rest of
22 that. That may move out fairly quickly, but then it would
23 also require coming back and making a report on that
24 implementation plan, maintaining the consensus to move
25 forward and so forth.

1 Then once we do that, obviously, it becomes a
2 question of earmarking money within the Federal budget
3 process to support the budget that the implementation plan
4 was done by. So there are a bunch of little synergies that
5 have to go on there, but I would say it's a couple of years,
6 probably two years out before, even under the most
7 aggressive schedule we would take, that we would do all of
8 the things necessary that might have to be changed in terms
9 of verbiage in the rule for us to go out and do that
10 implementation plan, bring it back and present it and so
11 forth and get the money earmarked.

12 It might take us another whole budget cycle
13 because 1995 is already being formulated. So I would say
14 it's probably a couple of years out to be able to make it an
15 actually identifiable activity that people can say this is
16 LSS now and it's moving forward.

17 But I think we deserve the opportunity to do it
18 properly and to do what would be the equivalent of an
19 implementation plan for it.

20 MR. HALLNOR: I would like also to very briefly
21 address some forms of security. We are keenly aware of the
22 records, have them monitored, when it happened, what form,
23 so forth, and also being able to assure that the data -- our
24 protection mechanisms we have are such that the record
25 cannot be changed.

1 There are a number of technical solutions to that.
2 Many times, there's a simple solution. You have a
3 statistical file, snapshot, writing the file out to a media
4 and then say write once, many types of media, and that gives
5 you a fairly decent protection in terms that no one can
6 change anything on that without it being detected.

7 So combined with standard system security
8 features, access levels associated with each individual user
9 and all the using of write-only, I think it's easy to assure
10 that we have a process in place in order to assure the
11 records cannot be changed.

12 Furthermore, a big issue in these kinds of systems
13 is the signature issue. It has been successfully solved in
14 other fields. For example, banking shifts daily over a
15 trillion dollars around the United States on digital
16 signatures. It's the only record they have. The whole
17 national shipping is based on EDI, which is essentially an
18 encoded, encrypted signature profile. They know exactly
19 what is on each ship sitting out there at sea, which was
20 unknown when they used the paper systems.

21 So our belief is that any technologies that exist
22 today, secure signature, digital signature is being
23 developed and is on the verge of becoming a common standard.
24 We can assure that we have a signature electronic document
25 that is traceable to an individual and verified that that

1 individual signed, provided, of course, it doesn't give his
2 password or whatever method we use to someone else.

3 But we can't stop that, even in today's system.
4 If someone gives away his key, there is nothing we can do.

5 MR. SILBERG: Can I encourage you not to use the
6 word "guarantee?" Reasonable assurance or something.

7 MR. HALLNOR: Reasonable assurance, all right.

8 MR. SILBERG: I don't think anybody can guarantee
9 anything.

10 MR. HALLNOR: The problem is that this whole thing
11 is not strictly -- there are still legal parts about this.
12 It has been accepted in certain fields. It's also a
13 cultural step.

14 In conclusion, I think that InfoSTREAMS does
15 incorporate the state-of-the-art technologies. It is a
16 practical solution to all the requirements in the CRM.

17 MR. SILBERG: CFR.

18 MR. HALLNOR: CFR. It will increase productivity
19 and provide data and provide the tools for --

20 MR. BALCOM: Can I ask you a quick question going
21 back to the volume and client/server issues? I would think
22 TRW has worked with the intelligence community and that
23 maybe this is where your assurance about being able to
24 handle high volumes comes from.

25 MR. HALLNOR: In this type of process, we are

1 really handling data in blocks here. We don't do anything
2 inside the blocks until it's on client. This is very akin
3 to single processing, in a sense, having large volumes of
4 data streaming through massive architectures.

5 MR. BALCOM: In kind of layman's terms, can you
6 say that you're aware of other organizations that are
7 dealing with the volumes that we're looking at here?

8 MR. HALLNOR: There are some organizations that do
9 similar things. Typically, a terminal-oriented structure
10 centered around a mainframe where you have direct terminal
11 connect, and that is fine for some reasonable limit of
12 distances and they are typically characterized -- there's
13 very, very few systems that are image-based out there today.

14 Also, the image -- essentially, I guess over the
15 last two or three years, they were small systems from work
16 group type of environments. The other thing is that we're
17 also talking about access restrictions based on who you are.
18 That typically is not built into the existing document
19 system. You may have different categories of documents, but
20 not the flexibility we have built in in terms of what your
21 profile is.

22 MS. LARIMORE: Sally Larimore, Nuclear Waste
23 Division, Clark County. My question is a followup on the
24 architecture with respect to the network. Could you give
25 some clarification in your plans in terms of handling the

1 obvious contention for CPU cycles in the network throughput?
2 It wasn't clear what sort of issues or what sort of analysis
3 you've given to the issues of throughput, both at the
4 communications hubs and also in terms of being somewhat CPU-
5 bound.

6 MR. HALLNOR: I don't believe you will be CPU-
7 bound five years from now. We see other things coming on-
8 line now. I don't think T1 will be the leading choice five
9 years from now. I think ATM will be. You buy things by how
10 much you actually use the system. If you need 20,000
11 packages, you buy 20,000 packages; if you need a million
12 packages, you buy a million.

13 You don't put out the T1 line there that sits
14 empty most of the time.

15 MS. LARIMORE: Your architecture doesn't quite
16 give me a clue in terms of the diagram you have for the
17 physical architecture with respect to using things such as
18 network servers or what sort of parallel processors for the
19 server you might use or what kind of fault tolerance the
20 system will have in terms of reliability or recovery from
21 catastrophic failures and things like that.

22 MR. HALLNOR: I have not addressed that here, no.
23 That's much more detailed.

24 MS. LARIMORE: Will that be addressed in Increment
25 1, Increment 2, or when?

1 MR. HALLNOR: That is inherent in the architecture
2 and we have not presented any reports on that at this time.

3 MS. LARIMORE: I guess my confusion was some
4 elements are represented with some detail and others are
5 not.

6 MR. HALLNOR: You, as a user, what you will have,
7 you will have a client that is maybe attached directly
8 through an ATM linkup or a dial-up linkup, potentially, and
9 book into our server side directly.

10 MS. LARIMORE: Correct.

11 MR. HALLNOR: Or you may have a network that you
12 sit on in-house and it's your network and then you put that
13 network through an ATM or T1 or something like that.

14 MS. LARIMORE: Sure. I see the client side. I'm
15 not seeing the server side of the architecture. Could you
16 perhaps provide us with some of those details and, also,
17 could you tell me what your thoughts are with respect to
18 accessibility? You said you were going to plan to hook up
19 to the DOE network as a backbone. Are there any plans to
20 set up a connection through INTERNET?

21 MR. HALLNOR: We have not looked at INTERNET, no,
22 at this time. There's nothing to prevent us from doing
23 that.

24 MS. LARIMORE: So there are no constraints from
25 the DOE side that you're aware of.

1 MR. HALLNOR: No. It's a matter of how much you
2 would spend on this.

3 MS. LARIMORE: Well, it looks rather limited when
4 I look at the map for the geographic base backbone that you
5 have.

6 MR. HALLNOR: That is today's map. That is
7 today's existing lines. Five years from now, you're going
8 to get it from the phone company, get the ATM and get the
9 address to where you want to go. It will not look like this
10 five years from now.

11 MR. ALEXANDER: I think what she's saying right
12 now is it doesn't look that way. You can get on INTERNET
13 almost anyplace in the world, let alone in the United
14 States, and it's not that expensive.

15 MS. LARIMORE: It looks limited now in that
16 regard.

17 MR. HALLNOR: Not to us, because we deal with the
18 people who are hooked up to these. We're not saying that we
19 will not supply that commercial or INTERNET service for
20 anyone else who wants to hook up.

21 MS. LARIMORE: I understand. It's just you had
22 earlier said that you thought of LSS as you built this
23 architecture. So it seemed like a major deficiency not to
24 be able to get into INTERNET.

25 MR. HALLNOR: I'm talking about InfoSTREAMS. LSS

1 will expand into whatever we need.

2 MR. GRASER: I'd just like to expand on that a
3 little bit. The Department of Energy users at headquarters,
4 for example, already do have a mechanism to get access into
5 INTERNET. But within our program, INTERNET is not used as a
6 primary method of communicating back and forth between
7 program participants, but it is done.

8 Today, I believe we have a number of participants
9 that are still currently using some INTERNET connectivity
10 for E-Mail type communications between the Project Office
11 and the various laboratories.

12 So some of that capability we already have within
13 the program, but it is not an essential highlight feature of
14 the InfoSTREAMS design.

15 MS. LARIMORE: Okay. I still don't understand,
16 because without -- it's not clear to me without the INTERNET
17 accessibility how the users, from the LSS point of view,
18 would make most use of the system. It seems like something
19 they wouldn't be able to capitalize on very easily.

20 MR. HALLNOR: It's something that should be
21 incorporated in the architecture.

22 MR. HOYLE: Thank you very much, George. The
23 remainder of the afternoon will be left to hear from Gerald
24 Cranford on the compliance assessment. Why don't we take a
25 short break and then have Gerald give us that presentation.

1 [Recess.]

2 MR. HOYLE: Please take your seats and let's get
3 started. Let's have our attention given to Gerald Cranford.
4 We're going to talk about the most important aspect of these
5 discussions, the LSS compliance assessment and audit
6 program. Gerald?

7 MR. CRANFORD: Thank you, John. Before I begin,
8 I'd like to say that what I'm going to present is a draft
9 proposal. It's something that we've been working on over
10 the last year or so. Of course, the compliance assessment
11 program that we were thinking about at that time was
12 tailored to the existing rule.

13 Of course, if we do change the rule, then the
14 compliance assessment program is going to be different. So
15 my presentation today is also tailored around the paper that
16 we attempted to send out. I believe we tried to Fed Ex it
17 last Thursday. So some of you may have received it, others
18 probably not. But I do believe that it's part of your
19 handouts that were at your chairs this morning.

20 We talk about standards, we talk about other
21 issues, but keep in mind that they're strawman standards.
22 The standards that ultimately I hope we come up with are the
23 standards that would be developed through interaction with
24 this group.

25 This slide addresses the LSSA's responsibility as

1 far as the compliance assessment program is concerned. As
2 the bullets speak to the problem, I'm just going to kind of
3 add to those. Of course, you can read the bullets.

4 The first one, in order to assure a successful
5 LSS, we need to clearly define the participation rules so
6 that they are understood and hopefully achievable. As far as
7 the guidance is concerned, we need one single source to
8 establish guidance to assist the LSS participants as we wind
9 our way through this program.

10 We need to evaluate the participant performance
11 against requirements. The LSSA must be able to ensure that
12 each participant is adhering to the requirements. We need
13 also to oversee the DOE design. This is probably the one
14 singlemost important function that the LSS will perform from
15 an operational perspective. Once the LSS is up and running,
16 then that's probably the most important thing that this
17 office is going to be responsible for.

18 We also need to certify the participant compliance
19 or the participant non-compliance, what corrective measures
20 would be required to bring non-compliance into compliance,
21 if that does occur.

22 What information is needed for the LSSA
23 facilitation of participant access to all relevant
24 documentary material? We need adequate information for
25 planning. We need workload estimates. We need to be able

1 to schedule our audits to establish sizes for QA samples and
2 so forth.

3 We need to be able to check against compliance
4 plan schedules to make sure that the LSS database is being
5 updated on schedule and that the proper information is
6 contained in the LSS database. We need a means to ensure
7 that the LSS is an accurate and complete database.

8 In order to do this, we would perform QA audits of
9 the LSS database. We need to be familiar with each
10 participant's operation in order to perform the necessary
11 checks to ensure compliance.

12 MR. SILBERG: Do you read the current rule as
13 requiring certification of non-DOE participants or is this
14 something that you want in the future?

15 MS. SHELBURNE: The rule currently requires each
16 participant to certify that they are in compliance. That is
17 in the rule. What we intended in order to back up that, to
18 tell the Commission and everyone else that the database
19 integrity was to audit the participants and audit their
20 incoming material. It is not in the rule that we evaluate
21 each participant, other than DOE on a periodic basis. We
22 are taking that as an implied function in order to assure
23 the accuracy of the database.

24 That could be brought up in the rule to clarify
25 that point.

1 MR. CRANFORD: We're preparing a commitments
2 document that will enable us to establish that each of the
3 participant's, plus DOE's and NRC's responsibilities vis-a-
4 vis the rule are spelled out. We need to propose standards
5 and non-compliance thresholds.

6 Again, the standards will allow us to -- it will
7 give us something to audit against, but the standards
8 themselves are something I think this group should be
9 involved in establishing.

10 MR. SILBERG: What about the group being involved
11 in determining whether there ought to be such audits?

12 MR. CRANFORD: Yes. Yes. To the extent we build
13 a usable tool, then we will have done a lot better job. We
14 need to define a method for measuring participant
15 performance.

16 The next several slides that we'll see, we will
17 use as an example one of the commitments and run it through
18 what we would propose would be needed in order to measure
19 that particular commitment.

20 The bottom line is we need your review and
21 comments. I think this is an important component of the
22 compliance assessment program, the fact that we get
23 participation from the LSSARP.

24 This slide shows the four possible areas of LSS
25 participant commitment. Group 1 is the one that I'm going

1 to take you through. That's the one that identifies the
2 document universe, the screening, etcetera. Group 2 talks
3 about the physical condition of the submitted materials,
4 header prep, unitization, those types of issues.

5 Group 3 is participant management requirements and
6 conditions for gaining and maintaining access to the LSS.
7 It describes what each participant must do to manage their
8 commitments. Group 4 will describe DOE's obligations
9 relative to the design development and operation and
10 maintenance of the LSS.

11 I'll talk about things like access, predictability
12 of performance, user assistance, user assistance for
13 submitting material, user assistance for searching the LSS,
14 those types of issues.

15 I want to point out that this is not an exhaustive
16 list. It's an illustrative list that shows -- for this
17 example, I want to key in on Item 1A, which is the document
18 universe identification and shows the commitments that we
19 would propose for this particular item.

20 The participant management requirement for this,
21 I'll just pick on a couple. The 3A, the designated LSS
22 official, this is the person responsible for assuring and
23 certifying compliance with the LSSA. It would also talk
24 about the compliance program plan, LSS audits, those types
25 of things.

1 The definition of each commitment must be agreed
2 upon by the LSSARP. This one, as I said, talks about the
3 document universe identification that defines the conditions
4 for identifying the documents that will be contained in the
5 LSS for that particular participant.

6 This standard says the DLO must report all
7 existing and potential LSS materials. The rationale behind
8 that is if we're not aware, we do not expose even a single
9 potential source, that significant amounts of information
10 will be maintained in the LSS. So it's critical that we
11 define the relevant document that was contained in the LSS.

12 This slide shows the non-compliance reporting
13 threshold for the document universe identification. The
14 threshold is the standard in which the LSSA will report
15 deficiencies to the Commission; in other words, non-
16 compliance.

17 This slide shows the compliance assessment method
18 for determining what the LSSA would do in terms of working
19 with the DLO to investigate claims that a particular set of
20 documents might not be in the LSS, things like on-site
21 audits or anything else that the LSSA would have to do to
22 determine whether or not there was compliance with this
23 particular item.

24 This slide depicts the LSS participant's
25 compliance program plan to assure that all participants'

1 programs are governed by the same set of rules, standards,
2 guidance, and so forth. It sets the stage for the
3 participant involvement in the LSS program.

4 This presentation, to the extent possible, is
5 tailored around the paper that hopefully you received. This
6 is the sequence of events for the LSS participant compliance
7 program. The first thing would be the participant commits
8 to providing a plan and provides limited high level plan
9 information. In other words, you would tell us the --
10 identify your DLO, your designated LSS official.

11 The second step would be for the LSSA to issue
12 guidance on the format and content of the LSS participant
13 compliance program plan. With LSSARP review and comment,
14 the LSSA would issue specific guidance, present clear
15 objectives, outline required content of the plan itself.

16 The third point, the LSSA will review and request
17 modification, if needed, and approve the plan itself. The
18 participants will be audited against these plans. The
19 individual plan will be the basis for the LSSA audit.

20 The participant's adherence to the plan better
21 ensures an accurate and complete LSS database. It will be
22 the responsibility of each participant to provide as
23 accurate a plan as possible to ensure ongoing compliance
24 with the LSS.

25 The plan itself will contain three key items. It

1 will identify the participant management, LSS management,
2 identify the designated LSS official, etcetera. There will
3 also be a materials division plan which will have estimates
4 of document backlog, total population of documents, current
5 and projected, priority document loading schedule is
6 required. Then there will be an implementation plan, how
7 the participant plans to participate, including processes,
8 tasks, subtasks to be performed, staffing plans, training
9 plan, QC plan, things that are relative to the day-to-day
10 processing of the documents.

11 The next slide shows how the LSSA will evaluate
12 participant performance. First, do the proposed
13 requirements satisfy LSS requirements. This is not a
14 technical review. It's really a functional review of the
15 requirements as proposed by DOE.

16 LSS oversight of DOE development, operation and
17 maintenance of the LSS, this will be accomplished through
18 audits, on-site observations, quality assessment of the LSS,
19 and so forth. There will also be an LSS audit program.
20 Audits will be broken down into two categories; an adequacy
21 audit, which looks at the program plan from the standpoint
22 of the organization structure; the program design, document
23 processing, QC plans.

24 Then there will be process audits, which will look
25 at the operations themselves, the header prep, the

1 screening, duplication check, utilization, those types of
2 functions.

3 Finally, there will be an LSSA QA facility, which
4 will be a contractor-managed facility. It will be the QA of
5 the participant processing materials, how the participants
6 are processing material. We'll develop a random sampling
7 approach where we will look at particular records to
8 determine compliance with the program, particularly in the
9 areas of header preparation, image legibility, quality, text
10 format and accuracy, the linkage with other documents and so
11 forth.

12 As far as the LSSA role in the DOE design and
13 development of the LSS, we need to -- one of the key
14 functions there is the LSSA will review and approve
15 requirements with LSSARP advice. The LSSA will review and
16 approve based upon the functional needs of the LSS. The
17 rest of them are fairly self-explanatory.

18 Those are the types of auditing that we would
19 propose the LSSA do. Of course, as I said, manage the
20 audit, contractors, do periodic audits on the DOE
21 development of the LSS. Interim observation audits; if,
22 during a periodic audit, a particular operation appears to
23 be marginal, that might be something that we might -- yes.

24 MR. BALCOM: Would the LSSA also hire the audit
25 contractor?

1 MR. CRANFORD: At this point, yes. It would be
2 through regular government contracting.

3 MR. MURPHY: Let me just follow up on that. That
4 means, I take it, that the LSSA is focusing on DOE now. The
5 LSSA will itself direct, through a contractor perhaps, but
6 will itself directly audit DOE's implementation of the LSS
7 rather than audit DOE's audits of its own implementation.

8 MR. CRANFORD: Right. As Dave points out, I guess
9 it could be a combination of each, but keep in mind that we
10 would have a separate contractor working for LSSA who would
11 perform the audits.

12 MR. MURPHY: But the model I have in mind and I
13 think Kirk probably was referring to, as well, is that in
14 the technical QA program right now, the NRC observes DOE's
15 audits.

16 MR. CRANFORD: Right.

17 MR. MURPHY: You're saying that the LSSA is going
18 to be doing the audit.

19 MR. CRANFORD: Right, have an on-site presence.

20 MR. SILBERG: Why is there that difference?

21 MS. SHELBURNE: One of the major driving forces
22 was that the LSS Administrator was responsible for the
23 database. It's DOE's system, but it's NRC's assurance of
24 discovery for all participants. So we certainly looked at
25 what the technical program was doing, but where DOE was

1 responsible for the quality of their application, NRC, the
2 LSS Administrator is responsible for the integrity of the
3 database.

4 MR. SILBERG: Ultimately, NRC is responsible for
5 its decision, which is based on the adequacy of DOE's
6 information. So I don't know why you should be doing more
7 for this data than you are for the safety of the repository
8 itself. That just doesn't seem to make any sense.

9 MS. SHELBURNE: I think that's what the LSS
10 Administrator felt, given 10 CFR Subpart 2.

11 MR. CRANFORD: This slide talks about how the
12 audits of DOE would be done. In addition to the
13 requirements that DOE feels necessary for the LSS, the LSSA
14 would also develop requirements to ensure the successful
15 enactment of the rule. In other words, if there are things
16 that we would need to have done to ensure compliance with
17 the rule, then those requirements would be developed by the
18 LSSA.

19 I guess the real key point of this slide is the
20 last bullet, that audit results are key to LSSA
21 certification of DOE compliance. In order to ensure that
22 DOE is, in fact, in compliance with the rule, these audits
23 are essential.

24 This describes some of the activity at the LSSA QA
25 facility. For quality assurance review, just submitting

1 documentary materials, physical and relevancy. After
2 review, the participant submissions are accepted as
3 conforming to standards or rejected. If they can be
4 corrected by the LSSA, they will be. Otherwise, they will
5 be returned to the sending participant for repair.

6 We will operate this facility for the duration of
7 the LSS program. This is not a short-term, upfront -- yes,
8 Kirk.

9 MR. BALCOM: Quality assurance of documentary
10 materials. How about non-documentary materials and the
11 management of them?

12 MR. CRANFORD: Yes. It's really all materials.
13 As a matter of fact, I guess documentary materials, I think
14 of that as documents, period.

15 MR. SILBERG: Is this an audit type function? In
16 other words, are you looking at a sample of documents or are
17 you looking at every document?

18 MR. CRANFORD: This is a sample of the documents
19 at the QA facility, where we would be on-line to the LSS and
20 be able to query the LSS QA standard.

21 How and when will the certification take place?
22 We propose to certify -- I think the rule says -- does the
23 rule say every six months?

24 MR. SILBERG: Yes.

25 MR. CRANFORD: Every six months. So LSS

1 certification review compliance every six months. As far as
2 the other participants' compliance we see as perhaps
3 coinciding with the DOE certification schedule.

4 As I said, the results of the compliance is based
5 on the results of the audits and the QA facility evaluations
6 and non-compliance could result in loss of LSS access or
7 other appropriate actions.

8 We need and want your comments on this plan. We'd
9 like to hope that you would be able to send your comments to
10 us no later than November 1, 1993. We want you to send them
11 to Dave Drapkin. The address is here. Not too much more I
12 can say about that.

13 MR. SILBERG: Are you publishing this in the
14 Federal Register for comment?

15 MR. CRANFORD: I guess we could.

16 MS. SHELBURNE: Are you talking about the report
17 that we sent you?

18 MR. SILBERG: I mean you're asking for comments on
19 a document.

20 MR. CRANFORD: On the advice of the --

21 MR. SILBERG: Okay. This is an LSSARP request.

22 MR. CAMERON: Yes. I think that this November
23 request for comments has to be folded into the Panel's
24 discussion of what they want to send to the Commission.

25 MR. HENKEL: We would send our comments to LSSA

1 right now, right?

2 MR. MURPHY: We may reach consensus later on today
3 that November 1 is -- even November 1 is a draft date,
4 right? A draft deadline.

5 MR. CRANFORD: Yes, yes. Correct. We just picked
6 a date that may or may not be reasonable, depending how the
7 remainder of this meeting and tomorrow goes.

8 MR. SILBERG: And this is also based on
9 Alternative 3.

10 MR. CAMERON: Yes. That's why it has to be --

11 MR. MURPHY: No, that's not necessarily true, is
12 it?

13 MS. SHELburnE: Well, a lot of this program is not
14 Alternative 3 specific.

15 MR. SILBERG: You would have a compliance
16 assessment program under any alternative.

17 MR. CRANFORD: As a matter of fact, as I pointed
18 out in the beginning, we've already begun before this got
19 superseded by the study for Alternative 3. We're already
20 into developing a compliance program under the old -- under
21 the existing alternative.

22 The final slide. Obviously, we've got to include
23 an effective compliance program to give reasonable assurance
24 to the Commission, DOE, the participants that the parties
25 have entered the proper accurate mode of documentary

1 material and then it would be available through the LSS.

2 MR. SILBERG: Have you made any estimates as to
3 how much any of this will cost and how many people are
4 involved and what the size of this QA facility is and all
5 those other questions?

6 MR. CRANFORD: We've done some preliminary
7 costing. I think over a 12-year cycle, I think it averages
8 out to about \$3 million a year. Of course, it's based upon
9 what I just presented as far as the types of audits we would
10 do. Of course, the costs will be reflected in what we as a
11 group decide, as well. We can relax certain standards if
12 certain quality of document is not necessary. Of course,
13 that's going to lower the overall cost. No?

14 MS. SHELBURNE: No.

15 MR. CRANFORD: Okay.

16 MS. SHELBURNE: The standard -- if the standard
17 for ASCII is 98 percent or 99.5, that is a standard against
18 which we audit. Those standards for document submission,
19 document quality all will be proposed for your concurrence,
20 comments on the standards.

21 Once we start auditing, the cost will not vary.
22 It will only vary if the number of documents is less. If we
23 choose to do -- if you feel we don't need to do as many
24 audits as we planned. Those are the cost elements for the
25 QA program.

1 MR. MURPHY: The one point you just mentioned
2 about if we don't feel we need to do as many audits as we
3 planned, one thing -- and I'm sure we'll incorporate these
4 into our written comments, I'm sure. But one thing we need
5 to consider, and Jay is going to support me on this, I'm
6 certain.

7 MR. SILBERG: Absolutely.

8 MR. MURPHY: I think as in other QA aspects that
9 will apply to the overall repository program, you have to
10 keep in mind that only the Department of Energy is asking
11 for the right to receive and possess nuclear material. They
12 need to be subject, both technically and in their
13 engineering and scientific programs and in this program, to
14 stricter quality controls than other participants and
15 intervenors and etcetera.

16 So we may very well suggest after reflecting on
17 this somewhat that you don't need to audit all of the non-
18 DOE participants every six months. You need to ensure that
19 the data we're submitting and that our compliance with the
20 LSS is sufficient so that our participation in the licensing
21 proceedings is going to be based on reliable information and
22 that DOE -- and, remember, DOE is really the only one that's
23 interested in digging into our data, pretty much.

24 There is going to be some reliability associated
25 with our participation, but it's not to the same extent that

1 DOE's entry of data, as well as the data that they are
2 entering needs to be quality assured, because they're the
3 ones that are going to be handling nuclear materials if this
4 repository is licensed, not us.

5 MS. SHELBURNE: Well, we intend to propose an
6 audit program and it is certainly subject to your review.

7 MR. MURPHY: You could save some money. And Jay's
8 concern is not trivial. You could save a significant amount
9 of money, it seems to me, by -- this is just an off-the-
10 top-of-the-head suggestion, though -- by auditing DOE every
11 six months and other participants every year, for example.

12 MR. CAMERON: It may be that -- I don't know how
13 the rationale that you presented now in terms of DOE because
14 of its position as a license applicant needs to be audited
15 more stringently than other participants in the licensing
16 proceeding.

17 But it may be that because of the size of the
18 document universe, for non-participants, that there wouldn't
19 be a need to audit.

20 MR. MURPHY: That's right.

21 MR. CAMERON: Every six months.

22 MR. MURPHY: People have to remember that the
23 amount of -- the mound and amount of documentary material
24 that's passing through participants' hands, that crosses my
25 desk or Lloyd's desk or Carl Johnson's desk, 90 or 95

1 percent of that are not documents that we are going to be
2 responsible for inputting into the LSS, because they come
3 from someone else. They're DOE documents or they're NRC
4 documents and we're not going to have to worry about them.

5 Much of that stuff is going to get thrown away
6 after we read it and comment on it. So that of the
7 thousands and thousands and thousands of pages of documents
8 that cross my desk as Nye County's regulatory and licensing
9 advisor, only what I generate on behalf of Nye County will
10 need to be -- and only then if it doesn't qualify for some
11 privilege will that need to be inputted into the LSS.

12 There isn't any reason to come visit me every six
13 months. You'd look at 30 or 40 documents, maybe.

14 MR. HENKEL: Aside from the volume aspect, I'd
15 like to point out that the State of Nevada and the
16 participant counties analysis of DOE's data or collection of
17 their own data may be as important to the success or failure
18 of the licensing process as what DOE does themselves.

19 MR. MURPHY: No question about it. But compared
20 to -- even with the state and Nye County having proactive
21 technical programs, compared to the data that DOE is
22 generating and will be responsible for inputting into the
23 LSS or even compared to the data that the NRC and the CNWRA
24 is generating that will be inputted into the LSS, what we
25 generate in terms of review and independent data generation

1 is minuscule.

2 MR. HENKEL: On a volume basis, you're absolutely
3 right.

4 MR. MURPHY: On a volume basis. On a significance
5 basis, there's no comparison. Ours is much more
6 significant.

7 MR. SILBERG: Have you figured out what size of
8 staff the requirements that you propose to be laid onto
9 other participants would involve? You talk about training,
10 about QC, about DLO or DOL or whatever he is. What's the
11 minimum size LSS staff that a non-DOE participant is going
12 to have to have? In other words, how much is this system
13 going to cost at the other end?

14 MS. SHELBURNE: We have not evaluated that. That
15 is something that, as we go through putting together the
16 format and content of the compliance plan, may fall out.
17 But we don't want to impose how on participants.

18 MR. CAMERON: Even though we don't want to impose
19 how, I think that it's a legitimate point and Jay raised
20 something earlier on this. What are the costs going to be
21 on an individual --

22 MR. CRANFORD: I think we have to look at their
23 compliance. Each will be different, obviously.

24 MR. CAMERON: That's right. I think that it's
25 another example of where, at some point in this process, we

1 may want to specify the types of costs that an individual
2 participant might incur, not just the audit QA business, but
3 also the access, the document submission, which, of course,
4 is going to depend on a number of factors.

5 But I know Robert has some concerns there about
6 what is this all going to cost an LSS participant.

7 MR. DRAPKIN: I think the answer is you're going
8 to tell us what you can do.

9 MR. SILBERG: Not if you give us a document that
10 says you've got to do X, Y and Z. That's what you're
11 talking about doing. You're saying you've got to have a
12 training program, you've got to have a QA program.

13 MR. DRAPKIN: No, no. Those are issues that you
14 should address in your plan. You say I've got five
15 documents. I don't need a training program. That's how you
16 address the training program.

17 MS. SHELBURNE: There is a section also in the
18 rule that talks about setting up procedures and training
19 programs, 1009.

20 MR. CAMERON: That was the LSS Administrator's
21 responsibility for setting up a training program.

22 MS. SHELBURNE: No, no, no. Each participant.
23 1009 designates that each participant shall designate a DLO,
24 set up procedures and a training program, and the
25 supplementary material talks about making sure that your

1 contractors -- and all of this is derivative from our
2 analysis on the rule.

3 Basically, it is to go and to assure that
4 participants are prepared to certify compliance. So I agree
5 that we do need to do some listing with elements of cost.

6 MR. MURPHY: 109 doesn't say anything about
7 establishing a training program. It says "shall provide
8 training to its staff." That could be a five-minute
9 overview of what they're required to do.

10 MS. SHELBURNE: That may be it.

11 MR. CAMERON: Robert, did you want to talk about
12 the general costs?

13 MR. HOLDEN: And those concomitant costs are going
14 to depend on who establishes the parties, for instance. The
15 Department of Energy in the Yucca Mountain project area has
16 made a determination that 20 tribes or 16 tribes have a
17 vested interest in the Yucca Mountain project because they
18 have cultural treaties and other types of ties to this area.

19 Who is going to make that determination and on
20 what basis? There is some language in here that addresses
21 that, but, still, your overall costs are going to vary. On
22 top of that, NRC is just like the Department of Energy. The
23 Department of Energy is not doing this -- well, I shouldn't
24 say because they're good guys, because they want to. It's
25 sort of like they have to because there's a trust

1 responsibility to those tribes that have treaties and that
2 trust responsibility is what we were able to mandate them to
3 do for those tribes.

4 NRC, also as an arm of the Federal Government, as
5 an agency, Federal agency, has that responsibility to
6 provide those costs to the tribes, whether it means
7 providing them software, hardware, training, all of the
8 above. So that's something that needs to be factored into
9 these costs.

10 It's something also that needs to make sure that
11 the input and all this information is going to those tribes,
12 at a minimum of 16 tribes, and we haven't even talked about
13 some that are involving transportation routes in other parts
14 of this area.

15 MR. MURPHY: Parts of the country.

16 MR. HOLDEN: Country, right.

17 MR. MURPHY: On transportation.

18 MR. HOLDEN: Exactly.

19 MR. CRANFORD: Are there other questions or
20 comments on this?

21 MR. BALCOM: I have a question about the document
22 universe, going back to Slide 10 and the ones before that.
23 Had you given any thought to -- Slide 10 talks about
24 undisclosed potential source of LSS material from someone
25 other than the -- the LSSA will ask the responsible DLO to

1 investigate this potential source.

2 I'm wondering if you had taken into account, say,
3 other participants, other than NRC and DOE in this process
4 of looking at the document universe, what role some of the
5 other participants could play in that and whether or not we
6 would have a way to trigger some of this concern if it came
7 up.

8 You're asking the DLO to go back in and look at
9 their own materials.

10 MS. SHELBURNE: Are you saying --

11 MR. CRANFORD: This is not necessarily just DOE,
12 right? This would be any DLO. Each participant is going to
13 provide us with a plan in which they name their DLO. That's
14 part of the audit of that particular plan. If we find that
15 either information has not been provided or has been
16 withheld, then I think that's what this is really intended
17 to get at.

18 MR. BALCOM: Then let's say the State of Nevada,
19 for some reason, raises the issue about materials not having
20 come in and we suggest that you have some concern that that
21 is worth looking into. Then you will ask the DLO to go back
22 in and certify that that's the case.

23 MS. SHELBURNE: And what would be your --

24 MR. BALCOM: The fox guarding the hen house, if I
25 might use that old phrase. I'm just wondering if you had

1 thought about the role other participants would play in this
2 business of the document universe.

3 MR. CRANFORD: I guess I don't know, but if you
4 read a little bit further, it says that the LSSA will
5 perform on-site audits. That's not really just a question
6 of whether or not we believe the DLO. If you've got some
7 ideas or thoughts on how the other participants might play
8 in this.

9 MR. BALCOM: I'll probably do that. I'm just
10 raising this because I'm seeing it for the first time.

11 MS. SHELBURNE: What this was to be is on each
12 commitment, we intend to provide the same blocks of
13 information; a definition, a standard, proposed standard,
14 non-compliance threshold, and compliance assessment, all for
15 review and comment in every aspect.

16 Your particular comment here is that the
17 assumption is that once the universes of documents to be
18 screened is identified in the compliance program plan, those
19 would be subject to review by everyone. The idea -- the
20 scenario that we thought about was, oh, wait a minute, you
21 forgot about so-and-so contractor that had some materials
22 back then.

23 So all of this would be open for review to make
24 sure that everyone felt comfortable. But if there are any
25 suggested controls, additional controls or methods for

1 assurance, that's what we want to hear for discussion.

2 MR. CAMERON: The LSS rule does require the
3 circulation of the LSS Administrator's compliance evaluation
4 reports to the --

5 MR. SILBERG: For DOE.

6 MR. CAMERON: For DOE, right -- to the parties.
7 Jay, maybe correct me on this if I'm wrong, but at some
8 point during the negotiated rulemaking, didn't we talk about
9 having some sort of an audit committee composed of some of
10 the users? That is sort of the point.

11 MR. SILBERG: I don't recall one way or the other
12 whether we did or not.

13 MR. CAMERON: I think Jay said it would be a
14 better idea for the LSS Administrator to establish this
15 audit program for the non-participant. You don't remember
16 that, do you?

17 MR. SILBERG: No. It sounds good.

18 MR. BALCOM: It's just a little bit like the last
19 year-and-a-half of the working group, for example, and some
20 of us having been excluded from that process and having to
21 get up to speed here really quickly. To me, it just smacks
22 a little bit of the same thing. I'm just suggesting that
23 maybe you'd figure out a way for the rest of us.

24 MR. CRANFORD: Okay.

25 MR. BECHTEL: A question about Slide 7. You

1 indicate that all LSS participants will report to the LSSA
2 for their potential LSS material. At the end, these will
3 constitute all the sources of material to be screened for
4 topical guidelines of relevancy.

5 I wonder if maybe you could speak to the screening
6 process, the relevancy issue.

7 MR. CRANFORD: Betsy?

8 MS. SHELburnE: The assumption is that every
9 participant has more to do than just work on the waste
10 program and that there are certain offices and certain
11 repositories of material which either exists now and should
12 be reviewed or a backlog. Not every piece of paper that NRC
13 has in its offices should be subject to screening against
14 the topical guidelines.

15 When we get into an ongoing mode, not every office
16 within NRC or DOE or the State of Nevada or your county
17 should be subject to the rules. Every person doing that
18 screening -- every person working on generating documents
19 doesn't necessarily have to be trained.

20 So the idea is to ask people to think ahead of
21 time what repositories of existing documents needed to be
22 reviewed to say this is in, this is out, this is in, this is
23 out, the backlog, and then what offices or contractors or
24 facilities had the potential for generating LSS-relevant
25 material.

1 MR. BECHTEL: So it's up to the participant to
2 define the relevancy.

3 MS. SHELBURNE: Definitely. The topical
4 guidelines are out there. The issue is are they being
5 applied to the right complete sets of material.

6 MR. MURPHY: This is an issue for backlog
7 material.

8 MS. SHELBURNE: Yes.

9 MR. MURPHY: Not for --

10 MS. SHELBURNE: In the ongoing -- certain
11 contractors, certain offices are generating materials.

12 MR. MURPHY: But that's not the same problem as
13 figuring out what backlog gets pumped into the database.

14 MS. SHELBURNE: Right.

15 MR. HOLDEN: Excuse me. Not being well versed in
16 all of this, is there any consideration given to certain
17 types of material or information that would be privileged
18 material to just certain players that have access? Let me
19 give an example, better than trying to explain.

20 If, for instance, a tribe has a sacred site area
21 and archaeologists, anthropologists who work for the
22 Department of Energy came upon some of these areas and they
23 want to put some of this information into the info system,
24 how privileged would that be? Because it would be something
25 that those tribes would not want to divulge, would not want

1 to discuss.

2 For instance, it could lead to wholesale ravaging
3 and looting of some of these areas. It's happened in a lot
4 of certain Federal agencies; for instance, Park Service,
5 folks who don't have any cultural sensitivity will announce
6 and publish certain findings and so forth and the tribes
7 lose when these situations happen.

8 MR. CAMERON: That's the type of material that
9 could be entered in through a protective order file
10 controlled by the Hearing Licensing Board. There is no
11 specific provision for it in there now and I'm not sure
12 there's a category of privilege it would fall under at this
13 point.

14 But if there isn't, I think we definitely should -
15 -

16 MR. MURPHY: Let's consider it. Let's put that
17 down on the agenda for any changes to the rule.

18 MR. WARRINER: Could I speak to that? Dave
19 Warriner, Department of Energy, Records Manager. That type
20 of documentation is covered by statute and by regulation.
21 It is privileged and is not going to be submitted to the
22 InfoSTREAMS environment. It's covered by separate -- people
23 within DOE are aware of those regulations and are protecting
24 such documentation at this time.

25 MR. MURPHY: But the people within other potential

1 participants are not necessarily aware and not subject to
2 that statute.

3 MR. WARRINER: So they should become aware. They
4 should be --

5 MR. MURPHY: Well, it's something we need to
6 consider.

7 MR. HOLDEN: There needs to be safeguards.

8 MR. MURPHY: Ravaging and looting is going to take
9 place just as quickly if I disclose it as it will if you
10 disclose it. Send a copy of the statute to the Department
11 of Interior.

12 MR. SILBERG: I don't think you need to change the
13 rule, because it's covered by regulation and it's covered
14 under the NRC's current regulations, I think 2.790. It's
15 just a question of making sure everyone knows what the rules
16 are and that's certainly something that people need to be
17 sensitized to.

18 MR. CAMERON: It's an interesting issue about
19 whether it is covered by 2.790.

20 MR. MURPHY: I still think it's something we ought
21 to at least put on the agenda for consideration when we make
22 changes, if we make any change to this rule.

23 MR. HOLDEN: Yes. I think it should be.

24 MR. GRASER: I'll just put my two cents worth in
25 on that. In the InfoSTREAMS design that we have right now,

1 for example, there are a number of classes of documentation
2 that fall under the Federal records umbrella, what we're
3 charged to collect from a records perspective, that already
4 have within our records system flags on them to indicate
5 that we have something that may be attorney privileged
6 material, covered by the Privacy Act type considerations.

7 Documentation that the contractors may be
8 submitting to us in terms of budget formulation that may
9 have overhead and profit rates that they don't want
10 everybody else to see and maybe confidential business
11 information.

12 MR. MURPHY: Gilbert wants to see it.

13 MR. GRASER: And that may be that when the
14 indication is that that protection exists, it can certainly
15 be given out under the proper procedures that the LSSA says,
16 well, okay, we have this information; if you want to see it,
17 come over here and I'll open up the file cabinet for you.
18 But we just don't release that stuff wholesale.

19 MR. MURPHY: And that was covered in the rule. We
20 spent a fair amount of time considering the subject of
21 privilege in the negotiated rulemaking.

22 MR. HOLDEN: Actually, I'd probably have more
23 confidence in the users and the people who are setting up
24 this than I do those people that are out in the field,
25 because just right out here at Yucca Mountain, it's happened

1 where the tribes are the last to know that things have been
2 discovered and moved.

3 Their idea of mitigation, for instance, is, well,
4 there's a dig -- there's a trench here and there's a fault
5 line here. The fault line runs for 200 miles, but we've got
6 to dig right here where this site is where there are,
7 indeed, artifacts. Their idea of mitigation is dig it up
8 and then put whatever is left back there.

9 So that's not mitigation, in the mind of the
10 Indian people.

11 MR. CRANFORD: Any other questions or comments?

12 [No response.]

13 MR. CRANFORD: Thank you.

14 MR. HOYLE: Why were there no more questions? The
15 answer to that is you've just really seen the program
16 outlined.

17 MR. GRASER: I will ask one more question of
18 Gerald. How quickly do you think you would be able to put
19 the audit capability in place, specifically for something
20 that we anticipated would be starting sooner, a component
21 like capturing, as opposed to a component that might be
22 happening later on, like search and retrieval?

23 If I'm going to be in the process of starting to
24 capture my stuff and digitize it and all the rest of that, I
25 would like to have at least that component of the plan in

1 place as soon as possible so that everything downstream from
2 that falls within the QA program.

3 So the question is how quickly do we think we
4 could have pieces of that put into place.

5 MR. CRANFORD: I don't know that I can give you an
6 answer off the top of my head, but I suspect that if we knew
7 what your requirements were and could spell them out in some
8 type of a contract specification, that we could get a
9 contractor on board in I would think a fairly reasonable
10 period of time. I can't tell you what that would be, but
11 we're talking probably months and not years.

12 MR. SILBERG: What is the rationale for having the
13 QA facility be a contractor-run facility as opposed to an
14 NRC employee-run facility?

15 MR. CRANFORD: It's really a question of staff
16 FTE. We're very constrained at this point in the
17 availability of staff to do something.

18 MR. DRAPKIN: NRC will also be audited. It's
19 probably inappropriate for NRC staff to audit NRC
20 activities. A contractor would provide a better and more
21 unbiased view.

22 MR. MURPHY: That's debatable.

23 MR. SILBERG: I would disagree with that. It's
24 contrary to the whole philosophy of quality assurance. If
25 that's true, then every quality assurance program in the

1 word is invalid.

2 MR. DRAPKIN: This isn't quality assurance, but
3 auditing.

4 MR. SILBERG: The same with audit. You have
5 licensees who audit themselves every day of the week and NRC
6 requires it and NRC regulations require it. So you're
7 saying that 10 CFR Part 50, Appendix B is wrong and it just
8 ain't right.

9 MR. MURPHY: I also think that it is probably more
10 likely that an NRC employee subject to the Federal Personnel
11 Management System's protections is more likely or might be
12 more likely to issue demerits to the NRC's own staff than a
13 contractor, who is subject to the discretion of the NRC. I
14 just think that the fundamental underpinning of the
15 statement that a contractor selected by the NRC is going to
16 be more independent than the NRC staff itself is just
17 fallacious.

18 MR. CRANFORD: We retract that last statement.
19 The real problem is one of employees, of having the people
20 on the staff co do that.

21 MR. SILBERG: If it's important enough, then
22 you've got to go to Congress and tell them you need the
23 employees. If it's not, it shouldn't be done. Congress
24 doesn't want it to be done by not authorizing FTEs, then, by
25 God, let's not do it.

1 MR. CRANFORD: There's a lot of things that
2 Congress won't authorize FTEs first. You get down to a lot
3 of things.

4 MR. MURPHY: I don't think we will get the
5 affected units of local government to agree that nothing in
6 this program should be done that Congress doesn't
7 specifically want.

8 MR. HOYLE: All right. We've had a day of it. We
9 have a couple other things planned for tomorrow morning, but
10 I think we need to stop at this point and decide how we want
11 to proceed.

12 You've got an awful lot of information so far
13 today that you really haven't seen before, haven't heard
14 much. Some of it is new. Some of it is a reminder of
15 things we've heard two years ago. There is an expansion on
16 the audit program that was already under consideration.

17 That has to be looked at, thought about and
18 analyzed a little bit by each of you, I'm sure, before
19 you're prepared fully to comment on it.

20 I guess I'd like to hear suggestions on how we
21 want to proceed, let's say, for the moment, on the
22 compliance program, knowing that you also have to think of
23 it in the context of Alternative 3. There's going to be a
24 compliance program if there is an LSS.

25 The compliance program proposed today in draft is

1 tied more specifically to an Alternative 3 approach. So
2 that's really the basic focus for us. We could spend some
3 more time this afternoon, but I'm not sure it would be
4 fruitful.

5 You need to read the material some more and think
6 about and talk to each other about it. We have only for
7 tomorrow morning presentations that take us up to 10:30 or
8 so. We could talk some more after that tomorrow morning.

9 I'm willing to hear what you think about it.

10 Chip?

11 MR. CAMERON: I would just want to make sure that
12 we give the Panel enough time to tell us what their concerns
13 are with Alternative 3 and have a discussion about how we
14 might be able to alleviate those concerns. I don't think we
15 want to go back -- end this meeting without hearing those
16 concerns and also without hearing some plan of action from
17 the Panel about whether they want to develop some written
18 statement that they want to send to the Commission or how
19 they're going to proceed on that.

20 As Dan has pointed out, getting a decision on
21 whether InfoSTREAMS is going to essentially be the
22 foundation for the LSS, that's a decision that should be
23 made sooner rather than later, for various design reasons.

24 I know that's what you planned to do. I just want
25 to make sure that we hear everything that people have to

1 say.

2 MR. SILBERG: I think you raised a lot of issues
3 today. There's a lot of information which is out there,
4 which none of us non-NRC or DOE people are privy to, that I
5 think effects us from one vantage point or another.

6 What are the alternatives and what costs and
7 benefits went into rejecting them? How much do any of these
8 things cost? I think all of us, from our own particular
9 viewpoints, need to know those things to reach a decision as
10 to whether Alternative 3 is worth pursuing or not.

11 And if it is worth pursuing, I think people need
12 to express their views on whether there are any set of
13 circumstances under which it would be acceptable to them. I
14 think that's kind of a yes/no question from Mal and from
15 Kirk and from others who have that concern.

16 Then from our standpoint, without having really
17 discussed it and putting aside the cost, I don't know that
18 we're ideologically opposed to DOE running the program, but
19 we need to know what are the alternatives or how much -- I
20 hate to get back to cost -- would it cost for an LSS-only
21 system versus an InfoSTREAMS that does the minimum of what
22 DOE needs to do absent LSS.

23 Then how much of InfoSTREAMS really incorporates
24 features which we think may be above and beyond the call of
25 duty. We each need a lot of information from our own

1 vantage points to reach a decision.

2 And assuming that you want to proceed with
3 Alternative 3, you get to the question about what kind of
4 protections do the people who are worried about DOE being in
5 charge of the chicken coop need, assuming that there are
6 some, and then we need to discuss those.

7 Since the first set of questions I think will
8 require review of documents that I don't think we're going
9 to get tonight or tomorrow morning and then some time to
10 look at them, maybe we have to step over that question.
11 Let's make the assumption or let's go right to the issue of,
12 ideologically, are there any set of circumstances on which
13 Alternative 3 would be acceptable to some of the
14 participants around the table.

15 If the answer to that is yes -- if the answer to
16 that is no, then those people at least can be non-consenters
17 and --

18 MR. MURPHY: You mean withhold -- what's the word
19 -- consensus?

20 MR. SILBERG: Right. With that in mind, we can go
21 ahead and discuss what are possible bells and whistles that
22 could be added to the program to give people comfort to the
23 extent DOE is running it.

24 MR. MURPHY: I think the last point you make, just
25 to focus on that, is a good one and going back in history,

1 because there may be parties at the table, and I'm not
2 suggesting that it's necessarily Nye County or the state or
3 anyone else, but there may be parties at the table who
4 simply cannot agree under any circumstances to turn over the
5 control of their documents to the Department of Energy.

6 MR. SILBERG: Right. I think we ought to know
7 that. That's something I think --

8 MR. MURPHY: You'll need to know that. But the
9 industry representatives, you and Chris, were able to
10 withhold your consent to consensus in the LSS rule without
11 saying screw this, we're going to pick up our marbles and go
12 home. You have continued to participate in the process,
13 even though you didn't agree with the rule.

14 MR. SILBERG: And I would hope that --

15 MR. MURPHY: We may not be able to publicly say we
16 agree to having DOE control our documents, but that does not
17 mean that any particular party to this process is going to
18 leave the room. Some may.

19 MR. SILBERG: If I left that impression, I
20 certainly didn't intend to.

21 MR. MURPHY: But it seems to me we can break this
22 down into various components of what we have to decide. But
23 just looking at that question, there's really two sub-
24 questions. One is is InfoSTREAMS an appropriate vehicle to
25 proceed with developing a licensing support system and --

1 MR. SILBERG: From a technical standpoint.

2 MR. MURPHY: Yes, from a technical standpoint.

3 And a second question is should the Department of Energy,
4 for LSS purposes, not for their internal interest, but for
5 LSS purposes, should the Department of Energy control all or
6 part of InfoSTREAMS as the LSS.

7 I guess another question is -- it seems to me that
8 at least worth discussing is are there ways -- are there
9 other alternatives, Alternative 3A or 3B or 3C that aren't
10 written down yet that are worth talking about.

11 The one that occurs to me, this is just off the
12 top of my head and it may not work, but it's worth talking
13 about, is is there some other way for parties who feel
14 uncomfortable in giving DOE their documents and letting DOE
15 manage their documents and inputting them into the LSS, for
16 getting those documents into an LSS even if it's made up of
17 InfoSTREAMS.

18 As an example, would we -- when I say we, I mean a
19 party that feels uncomfortable enough just simply not to
20 agree -- turn over documents to the LSSA and, for those
21 purposes, limited purposes of servicing one or more non-
22 consenting participants, perhaps the LSSA becomes the
23 responsible official for ensuring input into the LSS.

24 I think there's more than one way to skin this
25 cat.

1 MR. CAMERON: There are and I think that's why it
2 would be valuable to skip over, for the time being, the cost
3 and the technical issues in terms of InfoSTREAMS being the
4 vehicle and get to that point. But I guess there's control
5 -- there's the submission of documents issue that you
6 raised, Mal, and there is also control of the system issue.

7 There might be a way for parties who don't feel
8 comfortable to turn over their documents to the LSSA for
9 entry. Basically, if you look at the Commission paper, I
10 think that option is laid out in the Commission paper even
11 for Option 3, isn't it? Where the documents would go --
12 non-DOE documents would be turned over to an NRC LSSA
13 contractor before they're submitted to the Department of
14 Energy for capture and loading.

15 MR. MURPHY: But it's not Alternative 3. It's one
16 of the other alternatives.

17 MS. SHELBURNE: Under Alternative 3, that was the
18 purpose of ensuring compliance by the non-participants. We
19 would receive the material. We would review and accept it
20 in the audit trail before we sent it off to DOE for capture.

21 Now, if you're talking about not allowing DOE to
22 capture or characterize the material, that was Alternative
23 2. And wasn't there a copy of the paper in your --

24 MR. MURPHY: Yes. You looked at 11 alternatives.
25 You compressed that down to three and then you chose

1 Alternative 3. What I'm suggesting is maybe there are bits
2 and pieces of all 11 that we can put together and come up
3 with Alternative 4.

4 One of them might be some potential participant,
5 and I use this advisedly, for political reasons, for reasons
6 of public perception, may not be able to turn over their
7 repository related documents to the Department of Energy for
8 processing into that system. It may simply not be publicly
9 acceptable.

10 And, yet, those same participants may feel
11 perfectly comfortable in letting Betsy input their documents
12 into the system and the control of the information in the
13 system after those documents are inputted is another issue
14 all together. Those same participants may feel comfortable
15 knowing that Betsy is going to be looking over Dan's
16 shoulder.

17 MR. CAMERON: And that's the type of controls that
18 we need to talk about, because it may be easy to deal with
19 the first question about Betsy capturing the documents than
20 it is to deal with somehow segmenting control of the system.
21 There's just no -- there's not going to be any easy way to
22 do that.

23 MR. MURPHY: I'm not suggesting that the
24 Department of Energy people are going to go in and start
25 cutting and pasting and changing all the no's to yeses in

1 Nye County's documents, but what I am suggesting is that if
2 it is conceivable that as get closer and closer to licensing
3 and crunch time has really arrived and there is a pile of
4 documents, a truckload of documents delivered from the State
5 of Nevada to the InfoSTREAMS office, and a boxcar of
6 documents or electronic data coming in from the Yucca
7 Mountain Project Office and the deadline for complying with
8 the LSS is upon them, what choice is Dan going to make?

9 Is he going to say I'm going to input Carl
10 Johnson's documents or am I going to input Carl Dirches'
11 documents? Then the deadline passes and all of a sudden the
12 LSS Administrator is all over the State of Nevada's butt,
13 saying you people haven't complied with the LSS and we're
14 not going to allow you to participate in the licensing
15 process.

16 MR. GRASER: And they'll say no, no, no.

17 MR. MURPHY: And then there's a big huge fight.
18 So the first fight is over the first litigation which goes
19 all the way up to the Court of Appeals, whether or not
20 somebody complied with the LSS or whether or not somebody
21 else acted in good faith, etcetera, etcetera. Those things
22 should be avoided and on way to avoid it is to not make Dan
23 responsible for putting my documents in, as well as his.

24 MR. GRASER: Having to prioritize who goes first.

25 MR. MURPHY: Exactly. I can just see them having

1 the Las Vegas office call and say why aren't these documents
2 in, we sent them up two weeks ago. I'm working on Nye
3 County's documents. You're what?

4 I just don't think it makes much sense to put
5 either us or the Department of Energy or the NRC under those
6 kind of pressures when there are better ways to approach the
7 problem it seems to me.

8 MR. HOLDEN: Two comments. One is that in a
9 historical context, even though it's a matter of semantics,
10 when you talk to the tribal governments out here who are
11 still questioning the validity of a treaty signed in 1854,
12 when you talk about capturing documents, that will stir the
13 hearts and souls of those people out there.

14 But, also, regarding the documents and what should
15 or should not go into these systems, the tribal governments
16 work in an entirely different manner and sometimes the
17 decision as to what can and should and will be released
18 takes a lot of deliberation, sometimes more than just the
19 tribal governing body or council, one person won't be making
20 that decision. It can go to a body of the whole, the nation
21 as a whole.

22 These are still tribal governments and, as
23 governments were intended to be, sometimes they go back to
24 people for input. These are governments of the people.

25 MR. HENKEL: I'd just like to say that as the

1 person who was beating the table all day about costs, I
2 agree with what Jay and Chip said about we ought to overlook
3 that question for tomorrow and go on to can we implement
4 Option 3 or some variation of that.

5 However, from a personal perspective, and I think
6 I speak for Jay, as well, if we're going to endorse at some
7 point that there is, say, a net savings of \$63 million with
8 Option 3, I have to feel confident that the InfoSTREAMS
9 system is justified unto itself against that \$63 million net
10 savings.

11 So I do want to follow up with that in the future,
12 but I don't think we need to do it tomorrow. I don't think
13 we can do it tomorrow.

14 MR. MURPHY: I don't think we can do that until we
15 get that Technical Working Group document.

16 MR. HENKEL: Right.

17 MR. CAMERON: When you talk about whether the
18 InfoSTREAMS system is justified, in and of itself, what type
19 of decision criteria would you be looking at to determine
20 that?

21 MR. HENKEL: Off the top of my head, I would say
22 does that system provide a waste management system in a more
23 time-effective manner, a more cost-effective manner, or with
24 more certainty that some other option, even if that option
25 is just status quo operating principals now. But there's

1 probably some other options in between there, as well.

2 If, based on those three conditions or some
3 combination of those three versus the cost of the
4 InfoSTREAMS system, it can be justified, then it's a
5 justifiable system, in my opinion.

6 MR. CAMERON: I imagine that's the type of stuff
7 that you probably have already had to work up, Dan, and
8 proceed with InfoSTREAMS, right? Pretty basically.

9 MR. GRASER: Yes.

10 MR. CAMERON: Are you going to take an envelope
11 out now?

12 MR. GRASER: No, no, no. Yes, indeed. We've had
13 to go through the whole normal -- if anybody has ever been
14 involved in a Federal ADP buy, you will know all the hoops
15 you have to jump through just to be able to get a delegation
16 of authority from GSA and some of the hoops you have to jump
17 through include doing the benefit-cost analysis, the
18 analysis --

19 MR. CAMERON: Al Gore is going to take care of
20 that for you.

21 MR. GRASER: Al Gore came to the table a year or
22 two too late. The launch of InfoSTREAMS happened back in
23 1991 already. So that was on ex-President Bush's watch, I
24 believe.

25 MR. MURPHY: Chris, why doesn't the Edison

1 Electric Institute propose to get that NRC LSS auditing
2 contract and you can recapture some of the nuclear waste?

3 MR. HENKEL: I guess getting to the question --

4 MR. MURPHY: It's okay with us if it's okay with
5 you.

6 MR. HENKEL: The issue of the cost-benefit
7 analysis, you're absolutely right. The government
8 procurement process doesn't allow for that. But what was
9 the basis of that cost-benefit analysis? Was it the cost
10 over the next five years? Was it the total system cost?
11 I'm not asking you to answer that now. I'm just saying that
12 that's some of the issues that I would like to get resolved.

13 MR. GRASER: I can tell you now the foundation of
14 the justification for that sort of system eventually pointed
15 right back to the analysis of benefits and costs that was
16 done by SAIC as Volume No. 4, when they went back in and did
17 the analysis of how much it would cost to develop the
18 licensing support system.

19 I don't know if you have a copy of that. But the
20 same sort of driving factors that were recognized in that
21 analysis of benefit and cost apply directly to what it takes
22 for us to assemble and prepare all this stuff just to
23 deliver it.

24 So some of the foundations go right back to those
25 documents that came out as a result of 10 CFR 2 action.

1 Subpart J really did whip and drive a lot of the things that
2 eventually we recognized we had to do. So the causal effect
3 of all of it goes right back to the thing we're talking
4 about right now.

5 MR. CAMERON: I guess I'm just concerned about
6 there's a lot of cost information and analysis that you have
7 not seen that you have to see.

8 MR. GRASER: Yes.

9 MR. CAMERON: I would just hope that that type of
10 information would be the type that would be satisfactory.

11 MR. HENKEL: I suggest that rather than spending
12 more time during this meeting, that we get what information
13 DOE has available and then deliberate that at a future
14 meeting, perhaps.

15 MR. GRASER: And what NRC has.

16 MR. MURPHY: John, does the Commission or the
17 Chairman expect, as a result of this meeting, some signal
18 from the LSSARP as to whether or not Alternative 3 at least
19 passes the wretch test?

20 MR. HOYLE: This meeting and any followup
21 submission of comments or a followup meeting, if necessary,
22 no. I shouldn't take the word back tomorrow whether this
23 group has agreed or disagreed, unless it wants to do that.

24 MR. MURPHY: We could wait until you obtain the
25 release of the Technical Working Group document and give us

1 a chance to consider it, to review it and reflect on it;
2 perhaps then have another meeting of this Panel and then
3 maybe come up with an LSSARP recommended approach, which
4 might be Alternative 3 or Alternative 3A or Alternative 6.

5 MR. CAMERON: And you could factor in the
6 discussion tomorrow at the beginning of that ARP
7 recommendation.

8 MR. MURPHY: Sure. That's good, because if the
9 Chairman expected an up or down answer as a result of this
10 day-and-a-half meeting, our answer would be no.

11 MR. HOYLE: No. He doesn't expect it. The
12 Commission realizes, recognizes that you haven't had all of
13 the information that it has had. A lot of time has gone by;
14 not because we were doing a lot of analysis over time. As
15 you know, I tried to schedule a meeting, I think a year ago
16 I started doing it. That was the time the working group's
17 report was expected to be finalized.

18 Things just kept changing and I couldn't get
19 anything going. So it's not that we have studied the heck
20 out of it for the past year. Let me see what I can get
21 released. We can continue this discussion tomorrow and
22 decide tomorrow about when we would like to meet, assuming I
23 can get the material out.

24 MR. MURPHY: One other thing. Are we going to
25 have an opportunity tomorrow to discuss the topical

1 guidelines?

2 MR. HOYLE: I hadn't specifically set any time for
3 that. I don't know that the NRC staff is here to help with
4 that discussion, if you need the NRC people here, but we're
5 going to end up around 11:00. We could spend -- how much
6 time do you think you'd want?

7 MR. MURPHY: The Federal Register notice calls for
8 comments on the draft NUREG by October 29. We aren't going
9 to meet again in this Panel between now and October 29.
10 It's always been our understanding and I'm sure it's been
11 Jay's and Chris' understanding, DOE's and everybody else's
12 that the topical guidelines would not be cast in concrete
13 until the ARP had an opportunity to review them. That was
14 the result, I thought, of the infamous meeting in October
15 and the letter that Silberg so artfully handwrote, which
16 resulted in your memo to Bob Bernero.

17 MR. HOYLE: That's right and the Commission agreed
18 with that approach.

19 MR. MURPHY: But I do think we need -- I feel at
20 least that there needs to be some discussion of the draft
21 NUREG tomorrow or right now. What NRC staff is not here who
22 needs to participate in that discussion?

23 MR. HOYLE: Ken Kalman is here.

24 MR. MURPHY: Chip is here. He can take notes and

25 --

1 MR. CAMERON: I can take notes.

2 MR. MURPHY: He can take notes and take back to
3 Bethesda what --

4 MR. HOYLE: Ken, do you want to speak?

5 MR. KALM~~Z~~AN: Yes. I can honestly say I'm not the
6 person to speak to it. I'm not the person you're going to
7 need to speak to. If Joe ^{Holmick}~~Relage~~ can make it, he might be
8 able to entertain some discussion. Otherwise, Mark Delgad^{ti}~~ti~~
9 was also the contact person in that and he's not here.

10 MR. CAMERON: And I guess it depends on how
11 extensive a discussion, what you want to address in the
12 topical guidelines. I'm certainly familiar with the issues.
13 As Ken points out, the key technical staff aren't here, but
14 we can talk about it.

15 MR. KALM~~Z~~AN: The best I can do is call ^{Holmick}~~Relage~~ and
16 see if he can show up tomorrow.

17 MR. MURPHY: I talked to Joe at the other
18 technical exchange this morning. He was here this morning.
19 He was back over there when I was back over there this
20 afternoon. He told me this morning that he was going to be
21 here at this meeting tomorrow.

22 But this is an LSS topical guideline. Why does -
23 - I'm not saying that I -- you know, I think Joe should
24 participate to the fullest extent, but why does high level
25 waste management -- why do we have to wait for high level

1 waste management to talk about LSS topical guidelines when
2 the acting LSS Administrator and staff are here?

3 MR. KALMAN: The only reason I think ^{Holcomb} Holage
4 should be here is because the paper did come out of our
5 shop.

6 MR. MURPHY: That's good. I'm glad it did come
7 out of their shop rather than General Counsel's. General
8 Counsel screwed it up last time.

9 MR. HOYLE: Why don't we --

10 MR. MURPHY: Not you, Jim.

11 MR. HOYLE: All right. I will be prepared to open
12 the floor at the regular session tomorrow.

13 MR. MURPHY: I don't think it has to be very
14 extensive, but some of us, I think, have some things on our
15 minds that we want to talk about and we have to submit
16 formal comments by the 29th of October.

17 MR. HOYLE: We'll do it tomorrow. Anything else
18 for tonight?

19 [No response.]

20 MR. HOYLE: We'll start at 8:30 tomorrow.

21 [Whereupon, at 4:45 p.m., the meeting was
22 recessed, to reconvene the following day, Wednesday, October
23 6, 1993, at 8:30 a.m.]

24

25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:

NAME OF PROCEEDING: Licensing System Review Panel

DOCKET NUMBER:

PLACE OF PROCEEDING: Las Vegas, NV

were held as herein appears, and that this is the
original transcript thereof for the file of the
United States Nuclear Regulatory Commission taken
by me and thereafter reduced to typewriting by me
or under the direction of the court reporting
company, and that the transcript is a true and
accurate record of the foregoing proceedings.

Mardian Nicksen
Official Reporter
Ann Riley & Associates, Ltd.

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission
Title: LSS Advisory Review Panel Meeting
Docket No.

LOCATION: Bethesda, Maryland

DATE: Thursday, June 7, 1990

PAGES: 1 - 88

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

9008150262 748pp

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

3
4 LSS ADVISORY REVIEW PANEL MEETING

5
6 Public Hearing Room
7 4350 East-West Highway
8 Bethesda, Maryland

9
10 Thursday, June 7, 1990

11
12 The panel met, pursuant to notice, at 9:25
13 o'clock, a.m., John Hoyle, presiding.

14
15 MEMBERS PRESENT:

16 Stuart Treby
17 Marilee Rood
18 Felix Killar
19 Daniel Graser
20 Barbara Cerny
21 Liza Vibert
22 Dennis Bechtel
23 Elgie Holstein
24 Philip Altomare
25 Kirk Balcom (by phone)

1 ALSO PRESENT:

2

3 Elizabeth Shelburne

4 Lloyd Donnelly

5 Dona M. Mennella

6 Steven Scott

7 Lynn Scattolini

8 Reporter: Dean A. Robinson

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

P R O C E E D I N G S

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

MR. HOYLE: Good morning, ladies and gentleman.
This is the third meeting of the LSS Advisory Review Panel.
We do have, as near as I can tell, a quorum present, even
though we don't have a representative of the State of
Nevada. We had wanted him to be present because he was
Chairman of the Subcommittee which worked on the header
formats for us. We were prepared for teleconferencing with
those outside of town, but we had no takers this morning.

The first thing I want to do is go quickly around
the table so that those in the audience will know who is up
at the table and who they are representing. So, I will
start with myself. I am John Hoyle, representing the
Nuclear Regulatory Commission.

MR. TREBY: Stuart Treby, NRC, Office of General
Counsel.

MS. SHELBURNE: Betsy Shelburne of the office of
the LSS administrator.

MR. KILLAR: Felix Killar representing the U.S.
Council for Energy Awareness.

MR. GRASER: Dan Graser, representing the
Department of Energy.

MS. CERNY: Barbara Cerny, representing the
Department of Energy.

MS. VIBERT: Liza Vibert, representing Clark

1 County, Nevada.

2 MR. BECHTEL: Dennis Bechtel, representing Clark
3 County, Nevada.

4 MR. HOLSTEIN: ^{Elgie.} ~~Lee~~ Holstein, representing Nye
5 County, Nevada.

6 MS. ROOD: Marilee Rood, Administrator.

7 MR. HOYLE: Okay. Thank you very much.

8 Let me remind everyone to sign the attendance list
9 that we have so we can make a record of that. We do have a
10 transcript of today's meeting for the first time. We had
11 talked earlier about having minutes and how quickly we could
12 get them out, and the usefulness of the minutes versus a
13 transcript. We agreed the last time to try a transcript for
14 this meeting. I will get it out as soon as it's available
15 to me.

16 The first administrative matter I want to bring up
17 is the approval of our March 20 meeting. I had forwarded
18 that to the members on April 23, so I would open the floor
19 to any comments, changes, alterations to the minutes. Are
20 there any?

21 [No response.]

22 MR. HOYLE: Not hearing any, I consider the
23 minutes approved at this time. Thank you.

24 The next item and our primary item on the agenda
25 is to discuss the header format that we agreed at the last

1 meeting to look at because it was becoming a critical path
2 item for getting on with the design of the LSS.

3 We established a working group made up of
4 representatives of the State of Nevada, the Nuclear
5 Regulatory Commission and DOE, and had asked the LSS
6 administrator to assign a person to the working group, and
7 he assigned Betsy Shelburne, who is at the table with us.

8 The Subcommittee met a couple of times, I think,
9 and came up with recommendations for the full Committee
10 which we have before us now.

11 I'm going to ask Betsy Shelburne, in Kirk's
12 absence, to walk us through what the Subcommittee did, how
13 it conducted itself and arrived at the recommendations that
14 it did. So, Betsy, please. Thank you for doing this on
15 very short notice -- like five minutes. I greatly
16 appreciate the work of all of those who served on the
17 Subcommittee, and I know the full panel agrees with me,
18 Betsy.

19 MS. SHELburne: Okay. Basically, as John said,
20 the Subcommittee was made up of Kirk Balcom, representing
21 the State of Nevada, Donna Mennella, who is in the audience,
22 Eileen Tana and myself of the Office of the Administrator.
23 We met, as John said, several times in an iterative process,
24 starting with, as the report indicates, the list of header
25 elements which was discussed May 17, 1990⁸⁸. This was a list

1 of elements that was devised by another subcommittee of the
2 committee, that is of the Advisory Committee on the
3 negotiated rule.

4 We started with this list and also factored in
5 experience that was gained from the prototype, the ^{SAIC} ~~SVOD~~
6 prototype for the indexing of the sample of records. So,
7 those two became the starting point.

8 Then, we tried to be systematic to go through the
9 files. We went through thinking about these elements, as I
10 tried to characterize in the last meeting of the Committee,
11 the issue of what should be picked up, and what, from the
12 point of view, would be of interest to the users, what could
13 be picked up based on the fact that you're looking at a
14 document, and we addressed the issue of who should pick it
15 up. That is basically the format of the report.

16 We came up with 28 files and divided those into
17 the sections that you see starting on page one of the report
18 and following on page two. I think it might be helpful to
19 go through how this list differs from this May 17, 1988
20 list, and it does not differ greatly.

21 Basically, we did not come up with any additional
22 fields, though exactly what the fields should contain was
23 discussed, and there may be certain differences based on
24 someone's reading of the field in the May '88 list versus
25 the fields in the appendix in our report. I am really not

1 prepared to go through a detailed difference here.

2 Just quickly looking at the May 17th document, we
3 have the actual title of any document and other fields for
4 the description of the document, a short description if the
5 document was not titled. We decided to change that into one
6 field on understanding that people didn't want to search
7 two fields, and may or may not know whether it had a formal
8 title, or whether it was just a description. That was
9 taking two fields and making them one.

10 The other thing that immediately comes to mind on
11 the May 17th, '88 list -- there was an errata date field
12 that we, after discussion, determined really if a document
13 was an errata, that would have to be captured in its
14 relationship to the document it was changing. Really, what
15 the date of that document would be would be captured in the
16 document data. That was eliminated as a field.

17 There was, in the original list, something called
18 a "contract number field," and after discussion, it was
19 decided that it should really be just one field that
20 captured the alpha numeric things that people would call it
21 by. So, that collapsed into one field.

22 Another field on the May 17, '88 list was
23 something called "Site of Activity." This had been proposed
24 with the idea -- during that time frame, there were several
25 sites under consideration, and the fact, based on the result

1 of the prototype, was that this field was felt not to be
2 useful. If the subject of the document was a particular
3 site or section of the site, that could be captured either i
4 the descriptors, or somehow captured elsewhere. So, that
5 was eliminated.

6 There are fields that may be different in the May
7 17 list and out list, but the content is essentially the
8 same. I want to see if there is anything else.

9 [Pause.]

10 MS. SHELBURNE: There was a field called meeting
11 date on the 1988 list. We expanded that to a field called
12 event date. We wanted to pick up documents about meetings
13 that happened on a certain date. From my experience, that
14 is an essential field. People may know of the meeting but
15 not know the date of the minutes in the public document
16 room, but we felt there were other events, audits,
17 conferences, and so we broaden that so that if a document
18 was clearly about something, that the searcher might want to
19 have access to based on that, they knew the timeframe. We
20 picked that up. Let me see what else.

21 [Pause.]

22 MS. SHELBURNE: The original recipient field in
23 the 1988 list included the capture of copyees. We decided
24 to separate that out, so you can see as an addressee, in our
25 recommendation, and a separate field for copyee, an

1 organization where it can be identified on the document.

2 That is basically a quick review without going
3 into a lot of detail. I think there are distinctions to be
4 made about individual fields. As you will note in the
5 report, we kept bumping up against things that did not
6 really relate to the specific fields, whether or not we
7 wanted to capture or felt we should recommend the capture of
8 an element of information.

9 The report does go through those. We tried to
10 characterize some of the issues that we felt should be drawn
11 to the attention of the ARP, whether or not they have to be
12 resolved before we can determine that these are the elements
13 of information that the Committee wants to recommend. We
14 didn't want to ignore them in the report, so we laid them
15 out for discussion.

16 I would like to hear a discussion on each issue,
17 but I don't know how you want to do that.

18 MR. HOYLE: Well, why don't you just mention the
19 issues and you can comment about what you think the central
20 point of that issue is.

21 MS. SHELBURNE: Okay. Starting on page 2 of the
22 report, the first issue related to the acknowledgement that
23 multiple participants may submit the same document during
24 the backlog sort of becomes a question of what is relevant
25 and falls within the topical guidelines. It is not only the

1 document authored by that participant. But either because
2 they have included that in a package, of course, of what has
3 been authored by someone else or because they feel a totally
4 separate study or document is relevant. We had to
5 acknowledge there would be the same document submitted and
6 header submitted for the same document.

7 According to the understanding of the design, we
8 would not need to actually store the text or image of a
9 document multiple times, so long as we determined it was an
10 exact match. But the header information might be different.
11 We wanted to raise the issue of how to handle that. So,
12 that is the first issue.

13 In the discussion on characterization of the
14 fields, whether or not they were multi-value, whether or not
15 there should be some format control for ease of indexing,
16 and more importantly, consistency in retrieval. We talked
17 about editing, quality control, the ability of the capture
18 station, in reviewing the submitted information from the
19 bibliographic information headers to determine what should
20 be done by the LSSA capture station staff in the quality
21 control and correction of editions, I mean, the correction
22 of information and how to notify or whether we needed to
23 notify the participants that we had corrected something.

24 MR. HOLSTEIN: Should we ask questions along the
25 way or wait?

1 MR. HOYLE: I would like to wait until the end.

2 MS. SHELBURNE: Issue No. 3 was the issue of
3 abstracts. There was a lot of discussion on the benefit
4 versus the cost of abstracts, and we did not feel that we
5 could make a hard recommendation on the need for abstracts
6 versus the costs of abstracts. So, we felt like that was a
7 point of discussion that needed to be discussed with the
8 numbers.

9 We did make a recommendation which was basically
10 we did not feel in the working group that the cost of
11 abstracting every piece of document, given we did have a
12 full text system, was justified. There are arguments that
13 some types of documents do benefit from an abstract and the
14 pros and cons of that, who should do it, what type of
15 abstracts, is really a larger matter that we felt
16 uncomfortable making a recommendation on given the timeframe
17 and the resources we have.

18 The fourth issue was that there are relevant
19 documentary materials which cannot be stored in full text.
20 It can be stored in image only: handwritten materials,
21 maps. There are sets of information which cannot be stored
22 even in image. These have been characterized as technical
23 data, graphic oriented material. There are header fields
24 and elements of information, access points, which are
25 different than in the describing of the document, the number

1 of pages and certain things.

2 We limited our discussion and recommendation to
3 document material only in the Office of the LSSA
4 Administrator and further information needs to be gathered
5 relating to the idea of accessing information about this
6 material. So we acknowledged in the report that we did not
7 try to finalize the recommendation on that, and that there
8 may be field within the header report that we recommended
9 that would be applicable for the sponsoring agency. But we
10 wanted to acknowledge they had not gone through that aspect
11 in detail.

12 The last issue related to our acknowledgement that
13 we are not perfect and that there may be fields in the life
14 of this system, elements of information that warrant the
15 development of a separate field and that it, after
16 discussion here and review by the LSS Administrator, and the
17 setting of the bibliographic header and the full header over
18 time, as we characterized these documents, there may be
19 field that we need to add.

20 Obviously, if we do that, it would be with a lot
21 of deliberation, and the fact that you had to say if you
22 search this field, it will only be for documents captured of
23 this type. That is an issue with these kinds of systems
24 that would be a point of discussion. That is basically it
25 without getting into a lot of detail about those issues.

1 The rest of the report and Appendix A is the list
2 of the names of the fields and our determination as to
3 whether they should be multivalued. Our feeling as to
4 whether they should be control authority -- a controlled
5 authority being a specific list of acceptable entries in
6 that field.

7 The next column relates to format control and the
8 development of the indexing rules. We will specify the
9 format of the entry.

10 And the last column was the acknowledgement that
11 the header is the structured field record about the ability
12 to go through, and the example I always give is the
13 descriptor's field. It is a controlled authority, but if
14 someone wants to go through and say give me a set of records
15 where the word "core" was either the first word, the last
16 word or somewhere apart of the descriptor phrase without
17 having to know if it's the first or the last word or its
18 position, that the ability to search that field, as you do
19 in a full text system, would allow you to do what is called
20 words in context search. Most packages allow you to do
21 that. We felt we ought to acknowledge that some people
22 might want to do that.

23 Appendix B is a description of each field. It is
24 divided into those that are recommended to be committed to
25 the participants and those that are either optional for the

1 participants and those that will be picked up by the LSS
2 administrator.

3 Now, one of the things we kept coming back to, if
4 you say oh, my God, 26 elements, there are many elements
5 that are not likely to be many document types.

6 So, obviously, if there was no report number, no
7 event date, we know that is not going to be captured,
8 period. It will always say "if applicable."

9 That's it.

10 MR. HOYLE: Okay. Betsy, I thank you. And also,
11 Donna Menella and Eileen Tana, I want to thank them for
12 their participation.

13 MS. SHELBURNE: Also, if there is anything that
14 you would like to add, or characterize as to what we did or
15 modify something or have left out something, I wish you
16 would chime in.

17 MS. CERNY: Can I just say, I think you ~~recall~~ did
18 a good job.

19 MS. SHELBURNE: Yes. You can say that.

20 Thank you.

21 If you would like the others up here with me,
22 please feel free to chime in.

23 One of the things about my participation in the
24 group is that I was very sensitive to the fact that I was
25 nota member of the Advisory Review Panel. If you remember,

1 at my presentation to the last meeting, I was the brilliant
2 one who had the idea of having a working group with the idea
3 that this would be a small group of people who are
4 experienced users, experienced with the headaches of
5 capturing, and wanted to get together to try and make our
6 best recommendations.

7 When there were issues in the report and there
8 were some problems, I tried to give my best advice. It was
9 not a lot of voting in the group. It was just laid out for
10 discussion. And the group had a strong recommendation of
11 the elements. And this is a good list. If there are things
12 missing, we would like to hear about it. But it is a strong
13 recommendation from the working group, prospective of
14 potential users, and also the level of effort on searched
15 capture.

16 MR. HOYLE: I appreciate you making that point
17 clear, that you are a member of the Administrator's office
18 and are not part, or a member of the panel, and therefore
19 could not be a full-fledged member of the subcommittee. But
20 I appreciate your efforts greatly.

21 Let me mention two things. And then Dan had a
22 point to make, and we will get to that. Otherwise, what I
23 think I will kind of do is go around the table. Since Mr.
24 Holstein first indicated he had a point, we will start with
25 him and then go around.

1 But Betsy mentioned two documents, which I will
2 make a part of the draft bibliographic header field Revision
3 3, which is a starting point for this subgroup dated May 17,
4 1988, and then the recent letter from Kirk ^BMalcolm of May
5 28, 1990, which has recommendations of the working group.

6 MR. GRASER: It was just a quick point. I counted
7 29 fields by actually going through the list. So I think we
8 should clarify that.

9 There are 29?

10 MS. SHELBURNE: By the time we got through, we
11 were lucky -- well, they were fun meetings.

12 MR. GRASER: The record should reflect there are
13 29 and we should go by the list as they are listed out.

14 MS. SHELBURNE: Kirk stands corrected.

15 MR. HOYLE: There are several ways we could do
16 this. One is to just go page by page, item by item, and see
17 whether we have agreement or if there is discussion on a
18 point.

19 The Department of Energy has sent me a letter with
20 their thoughts and comments, and we need to discuss those
21 items. But let's see how this goes.

22 Mr. Holstein.

23 MR. HOLSTEIN: Thank you very much. I just have
24 one very brief question to clarify my understanding of the
25 first recommendation, multiple submissions for same

1 document.

2 I gather from, rather than trying to make choices
3 among several different submissions of subjective
4 information, that you would go ahead, but that you would
5 identify them by participant's number, and that those
6 numbers would be -- and this is the part I want to clarify --
7 - the number will all be listed in sequence.

8 Will it be easy to ascertain which submission goes
9 with which numbers?

10 MS. SHELBURNE: We discussed that a lot.

11 Our feeling was that -- Let me just preface this
12 by one comment: that based on my now speaking for the
13 Administrator's office -- excuse me. If something is
14 different, clearly wrong, a different date or just a
15 different format of the contract number, I don't think we
16 would just sort of list that one right after the other.

17 What we are talking about here is for those
18 documents that may be described differently for additional
19 terms that are there, our recommendation is you would still
20 have one header, so people wouldn't have to get two headers
21 and wonder if it was a different document or a duplicate,
22 point to the same image, point to the same text.

23 Only where the description was different, the
24 title description, did we feel it was important to attribute
25 the describing of it to the different submitters. If

1 additional terms were added, we didn't feel like we needed
2 to put a Code Number 1 in a system like this, because we
3 didn't think that would be a problem.

4 If it needed to be done, we would do it. But only
5 where the textual description and the title description
6 field was different did we feel that some code or acronym or
7 whatever related to it, maybe the submitter's acquisition
8 number, that would be attributed. We would just merge the
9 information and assume it was right according to the catalog
10 numbers and that the submitter's acquisition number field
11 would add that additional tack-on so the two submitters
12 contributed to this header, but you wouldn't know if the key
13 terms or something like that, which one was which.

14 Does that answer your question?

15 MS. CERNY: I agree, there is going to probably be
16 a lot of multiple submissions. But I also think, in many
17 cases, it is going to be very hard. The very issue you
18 brought up here, you might have different titles, different
19 descriptors. And in an automated environment, by doing
20 matching to titles, descriptions, et cetera, I think it is
21 very difficult to pick up that they are duplicates, except
22 in very complex search cases.

23 How are you going to find out they are duplicates?
24 To, from, a certain number of fields will match. But if you
25 have titles, et cetera, the duplicates will throw that out

1 and say that isn't a duplicate.

2 I think there is more to this than just the issue
3 of whether you are going to capture both of those titles.

4 MS. SHELBURNE: I think this was based on the
5 assumption, gee, when you put it in, you said it might be a
6 duplicate, but after review, you determined it was not a
7 duplicate. Looking at the image of the information, the
8 text of the information, to say this is not the exact same
9 document DOE had, it is as an attachment to a piece of their
10 own document. There was an additional description. It was
11 the point at which you determined that it was not a
12 duplicate that we had this issue.

13 If there was some question as to whether or not it
14 was the same document, then the header would be separate,
15 would point to a different document. There would be two
16 different citations on the assumption that people would not
17 duplicate.

18 Am I characterizing this right?

19 MS. CERNY: But you really get into an issue then
20 of how much manual work are you going to do in this system
21 and how much you want to automate at the expense of having
22 some duplication, just because it is too expensive, and at
23 what point is it worth doing the manual checking that you
24 are talking about.

25 MR. TREBY: I was wondering if we could maybe set

1 up some specific samples instead of talking in the abstract,
2 and get at this issue of how much manual checking we are
3 going to do ahead of time.

4 I can foresee three different situations where you
5 might have -- there may be more, but at least three came to
6 mine -- where you might have duplicate documents with
7 different headers.

8 One would be where, for some reason, the document
9 is developed by the initiator and submitted with a header,
10 or for some reason or another, an organization submits that
11 same document, but their own header.

12 A second situation would be where the issuer
13 develops a document and submits it with its header and
14 another organization has some sort of a different document
15 about this particular issue, say, an enclosure, or in some
16 way or other it is a cover letter they are sending to
17 somebody else. They had that with the enclosure for some
18 reason. And the issuing document is also enclosed so they
19 have a header for it.

20 I guess a third situation would be a document not
21 developed by any of the participants but by some outside
22 organization and one or more participants believes that it
23 is an important document that needs to be in the LSS, and
24 they submit it each with their own headers.

25 Taking those three situations, I guess I am

1 interested in what the process would be.

2 In the first situation, when you have a
3 participant who is actually the originating organization and
4 they submit a header, and a second organization submits that
5 same document with their own header, I would think that the
6 header of the originating organization perhaps sends the
7 document, that second document back to them, indicating that
8 the document has already been submitted by the originating
9 organization.

10 MS. SHELBURNE: This is a stand-alone entry?

11 MR. TREBY: Right. Would you agree that is what
12 would happen?

13 MR. GRASER: Not quite. In the system design,
14 what would happen is that the second attempt to enter the
15 document would define that the document has already been
16 entered. A straightforward case.

17 There is no question as to the fact this document
18 is the same as this document [indicating].

19 The second attempt to enter that document would
20 find that the document is a duplicate. The second document
21 submitted would not simply be sent back to the submitter
22 stating that the document had been submitted. This relates
23 to the fact the system will be annotated with the fact that
24 the second party attempted to submit the document, the date
25 the document was submitted; and we will keep track of the

1 fact that, you know, the document was submitted along with a
2 duplicate, and it won't be seen, but in the record, for the
3 first submission, will be appended a notation that that
4 document was attempted to be submitted a second time by a
5 second party.

6 So it is not really just a question of saying oh,
7 we have already got it here. It comes back. We would be
8 keeping track of every subsequent attempt of submitting that
9 document.

10 When someone comes back and attempts to submit
11 40,000 documents but only 38,000 got into the system, we
12 will be able to say oh, yes, we have 2,000 documents
13 identified as already being in the system.

14 It is not quite as simple as saying no, the
15 document is in there, it comes back.

16 MR. HOYLE: That is part of the system as you
17 envision it?

18 MS. SHELBURNE: Your representation is that would
19 be captured on the third section of the administrative
20 tracking, which may or may not be part of the header, but
21 would be retrievable?

22 MR. GRASER: For database administrators, there
23 will be a complete audit trail of who submitted it to them
24 and so forth. It will be in the duplicate check file.

25 MS. SHELBURNE: Would it be given a submitter's

1 acquisition number?

2 MR. GRASER: I am not certain about that level of
3 detail. Whatever it is going to take to identify, yes, we
4 would keep that information.

5 MS. SHELBURNE: This is the subject for the three
6 categories. If the header information is different from one
7 to the other, the second submission, once it is deemed to be
8 a duplicate, you would not look further to see if the header
9 information is different?

10 MR. GRASER: That is a legitimate issue that
11 Barbara was raising. If one document gets into the system,
12 and that is a complete title that is essentially different
13 from the created title, that the second capture station
14 might attempt to assign to it, depending on the way it is
15 collected. As to the title field, there may be a less
16 probability that document even being identified as a
17 duplicate if the created titles are so substantially
18 different.

19 This is where it begins to go back to the question
20 of what kind of procedures and standards can be put in place
21 for this title field for the descriptor to ensure there is
22 as much consistency as possible.

23 Very often, in litigation support data bases,
24 where there is no title and someone creates a title, there
25 is a standard procedure for how you go about creating a

1 title, like making the first line of the paragraph the one
2 or use the words from the first line to summarize what the
3 document is, so there is some consistency.

4 But whatever procedure is followed, about the only
5 way to be sure that it is a duplicate would be some sort of
6 a standard in place, especially in the title field, where it
7 is a created title.

8 That is an issue, yes. And that is a problem.
9 The problem, with attempting to put two documents in from
10 totally different environments, with two differently created
11 titles.

12 MR. KILLAR: Can I bring up a different question
13 with copies? Is someone was to enter an document that would
14 get kicked out because the header or the description is the
15 same, it would never be entered in?

16 MS. CERNY: My answer to that is, no, it will not
17 be considered a second document because it is my definition
18 not to duplicate.

19 MR. KILLAR: Your software will not be kicking out
20 the header? It looks at the actual pages?

21 MS. CERNY: Marginalia is one of the issues in
22 order to kick it out because it is a duplicate. A duplicate
23 is an exact duplicate.

24 MR. HOLSTEIN: Would they have the same title?

25 MS. CERNY: But marginalia is what makes it

1 different.

2 MR. KILLAR: In which case, the first thing that
3 should be checked out is the marginalia?

4 MS. SHELBURNE: There are two issues in this one
5 that I see. If it is just another version of a document
6 that happens to be unattributed to markings, notes, that we
7 don't know who they are from, they just look different, we
8 assume this has all gone through the participant's dup check
9 and concluded that this is the best copy they are submitting
10 because they want to submit the document.

11 Let's say this, as an example, is the best copy
12 the submitter would find that is legible, here attaching a
13 report which happens to be different from this, B.S.
14 comments, which stands for Betsy Shelburne, by the way.
15 They are submitted and they describe the contents of the
16 document. That is a characterization of that document.
17 When it came in if there was already a clean copy, if it is
18 a different document, it has the same date and there is
19 another copy with marginalia, that is one kind of situation.

20 The other situation is where a copy of my comments
21 comes in. The header would say the author is Betsy
22 Shelburne. The description is comments on Kirk Balcom's
23 report. These are really two different headers and access
24 points. So you have two situations. The situation where it
25 looks like a duplicate except that there are unattributed

1 marginalia and, I guess, well, for the two copies, point to
2 the two versions, the issue is where it is being submitted,
3 because it is my comment on something and that is another
4 situation, because it would have a different header, and
5 hopefully we can figure out what the date of my comments
6 were and that kind of stuff.

7 Does that answer your question?

8 MR. KILLAR: I understand the duplication. Going
9 back to the header section itself, we have agreed there
10 would only be one heading. How do you come up with
11 agreement of what the header is? What you have suggested is
12 that subsequent submitters just let it go. These people
13 have submitted it and there may be something in it that they
14 want to appear in the abstract or some other items added to
15 the header that will not be picked up.

16 Is there an arbitrator who comes up and who says,
17 what do you have in the header section that you feel
18 comfortable with? Would that be the LSS Administrator or
19 someone else? The Administrator looks at that, sends it
20 back to the original submitter, and gets agreement that,
21 yes, this will not detract from what he originally submitted
22 as his header? That is my suggestion. That is a reasonable
23 way to get the header and make the people who submit
24 multiple documents conform it.

25 MS. CERNY: But the real issue retrievability and

1 this is a full text system and you have all of these other
2 fields. How much, in fact, is that created title going to
3 influence the retrievability of these documents?

4 MR. KILLAR: I agree. If you just limit it to the
5 discussion of the created title. We haven't got down to the
6 other part, and I have some concern about the discussion of
7 the abstract and people doing the searches of abstracts.

8 MS. CERNY: We will have to come up with standards
9 on how you do this. I really think this is the issue. I
10 think the issue is that there is a lot involved and that has
11 to do with the system design and with capture standards,
12 indexing standards, et cetera. We can just sit here and
13 talk about all this, but in fact, that is what we have to
14 do.

15 MR. KILLAR: I agree with that.

16 MS. CERNY: That is what should be put in place
17 and presented. Will these standards work? This is a very
18 good start to filter, but we will not sit here and get
19 closure.

20 MR. HOYLE: No, we are not. That is a good time
21 to comment on issues versus do you think we get to closure
22 on some of the fields in here, and maybe hold out on those
23 that have issues attached to them and talk about the issues
24 in subsequent meetings, papers, or however else we are going
25 to deal with those, because many of these are properly

1 issues for this panel, maybe all of them. Some of them the
2 panel may not be able to get to or too interested in because
3 you need guidance, but there might be closure and that you
4 want to get going on. So the question is, how much time do
5 we want to spend talking about issues versus trying to get
6 closure on some of the fields that we can get closure on?

7 MS. SHELBURNE: Can I just do one thing?

8 MR. HOYLE: Let me take the mystery out of the
9 note passing. Kirk Balcom had an emergency at home. He is
10 available this morning, but only available by phone after
11 10:30 if we need him.

12 MS. SHELBURNE: I agree with what you say. I want
13 to go back, Stuart, to your characterization of when are we
14 going to discuss people needing to go away thinking about it
15 in this three-tier issue or the different situations getting
16 an idea on how to handle that, because it is a note in the
17 margin by one organization about this idea of multiple
18 participants create problems.

19 MS. CERNY: My experience with duplicate software
20 is we spent about two years tuning this thing, and you
21 really error on the side of putting them in because you
22 don't want to miss them. And you do have duplicates.

23 I think it will take soe working through. As you
24 say, this is far more complex than just one organization.

25 Could we vote on accepting the fields, the 29 of

1 them, as looking at those fields like this one, where we
2 feel we have to go back to the drawing board for one reason
3 or another?

4 MR. HOYLE: I am ready to do something like that
5 unless there should be other discussion that would keep us
6 from doing that, one by one, or as a group?

7 MS. CERNY: The 29, do we all agree that these
8 are the fields? That would be a big start. And then, one
9 by one, in those with which people have some problems. As
10 we have laid it out in the letter, we have certain problems
11 with certain ones. And then we can go back and consider
12 those. But at least get the bulk of those out of the way.

13 MR. HOYLE: One of those, the NRC feels, is an
14 unnecessary one, for instance, and I take it this is, one of
15 the 29 is whether or not there should be an abstract for
16 documents that will be in full text in the system.

17 MS. CERNY: That is an issue.

18 MR. HOYLE: If we already agreed that is an
19 optional field to both participants and the administrator,
20 and so long as we can go back and take it back out, if in
21 discussing the issue it should come out, fine, that is
22 agreed upon. And then I am willing to agree to the 29
23 fields.

24 MR. KILLAR: We are not.

25 MR. HOYLE: We are not?

1 MR. KILLAR: We question the copy organization as
2 a field.

3 MR. HOYLE: We also have some concern about the
4 numbers of entries that could be in there because the NRC,
5 we send copies to a large number of people.

6 MR. KILLAR: There is a NUREG out, and there is a
7 list in Part B.

8 MR. HOYLE: Is there in the design some limit on
9 the number of copyees, up to two?

10 MR. GRASER: It depends on the software.

11 MR. KILLAR: I guess I am going back to
12 fundamentally what is the point of the fields. The question
13 is, what is the point of the fields in the first place, what
14 is the value of having the copyee and the copying
15 organization?

16 MS. CERNY: I think that, if I remember
17 correctly, the State of Nevada was concerned in negotiations
18 and they were very interested. However, they are not here.

19 MS. SHELBURNE: I know.

20 MS. CERNY: Don't you recall that?

21 MR. KILLAR: My answer to that, though, is with
22 the full text system, once they see the document, they can
23 see who the copyees are to the document.

24 Why they want to do a search of the header as to
25 copyees is beyond me. I would think they would do a search

1 of headers and find out who the letter went to and not the
2 copyees.

3 MS. CERNY: You will have to talk to them about
4 that.

5 MR. KILLAR: So we are down to 27.

6 MR. HOYLE: I would like to get Nevada's viewpoint
7 on that.

8 Do you feel as strongly about addressees and
9 copyees?

10 MR. KILLAR: No. I think that is appropriate.

11 MR. GRASER: I think the discussion is moving
12 towards a very similar sort of realization that there may be
13 some situations and some categories of documents where it is
14 very important to know who the copyees are and the copy
15 organizations, and whether it is a publication with a very
16 wide distribution, which is a very good example of that.

17 There may be examples of documents where it is not
18 appropriate to use that field. And that is something that
19 could be controlled in the capture system environment when
20 we get to procedures which are being put into place by the
21 LSS Administrator.

22 On the other hand, there may be some fields where
23 it provides another user with a point of access and they do
24 want to have access by that field, and for that type of
25 information, and for a certain category of document.

1 I see our discussion moving towards a realization
2 that there may be one field where some subsequent paper or
3 study needs to be done to make a recommendation. Okay, it
4 won't be used wholesale. But that doesn't mean the field
5 should be stricken.

6 MS. SHELBURNE: Let me bring up something to focus
7 the discussion. And this is a "for example."

8 When we are talking about fields, if you all are
9 going to be doing any recommendations or voting, I would
10 point to looking at Appendix B, not just the list of the
11 fields, because there is a description of what we felt the
12 short title of the field was going to be. In talking about
13 this, there should be a common understanding of what that
14 field should be.

15 I would note that copyees are useful for
16 correspondence only, names of all the persons to whom a copy
17 of the document was sent, as listed on the unit.

18 I would also like to point to the fact that it is
19 recommended that is a field that is going to be picked up by
20 the capture station personnel. Therefore, it has to be
21 listed on the elements. It is not something where you would
22 go off and ask everybody where you had copies to.

23 MR. KILLAR: The Nuclear Regulatory Commission
24 sent out a NUREG, part of which covers letter lists, which
25 is a listing of all of those who are receiving the document,

1 so you would have three pages of copies.

2 MS. SHELBURNE: Well, that is as to
3 correspondence.

4 MR. KILLAR: The letter is correspondence, even if
5 it is a transmittal letter.

6 MS. CERNY: If Mel Murphy were here, he would
7 have a lot of discussion about this. He would say, it is
8 correspondence having to do with some policy decision, and
9 he wants to know about it, and that was the idea behind
10 copyee.

11 And so this really is a limited category of
12 information in which a document is useful. And probably
13 Nevada who really wanted it, would agree with the NUREG on
14 transmittal letters.

15 MR. HOYLE: Let me suggest we try after 10:30 to
16 get hold of Kirk to see if he can speak to that.

17 Meanwhile, I will entertain a vote on the list,
18 reserving, for the moment at least, on copyee.

19 ~~MS. VIDERT~~ ^{MR. BECHTEL}: I have one question on the list, if I
20 may.

21 Would there be any benefit in having maybe a
22 description of the item that took place? You have down
23 here, "event." Whether that might be something that would
24 enable you to trace something, but also, if you were trying
25 to find out if you had an area of concern, or something

1 being able to include that information as a mandatory item?

2 I just don't see that here.

3 MR. HOYLE: Can you speak to that?

4 MS. SHELBURNE: I am going to ask Donna. This was
5 originally a field called site of activity. I can remember
6 us discussing that. I will turn to Donna on why we decided
7 to take it out.

8 MS. MENNELLA: It was very difficult to determine
9 on all cases of site activity what happened, from just a
10 reading of the document. It turns out most of the activity
11 was Yucca Mountain, during the year of tests.

12 When we put in "Yucca Mountain" they got almost
13 the entire data base. Therefore, it was not felt that it
14 was not worthwhile.

15 The other problem was the tendency to catalog all
16 the information you want to store in this descriptive field,
17 so we ended up merging those two fields. So it is not that
18 the site was lost in the field. It is just that it appears
19 in a different field. It does not have its own field.

20 ~~MS. VIDERT~~ MR. BECHTEL: I can see cases where it wouldn't be
21 applicable and I can see a benefit, if you were trying to
22 look at information about the particular bore hole where you
23 wanted to key it if you used geographic coordinates.

24 I don't know.

25 MS. SHELBURNE: Wouldn't it be in the full text if

1 the document was available?

2 ~~MR. VIBERT:~~ ^{MR. BECHTEL:} I guess maybe would be to go with an
3 abstract and then you would be able to pick that up from
4 other information.

5 MR. GRASER: Or in the title.

6 MR. KILLAR: It might be in the title.

7 ~~MR. VIBERT:~~ ^{MR. BECHTEL:} But maybe not. I don't know.

8 MR. TREBY: I guess I have one question before we
9 vote.

10 MR. HOYLE: Let's remove that. I don't really
11 hear a consensus on adding an item called location, but
12 maybe we could somehow or other urge that title be used to
13 describe location.

14 ~~MR. VIBERT:~~ ^{MR. BECHTEL:} Maybe in the standards of how you
15 describe it.

16 MR. HOYLE: We haven't really seen the standards
17 and details about how titles should be arrived at.

18 MR. HOLSTEIN: I would like to comment on this
19 briefly. I'm not sure. I think it would take some more
20 analysis as to whether or not the system, as it's currently
21 designed, would give user access to the sort of geographic
22 specific data that Dennis is describing.

23 On the other hand, I'm not sure -- I remain to be
24 convinced that the possibility or the likelihood of bringing
25 down on yourself, mountains of data by using a simple term

1 such as Yucca Mountain, is sufficient reason for knocking
2 out a particular code. Frankly, I think that problem is
3 going to occur in virtually any use of a full text retrieval
4 system, if you don't use sufficiently narrow search terms.

5 If you were to use that problem as a criterion for
6 knocking out some of these items or for determining what
7 items should be on the list, it seems to me you will end up
8 in trouble. Yucca Mountain isn't the only one that I can
9 imagine you bringing down unusable mountains of data with.
10 I am not sure the answer we heard was sufficient, leaving
11 aside whether you could achieve the same results through
12 some other system.

13 MR. HOYLE: Any further comments on that?

14 [No response.]

15 MR. HOYLE: I think we do need some at some point
16 the details of what should go into titles and what should go
17 into the event descriptor and what should be in some of
18 these other items like descriptors. Would there be an
19 opportunity to put the location information in the
20 descriptor?

21 MR. BALCOM: The thesaurus will contain geographic
22 terms and the description will contain geographic
23 information.

24 I think in the prototype we had bore holes.

25 VOICE: Every bore hole we know is included as a

1 descriptor.

2 ~~MS. VIBERT:~~ ^{MR. BECHTEL:} I think the only question I have is
3 the field optional at least in describing this.

4 MS. MENNELLA: Which field?

5 MS. VIBERT: The descriptor.

6 MS. MENNELLA: No, that is optional.

7 MS. SHELBURNE: It is up to the submitter. If
8 they don't do it, the recommendation is that the capture
9 station's staff would attempt to index the document.

10 MR. KILLAR: I think, rather than voting on this
11 list, I think we need to have the subcommittee to go back
12 and try to provide some more detail as to what would go
13 under each of these headers and possibly work with Barbara
14 as to what would be the standards or what you call the
15 procedures to fill out these headers.

16 That way, it would give people a more comfortable
17 feeling that their material is going to be included or the
18 material is not going to be included.

19 MR. HOYLE: Well, it is back to the chicken and
20 egg situation. That's what you're saying we have here.

21 When there is a sequence of events, would there be
22 detailed instructions or procedures prepared for
23 participants?

24 Is it appropriate as Felix suggests, to see that
25 type of detail before we decide on what the header units

1 are?

2 Would DOE answer that?

3 MS. CERNY: I'm happy with the header unit as they
4 are with some tuning, and I will go into that when we get to
5 abstracts of documents. A lot of thought has gone into
6 this, based upon the prototype and based upon knowledge of
7 other systems.

8 I really see us belaboring this when I am hopeful
9 that we can -- there are good reasons for picking what has
10 been picked and I would just as soon move on and fine tune
11 those fields we need standards for.

12 MR. KILLAR: I am suggesting we don't need to go
13 over all of them, but just like ^{copyee} ~~Copy E~~, or organization.

14 MS. CERNY: When I suggest this has been narrowed
15 to this set of fields and there are good reasons for having
16 picked it, as Dona just explained why we no longer have a
17 location field, I think we should accept this and go on, say
18 in which way is a field under question. Do you need your
19 standards set up?

20 I suggest that we move this thing on.

21 MR. HOYLE: We need to move on; it's 10:30. We
22 have decided that there are some things to be decided or are
23 we going to put everything off until the issues category?

24 Stew might have a further comment on how we may
25 proceed.

1 MR. TREBY: I think that we should reach some sort
2 of resolution as to the group of headers. My only question
3 is whether we should vote and whether we should vote on the
4 list first and hear the modifications or hear the
5 modifications and then vote. I understand that we can talk
6 to Kirk who is the representative of Nevada shortly, and we
7 can hear his comments on ^{copy}~~copy~~ and stuff, if that is still
8 an issue as to whether or not that should be a field of not.

9 The only question is as to standards for that
10 particular field.

11 MS. SHELBURNE: I just want to go back to Appendix
12 B, if people would like to alter the description of fields
13 to say such things under descriptors to give some
14 recommendation for the purpose and focus and any specific
15 indexes concept or philosophy, if that could be done. It's
16 not only a list of fields, but the wording of some of the
17 descriptions, the site or the location -- if there is a
18 recommendation that descriptor should be something else,
19 fine.

20 I'm not trying to put words in as to what they
21 should say in this report. You keep talking about the list,
22 but it is the issue of the definition; that detailed indices
23 will be developed from.

24 MR. HOYLE: Let me proceed by using pages 1 and 2
25 of the document we got from the subcommittee, plus

1 Appendix B, page 1. Let's take the first 5 items and see
2 what issues jump out. So we have participant accession
3 number, submitter center, submitter paper count,
4 title/description, and then author. And then, Mr. Treby, I
5 have one minor point I would like to raise, and that is, at
6 the very beginning where it says "Bibliographic Header" and
7 then in parentheses "required to be supplied by
8 participants," I guess I would suggest we might add, after
9 "required," "if applicable."

10 MR. TREBY: Picking up on what Betsy said, not all
11 of the fields are applicable. I assume we are referring to
12 all the fields. It is a small point, but I don't think we
13 want to leave the impression that everyone of these fields
14 are required to be filled out if they are not obviously ones
15 that can be filled out.

16 MR. HOYLE: As you say, Betsy made that point.
17 What we are suggesting is that it be put in the appropriate
18 in describing the headers to be supplied by participants.
19 All right, let's look at the description of the
20 title/description in the Appendix B. I will read it. "A
21 brief description given to a unit -- "

22 MR. KILLAR: Excuse me, do we really need to go
23 into this much detail?

24 MR. HOYLE: All right, the answer is no. Do we
25 have approval of the first 5 items?

1 Okay, approval.

2 Next, author organization, addressee, addressee
3 organization, document date, document/report number.

4 Approved.

5 Document condition, edition/version, event date,
6 code, protected status, related documents.

7 MS. VIBERT: Maybe we should put location in
8 there; maybe descriptor is fine.

9 MR. KILLAR: I have a question under the
10 edition/version, and the question is, that it says free
11 text. The question is, is it appropriate now to talk about
12 this, whether this should be free text searchable or not? I
13 have no problem with the header, I just have a question
14 about free text.

15 MS. CERNY: Let's do the headers.

16 MR. KILLAR: Okay.

17 MR. HOYLE: Special class, abstract/summary for
18 non-documents. Okay, we have approved the fields.

19 ~~MS. VIBERT:~~ ^{MR. BECHTEL:} I have a question about protected
20 status. What exactly does that mean?

21 MR. HOYLE: Who could describe protected status as
22 a header field? Betsy, before you run out, could you tell
23 us more about protected status as a field?

24 MS. SHELBURNE: Okay. It's my understanding the
25 bibliographic headers would have to be submitted for those

1 documents for which participants claim a privilege.

2 MR. BALCOM: I am catching about 90 percent of the
3 conversation.

4 MS. SHELBURNE: Very probably because I was
5 walking across the room.

6 MR. BALCOM: I am glad to join. I guess I would
7 have to use this conference call after all.

8 MR. HOYLE: Yes. Thanks for joining us. So far
9 what we have done is rapped a bit and we have approved just
10 about all of the fields of the bibliographic header to be
11 supplied by participants. We are now talking about one of
12 those, the protected status field. Betsy is describing what
13 that entails.

14 MR. BALCOM: I heard Betsy start to talk about
15 that.

16 MS. SHELBURNE: As I said, it is my understanding
17 that there is a requirement for those documents which
18 participants claim a privilege -- I would like anyone to
19 chime in on this one -- that headers must be submitted, and
20 there was the case -- the field in which someone would
21 designate the privilege they were invoking.

22 MR. BALCOM: Right, privilege, or I think the rule
23 states exemption. It's in one of the rule sections.

24 MR. HOYLE: Okay. The description of this field
25 is "a coded field indicating the type or types of privileges

1 or exceptions claimed for the underlying document upon which
2 the header is based." Perhaps the word "exceptions" should
3 be "exemptions."

4 MR. BALCOM: Whatever the rule is, we used the
5 wording in the rule which is "exceptions."

6 MR. HOYLE: Yes. Eileen's head is giving me a
7 yes, "exceptions." Steve Scott has raised his hand.

8 MR. SCOTT: Another issue, if that one is closed,
9 is that we might have the instructions to say, "if
10 applicable," correct?

11 MR. HOYLE: Yes.

12 MR. SCOTT: That creates inconsistencies that we
13 have with the descriptions in here. For example, document
14 date. That is not consistent with a description now. It
15 indicates that the document will be created regardless of
16 whether or not it's applicable.

17 MS. SHELBURNE: Are we switching fields here now?

18 MR. HOYLE: Steve is going back up to a field
19 "document date" and he has a comment on that. He says the
20 document on which the unit was published is created if it
21 doesn't -- well, that the information in the unit will be
22 used to determine a likely date. I don't feel that is a
23 problem.

24 MR. SCOTT: If there is no date, it is not
25 applicable or are we saying one is always applicable because

1 one will be created?

2 MR. HOYLE: I guess I am prepared to say, as far
3 as date is concerned, there should always be something in
4 that field.

5 MR. SCOTT: The same holds true for author and
6 addressee, organization?

7 MR. HOYLE: Yes.

8 MS. MENNELLA: This difference was if it is
9 applicable and whether it is available. Certain fields will
10 be filled on information that is available. Other fields it
11 is based on applicable information.

12 For example, if you have a report, the addressee
13 is applicable, because the report does not have an
14 addressee. Am I making sense? Everything has a date
15 whether or not the date is available in the document format.
16 It is available, but not applicable.

17 MR. SCOTT: Thank you.

18 MR. HOYLE: Okay. If we approve special class and
19 abstract summary --

20 MR. KILLAR: On abstract summary for non-documents
21 it is an issue as far as an abstract. And so I have
22 problems approving it for non-documents. We feel abstracts
23 will be there for all documents whether it is a nondocument
24 or something else.

25 MR. HOYLE: So you would --

1 MR. KILLAR: The participant should be reasonable
2 in filling out the abstract.

3 MR. HOYLE: Their proposal is, bring up the
4 abstract summary from the optional field below?

5 MR. KILLAR: Really, deleting this from the field
6 optional to both participant and LSS and deleting this for
7 participants for non-documents. The participant is
8 responsible for filling out the abstract summary, whether or
9 not it is a document or a non-document.

10 MR. HOYLE: Let's discuss that.

11 Lynn, do you have a comment?

12 MS. SCATTOLINI: I have a comment. We are having
13 a very great difficulty hearing all of you.

14 MR. HOYLE: I guess we are getting to the position
15 that the stronger we feel on the subject, the stronger the
16 voice. But thank you. We will try to keep our voices up.

17 I think NRC believes that we do not need abstracts
18 for documents which are going to be in full text. I believe
19 it is a matter of cost-effectiveness.

20 The size of the header field data base or data
21 file would have to be quite large, I would think, if you are
22 going to have abstracts of every document here. You are
23 getting more and more subjective descriptions of documents
24 in the file.

25 Useful, yes. Certainly cost-effective. I'm not

1 sure about that.

2 MR. KILLAR: We are concerned with costs, as well.
3 We recommend that we have abstract summaries for every
4 document and that be a controlled format, that it be limited
5 to 200 words or 300 words or something along that line, so
6 you don't get a summary almost as long as the document.
7 That should help keep the cost down. It does require labor
8 manpower by the participant to generate that summary, but
9 there are costs to the participants, not the system.

10 The system cost would be limited to the space it
11 takes to get that out as well as the searching of that
12 summary abstract.

13 I know when I went through the prototype testing,
14 there were a lot of abstract summaries.

15 MR. HOYLE: Felix, I found that, too, when I did
16 the same thing.

17 MS. CERNY: We come in the middle between the two
18 of you.

19 MR. HOYLE: Your position is described in your
20 memo. Why don't you describe it quickly here?

21 MS. CERNY: That's right. We really ought to
22 look at classes of documents for which abstracts should be
23 prepared. They are very, very important, but there have to
24 be standards set for this, in which cases, abstracts don't
25 go or don't say everything, and don't say anything. But we

1 really think this has to be revisited.

2 MR. HOYLE: Kirk, do you have any comments on
3 this?

4 MR. BALCOM: I think what I would simply say has
5 already been presented in the paper, and it sounds like
6 Barbara was the last speaker, and I think that is probably
7 our position, too. It is not everything, and not nothing.

8 In the situation for non-documents, it is
9 different, than, of course, the situation for a lot of
10 extraneous material.

11 A non-document is critical. That will be a way to
12 present. And talking about this in some form, and we had
13 long elected to have this abstract field for tying this all
14 together. It is like a multi-field. But it is especially
15 important in the situation of non-documents.

16 MR. HOYLE: I think none of us have a quarrel with
17 that.

18 MR. BALCOM: Okay.

19 MR. HOYLE: I think we have to hold up this one,
20 Felix. Would you be willing to entertain a discussion at a
21 future time, as to whether there are some documents that
22 would not need to be abstracted -- correspondence which does
23 not have lengthy attachments, things like that -- that sort
24 of speak for themselves.

25 I am not trying to get into things which are

1 excluded.

2 MR. KILLAR: I would be glad to listen to the
3 recommendation to quantify what does need or does not need
4 to have an abstract.

5 MR. HOYLE: Would the LSS Administrator's office
6 like to take a shot at going over abstracts and give us a
7 proposal and let us review or comment on it?

8 MS. SHELBURNE: Well, I think if people, what I
9 would like to hear, and I would like to have the writer
10 report their pros and cons, and come up with a potential of
11 what you think the potential set of documents is that they
12 would like to have. We will end up making the final
13 decision. But what we are asking for are the thoughts of
14 people.

15 Barbara has already recommended a certain set of
16 ideas. What I would like to hear is which set we can divide
17 which way.

18 I can lay out the issues, and the way it makes the
19 best sense to us, or the feeling of the advisory group panel
20 on which ones they felt warranted exception or inclusion.

21 I would like to bring up one more issue on the
22 thought of abstracts. The time it takes to do it relates to
23 cost, but is also relates to delays in issuing the document.
24 There may be some issues that you may want to think about in
25 terms of when we are in a real time mode here. Yesterday's

1 documents have to get in. So we have an issue of how you
2 feel about something that does take time to do it right on
3 the submitter's part.

4 I am just raising the issue. I want to get
5 people's input on the answer.

6 MR. HOYLE: What did you think? Do you want to
7 give us to the end of the month to think about this? I
8 don't know that really we are prepared to talk about it now.

9 Do I have a suggestion from anyone as to how we
10 should proceed with grappling with the subject of abstracts?

11 MR. TREBY: Well, I guess I suggest that we decide
12 there will be a field of abstracts because we certainly need
13 them for non-documents and that the group consider with
14 regard to documents what standards they would like to have
15 for abstracting those and perhaps we could set a date
16 whereby everybody would submit in writing to John their
17 thoughts and he could circulate them and then at the next
18 meeting in October we could bring it up and have everybody's
19 views available and have an opportunity to think about it
20 and maybe resolve it at that meeting fairly promptly.

21 MR. HOYLE: I appreciate the proposal.

22 In your comments, Barbara, you point out it's
23 critical in terms of sizing header file -- data files. If
24 we don't get these resolutions until October, are we all
25 right, Dan?

1 MR. GRASER: We are probably all right because the
2 size of bibliographic header file in comparison to
3 comparison to the text is minuscule -- not minuscule but
4 it's really of much less magnitude than the volume of text
5 that we are going to be putting into the system but, yes,
6 the decision could be deferred but eventually some decision
7 would have to be forthcoming.

8 MR. TREBY: Absolutely. The decision must be made
9 in October, no later.

10 MR. GRASER: It is not so much a question of size
11 of words, 200 words versus 1000, so much it is the
12 multiplier of how many documents are going to be or have to
13 be abstracted, whether it is 10,000, 100,000, a million --
14 the multiplier that you are dealing with there is really a
15 critical factor, so, yes.

16 You shake your head no, but I think we can defer
17 on that until October, yes.

18 MR. TREBY: I have one question though. Many
19 Government documents already have been abstracted. Those
20 abstracts could be found in the full search text.

21 MR. GRASER: Yes, or they could be put in the
22 abstract field. That might be one category of documents
23 that you automatically say yes, if an abstract is present in
24 a publication it will be placed in the abstract field.
25 There are no new abstracts that need to be created.

1 It's a very simple thing to accommodate. That
2 might be one of the recommendations that when somebody comes
3 to an abstract field in more detail.

4 MR. HOLSTEIN: That sounds great but I am not sure
5 that achieves what Felix is after.

6 MR. KILLAR: Really it does. What I was looking
7 for is in a search on headers rather than full text headers
8 to have a search of headers which is a lot easier than a
9 full text search.

10 MR. HOLSTEIN: Are you also looking to have
11 consistence across abstracts?

12 MR. KILLAR: Whoever is putting the abstract in is
13 going to be generating that document. They are going to put
14 their own abstract in rather than someone else's.

15 MR. HOLSTEIN: Let me pose this question to you.
16 I have seen a lot of abstracts of Government documents.

17 If your goal is to have some things consistent,
18 then in all abstracts -- then all abstracts can meet some
19 basic standards of usefulness to this system, are you
20 satisfied with all abstracts previously done by the authors
21 which may or may not meet those standards are somehow going
22 to by definition meet your needs of useability?

23 MR. KILLAR: The problem is even if you have a
24 very definitive set of standards you are going to have
25 abstracts that are not acceptable because there are

1 exceptions to standards.

2 MR. HOLSTEIN: That is a different question.

3 If somebody can't follow directions, if someone is
4 told write the abstract any way, you want to know what the
5 LSS standards are, it seems to be a separate problem.

6 MR. KILLAR: You will have to have some guidelines
7 and it is their responsibility to meet those guidelines or
8 not, I agree.

9 MR. GRASER: I believe in the prototype we had a
10 number of situations where a supplied abstract was found to
11 be deficient and required us to add additional material to
12 the abstract field to make sure that it fully described a
13 document. We weren't there in a situation in the prototype
14 where the abstract that was provided was not adequate and we
15 had to go a little bit further.

16 MR. HOLSTEIN: Presumably you don't want to have
17 to do that on a regular basis.

18 MR. GRASER: Also, let me point out that when the
19 abstract was done you want to utilize that and it's just
20 simply not a clear-cut answer.

21 I think this gets back to exactly -- this is
22 something that needs to be examined.

23 MR. HOLSTEIN: My point is just a very narrow one,
24 which is whatever the standard is created on, you are going
25 forward based on knowing who is in any event going to be

1 writing an abstract for his or her documents should be
2 exempted from having to review and meet these standards the
3 LSS system has for abstracts. That is leaving aside your
4 issue, Felix.

5 MR. GRASER: I will speak up on that one.

6 I think the probably type scenario, if I follow
7 what you are saying, would be that an engineer who wrote an
8 article out at Sandia, when they do an abstract of their
9 article, are you indicting they should be fully -- preparing
10 their abstract of their article out there?

11 I think the answer is it probably won't happen.
12 It will probably be a situation where a capture system
13 environment will be responsible for bringing that abstract
14 up to snuff.

15 MR. HOLSTEIN: I am saying fine, this is the
16 shortcomings but there is no reason why Sandia as a matter
17 of policy has anyone in their employ producing documents for
18 which abstracts can't be a matter of structure, please
19 prepare your abstracts according to the following set of
20 criteria.

21 There is no reason why you don't do both of those
22 things.

23 MR. KILLAR: I agree. You want an individual
24 putting the document in to make sure that abstract is
25 relative to the subject if that individual is at Sandia or

1 Los Alamos.

2 These are only guidelines.

3 When you develop a document, develop your abstract
4 to take these things into consideration and that saves the
5 individual from relying on or depending on what the
6 standards are we have for our abstracts, which may well be
7 different abstracts from some engineering publication or
8 from the Government as to what they require in an abstract.

9 MS. CERNY: It also becomes a contractual issue.

10 The contractors work under contract and to say
11 that they have to follow certain formats for abstracts would
12 have to be written into their contracts if you are really
13 going to insist that they do it.

14 That would then become a nightmare situation.

15 MR. GRASER: This is the LSS abstract which is the
16 one to conform to the general publication standard for
17 documents, which is different from the DOE. In that case,
18 it may very well be driven by what is already in the
19 standards for abstracts.

20 MS. SHELBURNE: Are there abstracts for the DOE
21 set forth, Steve?

22 MR. SCOTT: That is the situation. They must
23 comply. And we do incorporate those contractually.

24 MS. CERNY: I don't know the answer to that,
25 because we are getting into contractual issues.

1 MR. HOYLE: Well, this is going to be for October.

2 MR. HOLSTEIN: What we just heard was that they
3 are incorporated contractually. Does that not make it
4 unmanageable?

5 My point is only this. If you leave open a lot of
6 opportunities for shoddiness, if you will, by simply telling
7 yourself you are going to use a document control process to
8 catch all of these problems, you will end up with a costly
9 and an enormous job trying to go back and fix the problems.

10 I am simply suggesting it is relatively easy-to-
11 handle by some minimal guidance at the front end.

12 MR. ALTOMARE: I work in the Division of High-
13 Level Waste. We start out a lot of these things.

14 We looked at these problems of going after the
15 abstracts and taking the full text. But when we went over
16 to a professional abstractor, they were doing it quickly,
17 but we got the impression that there is a cost of having the
18 professional or somebody doing that; and putting it into
19 abstract form quickly exceeded the cost of putting in the
20 full document.

21 That is not a cheap thing. You have to have
22 professionals, people who know what they are doing. Our
23 conclusion, you could just go ahead and depend on the full
24 text as much as you can capture electronically in the
25 generation of a document.

1 If there is an abstract, there are ways to pull it
2 out of a field and put it in another field like the header.
3 But it depends upon somebody going into the document if he
4 is the one who wrote it, depending on him getting that
5 abstract correct. It is an expensive operation, and we
6 hesitate to do it.

7 I am very concerned about your asking the LSS
8 Administrator to go in and develop abstracts.

9 MR. KILLAR: I'm not saying that the LSS
10 Administrator is the individual who is putting that document
11 together or is responsible for that abstract at all.

12 MR. ALTOMARE: If you do know what you should be
13 doing with the document, it is possible to take the document
14 and tap electronically and transfer that over to a header,
15 if you wish.

16 But having a specialist of some kind, somebody
17 checking to see if that is correct, if that covers the
18 document, you are talking about a big expense. And I would
19 be very hesitant about doing that.

20 MR. KILLAR: The onus is on the individual putting
21 that document together to make sure that it represents the
22 document.

23 If we have some guidelines we develop as to what
24 should be in there, it is fairly self-evident that if the
25 existing abstract is adequate, then that task is not needed.

1 MR. ALTOMARE: I think having guidelines
2 requesting certain types of documents as has been suggested
3 is fine, seeing if you can get that as something else, it
4 can get a little bit out of control.

5 We have to think about it on a cost basis, as Dan
6 was saying. It's not 200 words. You start multiplying it
7 by millions, and it does get to be expensive.

8 MR. HOLSTEIN: I think we are agreeing with
9 everything you said. We are saying, for having reasons at
10 the front end, for the authors, not subsequent people, but
11 for the authors, that is precisely to avoid the cost
12 problems later on.

13 MR. ALTOMARE: Let me make one more point, and I
14 will stop.

15 From my perspective, from working in the technical
16 staff side, we did not want to start generating a lot of
17 work for our staff to pick out a specific identification
18 field that should be in the header.

19 We are watching carefully as to what it takes to
20 fill out the header. We want to utilize that as the primary
21 source. We agree with that.

22 But if you are asking now that every time you have
23 added maybe just five minutes, is it worth the cost? I
24 don't think it necessarily is.

25 In our case, the document normally has a header

1 and an abstract, so that is one thing. I am a little bit
2 cautious about what you are asking our staff to do. I am
3 just adding this caution, that I do not think you should be
4 agreeing to things that are just going to be adding work
5 that has to be paid for by somebody.

6 MR. KILLAR: I don't think we disagree with you.
7 In fact, some of the suggestions have been what we should
8 include in an abstract and what we should not. You are
9 talking about a letter and we don't need an abstract for a
10 four-page letter.

11 MR. HOYLE: I think we have had sufficient
12 discussion on the point.

13 The point that Mr. Holstein has raised is a very
14 good one. Phil's point is a very valuable commentary. I
15 think we should all take this discussion into account.

16 I would suggest that you provide to me by July 15,
17 in a little over a month, if that is agreeable, your
18 thoughts on what standards ought to be used for abstracting
19 one set of documents, and that set of documents should be
20 abstracted whether or not you believe all of it, including
21 correspondence and so forth, and who should do the
22 abstracting. Comment on who should do the abstracting.

23 MS. SCATTOLINI: I have a couple of comments.

24 There are costs to be realized here. But I don't
25 know if the group is aware as to what the cost is.

1 There are three different types of abstracts that
2 I know of. I don't know if the group is aware of what they
3 are. So I think you need some common information based on
4 which to make a decision that should be provided.

5 MS. SHELBURNE: I would agree to provide a talking
6 point or thought point to distribute to the members for
7 their consideration prior to their recommendation. I don't
8 know if I can give you dollar values or whatever, but there
9 are issues I think the members should take into
10 consideration before they make their recommendation.

11 If not, you will have to come back with what do
12 you think about this, what do you think about that.

13 MR. HOYLE: When do you think you could get me
14 that? Maybe July 15?

15 MS. SHELBURNE: Well, July was the date I set down
16 here [indicating].

17 MR. HOYLE: I need to send your material out.

18 MS. SHELBURNE: It is not like I have not thought
19 about this before.

20 I think in the next couple of weeks I ought to be
21 able to get something together.

22 MR. HOYLE: Perhaps I will set 31 days from the
23 date I send the LSS data out; I will expect back your items
24 for discussion in October.

25 Well, are you hearing?

1 MR. BALCOM: 30 days after the receipt of Betsy's
2 review?

3 MR. HOYLE: Yes, sir.

4 MR. BALCOM: That sounds good.

5 MR. HOYLE: I believe, with the exception --

6 MR. TREBY: No. I just have a comment on "special
7 class." And that is what the interim team was thinking
8 about.

9 A special class that came to mind to us was all
10 adjudicatory documents. We would certainly want those to be
11 flagged. That would identify what the record was.

12 I guess all we want to do is make sure that was
13 included as an example of a special class.

14 MR. GRASER: I believe the rule says that the LSSA
15 shall establish a separate file reflecting the official
16 file.

17 So in that regard, adding a separate field to that
18 would be, in a lot of ways, redundant, because the rule says
19 there has to be a separate file for that.

20 MS. SHELBURNE: What flag on the record? One of
21 the things I had thought about this issue is how we use
22 different fields.

23 MR. GRASER: Are the people taking a document into
24 the capture system environment going to know, so this is not
25 a cataloging of a field?

1 MS. SHELburnE: I will turn to John Hoyle, the
2 Secretary. It is a designation of what is the content of
3 the official file.

4 MR. HOYLE: The official file is going to be
5 established after the proceeding begins, and there will be a
6 number of documents that will be placed into the LSS well
7 before that time that will eventually become part of the
8 record. They will be introduced by DOE or others as
9 pertinent to the record.

10 Stu, are you suggesting that there needs to be
11 something flagged on the document when it is put in, if it
12 is a potential adjudicatory item?

13 MR. TREBY: We were considering a flag after the
14 fact, after the proceeding began, of a document previously,
15 let's say a site characterization of DOD was entered as an
16 exhibit, and there would be a flag that says this is part of
17 the adjudicatory record.

18 MR. HOYLE: And a notation would go into the
19 system saying that this is a special class and saying it is
20 an adjudicatory-type record.

21 MS. SHELburnE: Well, I do understand that. But
22 I'm asking the question, whatever the type is, it used to be
23 one thing and it is now something else?

24 MR. HOYLE: Yes. And still, it is what it was.
25 Does that help?

1 Yes, there does need to be a separate file of an
2 adjudicatory record, and it could be flagged. There are a
3 number of new records generated within the proceeding
4 itself.

5 MS. SHELBURNE: One of the things I had here when
6 I was going in this [indicating] that it might be not one of
7 these, but an additional field.

8 However, in working with the Board and the Office
9 of the Secretary as to what needs to be also added, I have a
10 letter and the date that the document is required. These
11 are issues. The date received on it I think is an area
12 where we will have to work to make sure the system, LSSA, is
13 meeting the needs of adjudicatory records. I think a
14 special-type code would be used and part of that parameter
15 will be to determine that. We will make sure that
16 requirement is met.

17 MR. HOYLE: Okay. These discussions are certainly
18 needed.

19 Maybe Stu was going to further comment, as I will,
20 that a lot of work has previously been done on the subject
21 of legal documents and adjudicatory documents, and how to
22 get some detailed descriptions of this into the header so
23 they can be found in search easily. We would hope to
24 preserve that work which was done two years ago some way or
25 another.

1 Anything further, Stu?

2 MR. TREBY: No.

3 MR. HOYLE: Moving to "Fields Optional to
4 Participant But Completed by LSSA."

5 There are six items in here: document type;
6 sponsoring organization; copyee; copyee organization;
7 publication data; descriptors.

8 Kirk, we were talking about copyee before. Felix
9 has suggested copyee be deleted from the list of header
10 fields.

11 MR. BALCOM: As just a concept moved back up to
12 addressee or the concept deleted?

13 MR. KILLAR: The concept deleted. We have raised
14 a question as to what is the value of the copyee and copyee
15 organization in the header.

16 Why do you have it when you have a full text
17 capability and you are able to call up the document and see
18 who the copyees are?

19 MR. BALCOM: The reason is usually in the
20 litigation support setting, where you want to find out
21 everyone who received a copy of a document, basically for
22 depositions and examination purposes, and full text
23 sometimes doesn't always work.

24 MR. KILLAR: If that is going to help, having it
25 in the header -- Aren't there standards about having them in

1 the header?

2 MR. BALCOM: At least you know where to search for
3 them.

4 MR. KILLAR: I hate to put Jay Silberg, our
5 attorney, in this position. But he would have been able to
6 be more supportive of your position rather than our opinion
7 that we don't need it.

8 MR. BALCOM: Well, the reason we actually had
9 originally I think planned to put copyees names in the
10 addressee field is simply to lump all of those together.

11 I think I probably made the case that in terms of
12 handling depositions efficiently, that it would be the best
13 place to do it. That is typically the way it is done.

14 If it is felt it is important to have those names
15 available for an examination, in other words, to find every
16 person who got a copy of a memo, for example, if we don't do
17 that, the full text probably won't pick that up and you
18 won't know every person who got the memo.

19 MS. SHELBURNE: I want to raise another issue, and
20 muddy the water.

21 If you search full text on somebody's name, you
22 will get those responses, and you will have to go through
23 and figure out if they were copyees.

24 MR. KILLAR: Well, then, we would have the reverse
25 where you are not.

1 MR. BALCOM: In full text, if you don't find them
2 in the document, you have seen that document, and you search
3 the document, you will then see who actually got the
4 document.

5 In fact, if you would look at the document, you
6 would be able to see whether or not the name is correct,
7 whether or not the address used is correct, rather than
8 putting a corrected address in or a corrected name in at the
9 end.

10 If you want to find out all about that document,
11 as to the persons who received it, for example, so you can
12 have a full history of what that person had to make
13 decisions with or be a participant in the decision, then the
14 only way is to find everything for which they were either
15 addressee or copyee and having a document, and then looking
16 up who received it is not quite the same thing as finding
17 out the document that the person was a recipient of.

18 MS. CERNY: Can I muddy the waters, too?

19 In DOE correspondence control, in the addressee,
20 if you are sending a memo, you don't put the person's name
21 in; you would show "Licensee Support Branch" and you are not
22 going to know who got the memo, whether it was the Branch
23 Chief or who was the Branch Chief of that support branch.
24 Then, that is all the information you have, is addressee.

25 Then we get into the position where I would have

1 to keep a file to have all of the names of the people who
2 got copies. So I would suggest that you would have to have
3 this addressee field distribution, and then you will have
4 names specified for distribution along with the
5 organizations.

6 But this is just a mixed bag of how these fields
7 are used.

8 MS. SHELBURNE: Well, I would look to Steve. Do
9 you want to talk about NRC's distribution codes also?

10 MR. SCOTT: Ours is a coded system. The code then
11 goes back to a data base which identifies who was on that
12 list.

13 MS. CERNY: When?

14 MS. SHELBURNE: At the point in time --

15 MS. CERNY: We don't have that. We have a Chief
16 of a support branch. There is no matching of the data base
17 as to who the Chief at a particular time was. You have to
18 just know that.

19 MR. SCOTT: My other point was that we have
20 another problem we would incur if you are looking towards
21 retrievability. Organizationally we change quite frequently
22 and you would have to maintain the linkage to know what it
23 was the day before if you are going to try to get this
24 information.

25 MS. CERNY: We don't maintain that. We just

1 reorganize that.

2 [Laughter.]

3 MR. SCOTT: You can't tell the players without a
4 scorecard.

5 MS. CERNY: It might be useful, by the way. I'm
6 circulating one.

7 MR. KILLAR: I guess that the other comment is we
8 talked about this earlier. One of the things we talked
9 about in litigation is -- and this is only as to
10 correspondence, we have to talk about what the
11 correspondence is: Does that include formal letters, does
12 that include memos, does that include transmittal letters,
13 things along that line?

14 Maybe once we go back and define the field, then
15 we can come back and address what is appropriate and
16 inappropriate as to copyees and copyee organizations in
17 here.

18 MR. TREBY: I agree. It seems to me this falls
19 into the same category as abstracts.

20 I would like to recommend we follow the same
21 procedure and go back and think about it and each submit
22 recommendations and thoughts on it. We can take it up at
23 our October meeting. I don't know whether Betsy is going to
24 volunteer to offer any talking point on that.

25 MR. HOYLE: Is that agreeable? Okay. When I

1 write you on the subject of abstracts I will remind you to
2 give me your thoughts on the copyee situation. We will
3 discuss it further in October and a copyee organization.

4 The next item is publication data and then we have
5 descriptors.

6 Any further discussion of those items?

7 ~~MR. VIBERT:~~ *MR. BECHTEL:* Just the fact that we need
8 observation and we need to flesh a lot of those out as to
9 what those things mean, especially the descriptors.

10 MR. HOYLE: The descriptors are from the LSS
11 Thesaurus. There is a thesaurus which of course is in draft
12 form.

13 MR. GRASER: And it is an ongoing process.

14 MR. HOYLE: Would you like to know exactly --

15 MR. GRASER: I will get you a copy.

16 MR. HOYLE: It might be in your administrator's
17 office but why don't you send him one.

18 All right, can I consider that group with the
19 exception of the copyee issue approved?

20 MS. SHELBURNE: Does this mean they are approving
21 the definition or the name?

22 MR. HOYLE: We are approving the field, I believe
23 as described in the document submitted to us by Kirk's
24 letter: "Fields optional to both participant and LSSA."

25 Three categories: identifiers, comments, and

1 abstract/summary.

2 Any discussion on identifiers or comments?

3 [No response.]

4 MR. HOYLE: All right. We consider them a part of
5 the field. That ought to be in, approved.

6 Next category is "Fields Not Applicable to
7 Participant but Supplied by System or LSSA."

8 This is LSS System Accession No., number of
9 images, and pointers.

10 Any discussion?

11 [No response.]

12 MR. HOYLE: Okay, they are approved as Header
13 Fields.

14 The next part of the working group's document goes
15 into issues, some of which we touched on, perhaps all but
16 one or two, that kept coming up as Betsy described in the
17 course of the working group's activity.

18 We talked about triple submissions of the same
19 document already. It seems like two days ago we did that.
20 I am not sure I know what the resolution of that was.

21 Is there any more discussion on the point of
22 multiple publications?

23 [No response.]

24 MR. HOYLE: Editing of headers by LSSA is the
25 second issue.

1 I believe that too is an issue that needs further
2 discussion and I would suggest we do that later but I would
3 entertain any thoughts or comments that participants would
4 want to make today.

5 The DOE I am sure has some comments there and NRC
6 has comments along the lines that as far as 2A is concerned
7 on page 3 that instead of having LSSA make it discretionary,
8 rather than when LSSA implements, or rather than have them
9 supplement, they may supplement.

10 We would also want to be sure that the
11 administrator would flag the supplement in some way and
12 inform the participant, the submitter, that they have
13 supplemented the record. I am sorry. I am getting off into
14 something else.

15 MS. SHELBURNE: If we add another key term, we
16 have to say we added it or let the participant know.

17 MR. TREBY: We want the participant to know that
18 his submittal had been modified in some way. We were
19 thinking there could be an asterisk so the submitter could
20 check. If he found the asterisk, he could go back and look
21 to see whether or not, within the time that he has to make
22 corrections to his submittal, he had any disagreement with
23 what the LSSA administrator had done.

24 To take the cycle, for example let's say the LSSA
25 administrator looked through the document and he saw that

1 the document is dated January 2, 1990, and put on the
2 header, it says "This was a document that was sent out
3 January 2, 1991," so he just corrected it and said, "1990,"
4 it is possible that the submitter was, in fact, accurate in
5 his header that the letter was sent out January 2 1991, but
6 they hadn't gotten around to realizing that the year had
7 changed and had dated it 1990 on the letter. The submitter
8 might want to go back to the administrator and tell him,
9 "No, this is an incorrect change that you had made." This
10 would be disastrous."

11 MS. SHELBURNE: This is a difference between what
12 someone submitted, and you add a new value, a new
13 descriptor, a new author, or a new number -- what I'm trying
14 to do is just clarify what you really mean.

15 MR. TREBY: Any of those changes.

16 MS. SHELBURNE: Do you want to flag changes or
17 corrections versus flagging what we have added?

18 MR. TREBY: We were just looking at two ways
19 related to changes and also modifications, and we said, when
20 we have a change made, the submitter ought to have the
21 opportunity to know that the change was made within a
22 reasonable period of time. We thought the reasonable period
23 of time in which it had to make corrections, to get back to
24 the LSSA administrator and say, "We thought that you have
25 made this change, and, for whatever reason, we don't think

1 that is an appropriate change --

2 MS. CERNY: This whole section, to me, raised a
3 major policy and design issue, because I think you have two
4 cases. One, where we have 80 or 90 percent of the
5 information, it is a huge quantity of information. In no
6 way do we see you going over it in the detail that you are
7 talking about.

8 In fact, it's sort of antithetical in the way the
9 program is laid out, the QA procedures that are approved by
10 the NRC, and then the NRC comes in and does an audit or
11 surveillance against the procedures. It seems that this is
12 just another issue covered under the procedures, that DOD is
13 responsible for corrections of the indexes information, the
14 headers for its information under procedures, under QA, if
15 you will. We don't have to call it theoretically approved
16 by the time you come in and audit our processing procedures.

17 If you find problems, you can tell us. Just like
18 we correct deficiencies under other QA audits, if you find
19 problems with the information or for batches of information,
20 you come back to us and say, "Now, fix this."

21 We will have that capture station with which we do
22 all this indexing, and you will have a capture station.
23 What you are proposing is actually a duplication of all this
24 work all over again.

25 MS. SHELBURNE: Can I clarify something here? It

1 is something we ran into multiple times in developing this
2 submitter's header versus capture stations full header.

3 We thought, in terms of the bibliographic header
4 being what would be submitted to a capture station, and then
5 what happened to it in the capture station under the rules
6 of procedures in the capture station, would be to review
7 what was submitted and to make changes.

8 What is raised here is after review at the capture
9 station, if the submitter has submitted this to the capture
10 station which feels it is wrong, how they alter the record.
11 What we get confused on is that the DOE will operate one of
12 those capture stations.

13 MS. CERNY: That's right.

14 MS. SHELBURNE: You are correct if the issue is
15 that it's decided by DOE under the rules of procedures, and
16 everybody is following the same rules, and they will be
17 generating the full header.

18 MS. CERNY: Right. That is all that makes sense.

19 MS. SHELBURNE: There is not a difference here.
20 It is just a problem of -- if it is agreed that DOE will
21 operate capture stations, your comments I only got this
22 morning and I am sort of reacting to them quickly.

23 We will not review every record. We would be
24 auditing.

25 Everybody is running capture stations the same way

1 and we want consistency however that is determined to be
2 done.

3 What is discussed here for those sets of records
4 that other participants submit to the capture station, NRC,
5 the state of Nevada, if there is a supplementation or
6 correction because we believe it is a typo or whatever, how
7 do we handle that. That was the issue, how should it be
8 handled?

9 Does that clear up your concern?

10 MS. CERNY: It isn't written that way. There are
11 two cases there.

12 One is our case. We really us doing this all
13 under the procedures, you know, like we do the rest of the
14 QA, what falls into quality effective procedures for the
15 program. That is one case.

16 The other case is for the other participants who
17 will be submitting information with maybe only the
18 submitters' headers filled out where you won't be put in a
19 place -- with those very stringent quality procedures you
20 will do it yourself because it is easier to take the
21 information from a small party to check information itself.

22 MS. SHELBURNE: If there is something wrong, there
23 is wrong information that submitter has given us, what do we
24 do? What is the supplemental information?

25 Those are two questions we could or want to do.

1 Kirk, chime in here.

2 MR. BALCOM: I am not sure I can talk on behalf of
3 Nevada, really, that Nevada has a strong interest one way or
4 the other.

5 I think the original impression that I got, that
6 it was simply an attempt, as Barbara raised the issue of QA,
7 which is an issue of one being more concerned with
8 integrity, and I think Barbara raises a good point about
9 simply letting the participant or the submitter knowing what
10 you found in the LSSA's opinion is in error and then to deal
11 with it normally like a compliance.

12 I don't have strong feelings one way or the other
13 on this.

14 MR. KILLAR: When I went through and I didn't have
15 any problems with it but now after discussions I have
16 interest or I am concerned about who is going to be
17 monkeying with whose data and who has access to change what
18 fields in somebody's header and who created this. This is
19 my concern.

20 I want to know who has been at my document. I
21 want to have them define it. I don't want someone else who
22 doesn't want my document for their own benefit to go in and
23 change the header so that the document doesn't get pointed
24 out.

25 MS. CERNY: It's really the role of the LSSA just

1 taking this information we give you are produced under
2 certain procedures that you have approved or are you really
3 going in, say, "we don't agree with your characterization of
4 your information."

5 It seems to me that is a real policy decision here
6 that this brings up.

7 MR. HOYLE: Could I interject at this point and
8 perhaps ask Betsy, would you comment on what you think is
9 appropriate at the October meeting for you to come in and
10 describe what you see is the role of the administrator and
11 the role of the capture station unit?

12 I don't think we have really heard too much about
13 what the capture station is going to do, who operates it,
14 what the audit program is going to be and what that is going
15 to have or operate -- I don't know what the right term is --
16 versus the LSSA is going to have and operate.

17 Is that appropriate to do then or now or how do
18 you want to go about that?

19 MR. DONNELLY: I am Lloyd Donnelly, the LSS
20 Administrator.

21 You are getting into an area now and there are a
22 lot of similar areas where we have not worked out all of the
23 details and don't know everything that we are going to be
24 doing.

25 I have one fundamental requirement and that is

1 ultimately everyone is going to be looking to me for the
2 integrity of that data because whatever integrity means, it
3 means accuracy. It means no tampering by unauthorized
4 sources and other things.

5 To me it is clear if an accepted submission from
6 ^EDO~~P~~ or one of the other parties is in error, I feel I have
7 the obligation to resolve that on your behalf to make sure
8 the best information is put in. Exactly how that will be
9 done is a matter that has to be thought through very
10 carefully in terms of the people submitting the QA, in terms
11 of my contractor, it is all integrated so we are not all
12 overkilling, but I can assure you that the data is correct.

13 I think we can talk further about it and we will
14 give it further thought and talk with DOE further about it
15 at the October meeting and provide more information.

16 We will have this whole issue at that point but I
17 think it would be helpful to you if we do that.

18 MR. HOYLE: I think that it would be very helpful.

19 Thank you.

20 We would find -- we would all find that useful.

21 How are we doing on time?

22 Does everybody have time to work a little longer?

23 People are leaving.

24 MS. VIBERT: I have a meeting at one.

25 MR. HOYLE: Stu has to leave in about five

1 minutes.

2 The third item on page 3 is Abstracts.

3 We have already held that already.

4 The fourth is Fields for Non-Document Materials.

5 Is there anything we need to do with that one at this time?

6 MR. GRASER: Yes. I would like to bring to your
7 attention that in Barbara's letter there was an item in
8 Barbara's comments where basically we agree with the
9 recommendation there should be some field available to
10 identify where non-text material such as core samples or
11 data tapes or whatever are located, and who the point of
12 contact is.

13 I think it might be appropriate at this time that
14 the panel entertain adding some addition field to the list
15 of headers, even though it is a non-textual type material
16 and for the most part, we have been talking about text
17 headers. At this point, it be considered for addition to
18 the list of headers and perhaps having the meeting acting on
19 another field that could be dealt with in a little more
20 detail and some sort of presentation made as to how to
21 include that field.

22 MS. SHELBURNE: I guess our only point in
23 supporting that one is that if you add one, there is another
24 one, and then another one, and we could just not wrap around
25 what fields there are. That is why we just limited our

1 recommendation.

2 MR. HOYLE: Are you getting to a miscellaneous?

3 MS. SHELBURNE: Well, that's number 4.

4 Dan said there is a recommendation to add a field
5 called "code" which deals with who, what and where, and you
6 could get the material at this point. The question is, are
7 there other fields, and if the committee is going to
8 recommend them. Is that the recommendation of the
9 committee?

10 MR. HOYLE: I don't know about the others on the
11 committee but --

12 MR. GRASER: Well, I've got to ask the question
13 then, what are we going to do with depositions, mark ups,
14 and perhaps we should have a working group at least
15 participating or working with those sorts of categories or
16 materials and the fields required for them. Maybe it is
17 premature to put this on the list of documentary materials.

18 MR. HOYLE: Is that something we can defer and
19 pick up in October? Okay.

20 Let me talk to you further on that. I will add
21 that.

22 The last item is Miscellaneous Fields. You are
23 just recognizing there might be other fields that someone is
24 going to think of. You heard one earlier today, location,
25 that might be useful. I think we should all recognize as we

1 get closer and closer, there might well be fields that we
2 want added.

3 MS. SHELBURNE: I guess the only thing is to
4 caution people about, in the middle -- well, you have to
5 feel strongly enough about an addition to want to include it
6 now.

7 MR. HOYLE: Agreed.

8 MS. SHELBURNE: This is not just sort of the, gee,
9 we will think about it later. This is acknowledging there
10 may be at some point in time new pieces of information with
11 new document types. To me, it was only the acknowledging
12 that we must be flexible and be able to accommodate.

13 MR. HOYLE: In spite of the hazards of having to
14 backfill.

15 MR. TREBY: I would agree. I am unclear. I
16 mentioned that under special class we would have other
17 documents. This is not an add category, I gather was one of
18 the purposes of it. All right.

19 VOICE: There needs to be somewhere a field that
20 identifies adjudication documents once they get to that
21 point. We may be a ways from this right now.

22 MS. SHELBURNE: We have identified a sort of
23 unique set of non-documents, the adjudicatory ones, and you
24 alluded to depositions. Is there anything special about
25 depositions that could not be captured in these fields or in

1 full text? I don't know. Maybe you want to ask people to
2 think about that for a certain set that you have that we
3 have identified, or they can identify.

4 MR. HOYLE: Okay. I will add that to the letter.

5 Turning to Appendix A, which is a 2-page relisting
6 of each of the fields, we have now approved with comment --
7 Betsy and Kirk, you have listened to the fields then as to
8 why they are not applicable under the columns called multi-
9 valued, controlled authority, format control, free text
10 searchable.

11 As the NRC group looked at this, we were comparing
12 control authority column with free text searchable. We
13 thought if you have a "no" under control authority, you
14 might expect to see a "yes" under free text searchable, or
15 vice versa.

16 Could you describe for me briefly the 2 non-
17 exclusive, they are exclusive, or whatever?

18 MS. SHELBURNE: You are asking me or Kirk?

19 MR. HOYLE: Kirk.

20 MR. BALCOM: I will try and respond. The way this
21 came up was in anticipating how a sample would actually be
22 prepared on a field such as descriptor. Let the descriptor
23 concept be extremely useful if it's done correctly, but
24 somewhat to navigate until the field is done in the
25 following way. This is a retrieval system. In a field like

1 descriptors where you may have 2, 3, or 4 that tries
2 automatically to be an indexing system, you would index the
3 whole phrase and simply the whole phrase or part of the
4 first word is done with your root search, or just the first
5 word, but you wouldn't search for the third word in the
6 phrase.

7 That is to make the distinction between a full
8 text search of an ASCII text of the document and get phrase
9 oriented. Another example would be that you don't remember
10 exactly what the entire descriptor was and then at least you
11 would be able to go at it word by word and do a search and
12 probably hit it.

13 It is a very subtle retrieval activity. The one
14 who raised it wanted to make sure that that be excluded from
15 the design.

16 MR. HOYLE: Okay. I'm not sure I understand what
17 all has been said, but I don't have any further question on
18 it.

19 MR. KILLAR: I have the benefit of being in an
20 index version text searchable system.

21 Where would you use this to follow your free text
22 searchable under that particular one?

23 MR. BALCOM: A good question. I don't remember.

24 MS. SHELBURNE: Can I make up one.

25 This is the third draft of the fifth revision. If

1 there is no control with it, we avoid the need for that.

2 If it is free text searchable, it may present
3 other questions. I guess I'm going to have to give you a
4 better example.

5 MR. KILLAR: It might be helpful, but at the
6 present time I think you're actually limiting yourself and
7 that is the problem with free text searchable on edition.

8 MS. SHELBURNE: I think one of the -- if you
9 search for a particular document and if you have multiple
10 versions coming in, it is a most valuable tool if you are
11 looking for a specific version, and if we have format
12 control, then you ought to be able to request the fourth
13 version.

14 The problem I have seen is where there are erratas
15 to the editions to, say, 14 drafts and really it gets very
16 complicated. Hopefully, we won't have that many in the
17 system, but I am not wedded to the use of the free text
18 searchable field.

19 MR. HOYLE: This is a design issue?

20 MR. GRASER: Not at this point.

21 MR. HOYLE: How do we want to leave that?

22 MR. GRASER: It's probably something that, as we
23 move to the next stage where we have gone beyond having the
24 fields identified and actually begun the process of saying
25 this is now data will be represented in the field, a field

1 like this after some hashing through, we may decide can have
2 standardized statements just as Lyband mails out its catalog
3 and L.C. Mark for its rev ed. We may be able to standardize
4 that and that can be incorporated in the cataloging. It may
5 turn out that you can go ahead and use a code environment in
6 the field.

7 On the other hand, you might get something like
8 farsi language edition, which doesn't have a code value in
9 the system. It may be that the environment you have has to
10 have the ability to put in a more robust description of what
11 you are dealing with. I can also see that situation in
12 terms of software where you are dealing with versions of
13 software, where you are just going to have almost an
14 infinite number of software versions. That could be
15 referred to in that field.

16 One way or the other, I think we get to the field
17 problem of just gathering all of this up and working
18 together to arrive at a solution.

19 MR. HOYLE: Okay. Enough discussion. I believe
20 that we have gone as far as we wanted to go today. I
21 believe NRC brought out all of the comments that we wanted
22 to bring out.

23 In proving these fields, we pointed out the
24 alternatives and we also approved the language describing
25 the fields, in particular, as we have listed them.

1 Now I should point out that we are going to have
2 to come back in October, and I will be corresponding with
3 you within the next month, probably on those items which we
4 will have.

5 I have abstracts, the ^{copyee}~~copy~~ issue, non-document
6 issue, whether we want to do something about adjudicatory
7 documents focusing on approval of the LSS administrator.

8 We also had on our other list of documents for
9 October that is in the folders that you have here at the
10 table at least, and we get into the summer, and I wanted to
11 firm up whether or not those topics are still ripe for
12 discussion in October.

13 When is that?

14 MS. ROOD: The 10th and 11th.

15 MR. HOYLE: That is October 10 and 11, the date we
16 agreed upon the last time in Reno. We are going to be
17 meeting in the Quality Inn in Reno.

18 Is there any more business to discuss?

19 MR. HOLSTEIN: Just a suggestion, Mr. Chairman.
20 In the letter that you sent out to us about abstracts and
21 the other issues that you just listed, I would certainly
22 welcome any pros, cons, descriptions of options that you
23 might want to include in that so we can get the most
24 complete discussion among ourselves for our respective
25 parties prior to the meeting. I think that overall today's

1 meeting and deferring issues to October was done not because
2 we weren't willing, but because we genuinely wanted to think
3 about it and talk to our respective gangs about them.

4 To the extent that we can hear other people's
5 views or have a broader understanding of issues involved
6 prior to coming to the table makes it that much easier.

7 I think that everyone agrees that we will reach
8 the point where we will not be able to have different issues
9 without harming the development of this whole thing.

10 MR. HOYLE: That's right. Thank you.

11 Barbara, did you have anything else to raise in
12 terms of your comments?

13 MS. CERNY: No.

14 MR. HOYLE: Kirk, do you have anything else for
15 us?

16 MR. BALCOM: My question is, were there any
17 changes to fields prior to my getting on the phone?

18 MR. HOYLE: No, there were none.

19 MR. BALCOM: I have no further issues.

20 MR. KILLAR: I do want to raise a question. This
21 deals with the October meeting and the preparation for the
22 meeting. I remember from our last meeting the various
23 design documents were going to be sent out as they became
24 available, so we didn't get a whole lump. Are they
25 sequestered somewhere, and is there going to be a surprise

1 attack? What about it? Have any design documents been
2 released?

3 MR. GRASER: The design documents are going to be
4 developed in a rather piecemeal manner. We are focusing on
5 some very specific areas. The first piece we can focus on
6 came out just at the end of May. There is another one
7 coming out, and I am expecting it to be this week. I can go
8 ahead and do distribution to John on those. Did we send you
9 the first one?

10 MR. HOYLE: I don't have anything since May. The
11 last thing is the thesaurus material.

12 MR. GRASER: We are going through that about every
13 two weeks between now and at the end of September, with
14 draft products coming out at which there has been a fairly
15 detailed discussion of those walk-throughs. We just are
16 beginning at that process now. I can go ahead and start
17 forwarding pieces of those documents. There is the question
18 of whether or not you want to see the initial draft or the
19 final product of the discussions, and that is something you
20 may want to consider.

21 MR. KILLAR: I was under the impression we agreed
22 at the last meeting we would look at something close to the
23 final draft rather than you have something finalized and we
24 say, "Gee, maybe you ought to look at this." But at the
25 same time, we wanted something so if we wanted to add it, it

1 could be brought up.

2 MR. HOYLE: Thank you.

3 Is there anything else anyone wants to add?

4 [No response.]

5 MR. HOYLE: All right. We stand adjourned. Thank
6 you much for your attention.

7 [Whereupon, at 1:05 p.m., the hearing adjourned.]

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

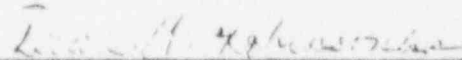
in the matter of:

NAME OF PROCEEDING: LSS Advisory Panel Meeting

DOCKET NUMBER:

PLACE OF PROCEEDING: Bethesda, Maryland

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.



Dean A. Robinson

Official Reporter
Ann Riley & Associates, Ltd.

ENCLOSURE 3

AGENDA

LSS ADVISORY REVIEW PANEL MEETING

JUNE 7, 1990

- 9:00 Administrative Issues (including approval of Minutes
from 3/20-21/90 LSSARP meeting)
- 9:15 Discussion and Vote on Recommendations Made By Header
Working Group
- 10:45 Future Schedule
- 11:00 Adjourn

ENCLOSURE 4

MINUTES

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL MEETING

October 10 and 11, 1990

RENO, NEVADA

The fourth meeting of the Licensing Support System Advisory Review Panel (LSSARP) took place on October 10 and 11, 1990, in Reno, Nevada.

Members of the LASSARP present were:

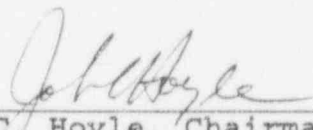
John Hoyle, Chairman, NRC
Barbara Cerny, DOE
Linda Deselle, DOE - 10/10/90 only
Jay Silberg, Nuclear Industry - 10/10/90 only
Chris Henkel, Nuclear Industry - 10/10/90 only
Malachy Murphy, State of Nevada
Kirk Balcom, State of Nevada
Dennis Bechtel, Clark County, Nevada
Liza Vibert, Clark County, Nevada
Lenard Smith, Lincoln County, Nevada
Peter Cummings, City of Las Vegas, Nevada, 10/10/90 only
Elgie Holstein, Nye County, Nevada
William Hooton, National Archives and Records
Administration - 10/10/90 only
Boyd Alexander, U.S. Patent and Trademarks Office

Enclosures are:

1. Meeting Agenda
2. Federal Register Notice Announcing Meeting
3. Attendance List
4. 11/9/90 Report on Mtg of LSS Advisory Review Panel
5. Index to Meeting Transcript

The meeting was open and attended by members of the public.*

This transcript has not been corrected or edited and it may contain inaccuracies.



John C. Hoyle, Chairman
LSS Advisory Review Panel

* Attendance list is attached.

AGENDA

LSS ADVISORY REVIEW PANEL MEETING

OCTOBER 10-11, 1990

Wednesday, October 10, 1990

8:30	Administrative Issues (J. Hoyle)
8:45	Status of LSS Development and Status of Repository Program (DOE)
9:45	Break
10:00	Science Applications International Corporation (SAIC) Design Documents (DOE/SAIC)
12:30	Lunch Break
2:00	Revised Topical Guidelines (S. Treby, NRC)
5:00	Adjourn

Thursday, October 11, 1990

9:00	Continuation of June 7, 1990, Discussion of Header Working Group Recommendations (K. Balcom, Nevada) <ul style="list-style-type: none">- Copyee Requirements- Abstracting- Code for Technical Data/Non-Documents
12:00	Lunch Break
1:30	Handling of Technical Data (C. Acree and R. Johnson, Center for Nuclear Waste Regulatory Analyses)
3:30	Break
3:45	Status of Compliance Evaluation Program and Status of Priority Document Production Schedule (F. X. Cameron)
4:45	Future Agenda (J. Hoyle)
5:00	Adjourn

ENCLOSURE 1

ENCLOSURE 2

Dated at Rockville, Maryland this 17th day of September 1990.

For the Nuclear Regulatory Commission,
Herbert N. Berkow,

Director, Project Directorate II-2, Division of
Reactor Projects—1/11, Office of Nuclear
Reactor Regulation.

[FR Doc. 90-22306 Filed 9-18-90; 8:45 am]

BILLING CODE 7590-01-M

Licensing Support System Advisory Review Panel Meeting

Notice is hereby given pursuant to the Federal Advisory Committee Act of October 6, 1972 (Pub. L. 94-463, 86 Stat. 770-776), that the Licensing Support System Advisory Review Panel (LSSARP) will hold a meeting on October 10 and 11, 1990. The meeting will convene at 8:30 a.m. on October 10, 1990, in the Zephyr Room of the Quality Inn, 3800 South Virginia Street, Reno, Nevada. The Nuclear Regulatory Commission (NRC) established the LSSARP to provide advice and recommendations to the Nuclear Regulatory Commission and to the Department of Energy (DOE) on topics, issues, and activities related to the design, development, and operation of an electronic information management system known as the Licensing Support System (LSS). This system is being designed to contain information relevant to the Commission's future licensing proceeding for a geologic repository for the disposal of high-level radioactive waste (HLW).

The agenda for the two-day meeting is as follows:

Agenda, LSS Advisory Review Panel Meeting, October 10-11, 1990

Wednesday, October 10, 1990:

- 8:30 Discussion of Administrative Matters (Committee Chairman).
- 8:45 Status of DOE's LSS Development Activity and Schedule, and Status of HLW Repository Program (DOE).
- 10 LSS Design Documentation (DOE/Science Applications International Corporation).
- 2 Revised Topical Guidelines for Determining What Information Goes Into the LSS (NRC).

Thursday, October 11, 1990:

- 9 Continuation of June 7, 1990, Discussion of Recommended Fields for the Bibliographic "Headers" Required for all Graphic LSS Records (NRC).
- 1:30 Handling of Technical Data in the LSS (NRC/Center for Nuclear Waste Regulatory Analyses).

- 3:45 Status of Compliance Evaluation Program and Status of Priority Document Production Schedule (NRC/LSSA).
- 5 Adjourn.

The meeting will be open to the public. Interested persons may make oral presentations to the Panel or file written statements. Requests for oral presentations should be made to the contact person listed below as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for oral statements.

For further information regarding this matter, contact Marilee Rood, Office of the LSS Administrator, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone 301-492-4003.

Dated at Rockville, Maryland, this 14th day of September 1990.

For the Nuclear Regulatory Commission,
John C. Hoyle,

Advisory Committee Management Officer.
[FR Doc. 90-22301 Filed 9-18-90; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards (ACRS) and Advisory Committee on Nuclear Waste (ACNW); Proposed Meetings

In order to provide advance information regarding proposed public meetings of the ACRS Subcommittees and meetings of the ACRS full Committee, and of the ACNW, the following preliminary schedule is published to reflect the current situation, taking into account additional meetings which have been scheduled and meetings which have been postponed or cancelled since the last list of proposed meetings published August 22, 1990 (55 FR 34359). Those meetings which are definitely scheduled have had, or will have, an individual notice published in the Federal Register approximately 15 days (or more) prior to the meeting. It is expected that sessions of ACRS full Committee and ACNW meetings designed by an asterisk (*) will be open or whole or in part to the public. ACRS full Committee and ACNW meetings begin at 8:30 a.m. and ACRS Subcommittee meetings usually begin at 8:30 a.m. The time when items listed on the agenda will be discussed during ACRS full Committee and ACNW meetings and when ACRS Subcommittee meetings will start will be published prior to each meeting. Information as to whether a meeting has been firmly scheduled, cancelled, or rescheduled, or whether changes have

been made in the agenda for the October 1990 ACRS and ACNW full Committee meetings can be obtained by a prepaid telephone call to the Office of the Executive Director of the Committees (telephone: 301/492-4600 (recording) or 301/492-7288, Attn: Barbara Jo White) between 7:30 a.m. and 4:15 p.m., Eastern Time.

ACRS Committee Meetings

Advanced pressurized water reactors. September 20, 1990, Bethesda, MD. The Subcommittee will review the draft SER for the Westinghouse RESAR SP-90 design.

Advanced pressurized water reactors. September 21, 1990, Bethesda, MD. The Subcommittee will meet with AAB Combustion Engineering, Inc., to discuss design feedback for System 80 Plus from operational experience at CE plants, in particular Palo Verde.

Plant license renewal. October 2, 1990, Bethesda, MD. The Subcommittee will review the draft Regulatory Guide on Standard Format and Content for License Renewal Application and the draft Standard Review Plan for the Review of License Renewal applications.

Joint severe accidents, extreme external phenomena, and probabilistic risk assessment. October 3, 1990, Bethesda, MD. The Subcommittee will continue their review of NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants" in the areas of seismic and fire analysis.

TVA plant licensing and restart. October 31, 1990, Huntsville, AL. The Subcommittee will review the planned restart of Browns Ferry Unit 2.

Thermal hydraulic phenomena. November 6, 1990, Bethesda, MD. The Subcommittee will discuss the status of the NRC staff's program on interfacing systems loss of coolant accidents (ISLOCA).

Joint containment systems and structural engineering. November 7, 1990, Bethesda, MD. The Subcommittees will discuss containment design criteria for future plants.

Joint advanced pressurized water reactors and advanced boiling water reactors. Date to be determined (October), Bethesda, MD. The Subcommittees will discuss the licensing review basis documents for CE System 80+ and CE ABWR designs.

Joint computers in nuclear power plant operations and instrumentation and control systems. Date to be determined (October/November), Bethesda, MD. The Subcommittees will discuss the use of computers and solid-

ENCLOSURE 3

Attendance List

LSS Advisory Review Panel Meeting, October 10 and 11, 1990

Panel Members

Nuclear Regulatory Commission

John C. Hoyle, Panel Chairman

U.S. Department of Energy

Barbara Cerny

Linda Deselle - 10/10/90 only

State of Nevada

Malachy Murphy

Kirk Balcom

Local Government - Site

Elgie Holstein

Local Government - Adjacent

Dennis Bechtel

Liza Vibert

Peter Cummings - 10/10/90 only

Lenard Smith

Nuclear Industry

Jay Silberg - 10/10/90 only

Chris Henkel - 10/10/90 only

U.S. National Archives and Records Administration

William Hooton - 10/10/90 only

U.S. Patent and Trademarks Office

Boyd Alexander

Others

Chip Cameron, NRC/LSSA

Elizabeth Shelburne, NRC/LSSA

Lynn Scattolini, NRC/LSSA

Marilee Rood, NRC/LSSA

Stuart Treby, NRC/OGC

Corrine Macaluso, DOE/OCRWM

Others (continued)

Edward A. Timmes, Jr., SAIC - 10/10/90 only
Dona Mennella, SAIC
David Nippert, SAIC
Bruce Foster, SAIC
Rawley Johnson, SWRI/CNWRA
Charles Acree, SWRI/CNWRA
Steve Young, SWRI/CNWRA - 10/11/90 only
Tom Nartker, UNLV/ISRI
Kazem Taghva, UNLV/ISRI - 10/10/90 only
Harry W. Swainston, State of Nevada - 10/10/90 only
Avi Bender, Contel - 10/10/90 only

Others Via Teleconference

Steve Scott, NRC/IRM - 10/10/90 only
Mark Delligatti, NRC/NMSS - 10/10/90 only
Ann Garcia, NRC/NMSS - 10/10/90 only

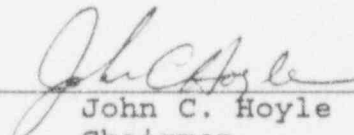
ENCLOSURE 4




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

CERTIFICATION
MINUTES OF FOURTH MEETING OF THE
LSS ADVISORY REVIEW PANEL

I certify that the attached minutes of the Meeting of the LSS
Advisory Review Panel, held on October 10-11, 1990 are accurate
to the best of my knowledge and belief.



John C. Hoyle
Chairman



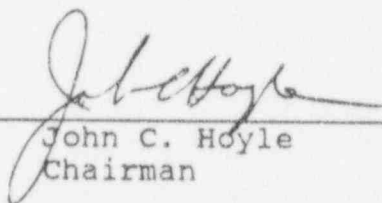
Date



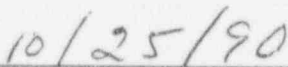
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CERTIFICATION
MINUTES OF THIRD MEETING OF THE
LSS ADVISORY REVIEW PANEL

I certify that the attached Minutes of the Meeting of the LSS Advisory Review Panel, held on June 7, 1990, are accurate to the best of my knowledge and belief. These minutes were approved by the Panel at the October 10-11, 1990, meeting.



John C. Hoyle
Chairman



Date

MINUTES

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL MEETING

June 7, 1990

The third meeting of the Licensing Support System Advisory Review Panel (LSSARP) took place on June 7, 1990, in Bethesda, Maryland.

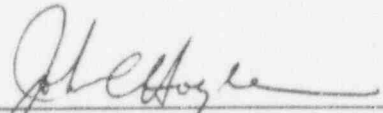
Members of the LSSARP present were:

John Hoyle, Chairman (NRC)
Barbara Cerny (DOE)
Dan Graser (DOE)
Felix Killar ((Nuclear Industry)
Kirk Balcom (State of Nevada) participated by telephone
Dennis Bechtel (Clark County, Nevada)
Liza Vibert (Clark County, Nevada)
Elgie Holstein (Nye County, Nevada)
William Hooton (National Archives and Records
Administration)

Enclosed are:

1. Index to Meeting Transcript
2. Meeting Transcript
3. Meeting Agenda
4. Kirk Balcom's May 17, 1990, letter to John Hoyle with recommendations of the Header Working Group
5. Barbara Cerny's June 5, 1990, letter to John Hoyle with comments on Header Working Group's recommendations
6. Federal Register notice announcing meeting
7. John Hoyle's letters to LSSARP members notifying them of meeting
8. Attendance List

The meeting was open and attended by members of the public.



John C. Hoyle, Chairman
LSS Advisory Review Panel

Approved by Panel 10/10/90 JCH

ENCLOSURE 1

INDEX

TO

TRANSCRIPT OF LSS ADVISORY REVIEW PANEL JUNE 7, 1990, MEETING

	<u>Page</u>
Introduction of Members	3
Approval of Minutes of March 20-21, 1990, Meeting	4
Introduction of Header Format	5
Header Information Prepared by Submitter	39
Header Information Prepared by Others	63
Discussion of Future Meetings	85

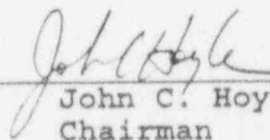
ENCLOSURE 2



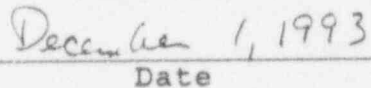
UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

CERTIFICATION
MINUTES OF SIXTH MEETING OF THE
LSS ADVISORY REVIEW PANEL

I certify that the attached minutes of the Meeting of the LSS Advisory Review Panel, held on October 5-6, 1993 are accurate to the best of my knowledge and belief.



John C. Hoyle
Chairman



December 1, 1993
Date

MINUTES

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL MEETING

October 5-6, 1993

LAS VEGAS, NV

The sixth meeting of the Licensing Support System Advisory Review Panel (LSSARP) took place on October 5 and 6, 1993, in Las Vegas, Nevada.

Members of the LSSARP present were:

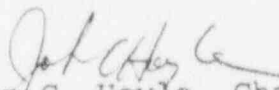
John Hoyle, Chairman (NRC)
Daniel Graser (DOE)
Corinne Macaluso (DOE)
Linda Desell (DOE)
Kirk Balcom (State of Nevada)
Malachy Murphy (Nye County)
Dennis Bechtel (Clark County)
Michael Baughman (Lincoln County)
Robert Holden (National Congress of American Indians)
Jay Silberg (Nuclear Industry representative)
Christopher Henkel (Nuclear Industry Representative)
Boyd Alexander (U.S. Patent and Trademark Office)

Enclosed are:

1. Meeting agenda
2. Federal Register Notice announcing meeting
3. Attendance List
4. 11/30/93 Report on Meeting of LSS Advisory Review Panel
5. Index to Meeting Transcript
6. Meeting transcript and Material Presented at the Meeting

The meeting was open and attended by members of the public.

The transcript has not been corrected or edited and it may contain inaccuracies.


John C. Hoyle, Chairman
LSS Advisory Review Panel

ENCLOSURE 1

AGENDA
LSSARP MEETING, OCTOBER 5-6, 1993

TUESDAY, OCTOBER 5

9:00 - 9:20 Opening Remarks (John Hoyle, NRC, Chairperson)

9:20 - 10:00 Discussion of LSS Rule - Historical Perspective (Chip Cameron, NRC)

10:00 - 10:15 Break

10:15 - 11:15 Status Report (Gerald Cranford, Acting LSSA)

Discussion of events leading up to this meeting. Include NRC/DOE Technical Working Group activities, Commission Decision, Revised Role of the LSSA.

11:15 - 12:30 InfoSTREAMS as the LSS Foundation (Dan Graser, DOE/Janis Touser, TRW)

Includes short presentation topics: Voice annotation; Electronic Documents; Copyright questions, Revised field structures

12:30 - 1:30 Lunch

1:30 - 3:00 LSS Compliance Assessment and Audit Program (Gerald Cranford, LSSA)

Presentation of the planned CAP and audit programs.

3:00 - 3:15 Break (15 Minutes)

3:15 - 4:15 Presentation of InfoSTREAMS as the LSS Vehicle (Dan Graser, DOE/George Hallnor, TRW)

4:15 - Closing remarks end of first day (John Hoyle, NRC,)

WEDNESDAY, OCTOBER 6

8:30 - 8:45 Second day's opening remarks (John Hoyle, NRC)

8:45 - 9:30 Presentation (Tom Nartker, UNLV)

Presentation discussing current OCR projects

9:30 - 10:15 Presentation (George Hallnor, TRW)

Presentation discussing text processing

10:15 - 10:45 Break

10:45 - Review and discussion of open issues, determination of areas requiring further consideration by the Panel, preparation of response to NRC, if appropriate, and closing of Meeting (John Hoyle, NRC)

ENCLOSURE 2

NUCLEAR REGULATORY COMMISSION

Documents Containing Reporting or Recordkeeping Requirements; Office of Management and Budget (OMB) Review

AGENCY: Nuclear Regulatory Commission (NRC).

ACTION: Notice of the OMB review of information collection.

SUMMARY: The Nuclear Regulatory Commission has recently submitted to OMB for review the following proposal for collection of information under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. chapter 35).

1. Type of submission, new, revision, or extension: Revision.
2. The title of the information collection: 10 CFR part 72—Notification of Events at Independent Spent Fuel Storage Installations (ISFSIs) and the Monitored Retrievable Storage Installation (MRS).
3. The form number if applicable: Not applicable.
4. How often is the collection required: On occasion.
5. Who will be required or asked to report: Licensees of ISFSIs and the MRS.
6. An estimate of the number of responses annually: Four.
7. An estimate of the number of hours needed annually to complete the requirement or request: 16 hours (an average of 4 hours per response).
8. An indication of whether section 3504(h) Public Law 96-511 applies: Yes.
9. Abstract: The Nuclear Regulatory Commission (NRC) proposes to amend its regulation to revise licensee reporting requirements regarding the notification of events related to radiation safety at Independent Spent Fuel Storage Installations (ISFSIs) and the Monitored Retrievable Storage Installation (MRS). This action is needed to ensure that significant occurrences at these licensed facilities are promptly reported to NRC so that the Commission can evaluate whether the licensee has taken appropriate actions to protect the public health and safety and whether prompt NRC action is necessary to address generic safety concerns. Licensee compliance with these reporting requirements would be mandatory whenever a significant event occurs.

Copies of the submittal may be inspected or obtained for a fee from the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC.

Comments and questions can be directed by mail to the OMB reviewer:

Ronald Minsk, Office of Information and Regulatory Affairs, (3150-0132), NEOB-3019, Office of Management and Budget, Washington, DC 20503.

Comments may also be communicated by telephone at (202) 395-3084.

The NRC Clearance Officer is Brenda Jo Shelton, (301) 492-8132.

Dated at Bethesda, Maryland, this 10th day of September, 1993.

For the Nuclear Regulatory Commission,
Gerald F. Cranford,

Designated Senior Official for Information Resources Management.

[FR Doc. 93-23034 Filed 9-20-93; 8:45 am]

BILLING CODE 7590-01-M

Licensing Support System Advisory Review Panel

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of meeting.

The Licensing Support System Advisory Review Panel (LSSARP) will hold a meeting on October 5 and 6, 1993, at the Emerald Springs Inn, 325 East Flamingo Rd., Las Vegas, Nevada. The entire meeting will be open to the public pursuant to the Federal Advisory Committee Act (Pub. L. 94-463, 86 Stat. 770-776).

The Nuclear Regulatory Commission (NRC) established the LSSARP in 1989 to provide advice and recommendations to the NRC and to the Department of Energy (DOE) on topics, issues, and activities related to the design, development and operation of an electronic information management system known as the Licensing Support System (LSS). This system will contain information relevant to the Commission's future licensing proceeding for a geologic repository for the disposal of high-level radioactive waste. Membership on the Panel consists of representatives of the State of Nevada, a coalition of effected units of local government in Nevada, the National Congress of American Indians, a coalition of organizations representing the nuclear industry, DOE, NRC and two other agencies of the Federal government which have experience with large electronic information management systems.

The meeting will begin on October 5, 1993 at 9 a.m. and conclude at 5 p.m. It will begin again at 8:30 a.m. on October 6, 1993 and conclude at approximately 12:30 p.m. The first day's agenda will consist of briefings by NRC and DOE and discussions by the Panel members of a modified approach for the design and operation of the LSS which has been proposed by the NRC. On the

second day, the Panel is planning to receive presentations by a representative of the University of Nevada at Las Vegas and by TRW on activities related to the electronic scanning and capture of information for the LSS.

Interested persons may make oral presentations to the Panel or file written statements. Requests for oral presentations should be made to the contact person listed below as far in advance as practicable so that appropriate arrangements can be made.

For further information regarding this meeting contact John C. Hoyle, Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone 301-504-1968.

Dated: September 15, 1993

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 93-22998 Filed 9-20-93; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards; Meeting of the Subcommittee on Decay Heat Removal Systems; Meeting

The ACRS Subcommittee on Decay Heat Removal Systems will hold a meeting on October 5, 1993, room P-422, 7920 Norfolk Avenue, Bethesda, MD.

The meeting will be open to public attendance.

The agenda for the subject meeting shall be as follows:

Tuesday, October 5, 1993-12:30 p.m. until the conclusion of business

The Subcommittee will review the proposed rule to address resolution of Generic Safety Issue-23, "Reactor Coolant Pump Seal Failure." The purpose of this meeting is to gather information, analyze relevant issues and facts, and to formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Oral statements may be presented by members of the public with the concurrence of the Subcommittee Chairman; written statements will be accepted and made available to the Committee. Recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the ACRS staff member named below as far in advance as is practicable so that appropriate arrangements can be made.

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding matters to be considered during the balance of the meeting.

ENCLOSURE 3

ATTENDANCE LIST

LSS ADVISORY REVIEW PANEL MEETING
OCTOBER 5-6, 1993

Panel Members

U.S. Nuclear Regulatory Commission

John C. Hoyle, Chairman

U.S. Department of Energy

Daniel Graser
Corinne Macaluso
Linda Desell

State of Nevada

Kirk Balcom

Local Government - Site

Malachy Murphy, Nye County
Lloyd Levy, Nye County

Local Government - Adjacent

Dennis Bechtel, Clark County
Michael Baughman, Lincoln County

National Congress of American Indians

Robert Holden

Nuclear Industry

Jay Silberg
Christopher Henkel

U.S. Patent and Trademark Office

Boyd Alexander

Others

Chip Cameron, NRC
Gerald Cranford, NRC
Elizabeth Shelburne, NRC
Brenda Shelton, NRC
Karen Van Duser, NRC
Joseph Holonich, NRC
Kenneth Kalman, NRC
David Drapkin, NRC
B. Paul Cotter, NRC
Ivan Smith, NRC
Sam Belk, Consultant
Steve Frishman, State of Nevada
George Hallnor, TRW
Carol Hanlon, DOE/YMP
Carl Johnson, State of Nevada
Sally Larimore, Clark County
Chan Pyng Lai, UNLV Visitor
Pamela Lentz, TRW
Ardyce Milton, Clark County
Thomas Nartker, UNLV
Tony Neville, Labat-Anderson Inc.
Howard Nevin, RF Weston
Kitty Russell, Price Waterhouse
Jocelyn Smith, Labat-Anderson Inc.
Joe Speicher, Labat-Anderson Inc.
Janice Tauser, TRW
David Warriner, DOE/YMP
Tom Williamson, CRWMS

ENCLOSURE 4

OUTLINE OF PRESENTATION

BACKGROUND ON CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES (CNWRA)

OVERVIEW OF CNWRA PROJECT FOR LSSA

STATUS REPORT

- Visits made to:
 - Yucca Mountain Project Office (DOE)
 - State of Nevada
 - NRC (Washington, D. C.)
 - DOE (Washington, D. C.)
- Observations
- LSS Header Fields for Technical Data
- Issues

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES

- CNWRA ESTABLISHED BY THE USNRC
 - Federally Funded Research and Development Center
 - Initial contract in October, 1987 with five year options
- PART OF SOUTHWEST RESEARCH INSTITUTE (SwRI),
SAN ANTONIO, TEXAS
 - Not-for-profit Research and Development in Engineering and Science
 - Over 2400 staff/\$190M gross annual income
 - Includes over 200 computer scientists and multiple computer labs

CENTER FOR NUCLEAR WASTE REGULATORY ANALYSES (CONT'D)

- CNWRA PROVIDES TECHNICAL ASSISTANCE/RESEARCH FOR NRC HLW PROGRAM
 - Systems Engineering and Integration
 - Geologic Setting, Engineered Barrier System, Repository Design for Construction and Operation, and Performance Assessment
 - Quality Assurance Program
 - Information Management and Technical Data Systems Development and Operations, including interface to NUDOCS and LSS

CNWRA PROJECT FOR LSSA

- Development of access protocols to LSS technical data
- Began work in June 1990
- LSSA letter to LSSARP members
- Fulfilling mandate of LSS Rule 2.1011 (d)(10) and 2.1003 (c)(1-3)

TASK OBJECTIVES

- Define technical data by category
- Identify organizations generating technical data
- Document existing/planned procedures for providing access to technical data
- Recommend a plan to assure access – including submission requirements and recommended header content
- Identify impacts of suggested plan – to encourage early problem resolution

APPROACH

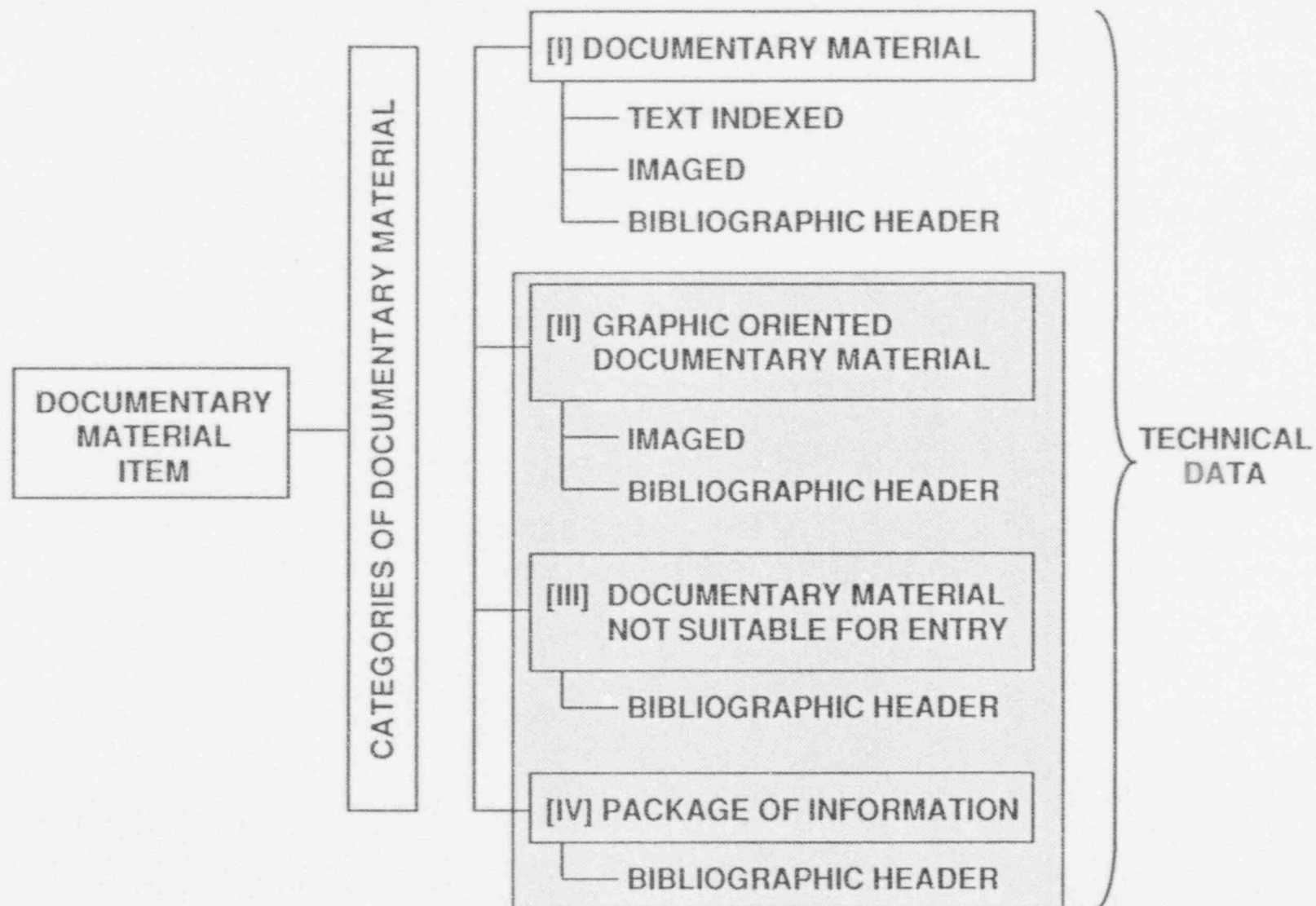
Examine background references and talk with knowledgeable LSS participants

Status report on initial work

TECHNICAL DATA

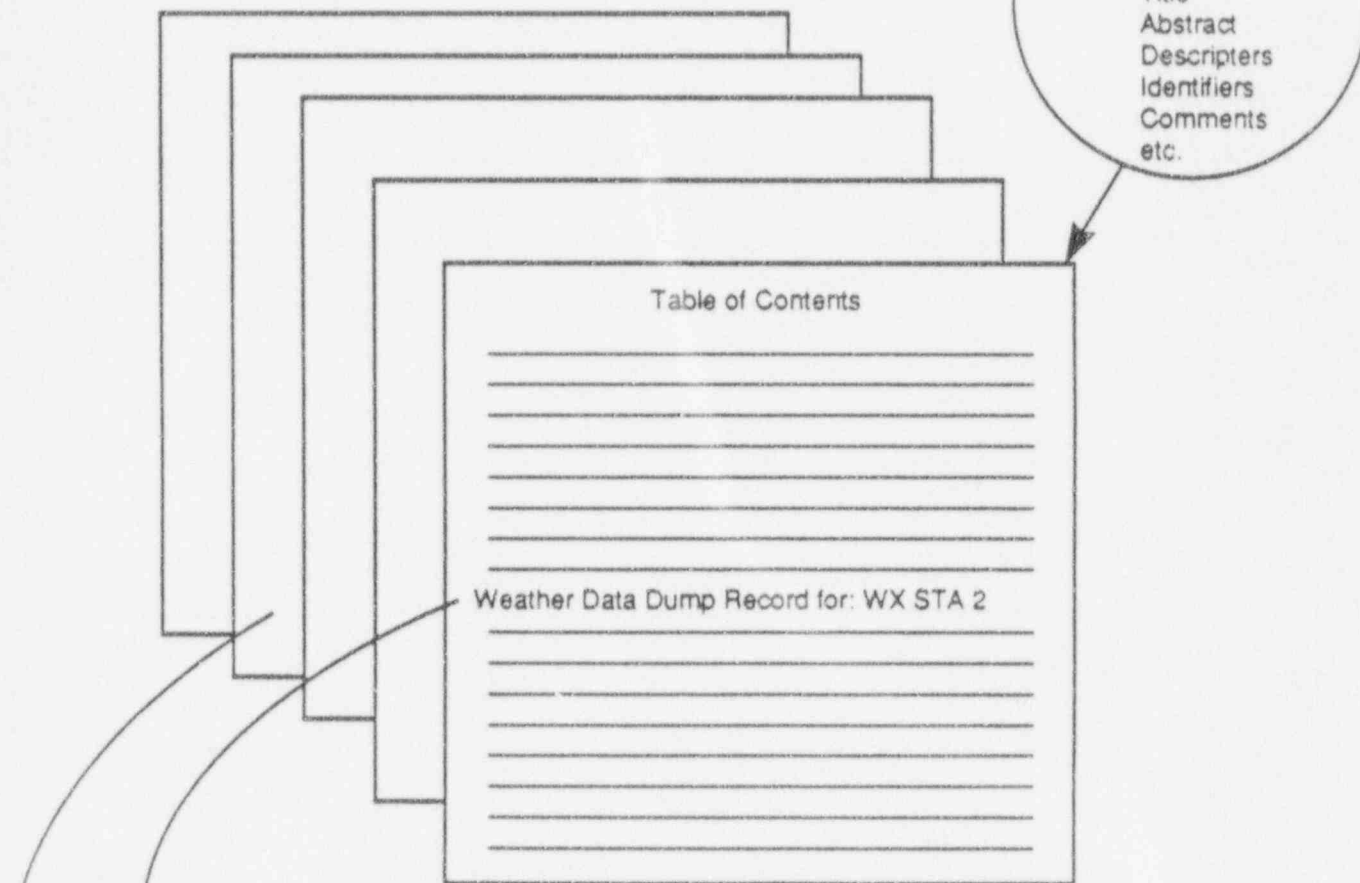
- For purposes of this Task, we've used the term "technical data" to mean documentary material which cannot be entered into the LSS in text-searchable form.
- In other words, it's the LSS material which can be found only with the help of a bibliographic header.
- If we refer to it in terms of media (rather than subject):
 - Some are imageable: graphics, tables, handwritten notes
 - Some are not: tapes, disks, cassettes, film, colored maps & photos, extra large maps.

CATEGORIES OF DOCUMENTARY MATERIAL DESCRIBED IN THE LSS RULE



LSS Bibliographic Header

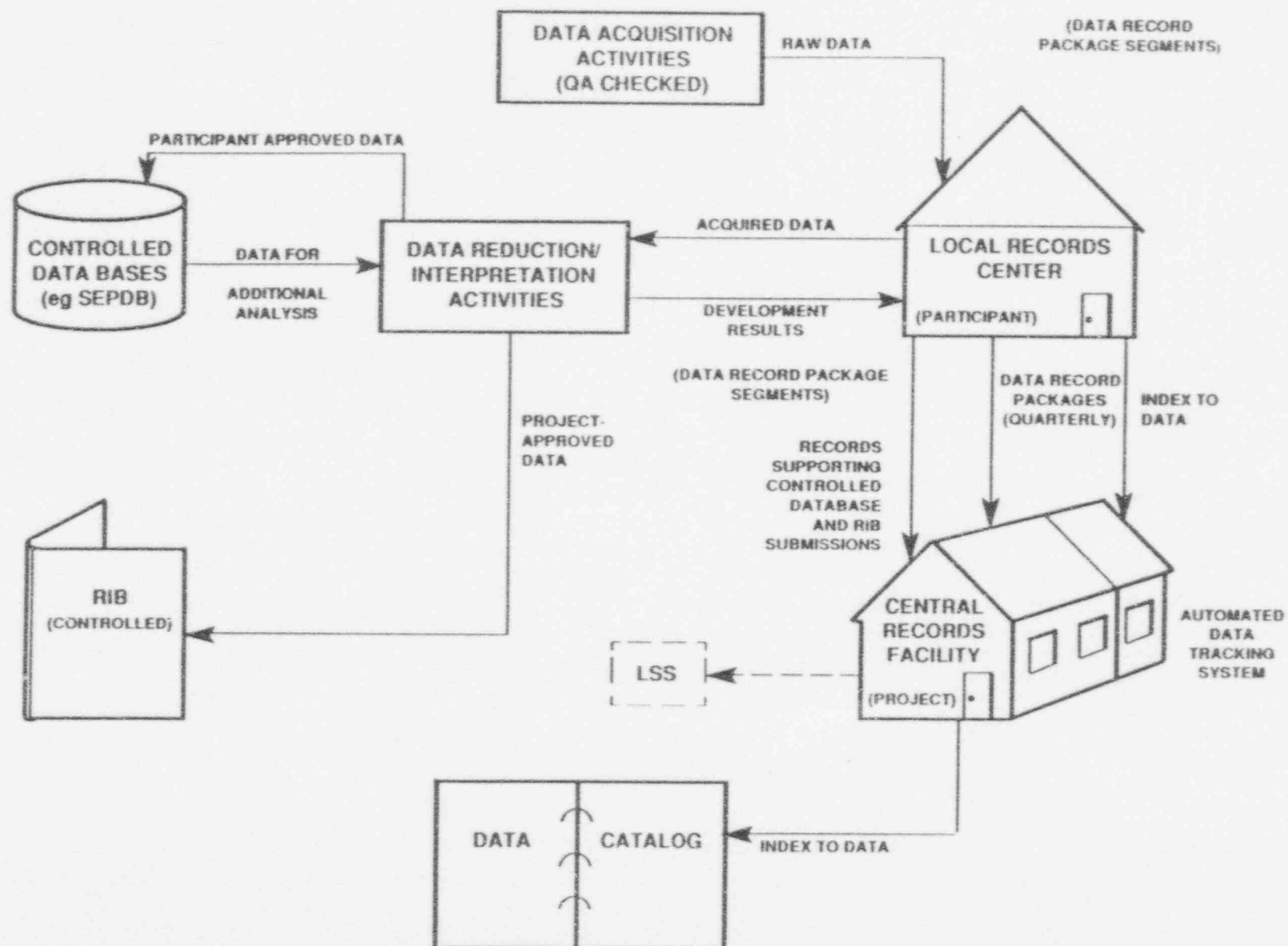
Submitter
Title
Abstract
Descriptors
Identifiers
Comments
etc.



Weather Data Dump Record for: WX STA 2

Weather Data Dump Record for: WX STA 2						
Date	Time PMT	Dump From	To	Access Time PMT	Size Error	Operator
3/1/99	200	1	639	00	-0.00%	W. J. [signature]
3/1/99	1850	639	14019	1051	-18.00%	W. J. [signature]
3/1/99	1807	14019	2556	13	-0.00%	W. J. [signature]
3/4/99	1826	2556	7190	23	-0.00%	W. J. [signature]
3/11/99	2007	7190	2055	33	-0.00%	W. J. [signature]
3/18/99	2200	2055	457	201	-10.00%	W. J. [signature]
3/25/99	22	457	10655	1516	-30.00%	W. J. [signature]
4/4/99	2254	10655	3203	998	-0.00%	W. J. [signature]
4/11/99	1230	3203	3109	2933	-0.00%	W. J. [signature]
4/18/99	2900	3109	857	1014	-0.00%	W. J. [signature]
4/25/99	151	857	2050	154	-0.00%	W. J. [signature]
5/2/99	151	2050	271	3	-0.00%	W. J. [signature]
5/9/99	152	271	2531	17	-0.00%	W. J. [signature]
5/16/99	156	2531	259	50	-0.00%	W. J. [signature]
6/13/99	1813	15000	10876	1420	-0.35%	W. J. [signature]
2/11/00	1215	10876	1307	220	-0.00%	W. J. [signature]

SYSTEM OVERVIEW



YUCCA MOUNTAIN PROJECT OFFICE (DOE)

TECHNICAL DATA = ALL DATA RELATING TO ITS TECHNICAL ACTIVITIES

- YMPO project organizations submit their data within 45 days to nine local records centers (prime contractors).
- They forward it quarterly to YMPO Central Records Facility (CRF) in Data-Record Packages.
- Packages may include numeric data (e.g., SEPDB) and results from computer modeling and graphic-display systems.
- CRF uses automated Records Information System (RIS) and Automated Data Tracking System (ADTS) to monitor holdings.
- A comprehensive technical Data Catalog, a SEPDB report, and a summary description of analyzed technical data (RIB) are all produced quarterly.

YUCCA MOUNTAIN PROJECT OFFICE (DOE) (CONT'D)

- The backlog of technical data at local centers is now being incorporated into CRF holdings.
- YMPO technical data is currently available via written request to the YMPO, which promises timely response.
- When LSS loading begins, YMPO will:
 - Scan its Data-Record Packages to submit LSS images.
 - Create LSS headers for packages from existing RIS/ADT² headers.

STATE OF NEVADA

PRODUCTION:

- The Nuclear Waste Project Office (NWPO) and its contractors (University of Nevada and Nevada Bureau of Mines & Geology) have not produced any raw data, but may do so in the future.
- NWPO publishes formal technical reports containing graphic material.
- It safeguards, within associated packages, the handwritten/numeric/graphic “backup” data on which those reports were based.
- When LSS loading begins, NWPO will:
 - Scan its reports and associated backup-data packages to submit LSS images.
 - Create LSS headers for them.

STATE OF NEVADA (CONT'D)

NEEDS:

- Individual items of technical data which are not text searchable but are contained within a Data-Record Package do not require their own headers. A header for the package as a whole is sufficient.
- Technical data which cannot be scanned for entry into LSS (but will be identified in the LSS through a header) must be transferred from current storage locations to an LSSA-controlled records center – several months before HLW repository licensing proceeding begins, to assure timely access.

NRC (WASHINGTON, D.C.)

PRODUCTION:

- The NRC and its contractors have produced non-text-searchable material and will do so in the future.
- Currently, the NRC employs an automated records index (NUDOCS) to provide reference to its central record holdings
- When the LSS becomes operational, the NRC will submit its documents to the LSS through its Document Control Center.
- When LSS loading begins, the NRC will centrally:
 - Submit its non-text-searchable material to the LSSA for entry into the LSS, in accordance with procedures to be established by the LSSA.
 - Create LSS headers for its non-text-searchable material, in accordance with LSSA guidance.
- The location of non-text-searchable material which is also non-imageable will be identified in the header. A central NRC contact will be provided.

NRC (WASHINGTON, D.C.) (CONT'D)

NEEDS:

- The NRC is unable to comment on the adequacy of using a single header for each Data-Record Package as a whole without clarification of DOE procedures for creating a package, including composition and timing for submittal to the LSS.

DOE (WASHINGTON, D.C.)

PRODUCTION:

- The DOE does not expect to produce any significant amount of non-text-searchable material from its Washington, D.C. headquarters.
- Any such material that may be produced or that has been produced in the past will be entered into the LSS using a DOE capture station.

NEEDS:

- The DOE anticipates no extraordinary LSS access needs.

OBSERVATIONS

DEFINITION OF TECHNICAL DATA:

- No ambiguity perceived in the LSS Rule, but:
 - Certain issues must be resolved.
 - Clear implementing procedures are needed.
- Categorization is required:
 - To be sure none of it escapes proper LSS entry
 - To enable LSS users to find needed items through consistent entry/search terminology

OBSERVATIONS (CONT'D)

PRODUCTION OF TECHNICAL DATA:

- Primary producers:
 - DOE & contractors
 - NRC & contractors
- Some changes in existing plans/procedures/systems of the DOE and NRC may be necessary to accommodate LSS requirements with respect to technical data.

OBSERVATIONS (CONT'D)

ACCESS TO TECHNICAL DATA:

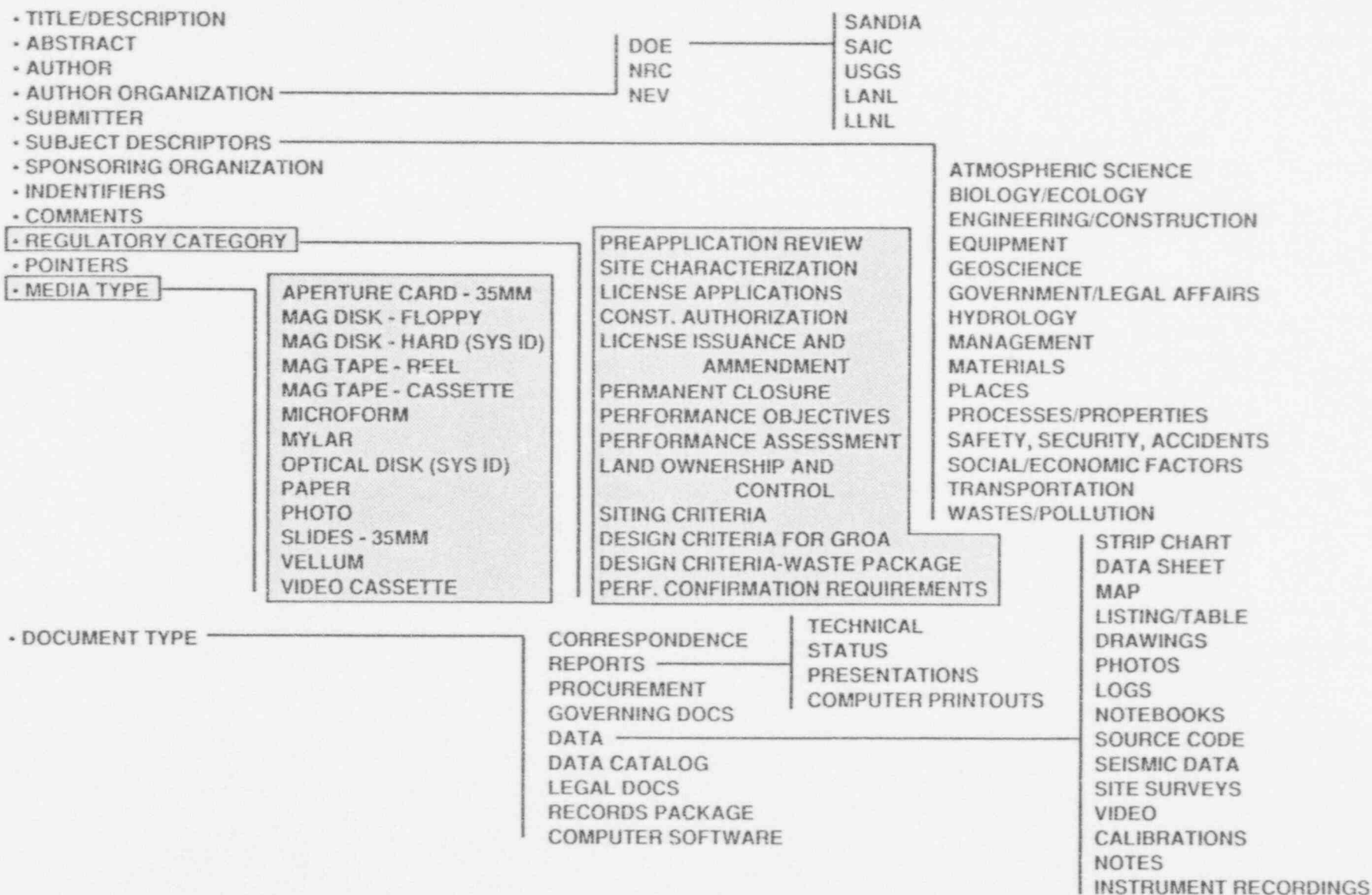
- Through bibliographic header.
- Imaged data will be viewed directly on the screen.
- Non-imaged data can be requested
- Each Data-Record Package will have:
 - A descriptive bibliographic header, with abstract
 - A viewable Table of Contents
 - Most pages viewable as images
 - Text-searchable pages (those without graphics)
- Viewable and text searchable:
 - Technical data summary (RIB)
 - Technical Data Catalog
 - Listing of available digital data on tape (SEPDB)

BIBLIOGRAPHIC HEADER FIELDS REQUIRED FOR DESCRIPTION AND RETRIEVAL OF TECHNICAL DATA/INFORMATION

- TITLE/DESCRIPTION
- ABSTRACT
- AUTHOR
- AUTHOR ORGANIZATION
- EVENT DATE/CODE
- DESCRIPTORS (SUBJECT)
 - SEE LSS THESAURUS
- SPONSORING ORGANIZATION
- IDENTIFIERS
- COMMENTS
- REGULATORY CATEGORY
- DOCUMENT TYPE
 - SEE DOCUMENT TYPE CODE LIST (DOE)
 - ADDITIONS TO DOCUMENT TYPE LIST
- MEDIA TYPE
 - SEE MEDIA TYPE LIST (DOE)
- POINTERS
- SUBMITTER CENTER

DATA BASE CATALOG
DATA CATALOG
DATA LISTING/TABLE

BIBLIOGRAPHIC HEADER FIELDS REQUIRED FOR DESCRIPTION AND RETRIEVAL OF TECHNICAL DATA/INFORMATION



RELATIONSHIP BETWEEN TECHNICAL DATA CATEGORIZATION AND LSS HEADER FIELDS

CATEGORIZATION OF TECHNICAL DATA	RELATED LSS HEADER FIELDS	TEXT INDEXED
1. TECHNICAL SUBJECT	1. TITLE/DESCRIPTION	Y
	2. DESCRIPTORS (TECH. SUBJECT)	Y
	3. IDENTIFIERS	Y
	4. COMMENTS	Y
	5. ABSTRACT	Y
	6. DOCUMENT TYPE	Y
2. REGULATORY CATEGORY AREA OF REGULATORY CONCERN PER 10 CFR 60	1. REGULATORY CATEGORY (10 CFR 60)	Y
	2. TITLE/DESCRIPTION	Y
	3. DESCRIPTORS	Y
	4. IDENTIFIERS	Y
	5. COMMENTS	Y
	6. ABSTRACT	Y
3. DOCUMENT TYPE	1. DOCUMENT TYPE	Y
	2. MEDIA TYPE	Y
4. MEDIA TYPE	1. MEDIA TYPE	Y
	2. DOCUMENT TYPE	Y

ISSUES

HEADER CONTENT:

- How will currently approved fields be used? (title, abstract, descriptors, identifiers, comments, etc.)
- What fields must be added, if any?
 - Are submitter/sponsor fields sufficient for storage location of non-imaged material?
 - Can document-type field incorporate media?
 - Is a “regulatory category” field feasible?
 - Is a “qualified data” indication needed?

ISSUES (CONT'D)

DATA-RECORD PACKAGES:

- Timing of submission must be defined.
- How will non-imageable portions be individually stored?
- Table of Contents must be sufficiently descriptive.
 - Should it be text-searchable?
- Header must be thorough (abstract, descriptors, etc.)
- Should packages be made text-searchable insofar as possible?

ISSUES (CONT'D)

NON-IMAGEABLE CLASSES OF TECHNICAL DATA:

- Classes suggested:
 - Magnetic media
 - Film
 - Colored graphs, photos
 - Extra large maps
- Criteria: practicality, cost-effectiveness
- Access protocols needed

1990

1991

ACTIVITY

Jan

Mar

Aug

Sep

Nov

LSS Design
& DevelopmentSAIC
Design
DocumentsAcquisition
Support
DocumentsRequest
For
CommentGuidance
& StandardsHeader
GuidanceTechnical
Data
RecommendationsFacility
Planning &
DevelopmentLSSA
Facility
Planning
Issues
PaperSAIC
Generic
Facility
Design

Access Planning

LSSA Access
Issues Resolution
PlanProduction
ScheduleDraft
Recommendation Approval:
on Priority Document Loading
Loading Categories ScheduleCompliance
Evaluation
ProgramLSSA Position
Paper: Compli-
ance Evaluation
StrategyCommission Approval
of Compliance Evalu-
ation Strategy

O&M Planning

1992

1993

ACTIVITY	March	April	November	August	September
LSS Design & Development		Request For Proposals	Contract Award	Install Equipment First Node	DOE Test & Acceptance
Guidance & Standards	Technical Data Guidance				
Facility Planning & Development					
Access Planning					
Production Schedule					
Compliance Evaluation Program				UNLV Facility Ready	
O&M Planning					

representing the nuclear industry, DOE, site affected local governments, adjacent affected local governments, and the State of Nevada

1. ~~Some~~ members of the Panel expressed concern that revision of the interim topical guidelines to exclude from the LSS environmental (including socio-economic) and transportation related documents was improper because it would thereby exclude information that might be relevant to issues in the NRC licensing proceeding. They are particularly concerned that, without the availability of environmental information in the LSS, they will be unable to provide independent comment to the NRC in the future on whether the NRC should adopt DOE's EIS. To exclude such information at this point in the process would be based on the presumption that it would not later be relevant to NRC's adoption of the EIS.

2. All members of the Panel (except NRC) strongly urged that if the NRC proposed to exclude such documents from the LSS, ~~(the NRC staff prepare a legal analysis supporting that exclusion and that~~ ^{should} the decision to exclude such documents be made in a formal rulemaking proceeding rather than in a Reg Guide change so that a judicial determination can be obtained on the legality of such exclusion if appropriate.

3. Although the Panel did not attempt to reach a consensus on whether such exclusions were appropriate or legally supportable (and indeed some categories might be justifiable while others might not), all members of the Panel (except perhaps NRC) believe that a final agency decision, challengeable in court, should be made now so that the validity of the exclusions will not become an issue at a time when

the licensing process could be adversely affected by a determination that the exclusions were erroneous.

Kirk M. Balcom, Esq.

Route 2, Box 481

Marshall, Virginia 22115

(703) 364-3195

May 17, 1990

Mr. John Hoyle
Chairman
LSS Advisory Review Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Hoyle:

Attached are the recommendations of the Header Working Group for the fields of information to be supplied by participants and the office of the LSS Administrator. The group consisted of myself as the representative of the State of Nevada; Eileen Tana, NRC, NMSS; Dona Mennella, SAIC, representing DOE; and Elizabeth Shelburne, NRC, LSSA.

If there are questions or possible revisions, please contact me as 466-4764.

Sincerely,



Kirk Balcom
Chairman
Header Working Group

441083004 34

RECOMMENDED FIELDS
FOR
LSS HEADER RECORDS

Header Working Group,
NRC Licensing Support System Advisory Review Panel

May 18, 1990

4005290159

RECOMMENDED FIELDS FOR "HEADER" RECORDS

I. INTRODUCTION

The list of recommended fields for the LSS header (Section II and Appendix A) represents the consensus of the Header Working Group appointed by John Hoyle, Chairman of the LSS Advisory Review Panel, at the March 20 meeting of the Panel. The working group consisted of representatives of NRC, DOE, the State of Nevada and the Office of the LSS Administrator (LSSA), NRC.

As a starting reference point, the group used the list of fields prepared by the technical staff during the negotiated rulemaking, entitled "Draft Bibliographic Header Fields," Rev. 3, dated May 17, 1988. We also drew on the experience of SAIC, the DOE contractor, in cataloging 100,000 pages of the Site Characterization Plan and assorted other documents for the instrumented test bed ("prototype") and experience with other systems including those used in conjunction with NRC's records management (NUDOCS) and Public Document Rooms.

During our review process, several issues emerged which were important to our discussions but which we could not completely resolve. We believe they should be reviewed and deliberated by the Advisory Review Panel. Those issues are presented below in Section III with our recommendations. The issues did not prevent agreement of the number or use of the fields.

The recommended header fields apply to documents only. We do not have enough information at this time to determine treatment of the so-called "non-documents." This is discussed further in issue number 4 of Section III.

Participant is used throughout to mean "party" or "potential party" and submitter refers to the organizational units of the participant contributing documents to the LSS.

II. RECOMMENDED FIELDS

We agreed upon 28 basic fields and have grouped them by who, in our best judgment, should supply the information, the participant or the LSSA. The "bibliographic header" fields together with the remaining fields below constitute the "full header." They are listed with their attributes in Appendix A. A description of each field is in Appendix B.

Bibliographic Header (required to be supplied by participants):

Participant Accession Number

Submitter Center
Submitter Page Count
Title/Description
Author
Author Organization
Addressee
Addressee Organization
Document Date
Document/Report Number
Document Condition
Edition/Version
Event Date, Code
Protected Status
Related Documents
Special Class
Abstract/Summary (for non-documents)

Fields optional to participant, but completed by LSSA:

Document Type
Sponsoring Organization
Copyee
Copyee Organization
Publication Data
Descriptors

Fields optional to both the participants and the LSSA:

Identifiers
Comments
Abstract/Summary (for documents)

Fields not applicable to the participant, but provided by the LSSA:

LSS Accession Number
Number of Images
Pointers

III. ISSUES FOR ADVISORY REVIEW PANEL DELIBERATION; WORKING GROUP RECOMMENDATIONS

There are several issues that kept surfacing during the working group's meetings. They will undoubtedly come up for consideration again.

1. Multiple submissions for same document. This issue arises when two participants submit different headers for the same document and they characterize some of the information differently, for example, the title/description. Should all of the information be merged into one header or does the first header for that document prevail? We think this will happen frequently during

processing of the backlog.

Our recommendation is to append the subjective information from subsequent submissions that is different to the respective fields of the original header. In the title/descriptions field, subsequent descriptions would be separated in some fashion to differentiate multiple submissions. The participant's accession number would be carried in the header in order following the original submitter's accession number.

2. Editing of headers by LSSA. How much latitude should the LSSA have in editing errors in submitter headers? If there are obvious errors, can the LSSA correct them during data capture or must the header be flagged for possible corrections by the submitter?

We recommend that the editing functions of the LSSA regarding individual fields be as follows:

A. For the fields submitted by the participant (required or optional), the LSSA staff will review the data against quality control standards. If submitted data is clearly wrong, e.g., the date or spelling of names, or if data is not formatted correctly, then the LSSA staff will correct the entries. In subjective fields, such as descriptors or title/description, the LSSA will not edit existing information. The LSSA will supplement with additional information as required to improve retrieval.

B. If the fields are optional to the participant and not completed, the LSSA will complete the following fields, if applicable: document type, copyee, copyee organization, sponsoring organization, publication data and descriptors.

C. With the remaining optional fields: identifiers, comments and abstracts, the LSSA will complete the information only if applicable in accordance with standardized procedures.

3. Abstracts. As it stands now, an abstract will be required for every unit that does not have searchable full text associated with it.

For other units, it is our recommendation to make selections for abstracting of documents ("searchable full text") based upon some consistent rules, such as length of unit or type of document. Because all documents would not be abstracted, the system should provide a warning message (e.g., "not all records contain abstracts") to users who use the abstract/summary field in their searches.

4. Fields for Non-Document Materials. Section 2.1003 (c) of the rule requires the LSS Administrator to develop "Access

Protocols" of information about materials that are not suitable for storage in either ASCII text form or bit-mapped image form. Information that such materials exists will be stored in fields in the LSS header. A code field to reference how the information can accessed should be in the header. The code will link with a table (to be updated as necessary) which explains how to access the item(s) referenced.

During the coming year, the LSS Administrator will be developing a plan for providing access to such "technical data." Part of that plan will be the development of these special header fields. It is expected that certain fields recommended here will be used, such as abstract, sponsoring organization, and pointers. In addition, there may be unique fielded information related only to non-documents technical data, such as storage facility, name of contact, access code or form of data. There will be, however, only one header and one data base for all materials.

Because the actual materials will not be available to the LSS Administrator's operations staff for "cataloging" and quality control, the header elements describing them will have to be provided by the participant organization. Certain fields, such as the Abstract, which are not required for documents, will be required in the participant's "technical data" header.

As the Access Protocols Plan is being developed, the LSS Administrator will keep the Advisory Review Panel informed and involved.

5. Miscellaneous Fields. It is probable that needs will arise for fields of information that have not been completely anticipated but which might need to be added without affecting the integrity of a submitter's coding. One such field is whether a copyrighted document has been approved from the source for distribution. We have not included such fields in our list but anticipate there will be some. We do not have a recommendation, but expect the issue will arise.

APPENDIX A:

HIGH LEVEL WASTE - LICENSING SUPPORT SYSTEM
FIELDS FOR "HEADERS"

FIELD NAME	MULTI- VALUED	CONTROLLED AUTHORITY	FORMAT CONTROL	FREE TEXT SEARCHABLE
FIELDS REQUIRED BY PARTICIPANT:				
Participant Accession Number	Y	N	Y	NA
Submitter Center	Y	Y	NA	NA
Submitter Page Count	N	N	N	N
Title/Description	N*	N	N	Y
Author	Y	N	Y	N
Author Organization	Y	Y	NA	Y
Addressee	Y	N	Y	N
Addressee Organization	Y	Y	NA	Y
Document Date	N	N	Y	NA
Document/Report Number	Y	N	Y	NA
Document Condition	Y	Y	NA	NA
Edition/Version	N	N	Y	Y
Event Date, Code	Y	Y, code only	Y	NA
Protected Status	Y	Y	NA	NA
Related Documents	Y	N	N	NA
Special Class	Y	Y	NA	Y
Abstract (non-documents)	N	N	N	Y

FIELDS OPTIONAL TO PARTICIPANT, BUT COMPLETED BY LSSA:

Document Type	Y	Y	NA	Y
Sponsoring Organization	Y	Y	NA	Y

FIELD NAME	MULTI- VALUED	CONTROLLED AUTHORITY	FORMAT CONTROL	FREE TEXT SEARCHABLE
Copyee	Y	N	Y	N
Copyee Organization	Y	Y	NA	Y
Publication Data	N	N	Y	Y
Descriptors (Thesaurus)	Y	Y	NA	Y

 FIELDS OPTIONAL TO BOTH PARTICIPANT AND LSSA:

Identifiers	Y	N	N	Y
Comments	N*	N	N	Y
Abstract/Summary	N*	N	N	Y

 FIELDS NOT APPLICABLE TO PARTICIPANT, BUT SUPPLIED BY SYSTEM OR LSSA:

LSS System Accession Number	N	N	Y	NA
Number of Images	N	N	Y	NA
Pointers	Y	N	Y	NA

 In each of the four columns, Y = Yes, N = No, NA = Not Applicable

Multi-valued = multiple entries, e.g., authors, allowed.

Controlled Authority = list of accepted entries with which all participants must comply, such as organization names or document types.

Format Control = whether the entry must follow guidelines or cataloging rules.

Free Text Searchable = the ability to perform phrase or single-word searches of the header fields .

* = Only one variable-length text field. Multiple entries just appended to previous text. See Section III, Issue #1.

APPENDIX B:

DESCRIPTIONS OF RECOMMENDED BIBLIOGRAPHIC HEADER FIELDS

Participant Accession Number: a unique identification code required by 10 CFR 2 to be assigned by the participant to each unit submitted for entry into the LSS. This code assists the submitter in locating documents they have submitted and assists the capture operation in verifying the identity of the document received and matching it with the image and ASCII file. This field should include a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alpha/numeric scheme which the submitting organization might be using to control their own documents.

Submitter Center: a coded field for the name and location of the participant or its subdivision submitting material for inclusion in the LSS. This field provides a contact point for material that is rejected by the LSS capture facility. It provides a contact point for notification that the header, image, and ASCII text have been loaded into the search and image system and are ready for review and verification by the first submitting participant.

Submitter Page Count: the number of pages identified by the submitter as representing the length of the document. This assists the capture station in determining whether the document is complete.

Title/Description: a brief description given to a unit (usually by the author) to distinguish the unit from other units. The complete identifying title of the unit, including any subtitle, is stored in this field. If there is no title, a description of the unit is entered. A mechanism should be available to distinguish those instances where a title does not exist on the unit but has been created by a person other than the author.

Author: the names of all persons listed as responsible for the creation of all or part of a unit. This includes editors or compilers (identified by "ed(s)" or "comp" after the name on the title page) but not those who merely concur or approve. Only personal authors are entered in this field. Corporations or organizations as authors are entered in the Author Organization field and are linked to their respective authors for report and search purposes.

Author Organization: the name of the organization with which each the author was affiliated at the time the unit was created is stored in this field. This field is also used for the name of the organization when a unit has no personal author, for the corporate source of a report, or for the corporate author of a book. In

those cases where both an author and an author organization are entered, a mechanism will be available to link the author with his respective organization. If an author works for one organization but is representing another, then both affiliations should be captured, e.g., an attorney using a law firm's letterhead stationery but representing a client organization, or a scientist for a lab chairing a formal working group or task force.

Addressee: the names of all persons to whom the unit is addressed (correspondence only). It is linked to the Addressee Organization for report and search purposes. See also Copyee field.

Addressee Organization: the organizational affiliation of each recipient, if indicated (correspondence only).

Document Date: the date on which the unit was published or created. If the date is unknown, information in the unit will be used to determine a likely date. A mechanism should be available to distinguish those instances in which a date does not exist on the unit but has been created by a submitter or cataloger.

Document/Report Number: any identifying numbers that have been assigned to a unit and appear (typed or handwritten) on the unit itself are considered to be control numbers for that unit. This field contains these control numbers, which are usually assigned to a document by the issuing agency or organization. Examples are report numbers, contract numbers, public law numbers, and any other identifying numbers on the unit.

Document Condition: the condition of the unit at the time of entry into the system. This includes information such as pages missing, portions illegible, and marginalia. It is always assumed that the unit is the "best copy" available to the submitter, but that the "best copy available" may not be a perfect copy. In some cases, the difference between two identical documents may be that one document contains marginalia; this indication makes the distinction between "duplicate" documents.

Edition/Version: the edition number, version number, revision number, or draft status of all units (including computer codes) that have multiple iterations.

Event Date/Code: the date(s) a particular event, such as an inspection, audit, meeting, or hearing, which is not the date of the document and a code indicating the type of event, e.g., inspection (IN) or meeting (MT). This enables the user to retrieve all documents concerning a particular inspection or meeting.

Protected Status: a coded field indicating the type(s) of privileges or exceptions claimed for the underlying document upon which the header is based.

Related Documents: units within the LSS can have relationships among them which are important to retain. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document and later versions, comments, corrections or errata); and whole/part (a book and its chapters, a journal and its articles, an information package and the cataloging units it contains). This field is intended to be used by a participant to store these relationships by identifying the type of relationship and the units involved. The LSSA will translate these references to a standardized form of pointers for navigating between the units.

Special Class: further classifies units in a manner that would assist a user in locating all units belonging to a special class of units, regardless of the type of unit. These classifications are not necessarily the subjects of the document, but rather are another way of grouping certain kinds of materials in order to facilitate retrieval or inform the user of some unusual aspect of the group. Examples of the use of this field, respectively, would be for units that are part of the Site Characterization Plan administrative record or for units that have only a header and image (no full-text of the unit is available).

Abstract/Summary (for non-documents and image-only materials): description of physical samples, raw data, hand-written notes, and other units that are not available for full-text searching in the LSS.

DESCRIPTIONS OF REMAINING RECOMMENDED FIELDS (FULL HEADER)

Document Type: the type of unit, i.e., the format or physical form of the document. This field is a two-part field consisting of both a major document type and a subset of the major document type. For example, a major document type might be correspondence and the subset would include letters, memos, etc.

Sponsoring Organization: the name of the agency or agencies responsible for funding or otherwise sponsoring the work reported in the unit is stored in this field. Generally, it is assumed the work has a sponsor if there is a contract number, if it is stated that the work was "Prepared for", or if a conference or workshop was presented or organized by a society or agency.

Copyee: used for correspondence only and contains the names of all persons to whom a copy of the unit was sent (as listed on the unit). This field is linked to the Copyee Organization for search and reports purposes.

Copyee Organization: the affiliation of each copyee, if indicated.

Publication Data: bibliographic information that is not

covered in other fields but is important in identifying or citing the unit. Examples of such information are journal name, conference title, conference location. This field in combination with author and title fields provides the user with a standard, consistent bibliographic citation for use in creating bibliographies and references for reports.

Descriptors: terms selected from the LSS Thesaurus that represent the subject content of the unit. The descriptor may or may not be a word or phrase contained in the text of the document. The use of a descriptor obviates the need for synonyms in a search statement. The number of descriptors assigned will vary from unit to unit, depending upon how many are needed to fully cover the content of the unit.

Identifiers: those terms that are not contained in the thesaurus, but that the submitter or cataloger believe will assist a user in retrieving the unit. These may be "buzz words" or words representing new concepts that have not yet appeared in the LSS Thesaurus. The terms in this field will provide a candidate list of terms for inclusion in the LSS Thesaurus.

Comments: any information not covered in the bibliographic fields which the submitter or indexer believes will be necessary to identify or retrieve the unit is stored in this field. This field should tell the user what language the unit is written if it is not English. It is also important because foreign language documents will not have any ASCII text. This will assist the user in determining whether the document is in a language which he will be able to understand.

Abstract/Summary (for documents only): description of the content of the document, generally written by the author but may be prepared by the submitter or cataloger.

DESCRIPTIONS OF SYSTEM FIELDS

LSS System Accession Number: a unique internal identification code assigned to each cataloging unit entering the system. The capture station at which the unit enters the LSS processing system is also identified as part of this number. The LSS Accession No. will also be used in the LSS Pointer field for units which have relationships to other units in the data base.

Number of Images: the exact count of the number of images that will be created from the pages of the unit. This informs the user as to how many pages will be printed if he executes the print command, as well as how many images he will need to view for "image only" documents. Since it is anticipated that an image represents an 8-1/2 X 11" page, there will be more images than the submitter page count indicates to allow for oversize pages (foldouts, maps, etc.) that will need to be tiled.

Pointers: references to related documents after they have been standardized by the LSSA. See Related Documents description.

ADMINISTRATIVE AND PROCESS TRACKING FIELDS

Additional elements of data are required to track the processing of the documents, their headers and their ASCII files and images for statistics and quality control. Such information might be captured in fields of the LSS Full Header either by the LSS system automatically or by the Process Tracking Data Bases. Typically, this type of information is available for use and viewing only to the LSS Operations and Management staff and is not displayed to the users of the search system.

The exact form and content of such fields will be determined by the future LSS design and development integrator. The following are typical examples of tracking information:

- a. Information about the dates that submissions were received, accepted, returned, resubmitted, finally accepted
- b. Initials of Indexer and Station ID
- c. Initials of QC staff
- d. Initials of subject and abstract cataloger
- e. Initials of cataloging QC staff
- f. Status field indicating the current process stage
- g. Date loaded into the LSS
- h. Date and Initials of Submitter Center personnel reviewing and verifying the loaded information.
- i. Change Tracking - a log of who, when, and what changes, additions, and/or corrections are made to the header record, if any, after the header is loaded into the search database.

*

ENCLOSURE 5



Department of Energy
Washington, DC 20585

JUN 05 1990

Mr. John Hoyle
Chairman, LSS Advisory Review Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Header Working Group Report "Recommended Fields for LSS Header Records"

Dear Mr. Hoyle:

We have some comments on the ARP Header Working Group recommendations which we feel should be addressed prior to any votes being taken on header elements.

A primary concern is that, on four separate issues, de facto policy is being established.

- 1.) The Abstract/Summary field has been identified, and we agree that it should be one of the fields. Deciding which categories of documents require abstracts is a fundamental information management question for the LSS. Thus, the precise guidelines for when this field is going to be required, and a detailed description of the style to be used, both need to be promulgated as part-and-parcel of designating this as an LSS header field. This will allow participants to begin including this information, where required, for all LSS-relevant records processed henceforth. Likewise, the volume of records involved and the size of the abstract each figure into the sizing of the LSS header record files.
- 2.) In the discussion of Editing of headers by LSSA on page 3, a recommendation has been made that LSSA staff will review submitted data against quality control standards and LSSA staff will correct entries.

By one reading, the recommendation as worded sounds like it anticipates that records would bypass the Capture System. All records must flow through the Capture System operations before an LSS system load disk is created; the conceptual design has never included an additional review by OLSSA prior to data load because the LSS Capture Systems will be responsible for meeting quality standards and are all to be operated under the strict processing procedures put in place by OLSSA.

An alternative reading of this recommendation suggests that the output of the Capture System process will be so deficient as to require an additional review by LSSA staff prior to database loading. Tightly controlling the Capture System processes and

of 24

procedures obviates the need for subsequent review except as already outlined in the LSS Capture System Detailed Design Document. If such a second review was anticipated, it is our opinion that OLSSA staff again reviewing the output of a Capture System installation will ultimately prove to be an unworkable strategy because of the sheer number of records. Likewise, the Capture Station configurations to be operated directly by the LSSA were not sized for this volume of re-review and scrutiny. Finally, it is redundant of work that should have been done either by the submitter in preparing records for submission to the LSS or by the Capture System processing.

A third alternative reading of this recommendation suggests that data generated from feeder systems such as DOE's RIS would, of necessity, require extensive scrutiny and rework within the Capture System environment. For DOE and NRC, with 90% of the information, rigorous data capture procedures should be instituted and audited in both the feeder systems such as DOE's RIS and in any co-located Capture System which supports conversion to the LSS header format. For the parties with smaller volumes of submissions, the LSSA can more easily check, edit, and add information to headers than control standardized entry procedures for the other parties' feeder systems. Hence, more or less rework may be required by the Capture System depending on who the submitter is, but all of the correction work and additive cataloging is via the Capture System.

Perhaps we are belaboring the point, but, all other elements of the DOE program will be performed under rigorous QA procedures and it is the adherence to these procedures that gets continually audited. We feel that this is the model that should be used for LSS data submission as well. An optimal environment is one where the quality standards that will be acceptable are defined well in advance, already implemented in internal procedures, where the OLSSA dedicates resources for continuing audits of submitters' adherence to processing procedures (both in and outside of the Capture System environment), and, where batches of submitted data not meeting quality standards are returned to the submitter for cleanup. We cannot support massive reprocessing by LSSA staff. When batches are returned wholesale, direction is provided to remediate the submitters preprocessing until it conforms to the stated quality standards.

- 3.) Page 2, notes that an issue to be resolved by ARP is the updating of a header record when two participants submit different headers for the same document and they characterize some information differently, for example, the title/description. Should all the information be merged into one header or does the first header prevail? The recommendation of the working group is to append the subject information, from a subsequent submission that is different, to the respective fields of the original header.

We have a number of concerns about this recommendation:

3/24

- A.) The concept of continually revisiting and updating header records raises more fundamental questions. To what purpose? When will the updates end? This recommendation invites changes to an LSS record once it has been submitted and "locked". DOE's records and headers are those of the license applicant, and the Rule says that each party is responsible for submission of all of its own relevant materials. Should we be designing a system which allows anyone to editorialize on the license applicant's (or anyone else's) submitted header? Will DOE still be responsible for the contents of such a changed header record?

Is the OLSSA authorized to be more than the custodian of the LSS, and is OLSSA ready to accept that responsibility?

- B.) Any created title is just that, and will always be subjective. In a system providing text search capabilities and a controlled vocabulary, will a superior title promote retrieval any more effectively than a merely adequate one? Our recommendation is to define the standards for a created title and ensure that the submitter complies with the standard.
- C.) This scenario is most likely with created titles, identifiers, descriptors, and abstracts. The recommendation to add data values to a textual field such as a title or an abstract could cause horrific database administration problems depending on the DBMS used, e.g., reloads of indexes on gigabytes of data.

Also, there could be auditability and integrity problems.

- 4.) Appendix B, discusses the Related Documents field. For the submitter, it will be used to store relationships between submitted cataloging units, such as parent/child, superseding versions, etc., so that this can be identified during the submission of records to a capture station. Then, the LSS administrator (Capture System operator) is to convert this data into LSS acceptable pointers in the LSS environment, where all duplicates are filtered out and pointers set to existing versions.

The submitters conceptualization of linkages may not track exactly to the nature of the LSS linkages. What happens if there is no LSS equivalent to the submitter's relational statement? The LSSA will erase the submitter's non-analogous statement. Does this violate the participants use of the LSS as its records system? No, document linkages are still available.

But, this approach forces each submitter to commit to the LSS design and configuration. This is a policy decision for which we should be eliciting up-front commitment. The fact that we are requesting this commitment should be made explicit.

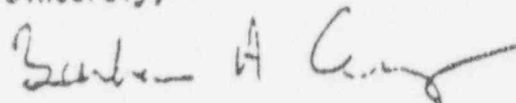
4/24

In addition, we have comments that are of less critical import, but should still be addressed prior to acceptance of the recommended fields.

- 5.) Page 3, and continuing on page 4, recommends a code field for the location of non-text/non-bit-mappable data. It should be added to the list as part of the submitter header and submitted in a non-code format so that the control list can be developed. We request this be added to the submitters' fields list.
- 6.) Appendix B, page 5, in discussing administrative and process tracking fields, suggests additional data be maintained in the LSS header. Most of the items on this list are not header data, indeed they are processing tracking data, and items a-f on this list will already be available in the process control databases maintained in the Capture System processing. Why duplicate the data in the LSS header, too? If the systems administration staff needs the data, they could mount the history file of the process control data files from the Capture Systems.

We recommend that these comments be presented to the members of the ARP in advance of the upcoming meeting and that the members of the ARP give them due consideration before any call for a vote on the recommended list of fields.

Sincerely,



Barbara A. Cerny, Director
Information Resources Management
Division
Office of Civilian Radioactive Waste
Management

5243

ENCLOSURE 6

Signed at Philadelphia, Pennsylvania, this 11th day of April 1990.
 Richard Soltan,
 Deputy Regional Administrator.
 [FR Doc. 90-11523 Filed 5-17-90; 8:45 am]
 BILLING CODE 4810-25-M

NATIONAL COMMISSION ON CHILDREN

Notice of Hearing

Background

The National Commission on Children was created by Public Law 100-203, December 22, 1987 as an amendment to the Social Security Act. The purpose of the law is to establish a nonpartisan Commission directed to study the problems of children in the areas of health, education, social services, income security, and tax policy.

The powers of the Commission are vested in Commissioners consisting of 36 voting members as follows:

1. Twelve members appointed by the President
2. Twelve members appointed by the Speaker of the House of Representatives
3. Twelve members appointed by the President pro tempore of the Senate.

This notice announces a Hearing of the National Commission on Children to be held in Los Angeles, CA.

Time: 2 p.m.-5 p.m., Thursday, May 31, 1990.

Place: Board of Supervisors, County of Los Angeles, 383 Hall of Administration, Los Angeles, CA 90012.

Status: 2 p.m.-5 p.m., Open to the public

Agenda: Hearing on "Children Outside Their Families."

Contact: Jeannine Atalay, (202) 254-3800.

Dated: May 15, 1990.

Joan D. Rockefeller IV,
 Chairman, National Commission on Children.
 [FR Doc. 90-11734 Filed 5-17-90; 8:45 am]
 BILLING CODE 4830-37-M

NUCLEAR REGULATORY COMMISSION

Documents Containing Reporting or Recordkeeping Requirements; Office of Management and Budget Review

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of the Office of Management and Budget review of information collection.

SUMMARY: The Nuclear Regulatory Commission (NRC) has recently submitted to the Office of Management

and Budget (OMB) for review the following proposal for the collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35).

1. *Type of submission, new, revision, or extension:* Extension.

2. *The title of the information collection:*

10 CFR Part 74—Material Control and Accounting of Special Nuclear Material.

NUREG 1065—Acceptance Criteria for the Low Enriched Uranium Reform Amendments.

NUREG 1280—Standard Format and Content Acceptance Criteria for the Material Control and Accounting (MC&A) Reform Amendment.

3. *The form number if applicable:* Not applicable.

4. *How often the collection is required:* Submission of the material control and accounting plan and the fundamental nuclear material control plan are one-time requirements which have been completed by all current licensees. Specified inventory and material status reports are required annually or semiannually. Other reports are submitted as events occur.

5. *Who will be required or asked to report:* Persons licensed under 10 CFR parts 70 or 72 who possess and use certain forms and quantities of special nuclear material.

6. *An estimate of the number of responses:* 15.

7. *An estimate of the total number of hours needed to complete the requirement or request:* Approximately 54 hours and 52 minutes per response and 1,376 hours per recordkeeper annually. The total annual burden for the industry is estimated to be 13,207 hours.

8. *An indication of whether Section 3504(h), Public Law 95-511 applies:* Not applicable.

9. *Abstract:* 10 CFR part 74 establishes requirements for material control and accounting of special nuclear material and for documenting the transfer of special nuclear material. The recordkeeping and reporting requirements are designed to provide timely detection of the loss, theft or diversion of special nuclear material. The material control and accounting plans and fundamental nuclear control plans are needed to ensure that licensees have systems and procedures in place for the control and accounting of special nuclear material.

Copies of the submittal may be inspected or obtained for a fee from the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

Comments and questions may be directed by mail to the OMB reviewer: Ronald Minsk, Paperwork Reduction Project (3150-0123), Office of Management and Budget, Washington, DC 20503.

Comments may also be communicated by telephone at (202) 395-3084.

The NRC Clearance officer is Brenda Jo. Shelton, (301) 492-8132. Dated at Bethesda, Maryland, this fourth day of May 1990.

For the Nuclear Regulatory Commission,
 Joyce A. Amenta,

Designated Senior Official for Information Resources Management.

[FR Doc. 90-11594 Filed 5-17-90; 8:45 am]
 BILLING CODE 7580-01-M

Licensing Support System Advisory Review Panel; Meeting

Notice is hereby given pursuant to the Federal Advisory Committee Act of October 6, 1972 (Public Law 94-463, 86 Stat. 770-776), that the Licensing Support System Advisory Review Panel (LSSARP) will hold a meeting on June 7, 1990. The meeting will convene at 9 a.m. in the Fifth Floor Hearing room, East West Towers Building (West Tower), 4350 East West Highway, Bethesda, Maryland. The Nuclear Regulatory Commission established the LSSARP to provide advice and recommendations to the Nuclear Regulatory Commission and to the Department of Energy on topics, issues, and activities related to the design, development, and operation of an electronic information management system known as the Licensing Support System (LSS). This system is being designed to contain information relevant to the Commission's high-level waste licensing proceeding. In addition to routine administrative matters, this meeting will include a discussion of a Panel working group's recommendations on elements of information to be required in headers for LSS documents.

The meeting will be open to the public. Interested persons may make oral presentations to the Panel or file written statements. Requests for oral presentations should be made to the contact person listed below as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for oral statements.

For further information regarding this meeting, contact Marilee Rood, Office of the LSS Administrator, U.S. Nuclear Regulatory Commission, Washington, DC 20555; telephone 301-492-4003.

Dated at Rockville, Maryland, this 14th day of May 1990.

For the Nuclear Regulatory Commission.
John C. Hoyle.

Chairman LSS Advisory Review Panel.

[FR Doc. 90-11506 Filed 5-17-90; 8:45 am]

BILLING CODE 7590-01-M

RESOLUTION TRUST CORPORATION

Adoption: Policy Statement and Procedures for RTC Employees Interaction with Public Officials

SUMMARY: Notice is hereby given that on April 3, 1990, the Resolution Trust Corporation ("RTC") adopted a policy statement for responding to inquiries and requests regarding activities of the RTC made by or on behalf of public officials, including measures to avoid political favoritism and undue influence. Copies of the policy can be obtained from the RTC.

DATES: Comments on the policy are requested by June 18, 1990.

ADDRESSES: Copies of the policy can be obtained by writing to the Executive Secretary, Resolution Trust Corporation, 801 17th Street NW., Washington, DC 20006. Requests for copies may also be made to the Public Reading Room at (202) 416-6940. Send comments to John M. Buckley, Jr., Executive Secretary, Resolution Trust Corporation, 801 17th Street NW., Washington, DC 20006. Comments may be hand delivered to room 355 on business days between 8:30 a.m. and 5 p.m. Comments may also be inspected in the Public Reading Room, 801 17th Street NW.

FOR FURTHER INFORMATION CONTACT: Loren T. Hooper, Deputy Director, Office of Legislative Affairs, Resolution Trust Corporation (202) 416-4279.

Dated at Washington, DC., this 14th May 1990.

Resolution Trust Corporation.

John M. Buckley, Jr.,

Executive Secretary.

[FR Doc. 90-11628 Filed 5-17-90; 8:45 am]

BILLING CODE 8714-01-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Summary Notice No. PE-90-21]

Petitions for Exemption, Summary of Petitions Received; Dispositions of Petitions Issued

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of petitions for exemption received and of dispositions of prior petitions.

SUMMARY: Pursuant to FAA's rulemaking provisions governing the application, processing, and disposition of petitions for exemption (14 CFR part 11), this notice contains a summary of certain petitions seeking relief from specified requirements of the Federal Aviation Regulations (14 CFR chapter I), dispositions of certain petitions previously received, and corrections. The purpose of this notice is to improve the public's awareness of, and participation in, this aspect of FAA's regulatory activities. Neither publication of this notice nor the inclusion or omission of information in the summary is intended to affect the legal status of any petition or its final disposition.

DATES: Comments on petitions received must identify the petition docket number involved and must be received on or before June 7, 1990.

ADDRESSES: Send comments on any petition in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-10), Petition Docket No. _____, 800 Independence Avenue, SW., Washington, DC 20591.

FOR FURTHER INFORMATION CONTACT: The petition, any comments received, and a copy of any final disposition are filed in the assigned regulatory docket and are available for examination in the Rules Docket (AGC-10), room 915G, FAA Headquarters Building (FOB 10A), 800 Independence Avenue, SW., Washington, DC 20591; telephone (202) 267-3132.

This notice is published pursuant to paragraphs (c), (e), and (g) of § 11.27 of part 11 of the Federal Aviation Regulations (14 CFR part 11).

Issued in Washington, DC, on May 7, 1990.

Denise Donohue Hall,

Manager, Program Management Staff, Office of the Chief Counsel.

Petitions for Exemption

Docket No.: 25242.

Petitioner: International Aerobatic Club.

Sections of the FAR Affected: 14 CFR 61.58(c) and 61.4.

Description of Relief Sought: To extend Exemption No. 4941 that allows Experimental Aircraft Association pilots and petitioner's member pilots to complete a training course in lieu of a pilot proficiency check as required by § 61.58(c). Exemption No. 4941 will expire on June 30, 1990.

Docket No.: 26137.

Petitioner: L.A.B. Flying Service, Inc.

Sections of the FAR Affected: 14 CFR 135.243.

Description of Relief Sought: To allow petitioner to operate twin-engine aircraft

under visual flight rules using pilots who do not hold airline transport pilot certificates.

Docket No.: 26152.

Petitioner: Sierra Academy of Aeronautics.

Sections of the FAR Affected: 14 CFR part 141, appendix F, paragraph (c)(III)(a).

Description of Relief Sought: To allow petitioner to conduct its Commercial Pilot, Helicopter Course, utilizing helicopters only, with 80 hours of flight instruction and 70 hours of directed solo training versus 50 hours of flight instruction and 100 hours of directed solo training as required by the regulations.

Docket No.: 26170.

Petitioner: WestAir Commuter Airlines, Inc.

Sections of the FAR Affected: 14 CFR 135.293, 135.297, and 135.351(c).

Description of Relief Sought: To allow the satisfactory completion of an approved course of training in an airplane Level B or C flight training device (phase I or II advanced simulator) to be substituted for the recurrent pilot competency/instrument proficiency check requirements of part 135 on an alternating basis.

Docket No.: 26184.

Petitioner: Florida West Airlines.

Sections of the FAR Affected: 14 CFR 121.503(f).

Description of Relief Sought: To allow petitioner to schedule flight crewmembers in excess of 10 hours of continuous flight without an intervening rest period by using two pilots and a flight engineer.

Dispositions of Petitions

Docket No.: 20090.

Petitioner: Sierra Academy of Aeronautics, Inc.

Sections of the FAR Affected: 14 CFR 61.63(d) (2) and (3) and 61.157(d).

Description of Relief Sought/Disposition: To extend Exemption No. 2963, as amended, that permits petitioner's trainees, who are applicants for a type rating to be added to any grade of pilot certificate, to substitute the practical test requirements of § 61.157(a) for those of § 61.63(d) (2) and (3); and to complete a portion of that practical test in a simulator as authorized by § 61.157(d).

Grant, April 30, 1990, Exemption No. 2963H.

Docket No.: 21168.

Petitioner: Executive Air Fleet, Inc.

Section of the FAR Affected: 14 CFR 135.297(a).

Description of Relief Sought/Disposition: To extend and amend

ENCLOSURE 7

STATUS REPORT

Presented by:

GERALD CRANFORD

ACTING LICENSING SUPPORT SYSTEM ADMINISTRATOR

MEETING OF THE LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL

**OCTOBER 5, 1993
LAS VEGAS, NEVADA**

AUGUST - SEPTEMBER 1991

PROPOSAL TO REEXAMINE THE LSS

TECHNICAL WORKING GROUP FORMED

**LSSARP PRESENTATION
OCTOBER 5, 1993**

TECHNICAL WORKING GROUP COMPRISED OF:

NUCLEAR REGULATORY COMMISSION

- OFFICE OF IRM**
- OFFICE OF THE LSSA**

DEPARTMENT OF ENERGY

- OFFICE OF CIVILIAN REACTOR WASTE MANAGEMENT**
- DOE CONTRACTOR**

TECHNICAL WORKING GROUP RESPONSIBILITIES

- EXAMINE ORIGINAL SAIC PROPOSED DESIGN**
- EXAMINE InfoSTREAMS CAPABILITIES**
- EVALUATE VARIOUS COST-REDUCTION/REALLOCATION MEASURES**
- DETERMINE IF COST REDUCTION MEASURES AFFECT FUNCTIONALITY**
- DELIVER RECOMMENDATIONS ON COST CUTTING MEASURES TO THE COMMISSION**

ELEVEN OPTIONS REVIEWED BY THE TECHNICAL WORKING GROUP INCLUDING

- CAPTURING DOE'S LSS MATERIALS USING InfoSTREAMS**
- USING InfoSTREAMS TO PERFORM LSS SEARCH AND RETRIEVAL**
- MINIMIZING NON-DOE DOCUMENT CAPTURE COSTS**

DOE CAPTURES ALL NON-DOE MATERIALS

**LSSA CAPTURES ALL NON-DOE MATERIALS USING InfoSTREAMS
SOFTWARE**

- LIMITING ON-LINE IMAGES**
- RECONSIDERING EARLY AVAILABILITY OF THE LSS**

**OF ELEVEN OPTIONS CONSIDERED, SIX RECOMMENDED FOR FURTHER
CONSIDERATION**

KEY OPTIONS RECOMMENDED

- CAPTURE DOE LSS MATERIAL USING InfoSTREAMS**
- ADOPT InfoSTREAMS SEARCH AND RETRIEVAL CAPABILITY**

FEBRUARY 1992

LSS TECHNICAL WORKING GROUP OUTCOME

- RECOMMENDATIONS HELD PENDING RESOLUTION OF BROADER ISSUES
SURROUNDING THE LSS PROGRAM AND BUDGET RESPONSIBILITIES**

**LSSARP PRESENTATION
OCTOBER 5, 1993**

MAY 1992

- **COMMISSION DIRECTS STAFF TO PREPARE PAPER ADDRESSING LSS PROGRAM AND BUDGET RESPONSIBILITIES**
- **LSSA DEVELOPS RECOMMENDATIONS FOR COMMISSION CONSIDERATION**
 - **PROPOSES NRC DEVELOP, OPERATE, AND MAINTAIN THE LSS**
 - **COST WOULD BE SHARED BY NRC AND DOE BASED UPON GUIDELINES IN OMB CIRCULAR A-130**
- **COMMISSION REJECTS RECOMMENDATIONS AND DIRECTS STAFF**
 - **TO EXAMINE ADDITIONAL ALTERNATIVES THAT WOULD EXPAND DOE'S LSS PROGRAM AND BUDGET RESPONSIBILITIES**
 - **TO EVALUATE ALTERNATIVES TO THE ORGANIZATIONAL PLACEMENT OF THE LSSA**
 - **TO EXAMINE OPTIONS FOR FUNDING THE NRC'S LSS RESPONSIBILITIES**

**LSSARP PRESENTATION
OCTOBER 5, 1993**

NOVEMBER 1992

- **COMMISSION APPROVES RECONSTITUTION OF THE LSSA UNDER THE OFFICE OF IRM**
- **POSITION OF THE LSSA/DEPUTY DIRECTOR FOR IRM CREATED**
- **LSSA REPORTS TO THE EXECUTIVE DIRECTOR FOR OPERATIONS IN MATTERS REGARDING THE LSS COMPLIANCE PROGRAM**

**LSSARP PRESENTATION
OCTOBER 5, 1993**

APRIL 1993

- STAFF RECOMMENDS AND COMMISSION APPROVES IN SECY-93-107

- ALTERNATIVE 3

**- DOE DESIGNS, DEVELOPS, OPERATES AND MAINTAINS LSS
INFORMATION STORAGE AND DISSEMINATION CAPABILITIES
WITHIN InfoSTREAMS**

- DOE CAPTURES ALL LSS MATERIAL (NON-DOE AND ITS OWN)

- NRC WOULD FUND LSSA SYSTEM OVERSIGHT ACTIVITIES

**- NRC WOULD CONDUCT AUDITS AND INSTALL A QUALITY
ASSURANCE PROGRAM**

- DOE WOULD FUND ALL OTHER SYSTEM-RELATED LSS ACTIVITIES

**LSSARP PRESENTATION
OCTOBER 5, 1993**

ALTERNATIVE 3 PROs AND CONs

PROs

- InfoSTREAMS IS TECHNICALLY FEASIBLE
- PROVIDES LSSA MORE CONTROL OVER LSS FUNCTIONALITY
- REDUCES RESOURCES EXPENDED FOR THE LSS
- CONSOLIDATES OWNERSHIP OF LSS DESIGN, DEVELOPMENT, AND IMPLEMENTATION

CONs

- MIGHT BE UNACCEPTABLE (DOE DOCUMENT CAPTURE)
- SOME PARTICIPANTS MAY BE UNWILLING TO HAVE DOE OPERATE THE LSS
- InfoSTREAMS FUTURE DEVELOPMENT TIED TO FUTURE BUDGETS

InfoSTREAMS as LSS Foundation - Issues



**Department of Energy
Office of Civilian Radioactive Waste Management
Information Management Division
(202)586-4589
October 5, 1993**

Agenda

- ➔ • 10CFR2/J Roadblocks to Technology Insertion
- LSS Header Definition
- Copyright/Royalties

10CFR2/J Roadblocks to Technology Insertion

- **Unnecessary Technology Constraints Included**
- **Technology Levers Omitted**

Unnecessary Technology Constraints Included

- Rule states implementation rather than requirement
 - ASCII
 - dial-up access
 - optical/magnetic media
- Recommendation:
 - Replace technology specific implementations with functional requirements
- Rationale:
 - Increase InfoSTREAMS reusability
 - Make best use of current technology
 - Reduce cost by reducing implementation constraints

Proposed Rule Change Examples

Sec. 2.1001 Definitions.

~~"ASCII File" means a computerized text file conforming to the American Standard Code for Information Interchange which represent characters and symbols.~~

"Image" means a visual likeness of a document, presented on a paper copy, microform, or a *bit-map on industry standard electronic media*
~~bit-map on optical or magnetic media.~~

"Searchable full text" means the electronic indexed entry of a document in ~~ASCII~~ *standard text format* into the Licensing Support System that allows the identification of specific words or groups of words within a text file.

"Text file" means a computerized file which represents characters and symbols. The format of the text file shall conform to the specifications provided in TBD.

Proposed Rule Change Examples

Sec. 2.1003 Submission of material to the LSS.

...shall submit to the LSS Administrator--

(1) Subject to paragraph (a)(3) of this section, *a text file, an ASCII file*, an image, and a bibliographic header, reasonably contemporaneous with its creation or ...

(f) Submission of *text files, ASCII files*, images, and bibliographic headers shall be in accordance with established criteria.

Sec. 2.1007 Access.

(c) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--

(1) *Full text search capability from remote locations at the requestor's expense;* ~~(1) Full text search capability through dial-up access from remote locations at the requestor's expense;~~

Technology Levers Omitted

- **Rule inconsistent in application of technology**
 - Adjudicatory proceeding filings require paper copy follow-up
 - Notification of service via electronic mail
- **Recommendation:**
 - Capitalize on emerging technology by recognizing a totally electronic document
 - Allow hard copy and/or electronic submission
 - Expand definition of 'document'
- **Rationale:**
 - Federal standards regarding electronic digital signatures emerging
 - Data integrity/security increased

Technology Levers Omitted (con't)

- Examples of future automation technology in
InfoSTREAMS

- Totally electronic document
- Voice annotations
- Video objects

Proposed Rule Change Examples

Sec. 2.1001 Definitions.

"Document" means any written, printed, recorded, magnetic, graphic matter, or other documentary material, regardless of form or characteristic. *A document file may consist of both text and graphic-oriented material. A document meeting the above criterion includes a document which has been generated as an electronic document only, including concurrence and signature.*

Proposed Rule Change Examples

Sec. 2.1013 Use of LSS during the adjudicatory proceeding.

~~(5) One signed paper copy of each filing shall be served promptly on the Secretary by regular mail pursuant to the requirements of Sec. 2.700 and 2.704 of this part.~~

Sec. 2.1019 Depositions.

(3) Subject to paragraph (i)(6) of this section, any party or interested governmental participant may request from the deponent a ~~paper copy~~ *an image* of any or all of the documents on the index that have not already been entered into the Licensing Support System.

(4) Subject to paragraph (i)(6) of this section, the deponent shall bring a ~~paper copy~~ *an image* of all documents on the index that the deposing party or interested governmental participant requests that have not already been entered into the Licensing Support System

Agenda

- 10CFR2/J Roadblocks to Technology Insertion
- • LSS Header Definition
- Copyright/Royalties

LSS Header Definition

- **Original definition insufficient for an electronic environment**
 - Header Working Group identified 28 fields
- **Recommendations:**
 - Add 13 new fields
 - Address QA qualification
 - Support totally electronic document
 - Electronic concurrence
 - Use common LSS/OCRWM thesaurus and authority lists
- **Rationale:**
 - Increase retrievability and integrity
 - Increase InfoSTREAMS reusability

28 Original Fields

Participant Accession Number	Protected Status
Submitter Center	Related Documents
Submitter Page Count	Special Class
Title/Description	Abstract/Summary
Author	Document Type
Author Organization	Sponsoring Organization
Addressee	Copyright Flag
Addressee Organization	Publication Data
Document Date	Descriptors
Document/Report Number	Identifiers
Document Condition	Comments
Edition/Version	LSS Accession Number
Event Date, Code	Number of Images
Package ID	Pointers

13 Proposed Fields

Estimated Date Flag
Related Accession Code
Package ID Code
Contract Number
QA Record
Document Category
Traceability Number

Traceability Code
Searchable Text Reference Info
Concurrence/Approval Info
Image Reference Info
Physical Unit Location Reference Info
Electronic Doc. Route Tracking Info

Agenda

- 10CFR2/J Roadblocks to Technology Insertion
- LSS Header Definition
- • Copyright/Royalties

Copyright/Royalties

- Rule does not address royalty fees
 - General Counsel: NRC must request permission to copy
- Alternatives:
 - Explore having General Counsel revise their position
 - Modify rule to exclude copyright text - enter header only
 - Modify rule to address cost recovery
 - Maintain items with royalty requirements in TIC - header contains pointer

Issue Closure

- Remove roadblocks, encourage technology insertion
- Reassemble Header Working Group
- Develop copyright strategy

Subpart J--Procedures Applicable to Proceedings for the Issuance of Licenses
for the Receipt of High-Level Radioactive Waste at a Geologic Repository

Sec. 2.1000	Scope of subpart.	1
Sec. 2.1001	Definitions.	2
Sec. 2.1002	High-level waste Licensing Support System.	4
Sec. 2.1003	Submission of material to the LSS.	5
Sec. 2.1004	Amendments and additions.	8
Sec. 2.1005	Exclusions.	9
Sec. 2.1006	Privilege.	9
Sec. 2.1007	Access.	10
Sec. 2.1008	Potential parties.	11
Sec. 2.1009	Procedures.	11
Sec. 2.1010	Pre-License Application Presiding Officer.	12
Sec. 2.1011	LSS management and administration.	14
Sec. 2.1012	Compliance.	16
Sec. 2.1013	Use of LSS during the adjudicatory proceeding.	17
Sec. 2.1014	Intervention.	18
Sec. 2.1015	Appeals.	21
Sec. 2.1016	Motions.	22
Sec. 2.1017	Computation of time.	22
Sec. 2.1018	Discovery.	23
Sec. 2.1019	Depositions.	26
Sec. 2.1020	Entry upon land for inspection.	28
Sec. 2.1021	First prehearing conference.	29
Sec. 2.1022	Second prehearing conference.	30
Sec. 2.1023	Immediate effectiveness.	31
Sec. 2.1025	Authority of the Presiding Officer to dispose of certain issues on the pleadings.	32
Sec. 2.1026	Schedule.	33
Sec. 2.1027	Sua Sponte.	34

Subpart J--Procedures Applicable to Proceedings for the Issuance of Licenses
for the Receipt of High-Level Radioactive Waste at a Geologic Repository

Source: 54 FR 14944, Apr. 14, 1989, unless otherwise noted.

Sec. 2.1000 Scope of subpart.

The rules in this subpart govern the procedure for applications for a license to receive and possess high-level radioactive waste at a geologic repository operations area noticed pursuant to Sec. 2.101(f)(8) or Sec. 2.105(a)(5) of this part. The procedures in this subpart take precedence over the 10 CFR part 2, subpart G, rules of general applicability, except for the following provisions: Secs. 2.702, 2.703, 2.704, 2.707, 2.709, 2.711, 2.713, 2.715, 2.715a, 2.717, 2.718, 2.720, 2.721, 2.722, 2.732, 2.733, 2.734, 2.742, 2.743, 2.750, 2.751, 2.753, 2.754, 2.755, 2.756, 2.757, 2.758, 2.759, 2.760, 2.761, 2.762, 2.763, 2.770, 2.771, 2.772, 2.780, 2.781, 2.786, 2.787, 2.788, and 2.790.

[56 FR 7795, Feb. 26, 1991]

DAILY CFR (TM) Note

56 FR 7787, No. 38, Feb. 26, 1991

SUMMARY: The Nuclear Regulatory Commission is amending its regulations concerning the Rules of Practice for the licensing of high-level radioactive waste at a geologic repository (HLW proceeding). The revised rules enhance the Commission's ability to comply with the schedule for the Commission's decision on the construction authorization for the repository contained in section 114(d) of the Nuclear Waste Policy Act of 1982, as amended, (NWPA), while providing for the thorough technical review of the license application and the equitable treatment of the parties to the hearing. The revised rules for the HLW proceeding establish a new standard for the admission of initial contentions, define "late contentions" as any contention proposed after the initial contentions are submitted, establish a compulsory hearing schedule, and specify that there will be no sua sponte review by the Commission's adjudicatory boards. The revised rules also clarify that the LSS Administrator's written report and periodic evaluations of the Department of Energy's (DOE) compliance with the LSS requirements will be circulated to potential parties who must timely file any objections they may have to the

Administrator's evaluations or report or risk waiving their objections. In addition, the rules clarify the Commission's authority to designate a Pre-License Application Presiding Officer to resolve disputes during the period prior to the receipt of the formal application for the construction of the high-level waste repository. The revised rules indicate that the Commission will specify the jurisdiction of the pre-License Application Presiding Officer in designating the officer pursuant to these amendments.

EFFECTIVE DATE: March 28, 1991.

Sec. 2.1001 Definitions.

~~"ASCII File" means a computerized text file conforming to the American Standard Code for Information Interchange which represent characters and symbols.~~

"Bibliographic header" means the minimum series of descriptive fields that a potential party, interested governmental participant, or party must submit with a document or other material. The bibliographic header fields are a subset of the fields in the full header. The bibliographic header **shall** conform to the specifications provided in TBD.

"Circulated draft" means a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred. A "circulated draft" meeting the above criterion includes a draft of a document that eventually becomes a final document, and a draft of a document that does not become a final document due to either a decision not to finalize the document or the passage of a substantial period of time in which no action has been taken on the document.

"Document" means any written, printed, recorded, magnetic, graphic matter, or other documentary material, regardless of form or characteristic. A document file may consist of both text and graphic-oriented material. A document meeting the above criterion includes a document which has been generated as an electronic document only, including concurrence and signature.

"Documentary material" means 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.

"DOE" means the U.S. Department of Energy or its duly authorized

representatives.

"Full header" means the series of descriptive fields and subject terms given to a document or other material. The full header **shall** conform to the specifications provided in TBD.

"Image" means a visual likeness of a document, presented on a paper copy, microform, or a bit-map on industry standard electronic media, ~~or a bit-map on optical or magnetic media.~~

"Interested governmental participant" means any person admitted under Sec. 2.715(c) of this part to the proceeding on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter.

"LSS Administrator" means the person within the U.S. Nuclear Regulatory Commission responsible for administration, management, and operation of the Licensing Support System. The LSS Administrator **shall** not be in any organizational unit that either represents the U.S. Nuclear Regulatory Commission 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. For purposes of this subpart the organizational unit within the NRC selected to be the LSS Administrator **shall** not be considered to be a party to the proceeding.

"Marginalia" means handwritten, printed, or other types of notations added to a document excluding underlining and highlighting.

"NRC" means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

"Party" for the purpose of this subpart means the DOE, the NRC staff, the host State and any affected Indian Tribe in accordance with Sec. 60.63(a) of this chapter, and a person admitted under Sec. 2.1014 of this subpart to the proceeding on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to part 60 of this chapter; provided that a host State or affected Indian Tribe **shall** file a list of contentions in accordance with the provisions of Secs. 2.1014(a)(2) (ii) and (iii) of this subpart.

"Personal record" means a document in the possession of an individual associated with a party, interested governmental participant, or potential party that was not required to be created or retained by the party, interested governmental participant, or potential party, and can be retained or discarded at the possessor's sole discretion, or documents of a personal nature that are not associated with any business of the party, interested governmental participant, or potential party.

"Potential party" means any person who, during the period before the issuance of the first pre-hearing conference order under Sec. 2.1021(d) of this subpart, is granted access to the Licensing Support System and who consents to comply with the regulations set forth in subpart J of this part, including the authority of the Pre-License Application Presiding Officer

designated pursuant to Sec. 2.1010 of this subpart.

"Pre-license application phase" means the time period before the license application to receive and possess high-level radioactive waste at a geologic repository operations area is docketed under section 2.101(f)(3) of this part.

"Pre-License Application Presiding Officer" means 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.

"Preliminary draft" means any nonfinal document that is not a circulated draft.

"Presiding Officer" means 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 matter, designated in the notice of hearing to preside.

"Searchable full text" means the electronic ~~indexed~~ entry of a document in ASCII standard text format into the Licensing Support System that allows the identification of specific words or groups of words within a text file.

"Text file" means a computerized file which represents characters and symbols. The format of the text file **shall** conform to the specifications provided in TBD.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991]

Sec. 2.1002 High-level waste Licensing Support System.

(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.

(b) The Licensing Support System **shall** include documentary material not privileged under Sec. 2.1006 or excluded under Sec. 2.1005 of this subpart.

(c) The participation of the host State in the Licensing Support System during the pre-license application phase **shall** not have any affect on the State's exercise of its disapproval rights under section 116(b)(2) of the Nuclear Waste Policy Act, as amended, 42 U.S.C. 10136(b)(2).

(d) This subpart **shall** not affect any independent right of a potential party, interested governmental participant or party to receive information.

Sec. 2.1003 Submission of material to the LSS.

(a) Subject to the exclusions in Sec. 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--

(1) Subject to paragraph (a)(3) of this section, a text file, ~~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.

(2) An image, a bibliographic header, and, if available, a text file, ~~an ASCII file~~, no

later than six months before the license application is submitted under Sec. 60.22 of this chapter, 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, on or before the date on which such potential party, interested governmental participant, or party was given access to the Licensing Support System.

(3) An image and bibliographic header for documentary material included under paragraphs (a)(1) of this section that were acquired from a person that is not a potential party, party, or interested governmental participant.

(b) Subject to the exclusions in Sec. 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--

(1) A text file, ~~(1) 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.

(2) A text file, ~~(2) An ASCII file~~, an image, and a bibliographic header no later than six

months before the license application is submitted under Sec. 60.22 of this chapter 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 on or before the date on which the Licensing Support System is available for access.

(c)(1) Each potential party, interested governmental participant, or party **shall** submit, subject to the claims of privilege in Sec. 2.1006, an image and a bibliographic header, in a time frame to be established by the access protocols under Sec. 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.

(2) Each potential party, interested governmental participant, or party, in a time frame to be established by the access protocols under Sec. 2.1011(d)(10) of this subpart, **shall** submit, subject to the claims of privilege in Sec. 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 Sec. 2.1011(d)(10) or through entry upon land for inspection and other purposes pursuant to Sec. 2.1020.

(3) Whenever documentary material described in paragraphs (c)(1) or (c)(2) of this section has been collected or used in conjunction with other such information to analyze, critique, support or justify any particular technical or scientific conclusion, or relates to other documentary material as part of the same scope of technical work or investigation, then an appropriate bibliographic header **shall** be submitted for a table of contents describing that package of information, and documentary material contained within that package **shall** be named and identified.

(d) Each potential party, interested governmental participant, or party **shall** submit a bibliographic header for each documentary material--

(1) For which a claim of privilege is asserted; or

(2) Which constitutes confidential financial or commercial information; or
(3) Which constitutes safeguards information under Sec. 73.21 of this Chapter.

(e) In addition to the submission of documentary material under paragraphs (a) and (b) of this section, potential parties, interested governmental participants, or parties may request that another potential party's, interested governmental participant's, party's, or third party's documentary material be entered into the Licensing Support System in searchable full text if they or the other potential party, interested governmental participant, or party intend to rely on such documentary material during the licensing proceeding.

(f) ~~Submission of text files,--(f) Submission of ASCII files, images, and bibliographic headers~~ **shall** be in accordance with established criteria.

(g) Basic licensing documents generated by DOE, such as the Site Characterization Plan, the Environmental Impact Statement, and the license application, or by NRC such as the Site Characterization Analysis, and the Safety Evaluation Report, **shall** be submitted to the LSS Administrator by the respective agency that generated the document.

(h)(1) Docketing of the application for a license to receive and possess high-level radioactive waste at a geologic repository operations area **shall** not be permitted under Subpart J of this part unless the LSS Administrator has certified, at least six months in advance of the submission of the license application, that the DOE has substantially complied with its obligations under this section.

(2)(i) The LSS Administrator **shall** evaluate the extent of the DOE's compliance with the provisions of this section at six month intervals beginning six months after his or her appointment under Sec. 2.1011 of this subpart.

(ii) The LSS Administrator **shall** issue a written report of his or her evaluation of DOE compliance under paragraph (h)(1) of this section. The report **shall** include recommendations to the DOE on any actions necessary to achieve substantial compliance pursuant to paragraph (h)(1) of this section.

(iii) The LSS administrator **shall** circulate each evaluation prepared pursuant to paragraph (h)(2)(i) of this section, and the written report prepared pursuant to paragraph (h)(2)(ii) of this section, to potential parties to the high level waste proceeding. Potential parties may submit comments on or objections to the evaluations prepared pursuant to paragraph (h)(2)(i) of this section or the report prepared pursuant to paragraph (h)(2)(ii) of this section, to the LSS Administrator within 30 days of issuance of the evaluation or report. Comments or objections not filed within this time period are waived.

(3)(i) In the event that the LSS Administrator does not certify substantial compliance under paragraph (h)(1) of this section, the proceeding on the

application for a license to receive and possess high-level radioactive waste at a geologic repository operations area **shall** be governed by Subpart G of this part.

(ii) If, subsequent to the submission of such application under Subpart G of this part, the LSS Administrator issues the certification described in paragraph (h)(1) of this section, the Commission may, upon request by any party or interested governmental participant to the proceeding, specify the extent to which the provisions of Subpart J of this part may be used in the proceeding.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991]

Sec. 2.1004 Amendments and additions.

(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.

(b) After the time period specified for verification in paragraph (a) of this section has expired, a submitter who desires to amend an incorrect document **shall--**

(1) Submit the corrected version to the LSS Administrator for entry as a separate document; and

(2) Submit a bibliographic header for the corrected version that identifies all revisions to the corrected version.

(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.

(c)(1) A submitter **shall** submit any revised pages of a document in the Licensing Support System to the LSS Administrator for entry into the Licensing Support System as a separate document.

(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.

(d) Any document that has been incorrectly excluded from the Licensing Support System must be submitted to the LSS Administrator by the potential party, interested governmental participant, or party responsible for the submission of the document within two days after its exclusion has been identified unless some other time is approved by the Pre-License Application Presiding Officer or the Presiding Officer designated for the high-level

waste proceeding; provided, however, that the time for submittal under this paragraph will be stayed pending Officer action on a motion to extend the time for submittal.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991]

Sec. 2.1005 Exclusions.

The following material is excluded from entry into the Licensing Support System, either through initial entry pursuant to Sec. 2.1003 of this subpart, or through derivative discovery pursuant to Sec. 2.1019(i) of this subpart--

- (a) Official notice materials;
- (b) Reference books and text books;
- (c) Material pertaining exclusively to administration, such as material related to budgets, financial management, personnel, office space, general distribution memoranda, or procurement, except for the scope of work on a procurement related to repository siting, construction, or operation, or to the transportation of spent nuclear fuel or high-level waste;
- (d) Press clippings and press releases;
- (e) Junk mail;
- (f) Preferences cited in contractor reports that are readily available;
- (g) Classified material subject to Subpart I of this Part.

Sec. 2.1006 Privilege.

(a) Subject to the requirements in Sec. 2.1003(d) of this subpart, the traditional discovery privileges recognized in NRC adjudicatory proceedings and the exceptions from disclosure in Sec. 2.790 of this part may be asserted by potential parties, interested governmental participants, and parties. In addition to Federal agencies, the deliberative process privilege may also be asserted by State and local government entities and Indian Tribes.

(b) Any document for which a claim of privilege is asserted, but is denied in whole or in part by the Pre-License Application Presiding Officer or the Presiding Officer, must be submitted by the party, interested governmental participant, or potential party that asserted the claim to--

(1) The LSS Administrator for entry into the Licensing Support System into an open access file; or

(2) To the LSS Administrator or to the Pre-License Application Presiding Officer or to the Presiding Officer, for entry into a Protective Order file, if the Pre-License Application Presiding Officer or the Presiding Officer so directs under Sec. 2.1010(b) or Sec. 2.1018(c) of this subpart.

(c) Notwithstanding any availability of the deliberative process privilege

under paragraph (a) of this section, circulated drafts not otherwise privileged **shall** be submitted for entry into the Licensing Support System pursuant to Secs. 2.1003(a) and 2.1003(b) of this subpart.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991]

Sec. 2.1007 Access.

(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.

(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.

(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.

(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.

(5) Public access to the searchable full text and images of all the documents in the Licensing Support System, not privileged under section 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 Sec. 2.101(f)(8) or Sec. 2.105(a)(5) on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area.

(b) Public availability of paper copies of the records specified in paragraph (a) of this section, as well as duplication fees, and fee waiver for those records, will be governed by the Freedom of Information Act regulations of the respective agencies.

(c) Access to the Licensing Support System for potential parties, interested governmental participants, and parties will be provided in the following manner--

(1) Full text search capability from remote locations at the requestor's expense;-

~~(1) Full text search capability through dial-up access from remote~~

~~locations at the requestor's expense;~~

- (2) Image access at remote locations at the requestor's expense;
- (3) The capability to electronically request a paper copy of a document at the time of search;
- (4) Generic fee waiver for the paper copy requested under paragraph (c)(3) of this section for requestors who meet the criteria in Sec. 9.41 of this chapter.

(d) Documents submitted to the LSS Administrator for entry into the Licensing Support System **shall** not be considered as agency records of the LSS Administrator for purposes of the Freedom of Information Act (FOIA), 5 U.S.C. 552, and **shall** remain under the custody and control of the agency or organization that submitted the documents to the LSS Administrator. Requests for access pursuant to the FOIA to documents submitted by a Federal agency **shall** be transmitted to that Federal agency.

Sec. 2.1008 Potential parties.

(a) A person may petition the Pre-License Application Presiding Officer designated pursuant to Sec. 2.1010 of this subpart for access to the Licensing Support System.

(b) A petition must set forth with particularity the interest of the petitioner in gaining access to the Licensing Support System with particular reference to--

(1) The factors set out in Sec. 2.1014(c) (1), (2), and (3) of this subpart as determined in reference to the topical guidelines in the applicable NRC Regulatory Guide; or

(2) The criteria in Sec. 2.715(c) of this part as determined in reference to the topical guidelines in the applicable NRC Regulatory Guide.

(c) The Pre-License Application Presiding Officer **shall**, in ruling on a petition for access, consider the factors set forth in paragraph (b) of this section.

(d) Any person whose petition for access is approved pursuant to paragraph (c) of this section **shall** comply with the regulations set forth in this subpart, including Sec. 2.1003 and agree to comply with the orders of the Pre-License Application Presiding Officer designated pursuant to Sec. 2.1010 of this subpart.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991]

Sec. 2.1009 Procedures.

(a) Each potential party, interested governmental participant, or party

shall--

(1) Designate an official who will be responsible for administration of its Licensing Support System responsibilities;

(2) Establish procedures to implement the requirements in Sec. 2.1003 of this subpart;

(3) Provide training to its staff on the procedures for implementation of Licensing Support System responsibilities;

(4) Ensure that all documents carry the submitter's unique identification number;

(5) Cooperate with the advisory review process established by the LSS Administrator pursuant to Sec. 2.1011(e) of this subpart.

(b) The responsible official designated pursuant to paragraph (a)(1) of this section **shall** certify to the LSS Administrator, at six month intervals designated by the LSS Administrator, that the procedures specified in paragraph (a)(2) of this section have been implemented, and that to the best of his or her knowledge, the documentary material specified in Sec. 2.1003 of this subpart has been identified and submitted to the Licensing Support System.

Sec. 2.1010 Pre-License Application Presiding Officer.

(a)(1) The Commission may designate one or more members of the Commission,

or an atomic safety and licensing board, or a named officer who has been delegated final authority on the matter (Pre-License Application Presiding Officer) to rule on all petitions for access to the Licensing Support System submitted under Sec. 2.1008; disputes over the entry of documents during the pre-license application phase, including disputes relating to relevance and privilege; disputes relating to the LSS Administrator's decision on substantial compliance pursuant to Sec. 2.1003(h); discovery disputes; disputes relating to access to the Licensing Support System; disputes relating to the design and development of the Licensing Support System by DOE or the operation of the Licensing Support System by the LSS Administrator under Sec. 2.1011, including disputes relating to the implementation of the recommendations of the LSS Advisory Review Panel established under Sec. 2.1011(e).

(2) The Pre-License Application Presiding Officer **shall** be designated six months before access to the Licensing Support System is scheduled to be available.

(b) The Pre-License Application Presiding Officer **shall** rule on any claim of document withholding to determine--

(1) Whether it is documentary material within the scope of this subpart;

(2) Whether the material is excluded from entry into the Licensing Support

System, under Sec. 2.1005 of this subpart;

(3) Whether the material is privileged or otherwise excepted from disclosure under section 2.1006 of this subpart;

(4) If privileged, whether it is an absolute or qualified privilege;

(5) If qualified, whether the document should be disclosed because it is necessary to a proper decision in the proceeding;

(6) Whether the material should be disclosed under a protective order containing such protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to limit the disclosure to potential participants, interested governmental participants and parties in the proceeding, or to their qualified witnesses and counsel. When Safeguards Information protected from disclosure under section 147 of the Atomic Energy Act, as amended, is received and possessed by a potential party, interested governmental participant, or party, other than the Commission staff, it **shall** also be protected according to the requirements of Sec. 73.21 of this chapter. The Pre-License Application Presiding Officer may also prescribe such additional procedures as will effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved. In addition to any other sanction that may be imposed by the Pre-License Application Presiding Officer for violation of an order pertaining to the disclosure of Safeguards Information protected from disclosure under section 147 of the Atomic Energy Act, as amended, may be subject to a civil penalty imposed pursuant to Sec. 2.205. For the purpose of imposing the criminal penalties contained in section 223 of the Atomic Energy Act, as amended, any order issued pursuant to this paragraph with respect to Safeguards Information **shall** be deemed an order issued under section 161b of the Atomic Energy Act.

(c) Upon a final determination that the material is relevant, and not privileged, exempt from disclosure, or otherwise exempt from entry into the Licensing Support System under Sec. 2.1005 of this subpart, the potential party, interested governmental participant, or party who asserted the claim of withholding must submit the document to the LSS Administrator within two days for entry into the Licensing Support System.

(d) The service of all pleadings, discovery requests and answers, orders, and decisions during the pre-license application phase **shall** be made according to the procedures specified in Sec. 2.1013(c) of this subpart.

(e) The Pre-License Application Presiding Officer **shall** possess all the general powers specified in Secs. 2.721(d) and 2.718.

(f) The Commission, in designating the Pre-License Application Presiding Officer in accordance with paragraphs (a) (1) and (2) of this section, **shall** specify the jurisdiction of the Officer.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7796, Feb. 26, 1991]

Sec. 2.1011 LSS management and administration.

(a) The Licensing Support System **shall** be administered by the LSS Administrator who will be designated within sixty days after the effective date of the rule.

(b)(1) Consistent with the requirements in this subpart, and in consultation with the LSS Administrator, DOE **shall** be responsible for the design and development of the computer system necessary to implement the Licensing Support System, including the procurement of computer hardware and software, and, with the concurrence of the LSS Administrator, the follow-on redesign and procurement of equipment necessary to maintain the Licensing Support System.

(2) With respect to the procurement undertaken pursuant to paragraph (b)(1) of this section, a representative of the LSS Administrator **shall** participate as a member of the Source Evaluation Panel for such procurement.

(3) DOE **shall** implement consensus advice from the LSS Advisory Review Panel under paragraph (f)(1) of this section that is consistent with the requirements of this subpart.

(c)(1) The Licensing Support System, described in Sec. 2.1002, **shall** not be part of any computer system that is controlled by any party, interested governmental participant, or potential party, including DOE and its contractors, or that is physically located on the premises of any party, interested governmental participant, or potential party, including DOE and that of its contractors.

(2) Nothing in this subpart **shall** preclude DOE, NRC, or any other party, potential party, or interested governmental participant, from using the Licensing Support System computer facility for a records management system for documentary material independent of the Licensing Support System.

(d) The LSS Administrator **shall** be responsible for the management and administration of the Licensing Support System, including the responsibility to--

(1) Implement the consensus advice of the LSS Advisory Review Panel under paragraph (f) of this section that is consistent with the requirements of this subpart;

(2) Provide the necessary personnel, materials, and services for operation and maintenance of the Licensing Support System;

(3) Identify and recommend to DOE any redesign or procurement actions necessary to ensure that the design and operation of the Licensing Support System meets the objectives of this subpart;

(4) Make a concurrence decision, within thirty days of a request from DOE, on any redesign and related procurement performed by DOE under paragraph (b)

of this section;

(5) Consult with DOE on the design and development of the Licensing Support System under paragraph (b) of this section;

(6) Evaluate and certify compliance with the requirements of this subpart under Sec. 2.1003(h);

(7) Ensure LSS availability and the integrity of the LSS data base;

(8) Receive and enter the documentary material specified in Sec. 2.1003 of this subpart into the Licensing Support System in the appropriate format;

(9) Maintain security for the Licensing Support System data base, including assigning user password security codes;

(10) Establish access protocols for raw data, field notes, and other items covered by Sec. 2.1003(c) of this subpart;

(11) Maintain the thesaurus and authority tables for the Licensing Support System;

(12) Establish and implement a training program for Licensing Support System users;

(13) Provide support staff to assist users of the Licensing Support System;

(14) Other duties as specified in this subpart or necessary for Licensing Support System operation and maintenance.

(e)(1) The LSS Administrator **shall** establish an LSS Advisory Review Panel composed of the LSS Advisory Committee members identified in paragraph

(e)(2)

of this section who wish to serve within sixty days after designation of the LSS Administrator pursuant to paragraph (a) of this section. The LSS Administrator **shall** have the authority to appoint additional representatives to the Advisory Review Panel consistent with the requirements of the Federal Advisory Committee Act, 5 U.S.C. App. I, giving particular consideration to potential parties, parties, and interested governmental participants who were not members of the NRC HLW Licensing Support System Advisory Committee.

(2) Pending the establishment of the LSS Advisory Review Panel under paragraph (e)(1) of this section, the NRC will establish a Licensing Support System Advisory Committee whose membership will initially include the State of Nevada, a coalition of affected units of local government in Nevada who were on the NRC High-Level Waste Licensing Support System Advisory Committee, DOE, NRC, the National Congress of American Indians, the coalition of national environmental groups who were on the NRC High-Level Waste Licensing Support System Advisory Committee and such other members as the Commission may from time to time designate to perform the responsibilities in paragraph (f) of this section.

(f)(1) The LSS Advisory Review Panel **shall** provide advice to--(i) DOE on the fundamental issues of the design and development of the computer system necessary to implement the Licensing Support System under paragraph (b) of this section; and

(ii) The LSS Administrator on the operation and maintenance of the

Licensing Support System under paragraph (d) of this section.

(2) The responsibilities of the LSS Advisory Review Panel **shall** include advice on--(i) Format standards for the submission of documentary material to the Licensing Support System by the parties, interested governmental participants, or potential parties, ~~such as text files, such as ASCII files,~~ bibliographic headers, and images;

(ii) The procedures and standards for the electronic transmission of filings, orders, and decisions during both the pre-license application phase and the high-level waste licensing proceeding;

(iii) Access protocols for raw data, field notes, and other items covered by Sec. 2.1003(c) of this subpart;

(iv) A thesaurus and authority tables;

(v) Reasonable requirements for headers, the control of duplication, retrieval, display, image delivery, query response, and "user friendly" design;

(vi) Other duties as specified in this subpart or as directed by the LSS Administrator.

[54 FR 14944, Apr. 14, 1989; 55 FR 51401, Dec. 14, 1990]

Sec. 2.1012 Compliance.

(a) In addition to the requirements of Sec. 2.101(f) of this part, the Director of the NPC Office of Nuclear Materials Safety and Safeguards may determine that the tendered application is not acceptable for docketing under this subpart, if the LSS Administrator has not issued the certification described in Sec. 2.1003(h)(1) of this part.

(b)(1) A person, including a potential party granted access to the Licensing Support System under Sec. 2.1008 of this subpart, **shall** not be granted party status under Sec. 2.1014 of this part, or status as an interested governmental participant under Sec. 2.715(c) of this part, if it cannot demonstrate substantial and timely compliance with ther requirements of Sec. 2.1003 of this subpart at the time it requests participation in the high-level waste licensing proceeding under either Sec. 2.1014 or Sec. 2.715(c) of this part.

(2) A person denied party status or interested governmental participant status under paragraph (b)(1) of this section may request party status or interested governmental participant status upon a showing of subsequent compliance with the requirements of Sec. 2.1003 of this subpart. Admission of such a party or interested governmental participant under Sec. 2.1014 of this subpart or Sec. 2.715(c) of this part, respectively, **shall** be conditioned on accepting the status of the proceeding at the time of admission.

(c) The Presiding Officer **shall** not make a finding of substantial and

timely compliance pursuant to paragraph (b) of this section for any person who is not in compliance with all applicable orders of the Pre-License Application Presiding Officer designated pursuant to Sec. 2.1010.

(d) Access to the Licensing Support System may be suspended or terminated by the Pre-License Application Presiding Officer or the Presiding Officer for any potential party, interested governmental participant or party who is in noncompliance with any applicable order of the Pre-License Application Presiding Officer or the Presiding Officer or the requirements of this subpart.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7796, Feb. 26, 1991]

Sec. 2.1013 Use of LSS during the adjudicatory proceeding.

(a)(1) Pursuant to Sec. 2.702, the Secretary of the NRC will maintain the official docket of the proceeding on the application for a license to receive and possess waste at a geologic repository operations area.

(2) Commencing with the docketing of the license application to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter, the LSS Administrator **shall** establish a file within the Licensing Support System to contain the official record materials of the high-level radioactive waste licensing proceeding in searchable full text, or for material that is not suitable for entry in searchable full text, by header and image, as appropriate.

(b) Absent good cause, all exhibits tendered during the hearing must have been entered into the Licensing Support System before the commencement of that portion of the hearing in which the exhibit will be offered. The official record file in the Licensing Support System will contain a list of all exhibits, showing where in the transcript each was marked for identification and where it was received into evidence or rejected. Transcripts will be entered into the Licensing Support System by the LSS Administrator on a daily basis in order to provide next-day availability at the hearing.

(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.

(2) Filings required to be served **shall** be served upon either the parties and interested governmental participants, or their designated

representatives. When a party or interested governmental participant has appeared by attorney, service must be made upon the attorney of record.

(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.

(4) 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--

- (i) Electronic acknowledgment ("delivery receipt"); or
- (ii) The affidavit of the person making the service; or
- (iii) The certificate of counsel.

~~(5) One signed paper copy of each filing shall be served promptly on the Secretary by regular mail pursuant to the requirements of Sec. 2.708 and 2.701 of this part.~~

(6) All Presiding Officer and Commission issuances and orders will be transmitted electronically to the parties, interested governmental participants, and the LSS Administration.

(d) Online access to the Licensing Support System, including a Protective Order File if authorized by a Presiding Officer, **shall** be provided to the Presiding Officer, the representatives of the parties and interested governmental participants, and the witnesses while testifying, for use during the hearing. Use of paper copy and other images will also be permitted at the hearing.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7796, Feb. 26, 1991]

Sec. 2.1014 Intervention.

(a)(1) Any person whose interest may be affected by a proceeding on the application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter and who desires to participate as a party **shall** file a written petition for leave to intervene. In a proceeding noticed pursuant to Sec. 2.105 of this part, any person whose interest may be affected may also request a hearing. The petition and/or request, and any request to participate under Sec. 2.715(c) of this part, **shall** be filed within thirty days after the publication of the notice of hearing in the Federal Register. Nontimely filings will not be entertained absent a determination by the Commission, or the Presiding Officer designated to rule on the petition and/or request, that the petition and/or request should be granted based upon a balancing of the following factors, in addition to satisfying those set out in paragraphs (a)(2) and (c) of this section:

- (i) Good cause, if any, for failure to file on time;
 - (ii) The availability of other means whereby the petitioner's interest will be protected;
 - (iii) The extent to which the petitioner's participation may reasonably be expected to assist in developing a sound record;
 - (iv) The extent to which the petitioner's interest will be represented by existing parties;
 - (v) The extent to which the petitioner's participation will broaden the issues or delay the proceeding.
- (2) The petition **shall** set forth with particularity--
- (i) The interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding, including the reasons why petitioner should be permitted to intervene, with particular reference to the factors in paragraph (c) of this section;
 - (ii) A list of the contentions that petitioner seeks to have litigated in the matter;
 - (iii) With respect to each contention:
 - (A) A specific statement of the issue of law or fact to be raised or controverted.
 - (B) A brief explanation of the basis of the contention.
 - (C) A concise statement of the alleged facts or expert opinion that support the contention and on which the petitioner intends to rely in proving the contention at the hearing, together with references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion.
 - (D) Sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. This showing must include reference to the specific documentary material that provides a basis for the contention, or if the petitioner believes that any documentary material fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief. In determining whether a genuine dispute exists on a material issue of law or fact, a dispositive factor **shall** be whether the contention, if proven, would be of no consequence in the proceeding because it would not entitle the petitioner to relief.
 - (E) The specific regulatory or statutory requirement to which the contention is relevant.
- (3) Any petitioner who fails to satisfy paragraphs (a)(2) (ii) and (iii) of this section with respect to at least one contention **shall** not be permitted to participate as a party.
- (4) Any party may amend its contentions specified in paragraph (a)(2)(ii) of this section. The Presiding Officer **shall** rule on any petition to amend such contentions based on the balancing of the factors specified in paragraph (a)(1) of this section, and a showing that a significant safety or

environmental issue is involved or that the amended contention raises a material issue related to the performance evaluation anticipated by Secs. 60.112 and 60.113 of this chapter.

(b) Any party or interested governmental participant may file an answer to a petition for leave to intervene or a petition to amend contentions within twenty days after service of the petition.

(c) Subject to paragraph (a)(3) of this section, the Commission, or the Presiding Officer designated to rule on petitions to intervene and/or requests for hearing **shall** permit intervention, in any hearing on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area, by an affected unit of local government as defined in section 2(31) of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10101. In all other circumstances, the Commission or Presiding Officer **shall**, in ruling on a petition for leave to intervene, consider the following factors, among other things:

(1) The nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding;

(2) The nature and extent of the petitioner's property, financial, or other interest in the proceeding;

(3) The possible effect of any order that may be entered in the proceeding on the petitioner's interest;

(4) The failure of the petitioner to participate as a potential party in the Licensing Support System.

(5) In determining whether a genuine dispute exists on a material issue of law or fact, whether the contention, if proven, would be of no consequence in the proceeding because it would not entitle petitioner to relief.

(d) An order permitting intervention and/or directing a hearing may be conditioned on such terms as the Commission, or the designated Presiding Officer may direct in the interests of:

(1) Restricting irrelevant, duplicative, or repetitive evidence and argument,

(2) Having common interests represented by a spokesman, and

(3) Retaining authority to determine priorities and control the compass of the hearing.

(e) In any case in which, after consideration of the factors set forth in paragraph (c) of this section, the Commission or the Presiding Officer finds that the petitioner's interest is limited to one or more of the issues involved in the proceeding, any order allowing intervention **shall** limit the petitioner's participation accordingly.

(f) A person permitted to intervene becomes a party to the proceeding, subject to any limitations imposed pursuant to paragraph (e) of this section.

(g) Unless otherwise expressly provided in the order allowing intervention, the granting of a petition for leave to intervene does not change or enlarge the issues specified in the notice of hearing.

(h) If the Commission or the Presiding Officer determines that any of the admitted contentions constitute pure issues of law, those contentions must be decided on the basis of briefs or oral argument according to a schedule determined by the Commission or the Presiding Officer.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7796, Feb. 26, 1991]

Sec. 2.1015 Appeals.

(a) No appeals from any Pre-License Application Presiding Officer or Presiding Officer order or decision issued under this subpart are permitted, except as prescribed in paragraphs (b), (c), and (d) of this section.

(b) A notice of appeal from (1) a Pre-License Application Presiding Officer order issued pursuant to Sec. 2.1010, (2) a Presiding Officer First or Second Prehearing Conference Order issued pursuant to Sec. 2.1021 or Sec. 2.1022, (3) a Presiding Officer order granting or denying a motion for summary disposition issued in accordance with Sec. 2.1025 of this part, or (4) a Presiding Officer order granting or denying a petition to amend one or more contentions pursuant to Sec. 2.1014(a)(4), must be filed with the Commission no later than (10) days after service of the order. A supporting brief must accompany the notice of appeal. Any other party, interested governmental participant, or potential party may file a brief in opposition to the appeal no later than ten days after service of the appeal.

(c) Appeals from a Presiding Officer initial decision or partial initial decision must be filed and briefed before the Commission in accordance with the requirements of Sec. 2.762 of this part.

(d) When, in the judgment of a Pre-License Application Presiding Officer or Presiding Officer, prompt appellate review of an order not immediately appealable under paragraph (b) of this section is necessary to prevent detriment to the public interest or unusual delay or expense, the Pre-License Application Presiding Officer or Presiding Officer may refer the ruling promptly to the Commission, and **shall** provide notice of this referral to the parties, interested governmental participants, or potential parties. The parties, interested governmental participants, or potential parties may also request that the Pre-License Application Presiding Officer or Presiding Officer certify, pursuant to Sec. 2.718(i) of this part, rulings not immediately appealable under paragraph (b) of this section.

(e) Unless otherwise ordered, the filing of an appeal, petition for review, referral, or request for certification of a ruling **shall** not stay the proceeding or extend the time for the performance of any act.

[56 FR 7797, Feb. 26, 1991]

Sec. 2.1016 Motions.

(a) All motions **shall** be addressed to the Commission or, when a proceeding is pending before a Presiding Officer, to the Presiding Officer. All motions, unless made orally on the record, **shall** be filed according to the provisions of Sec. 2.1013(c) of this subpart.

(b) A motion **shall** state with particularity the grounds and the relief sought, and **shall** be accompanied by any affidavits or other evidence relied on, and, as appropriate, a proposed form of order.

(c) Within ten days after service of a motion a party, potential party, or interested governmental participant may file an answer in support of or in opposition to the motion, accompanied by affidavits or other evidence. The moving party **shall** have no right to reply, except as permitted by the Presiding Officer or the Secretary or the Assistant Secretary.

(d) The Presiding Officer may dispose of motions either by order or by ruling orally during the course of a prehearing conference or hearing.

(e) Where the motion in question is a motion to compel discovery under Sec. 2.720(h)(2) of this part or Sec. 2.1018(f) of this subpart, parties, potential parties, and interested governmental participants may file answers to the motion pursuant to paragraph (c) of this section. The Presiding Officer in its discretion, may order that the answer be given orally during a telephone conference or other prehearing conference, rather than filed electronically. If responses are given over the telephone the Presiding Officer **shall** issue a written order on the motion which summarizes the views presented by the parties, potential parties, and interested governmental participants unless the conference has been transcribed. This does not preclude the Presiding Officer from issuing a prior oral ruling on the matter which is effective at the time of its issuance, provided that the terms of the ruling are incorporated in the subsequent written order.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1017 Computation of time.

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.

Sec. 2.1018 Discovery.

(a)(1) Parties, potential parties, and interested governmental participants in the high-level waste licensing proceeding may obtain discovery by one or more of the following methods: Access to the documentary material in the Licensing Support System submitted pursuant to Sec. 2.1003 of this subpart; entry upon land for inspection, access to raw data, or other purposes pursuant to Sec. 2.1020 of this subpart; access to, or the production of, copies of documentary material for which bibliographic headers only have been submitted pursuant to Sec. 2.1003 (c) and (d) of this subpart; depositions upon oral examination pursuant to Sec. 2.1019 of this subpart; requests for admission pursuant to Sec. 2.742 of this subpart; informal requests for information not available in the Licensing Support System, such as the names of witnesses and the subjects they plan to address; and interrogatories and depositions upon written questions, as provided in paragraph (a)(2) of this section.

(2) Interrogatories and depositions upon written questions may be authorized by order of the discovery master appointed under paragraph (g) of this section, or if no discovery master has been appointed, by order of the Presiding Officer, in the event that the parties are unable, after informal good faith efforts, to resolve a dispute in a timely fashion concerning the production of information.

(b)(1) Parties, potential parties, and interested governmental participants, pursuant to the methods set forth in paragraph (a) of this section, may obtain discovery regarding any matter, not privileged, which is relevant to the licensing of the likely candidate site for a geologic repository, whether it relates to the claim or defense of the person seeking discovery or to the claim or defense of any other person. Except for discovery pursuant to Secs. 2.1018(a)(2) and 2.1019 of this subpart, all other discovery **shall** begin during the pre-license application phase. Discovery pursuant to Secs. 2.1018(a)(2) and 2.1019 of this subpart **shall** begin after the issuance of the first pre-hearing conference order under Sec. 2.1021 of this subpart, and **shall** be limited to the issues defined in that order or subsequent amendments to the order. It is not ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(2) A party, potential party, or interested governmental participant may

obtain discovery of documentary material otherwise discoverable under paragraph (b)(1) of this section and prepared in anticipation of, or for the hearing by, or for another party's, potential party's, or interested governmental participant's representative (including its attorney, surety, indemnitor, insurer, or similar agent) only upon a showing that the party, potential party, or interested governmental participant seeking discovery has substantial need of the materials in the preparation of its case and that it is unable without undue hardship to obtain the substantial equivalent of the materials by other means. In ordering discovery of these materials when the required showing has been made, the Presiding Officer **shall** protect against disclosure of the mental impressions, conclusions, opinions, or legal theories of an attorney or other representative of a party, potential party, or interested governmental participant concerning the proceeding.

(c) Upon motion by a party, potential party, interested governmental participant, or the person from whom discovery is sought, and for good cause shown, the Presiding Officer may make any order that justice requires to protect a party, potential party, interested governmental participant, or other person from annoyance, embarrassment, oppression, or undue burden, delay, or expense, including one or more of the following: (1) That the discovery not be had; (2) that the discovery may be had only on specified terms and conditions, including a designation of the time or place; (3) that the discovery may be had only by a method of discovery other than that selected by the party, potential party, or interested governmental participant seeking discovery; (4) that certain matters not be inquired into, or that the scope of discovery be limited to certain matters; (5) that discovery be conducted with no one present except persons designated by the Presiding Officer; (6) that, subject to the provisions of Sec. 2.790 of this part, a trade secret or other confidential research, development, or commercial information not be disclosed or be disclosed only in a designated way; (7) that studies and evaluations not be prepared. If the motion for a protective order is denied in whole or in part, the Presiding Officer may, on such terms and conditions as are just, order that any party, potential party, interested governmental participant or other person provide or permit discovery.

(d) Except as provided in paragraph (b) of this section, and unless the Presiding Officer upon motion, for the convenience of parties, potential parties, interested governmental participants, and witnesses and in the interest of justice, orders otherwise, methods of discovery may be used in any sequence, and the fact that a party, potential party, or interested governmental participant is conducting discovery, whether by deposition or otherwise, **shall** not operate to delay any other party's, potential party's, or interested governmental participant's discovery.

(e) A party, potential party, or interested governmental participant who has included all documentary material relevant to any discovery request in

the Licensing Support System or who has responded to a request for discovery with a response that was complete when made is under no duty to supplement its response to include information thereafter acquired, except as follows:

(1) To the extent that written interrogatories are authorized pursuant to paragraph (a)(2) of this section, a party or interested governmental participant is under a duty to seasonably supplement its response to any question directly addressed to (i) the identity and location of persons having knowledge of discoverable matters, and (ii) the identity of each person expected to be called as an expert witness at the hearing, the subject matter on which the witness is expected to testify, and the substance of the witness's testimony.

(2) A party, potential party, or interested governmental participant is under a duty seasonably to amend a prior response if it obtains information upon the basis of which (i) it knows that the response was incorrect when made, or (ii) it knows that the response though correct when made is no longer true and the circumstances are such that a failure to amend the response is in substance a knowing concealment.

(3) A duty to supplement responses may be imposed by order of the Presiding Officer or agreement of the parties, potential parties, and interested governmental participants.

(f)(1) If a deponent of a party, potential party, or interested governmental participant upon whom a request for discovery is served fails to respond or objects to the request, or any part thereof, the party, potential party, or interested governmental participant submitting the request or taking the deposition may move the Presiding Officer, within five days after the date of the response or after failure to respond to the request, for an order compelling a response in accordance with the request. The motion **shall** set forth the nature of the questions or the request, the response or objection of the party, potential party, interested governmental participant, or other person upon whom the request was served, and arguments in support of the motion. For purposes of this paragraph, an evasive or incomplete answer or response **shall** be treated as a failure to answer or respond. Failure to answer or respond **shall** not be excused on the ground that the discovery sought is objectionable unless the person, party, potential party, or interested governmental participant failing to answer or respond has applied for a protective order pursuant to paragraph (c) of this section.

(2) In ruling on a motion made pursuant to this section, the Presiding Officer may make such a protective order as it is authorized to make on a motion made pursuant to paragraph (c) of this section.

(3) An independent request for issuance of a subpoena may be directed to a nonparty for production of documents. This section does not apply to requests for the testimony of the NRC regulatory staff pursuant to Sec. 2.720(h)(2)(i) of this part.

(g) The Presiding Officer pursuant to Sec. 2.722 of this part may appoint a discovery master to resolve disputes between parties concerning informal requests for information as provided in paragraphs (a)(1) and (a)(2) of this section.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1019 Depositions.

(a) Any party or interested governmental participant desiring to take the testimony of any person by deposition on oral examination **shall**, without leave of the Commission or the Presiding Officer, give reasonable notice in writing to every other party and interested governmental participant, to the person to be examined, and to the Presiding Officer of the proposed time and place of taking the deposition; the name and address of each person to be examined, if known, or if the name is not known, a general description sufficient to identify him or her or the class or group to which he or she belongs, the matters upon which each person will be examined and the name or descriptive title and address of the officer before whom the deposition is to be taken.

(b) Within the United States, a deposition may be taken before any officer authorized to administer oaths by the laws of the United States or of the place where the examination is held. Outside of the United States, a deposition may be taken before a secretary of an embassy or legation, a consul general, vice consul or consular agent of the United States, or a person authorized to administer oaths designated by the Commission. Depositions may be conducted by telephone or by video teleconference at the option of the party or interested governmental participant taking the deposition.

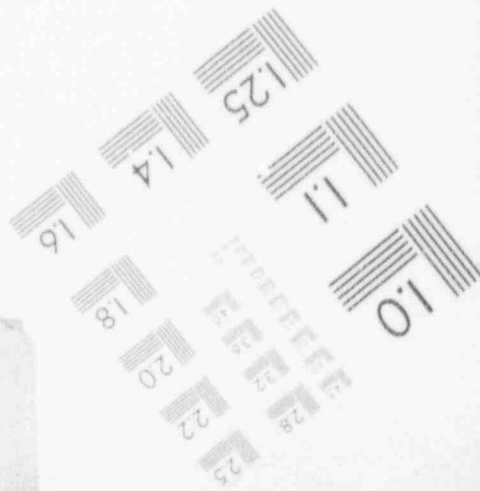
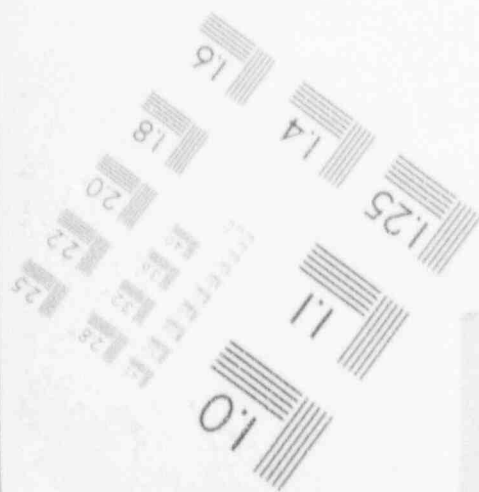
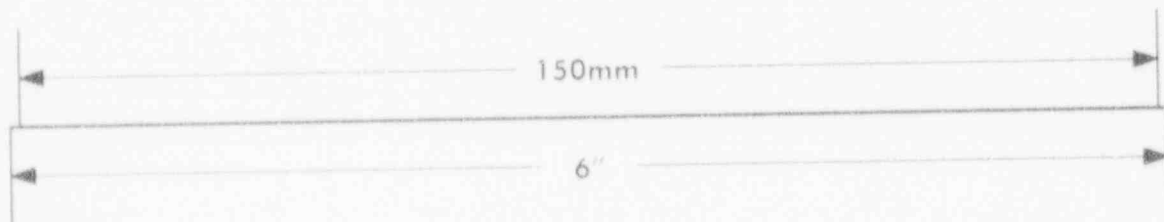
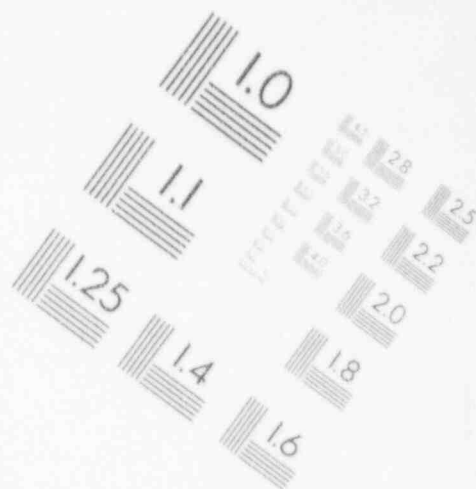
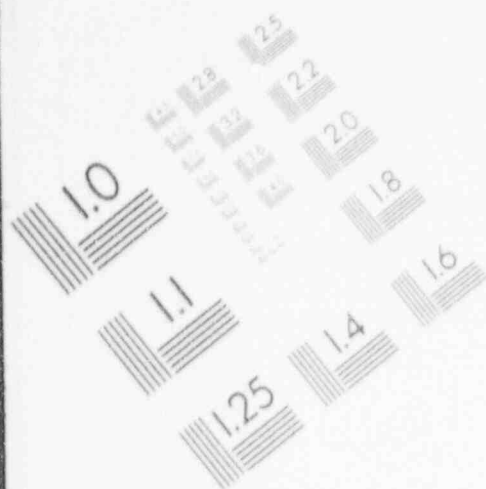
(c) The deponent **shall** be sworn or **shall** affirm before any questions are put to him or her. Examination and cross-examination **shall** proceed as at a hearing. Each question propounded **shall** be recorded and the answer taken down

in the words of the witness. Objections on questions of evidence **shall** be noted in short form without the arguments. The officer **shall** not decide on the competency, materiality, or relevancy of evidence but **shall** record the evidence subject to objection. Objections on questions of evidence not made before the officer **shall** not be deemed waived unless the ground of the objection is one which might have been obviated or removed if presented at that time.

(d) When the testimony is fully transcribed, the deposition **shall** be submitted to the deponent for examination and signature unless the deponent is ill or cannot be found or refuses to sign. The officer **shall** certify the

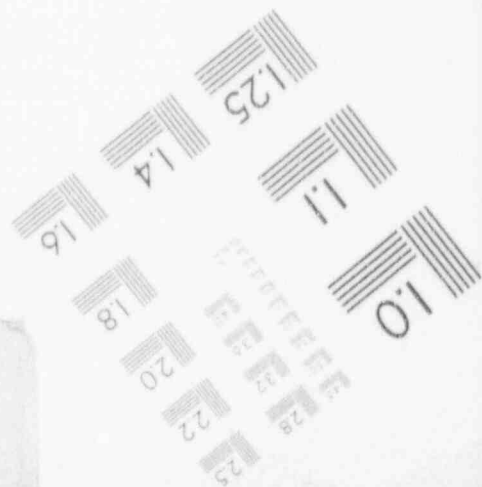
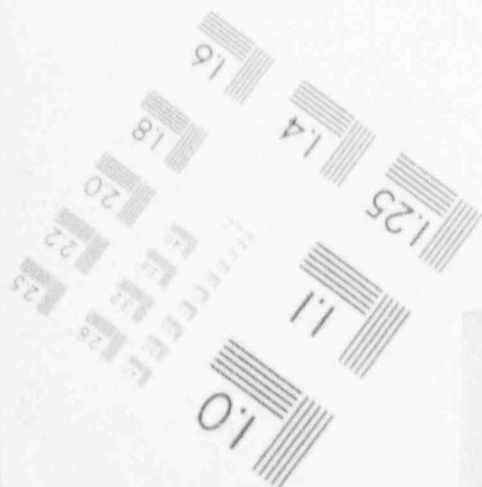
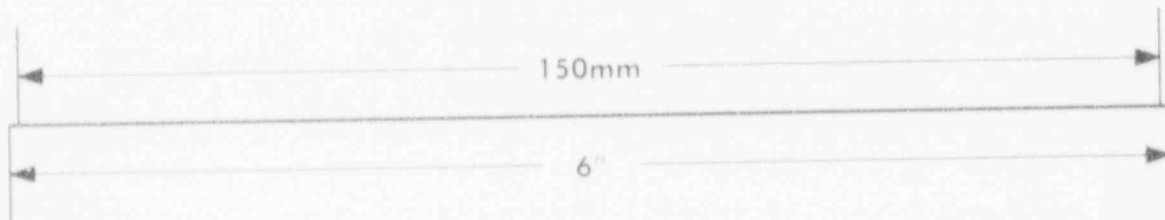
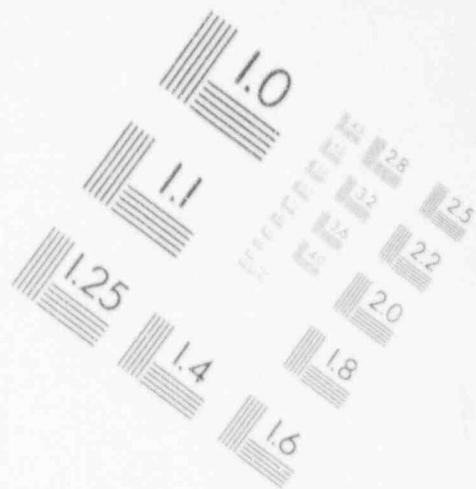
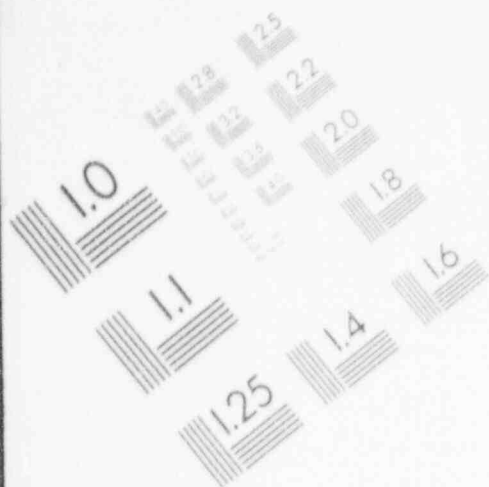
1

IMAGE EVALUATION
TEST TARGET (MT-3)



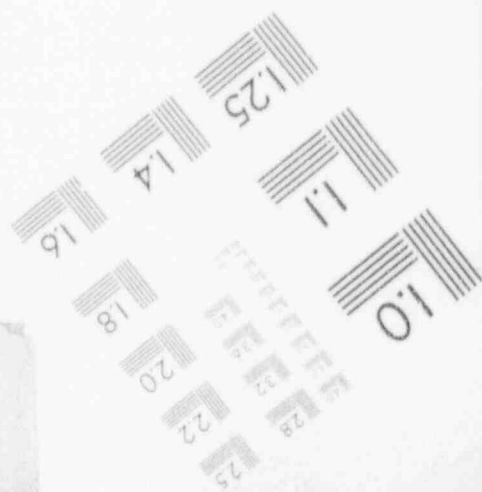
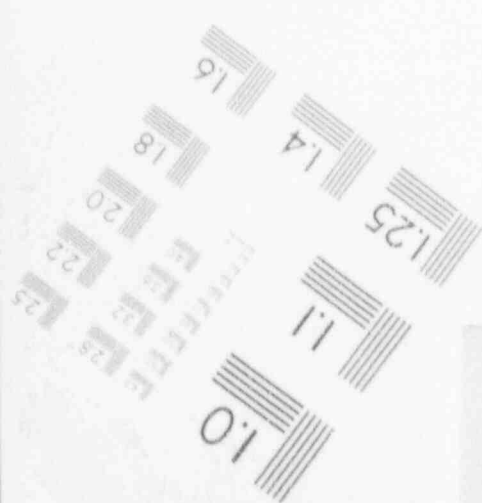
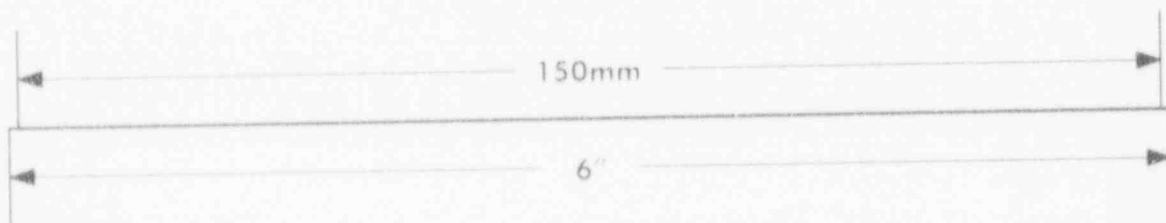
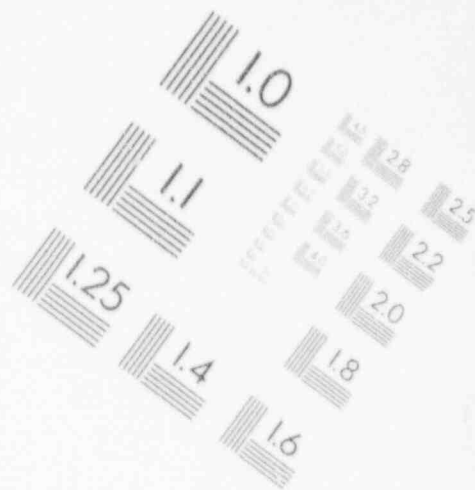
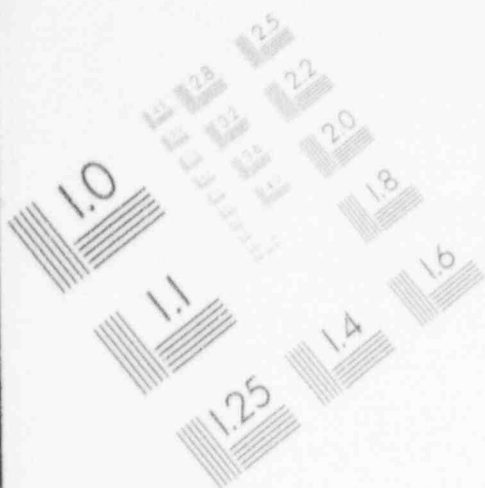
1

IMAGE EVALUATION
TEST TARGET (MT-3)



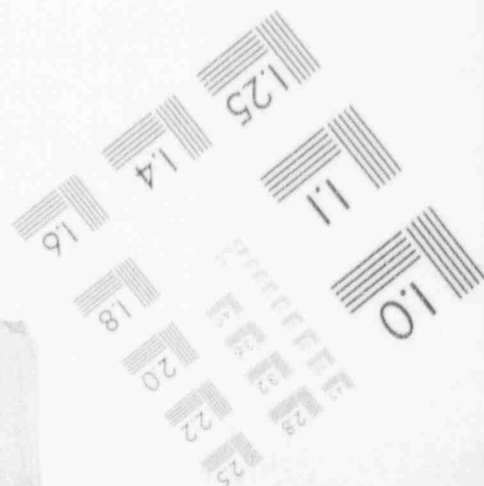
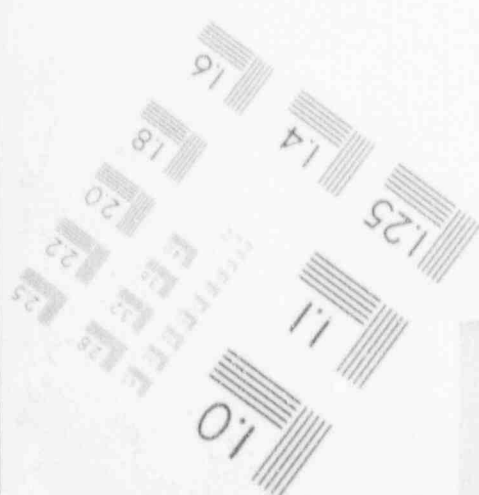
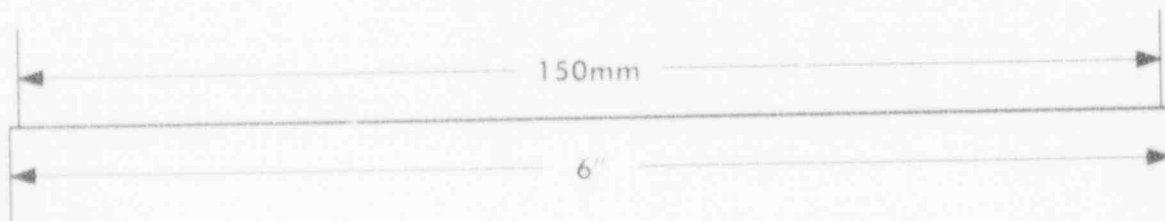
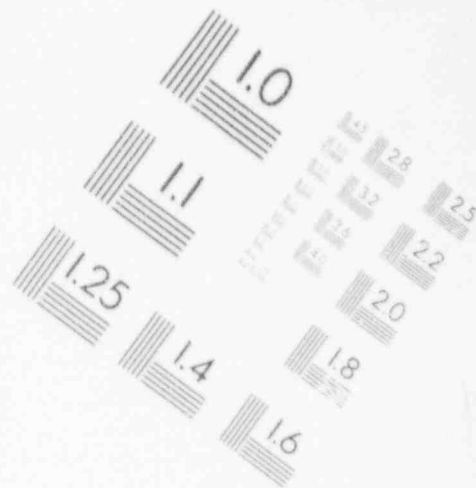
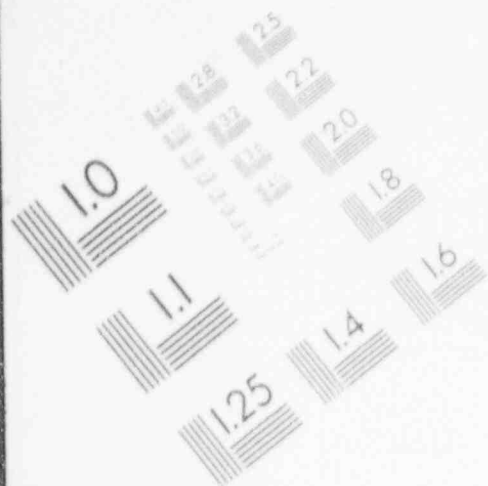
1

IMAGE EVALUATION
TEST TARGET (MT-3)



1

IMAGE EVALUATION
TEST TARGET (MT-3)



deposition or, if the deposition is not signed by the deponent, **shall** certify the reasons for the failure to sign, and **shall** promptly transmit the deposition to the LSS Administrator for submission into the Licensing Support System.

(e) Where the deposition is to be taken on written questions as authorized under Sec. 2.1018(a)(2) of this subpart, the party or interested governmental participant taking the deposition **shall** serve a copy of the questions, showing each question separately and consecutively numbered, on every other party and interested governmental participant with a notice stating the name and address of the person who is to answer them, and the name, description, title, and address of the officer before whom they are to be asked. Within ten days after service, any other party or interested governmental participant may serve cross-questions. The questions, cross-questions, and answers **shall** be recorded and signed, and the deposition certified, returned, and transmitted to the LSS Administrator as in the case of a deposition on oral examination.

(f) A deposition will not become a part of the evidentiary record in the hearing unless received in evidence. If only part of a deposition is offered in evidence by a party or interested governmental participant, any other party or interested governmental participant may introduce any other parts. A party or interested governmental participant **shall** not be deemed to make a person its own witness for any purpose by taking his or her deposition.

(g) A deponent whose deposition is taken and the officer taking a deposition **shall** be entitled to the same fees as are paid for like services in the district courts of the United States, to be paid by the party or interested governmental participant at whose instance the deposition is taken.

(h) The deponent may be accompanied, represented, and advised by legal counsel.

(i)(1) After receiving written notice of the deposition under paragraph (a) or paragraph (e) of this section, and ten days before the scheduled date of the deposition, the deponent **shall** submit an index of all documents in his or her possession, relevant to the subject matter of the deposition, including the categories of documents set forth in paragraph (i)(2) of this section, to all parties and interested governmental participants. The index **shall** identify those records which have already been entered into the Licensing Support System. All documents that are not identical to documents already in the Licensing Support System, whether by reason of subsequent modification or by the addition of notations, **shall** be treated as separate documents.

(2) The following material is excluded from initial entry into the Licensing Support System, but is subject to derivative discovery under paragraph (i)(1) of this section--

- (i) Personal records;
- (ii) Travel vouchers;

- (iii) Speeches;
- (iv) Preliminary drafts;
- (v) Marginalia.

(3) Subject to paragraph (i)(6) of this section, any party or interested governmental participant may request from the deponent ~~a paper copy~~ an image of any or all of the documents on the index that have not already been entered into the Licensing Support System.

(4) Subject to paragraph (i)(6) of this section, the deponent **shall** bring ~~a paper copy~~ an image of all documents on the index that the deposing party or interested governmental participant requests that have not already been entered into the Licensing Support System to an oral deposition conducted pursuant to paragraph (a) of this section, or in the case of a deposition taken on written questions pursuant to paragraph (e) of this section, **shall** submit such documents with the certified deposition.

(5) Subject to paragraph (i)(6) of this section, a party or interested governmental participant may request that any or all documents on the index that have not already been entered into the Licensing Support System, and on which it intends to rely at hearing, be entered into the LSS by the deponent.

(6) The deposing party or interested governmental participant **shall** assume the responsibility for the obligations set forth in paragraphs (i)(1), (i)(3), (i)(4), and (i)(5) of this section when deposing someone other than a party or interested governmental participant.

(j) In a proceeding in which the NRC is a party, the NRC staff will make available one or more witnesses designated by the Executive Director for Operations, for oral examination at the hearing or on deposition regarding any matter, not privileged, which is relevant to the issues in the proceeding. The attendance and testimony of the Commissioners and named NRC personnel at a hearing or on deposition may not be required by the Presiding Officer, by subpoena or otherwise: Provided, That the Presiding Officer may, upon a showing of exceptional circumstances, such as a case in which a particular named NRC employee has direct personal knowledge of a material fact not known to the witnesses made available by the Executive Director for Operations and the testimony sought is not reasonably obtainable from another source by any party, require the attendance and testimony of named NRC personnel.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1020 Entry upon land for inspection.

(a) Any party, potential party, or interested governmental participant may serve on any other party, potential party, or interested governmental participant a request to permit entry upon designated land or other property

in the possession or control of the party, potential party, or interested governmental participant upon whom the request is served for the purpose of access to raw data, inspection and measuring, surveying, photographing, testing, or sampling the property or any designated object or operation thereon, within the scope of Sec. 2.1018 of this subpart.

(b) The request may be served on any party, potential party, or interested governmental participant without leave of the Commission or the Presiding Officer.

(c) The request **shall** describe with reasonable particularity the land or other property to be inspected either by individual item or by category. The request **shall** specify a reasonable time, place, and manner of making the inspection and performing the related acts.

(d) The party, potential party, or interested governmental participant upon whom the request is served **shall** serve on the party, potential party, or interested governmental participant submitting the request a written response within ten days after the service of the request. The response **shall** state, with respect to each item or category, that inspection and related activities will be permitted as requested, unless the request is objected to, in which case the reasons for objection **shall** be stated. If objection is made to part of an item or category, the part **shall** be specified.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1021 First prehearing conference.

(a) In any proceeding involving an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter the Commission or the Presiding Officer will direct the parties, interested governmental participants and any petitioners for intervention, or their counsel, to appear at a specified time and place, within seventy days after the notice of hearing is published, or such other time as the Commission or the Presiding Officer may deem appropriate, for a conference to:

- (1) Permit identification of the key issues in the proceeding;
- (2) Take any steps necessary for further identification of the issues;
- (3) Consider all intervention petitions to allow the Presiding Officer to make such preliminary or final determination as to the parties and interested governmental participants, as may be appropriate;
- (4) Establish a schedule for further actions in the proceeding; and
- (5) Establish a discovery schedule for the proceeding taking into account the objective of meeting the three year time schedule specified in section 114(d) of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10134(d).

(b) The Presiding Officer may order any further formal and informal conferences among the parties and interested governmental participants including teleconferences, to the extent that it considers that such a conference would expedite the proceeding.

(c) A prehearing conference held pursuant to this section **shall** be stenographically reported.

(d) The Presiding Officer **shall** enter an order which recites the action taken at the conference, the schedule for further actions in the proceeding, and any agreements by the parties, and which identifies the key issues in the proceeding, makes a preliminary or final determination as to the parties and interested governmental participants in the proceeding, and provides for the submission of status reports on discovery.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1022 Second prehearing conference.

(a) The Commission or the Presiding Officer in a proceeding on an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area **shall** direct the parties, interested governmental participants, or their counsel to appear at a specified time and place not later than thirty days after the Safety Evaluation Report is issued by the NRC staff for a conference to consider:

(1) Any amended contentions submitted under Sec. 2.1014(a)(4) of this subpart;

(2) Simplification, clarification, and specification of the issues;

(3) The obtaining of stipulations and admissions of fact and of the contents and authenticity of documents to avoid unnecessary proof;

(4) Identification of witnesses and the limitation of the number of expert witnesses, and other steps to expedite the presentation of evidence;

(5) The setting of a hearing schedule;

(6) Establishing a discovery schedule for the proceeding taking into account the objective of meeting the three year time schedule specified in section 114(d) of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10134(d); and

(7) Such other matters as may aid in the orderly disposition of the proceeding.

(b) A prehearing conference held pursuant to this section **shall** be stenographically reported.

(c) The Presiding Officer **shall** enter an order which recites the action taken at the conference and the agreements by the parties, limits the issues or defines the matters in controversy to be determined in the proceeding, sets a discovery schedule, and sets the hearing schedule.

Sec. 2.1023 Immediate effectiveness.

(a) Pending review and final decision by the Commission, an initial decision resolving all issues before the Presiding Officer in favor of issuance or amendment of a construction authorization pursuant to Sec. 60.31 of this chapter or a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to Sec. 60.41 of this chapter, will be immediately effective upon issuance except--

(1) As provided in any order issued in accordance with Sec. 2.788 of this part that stays the effectiveness of an initial decision; or

(2) As otherwise provided by the Commission in special circumstances.

(b) The Director of Nuclear Material Safety and Safeguards, notwithstanding the filing or pendency of an appeal or a petition for review pursuant to Sec. 2.1015 of this subpart, promptly **shall** issue a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area, or amendments thereto, following an initial decision resolving all issues before the Presiding Officer in favor of the licensing action, upon making the appropriate licensing findings, except--

(1) As provided in paragraph (c) of this section; or

(2) As provided in any order issued in accordance with Sec. 2.788 of this part that stays the effectiveness of an initial decision; or

(3) As otherwise provided by the Commission in special circumstances.

(c)(1) Before the Director of Nuclear Material Safety and Safeguards may issue a construction authorization or a license to receive and possess waste at a geologic repository operations area in accordance with paragraph (b) of this section, the Commission, in the exercise of its supervisory authority over agency proceedings, **shall** undertake and complete a supervisory examination of those issues contested in the proceeding before the Presiding Officer to consider whether there is any significant basis for doubting that the facility will be constructed or operated with adequate protection of the public health and safety, and whether the Commission should take action to suspend or to otherwise condition the effectiveness of a Presiding Officer decision that resolves contested issues in a proceeding in favor of issuing a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area. This supervisory examination is not part of the adjudicatory proceeding. The Commission **shall** notify the Director in writing when its supervisory examination conducted in accordance with this paragraph has been completed.

(2) Before the Director of Nuclear Material Safety and Safeguards issues a

construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area, the Commission **shall** review those issues that have not been contested in the proceeding before the Presiding Officer but about which the Director must make appropriate findings prior to the issuance of such a license. The Director **shall** issue a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area only after written notification from the Commission of its completion of its review under this paragraph and of its determination that it is appropriate for the Director to issue such a construction authorization or license. This Commission review of uncontested issues is not part of the adjudicatory proceeding.

(3) No suspension of the effectiveness of a Presiding Officer's initial decision or postponement of the Director's issuance of a construction authorization or license that results from a Commission supervisory examination of contested issues under paragraph (c)(1) of this section or a review of uncontested issues under paragraph (c)(2) of this section will be entered except in writing with a statement of the reasons. Such suspension or postponement will be limited to such period as is necessary for the Commission to resolve the matters at issue. If the supervisory examination results in a suspension of the effectiveness of the Presiding Officer's initial decision under paragraph (c)(1) of this section, the Commission will take review of the decision sua sponte and further proceedings relative to the contested matters at issue will be in accordance with procedures for participation by the DOE, the NRC staff, or other parties and interested governmental participants to the Presiding Officer proceeding established by the Commission in its written statement of reasons. If a postponement results from a review under paragraph (c)(2) of this section, comments on the uncontested matters at issue may be filed by the DOE within ten days of service of the Commission's written statement.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991]

Sec. 2.1025 Authority of the Presiding Officer to dispose of certain issues on the pleadings.

(a) Any party may move, with or without supporting affidavits, for a decision by the Presiding Officer in that party's favor as to all or any part of the matters involved in the proceeding. The moving party **shall** annex to the motion a separate, short, and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard. Motions may be filed at any time. Any other party may file an answer supporting or opposing the motion, with or without affidavits, within twenty

(20) days after service of the motion. The party **shall** annex to any answer opposing the motion a separate, short, and concise, statement of the material facts as to which it is contended there exists a genuine issue to be heard. All material facts set forth in the statement to be filed by the moving party will be deemed to be admitted unless controverted by the statement required to be filed by the opposing party. The opposing party may, within ten (10) days after service, respond in writing to new facts and arguments presented in any statement filed in support of the motion. No further supporting statements or responses thereto may be entertained. The Presiding Officer may dismiss summarily or hold in abeyance motions filed shortly before the hearing commences or during the hearing if the other parties or the Presiding Officer would be required to divert substantial resources from the hearing in order to respond adequately to the motion.

(b) Affidavits must set forth those facts that would be admissible in evidence and show affirmatively that the affiant is competent to testify to the matters stated therein. The Presiding Officer may permit affidavits to be supplemented or opposed by further affidavits. When a motion for summary disposition is made and supported as provided in this section, a party opposing the motion may not rest upon the mere allegations or denials of its answer; its answer by affidavits or as otherwise provided in this section must set forth specific facts showing that there is a genuine issue of fact. If no such answer is filed, the decision sought, if appropriate, must be rendered.

(c) The Presiding Officer **shall** render the decision sought if the filings in the proceeding show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. However, in any proceeding involving a construction authorization for a geologic repository operations area, the procedure described in this section may be used only for the determination of specific subordinate issues and may not be used to determine the ultimate issue as to whether the authorization must be issued.

[56 FR 7798, Feb. 26, 1991]

Sec. 2.1026 Schedule.

(a) Subject to paragraphs (b) and (c) of this section, the Presiding Officer **shall** adhere to the schedule set forth in appendix D of this part.

(b)(1) Pursuant to Sec. 2.711, the Presiding Officer may approve extensions of no more than 15 days beyond any required time set forth in this subpart for a filing by a party to the proceeding. Except in the case of exceptional and unforeseen circumstances, requests for extensions of more than 15 days must be filed no later than 5 days in advance of the required time set forth

in this subpart for a filing by a party to the proceeding.

(2) Extensions beyond 15 days must be referred to the Commission. If the Commission does not disapprove the extension within 10 days of receiving the request, the extension will be effective. If the Commission disapproves the extension, the date which was the subject of the extension request will be set for 5 days after the Commission's disapproval action.

(c)(1) The Presiding Officer may delay the issuance of an order up to thirty days beyond the time set forth for the issuance in appendix D.

(2) If the Presiding Officer anticipates that the issuance of an order will not occur until after the thirty day extension specified in paragraph (c)(1) of this section, the Presiding Officer **shall** notify the Commission at least ten days in advance of the scheduled date for the milestone and provide a justification for the delay.

[56 FR 7798, Feb. 26, 1991]

Sec. 2.1027 Sua Sponte.

In any initial decision in a proceeding on an application to receive and possess waste at a geologic repository operations area, the Presiding Officer, other than the Commission, **shall** make findings of fact and conclusions of law on, and otherwise give consideration to, only those matters put into controversy by the parties and determined to be litigable issues in the proceeding.

[56 FR 7798, Feb. 26, 1991]

Proposed Detailed LSS Field List

Draft - As of 10/5/93

Abstract

Occurrences: Single

Validation: No

Format: No

Authority List: No

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

Access Control Code

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: An indicator specifying the access level of a document or unit. This field is used to indicate whether access to a document is restricted as privileged or company proprietary.

Author Name

Occurrences: Multiple

Validation: No

Format: Yes

Authority List: No

Description: The name of each person listed on the document as responsible for all or part of its creation. Only personal authors are entered in this field. Corporations as authors are captured in the Author Organization field.

This field is part of a logical group which includes:

- Author Name
- Author Organization

Entries in the Author field are linked to the corresponding entry in the Author Organization field.

Author Organization

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: The name of the organization (i.e., company, corporation or group) with which each author was affiliated at the time the document was created, or the name of the organization

responsible for creating or originating the document when there is no personal author. If an author works for one organization and is representing another, then both affiliations should be captured, e.g., an attorney using a law firm's letterhead but representing a client organization.

This field is part of a logical group which includes:

- Author Name
- Author organization

This field is linked to the Author Name field in order to provide the connection between an author and his affiliation. Thus a searcher seeking a document authored by J. A. Brown of Sandia will not retrieve a document authored by J. A. Brown of DOE and C. R. Smith of Sandia.

Comments

Occurrences: Single
Format: No
Validation: No
Authority List: No

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

Concurrence/Approval Info

Occurrences: Multiple
Validation: No
Format: TBD
Authority List: TBD

Description: This is a logical group of concurrence/approval information concerning all persons listed on the concurrence/approval form for the document. This information is needed for all electronic documents which are routed electronically for concurrence/approval. The fields within the logical group may include: Concurrence/Approval Flag, Concurrence/Approval Name, Concur/Approval Organization, Concurrence/Approval Date, Silence is Consent Flag, and Electronic Signature.

For hardcopy documents, this field contains the names of all persons on the concurrence/approval list.

Contract Number

Occurrences: Multiple
Validation: No
Format: No
Authority List: No

Description: The number of the contract, memorandum of understanding, inter-agency agreement, or similar document under which the work presented in the document or unit was performed. (This field replaces Sponsoring Organization)

Copyright

Occurrences: Single
Validation: Authority List
Format: No
Authority List: Yes

Description: An indication of the copyright status of a document. Entries will be made in this field if a document is copyrighted; this usually applies to documents that are commercially published. Copyrighted materials require permission from and possible payment of royalties to the author or publisher in order to store, reproduce, and distribute copies.

NOTE: Some copyright notices restrict the entry of copyrighted material into electronic format. This issue will need to be addressed prior to capturing images and searchable text of copyrighted documents.

Descriptors

Occurrences: Multiple
Validation: Authority List
Format: No
Authority List: Yes

Description: Words or phrases from the thesaurus representing the subject content of the document or unit. The descriptor may or may not be a word or phrase contained in the text of the document. The use of the descriptor obviates the need for synonyms in a search statement.

Document Category

Occurrences: Single
Validation: Authority List
Format: No
Authority List: Yes

Description: Indicates the specific stage of a document under development, i.e., Draft or Final.

Document Condition

Occurrences: Multiple
Validation: Authority List
Format: No
Authority List: Yes

Description: The physical condition of the document at the time of entry into the system which would preclude the ability of the capture station to accurately or completely capture all information. This includes information such as pages missing, portions illegible, and marginalia.

Document Date

Occurrences: Single
Validation: Yes
Format: Yes
Authority List: No

Description: The date on which the document was published or created. If the date is unknown, information in the document will be used to determine a likely date. In this case, the Estimated Date Flag is set.

This field is part of a logical group which includes:

- Document Date
- Estimated Date Flag.

Document Number

Occurrences: Multiple
Validation: No
Format: No
Authority List: No

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

Document Type

Occurrences: Multiple
Validation: Authority List
Format: No
Authority List: Yes

Description: The format or physical form of the document. Examples include a book, notebook and plan.

Electronic Document Route/Tracking Info

Occurrences: Multiple
Validation: TBD
Format: TBD
Authority List: TBD

Description: Detailed information concerning the routing and tracking of the electronic document. The fields within this logical group may include: Date Sent, Instructions, Type of Route.

Estimated Date Flag

Occurrences: Single
Validation: Authority List
Format: Yes
Authority List: Yes

Description: An indicator that the document date has been estimated from information contained in the document or in the accompanying documents. The Document Date field will contain the date that corresponds to the date on the record. If there is no date, other means of inferring the

date will be used. In these cases, the Estimated Date Flag will be set to inform the user that the date has been estimated.

This field is part of a logical group which includes:

- Document Date
- Estimated Date Flag.

Event Date

Occurrences: Multiple

Validation: Yes

Format: Yes

Authority List: No

Description: This field is used to capture the date of 1) The effective date of an order, procedure, or any other implementation date of the document; or, 2) the date(s) of a particular happening (such as an inspection, audit, meeting or hearing) that is the main topic(s) of the content of the document. The field will assist in assembling all documents about a particular event or all documents that must be implemented on or between specific dates. Examples of events include audits and inspections. Examples of implementation events include the effective date of an order or a regulation.

This field is part of a logical group which includes:

- Event Date
- Event Date Code

Event Date Code

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: A code that identifies the type of event occurring on the Event Date. Entries will be made in this field only when there is an entry in the Event Date field.

This field is part of a logical group which includes:

- Event Date
- Event Date Code

Each entry in the Event Date Code field will be linked to the appropriate entry in the Event Date field.

Identifiers

Occurrences: Multiple

Validation: No

Format: No

Authority List: No

Description: Words or phrases which are not contained in the LSS/OCRWM Thesaurus but the

submitter or cataloger believes represents the subject content of the unit and will assist the user in retrieving the unit. These may be "buzz words" or words representing new concepts which have not yet been incorporated into the LSS/OCRWM Thesaurus.

Image File Reference Info

Occurrences: TBD

Validation: No

Format: TBD

Authority List: No

Description: This is the identifier/pointer to locate the associated image file. This logical group may include: Image Count, File Pointers as required.

LSS Accession Number

Occurrences: Single

Format: TBD

Validation: Yes

Authority List: No

Description: A unique identifier assigned to each LSS unit entering the system.

Package ID

Occurrences: Multiple

Validation: Yes

Format: No

Authority List: None

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

This field is part of a logical group which includes:

- Package ID
- Package ID Code

Package ID Code

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: A code that identifies the type of package which has been assigned a Package ID. Entries will be made in this field only when there is an entry in the Package ID field.

This field is part of a logical group which includes:

- Package ID
- Package ID Code

Each entry in this field will be linked to the appropriate entry in the Package ID field.

Page Count

Occurrences: Single

Validation: Yes

Format: No

Authority List: No

Description: The total number of pages contained in the document. The contents of this field must correspond to the number of actual pages submitted. If the document is on media other than paper, this field may contain a zero.

Participant Accession Number

Occurrences: Multiple

Validation: Yes

Format: No

Authority List: No

Description: A unique identification number required by 10CFR 2/J to be assigned by the participant to each unit submitted for entry into the LSS. This number assists the submitters in locating documents they have submitted and assists the capture operation in verifying the identity of the documents received and matching it with the image and text. This field should contain a specific alpha code identifying the participant organization, e.g., DOE, NRC, NEV, and any other alphanumeric scheme which the submitting organization might use to control their own units. It may be the accession number used in their own records system.

This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center

Physical Unit Location Reference Info

Occurrences: TBD

Validation: TBD

Format: TBD

Authority List: TBD

Description: The location information of a physical unit which indicates where the physical unit can be found.

Publication Info

Occurrences: Single

Validation: TBD

Format: TBD

Authority List: TBD

Description: The publication information is a logical group of bibliographic information that is not covered in other fields, but is important in identifying or citing the document. This group in combination with author and title fields provides the user with a standard consistent bibliographic citation for use in creating bibliographies and references for reports.

This logical group may include the following fields:

- Publication Source Title
- Source Editor
- Publisher
- Place
- Page Range

QA Record

Occurrences: Single
Validation: Authority List
Format: No
Authority List: Yes

Description: An indicator of whether the document or unit is a quality assurance record. Quality assurance documents are those whose contents have been determined by the Quality Assurance Office to furnish evidence of the quality and completeness of data and activities related to the safety of the repository program.

Receiver Name

Occurrences: Multiple
Validation: No
Format: Yes
Authority List: No

Description: The name(s) of all person(s) to whom correspondence is addressed.

This field is part of a logical group which includes:

- Receiver Name
- Receiver Organization

Entries in this field is linked with the corresponding entry in the Receiver Organization field.

Receiver Organization

Occurrences: Multiple
Validation: Authority List
Format: No
Authority List: Yes

Description: The affiliation(s) of each recipient of correspondence or the organization to whom the correspondence is addressed.

This field is part of a logical group which includes:

- Receiver Name
- Receiver Organization

This field is linked to the receiver name field in order to provide a connection between a recipient and his affiliation. Thus a searcher seeking a document received by J. A. Brown of Sandia will not retrieve a document received by J. A. Brown of DOE and C. R. Smith of

Sandia. Given the large and increasing volume of documents, this feature will increase precision in search and retrieval by decreasing the number of false hits, as well as decreasing the number of potential duplicates.

Related Accession Code

Occurrences: Multiple
Validation: Authority List
Format: No
Authority List: Yes

Description: The code that represents the type of relationship between the document being entered and the record to which it is related. Each code in the authority list will have a reciprocal code; for example, the reciprocal of a document (A) that is attached to another document (B) is document (B) has attachments (A).

This field is part of a logical group which includes:

- Related Accession Number
- Related Accession Code

Related Accession Number

Occurrences: Multiple
Validation: Authority List
Format: Yes
Authority List: Yes

Description: The Accession Number of a record that has a particular relationship to the document or unit being entered. There are several types of relationships, such as: parent/child (a document and its attachments); original/subsequent (a document and a later versions, comments, corrections, or errata); and whole/part (a book and its chapters, a journal and its articles), an information package and the cataloging units it contains. The type of relationship is captured in the Related Accession Code field.

This field is part of a logical group which includes:

- Related Accession Number
- Related Accession Code

Searchable Text Reference Info

Occurrences: TBD
Validation: TBD
Format: TBD
Authority List: TBD

Description: Unique Identifier for Text file. This is the identifier to locate the searchable text file.

Special Class

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: A special group or category to which a document or unit may belong.

Entries in this field identify special categories of documents in order to retrieve them as a group, such as Site Characterization Plan Reference. The field is also used to indicate that a record does not contain text or does not have an image.

Submitter Center

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: A coded field for the name and location of the participant or its subdivision submitting material for inclusion into the LSS. This field provides a contact point for material that is rejected by the LSS Administrator. It provides a contact point for notification that the header, image, and searchable text have been loaded into the LSS and are ready for review and verification by the first submitting agency.

This field is part of a logical group which includes:

- Participant Accession Number
- Submitter Center

Title/Description

Occurrences: Single

Validation: No

Format: No

Authority List: No

Description: An identifying sentence or phrase given to the document that appears on the document.

Traceability Code

Occurrences: Multiple

Validation: Authority List

Format: No

Authority List: Yes

Description: A code that indicates the type of traceability number

This field is part of a logical group which includes:

- Traceability Number
- Traceability Code

Entries in this field will be linked to corresponding entries in the Traceability Number field.

Traceability Number

Occurrences: Multiple
Validation: Yes
Format: No
Authority List: No

Description: An identifier that has been assigned to a document in order to link it to a specific activity or to a specific record in another database. These identifiers will enable searchers to easily retrieve all records associated with any given site activity by providing a special linkage not available through other fields. They will also point to related records contained in other databases such as the technical data database. Examples of traceability numbers include WBS number, linkages to technical databases, and configuration management identifiers.

This field is part of a logical group which includes:

- Traceability Number
- Traceability Code

Entries in this field will be linked to corresponding entries in the Traceability Code field.

Version

Occurrences: Multiple
Validation: No
Format: No
Authority List: TBD

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

Proposed LSS Field Definition Summary Table

Draft - As of 10/5/93

Legend:

- o Y = Yes, N = No, NA = Not Applicable, TBD = To Be Determined
- o Original LSS Field Name / or New Candidate Field: * = A field which is being proposed by OCRWM as a candidate LSS field.
- o LSS / InfoSTREAMS Field Name = Name common to both LSS and InfoSTREAMS field
- o Data Submitted by Participant = This field will be submitted by the participant (Mandatory = must be provided for each unit; Required = must be provided if applicable; Optional = provided at discretion of participant; N = No)
- o Provided by LSS = This field will be provided by LSS. (Mandatory = must be provided for each unit; Required = must be provided if applicable; Optional = provided at discretion of participant; N = No)
- o Multi-valued = Multiple entries allowed in a field.
- o Controlled Authority List = List of accepted entries to be used by all participants, such as document types or specific forms of an organization name.
- o Format Control = Whether a data entry must follow specific index/cataloging guidelines or a set format for items such as dates and names.
- o Free Text Searchable = The ability to perform phrase or single-word searches of the field entries.

For Field Definitions = See attached Detailed LSS Field List

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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	Format Control	Free Text Search
LSS Accession Number	LSS Accession Number	N	Mandatory	N	N	Y	NA
Participant Accession Number	Participant Accession Number	Mandatory	N	Y	N	Y	NA
Submitter Center	Submitter Center	Mandatory	N	Y	Y	TBD	NA
Submitter Page Count	Page Count	Mandatory	N	N	N	N	NA
Title/Description	Title/Description - Created Title	Mandatory	N	N	N	N	Y
Author	Author Name	Required	N	Y	N	Y	N
Author Organization	Author Organization	Required	N	Y	Y	N	Y
Addressee	Receiver Name	Required	N	Y	N	Y	N
Addressee Organization	Receiver Organization	Required	N	Y	Y	N	Y
Document Date	Document Date	Mandatory	N	N	N	Y	NA
*	Estimated Date Flag	Required	N	N	Y	NA	NA

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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	Format Control	Free Text Search
Document/Report Number	Document Number	Required	N	Y	N	Y	NA
Document Condition	Document Condition	Required	N	Y	Y	NA	NA
Edition/Version	Version	Required	N	Y	TBD	Y	Y
Event Date	Event Date	Required	N	Y	N	Y	NA
Event Date Code	Event Date Code	Required	N	Y	Y	NA	NA
Protected Status	Access Control Code	Mandatory	N	Y	Y	NA	NA
Related Documents *	Related Accession Number	Required	Yes	Y	Y	Y	NA
	Related Accession Code	Required	Yes	Y	Y	NA	NA
Special Class	Special Class	Required	N	Y	Y	NA	Y
Abstract	Abstract	Required	Optional	N	N	N	Y
Package ID *	Package ID	Required	Yes	Y	N	Y	NA
	Package ID Code	Required	Yes	Y	Y	NA	NA
Copyright	Copyright	Required	N	N	Y	Y	NA

Proposed LSS Field Definition Summary Table

Original LSS Field Name / 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	Format Control	Free Text Search
Document Type	Document Type	Mandatory	N	Y	Y	NA	Y
Publication Data	Publication Info:	Optional	Required	N	-	-	-
	- Source Title			N	Y	NA	Y
	- Source Editor			Y	N	N	N
	- Publisher			N	Y	NA	N
	- Place			N	N	Y	N
	- Page Range			N	N	N	N
Descriptors	Descriptors	Mandatory	Required	Y	Y	NA	Y
Identifiers	Identifiers	Optional	Optional	Y	N	N	Y
Comments	Comments	Optional	Optional	N	N	N	Y
Sponsoring Organization	Contract Number	Required	N	Y	N	N	N
*	QA Record	Mandatory	N	N	Y	NA	NA
*	Document Category	Required	N	N	Y	NA	NA
*	Traceability Number	Required	Required	Y	N	Y	N
*	Traceability Code	Required	Required	Y	Y	NA	NA

Proposed LSS Field Definition Summary Table								
Original LSS Field Name / 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	Format Control	Free Text Search	
* Number of Images	Image Reference Info - Image Count - File Pointers	Required	Required	TBD	-	-		
*	SearchableText Reference Info	Required	Required	TBD	-	-	-	
*	Physical Unit Location Reference Info	Required	Required	TBD	-	-	-	
*	Concurrence/Approval Info	Required	N	Y	-	-	-	
*	Electronic Document Route/Tracking Info	Required	N	N	-	-	-	

DISTRIBUTION:

NRC PDR

JHoyle

MRood

LSS Reading

Central File

MAY 17 1990

Mr. William Hooten
National Archives and Records Administration
Archives Research and Evaluation Staff
7th and Pennsylvania Avenue, N.W.
Washington, D. C. 20408

Dear Mr. Hooten:

The next meeting of the Licensing Support System Advisory Review Panel (LSSARP) will be held on June 7, 1990. Enclosed for your information is a copy of the meeting agenda.

The meeting will convene at 9:00 a.m. in the Fifth Floor Hearing Room, East West/West Towers Building, 4350 East West Highway, Bethesda, Maryland.

During this meeting we will be voting on the recommendations made by the working group on document headers. About a week before the meeting, I will be sending you a copy of the group's recommendations so that you will be prepared to discuss and vote on their suggestions.

Also enclosed is a copy of a letter from Daniel Graser of the Department of Energy which forwarded to me a copy of an April 6, 1990, draft of the LSS Thesaurus. If you would like a copy of the Thesaurus for your review, contact Mr. Graser directly and he will send it to you.

If you have any questions concerning this meeting, please contact Marilee Rood, Office of the LSS Administrator, at 301-492-4003.

Sincerely,

151

John C. Hoyle, Chairman
LSS Advisory Review Panel

Enclosures:

1. Agenda
2. D. Graser letter, undated

IDENTICAL LETTERS SENT TO THOSE ON
ATTACHED LIST

OLSSA
MRood
5/15/90

SECRET
JHoyle
5/16/90

4005290033

ENCLOSURE 8

Attendance List

LSS Advisory Review Panel Meeting, June 7, 1990

Panel Members

Nuclear Regulatory Commission

John C. Hoyle, Panel Chairman

U.S. Department of Energy

Barbara Cerny

Dan Graser

State Of Nevada

Kirk Balcom (via telephone)

Local Government - Site

Elgie Holstein

Local Government - Adjacent

Dennis Bechtel

Liza Vibert

Nuclear Industry

Felix Killar

U.S. National Archives and Records Administration (Non-Voting Member)

Bill Hooton

Others

Lloyd Donnelly, NRC/LSSA
Chip Cameron, NRC/LSSA
Betsy Shelburne, NRC/LSSA
Lynn Scattolini, NRC/LSSA
Marilee Rood, NRC/LSSA
Phillip Altomare, NRC/NMSS
John Frye, NRC/ASLBP
Chris Kohl, NRC/ASLAP
Janet Lambert, NRC/RES
Steve Scott, NRC/IRM
Eileen Tana, NRC/NMSS
Stuart Treby, NRC/OGC

Others (continued)

Rosetta Virgilio, NRC/GPA/SF
Kathryn Winsberg, NRC/OGC
Victoria Reich, NWTRB
W. Richard Pierce, SAIC
Dona Mennella, SAIC
Stephen Spector, CNWRA
Bill Wells, UNLV
Kit Krickenberger, MITRE



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

September 28, 1993

NOTE FOR: Members of the LSS Advisory Review Panel

FROM: Gerald F. Cranford,
Acting Licensing Support System Administrator

SUBJECT: Proposed LSSA Compliance Assessment Program

The changes to the Licensing Support System Program outlined in the NRC Commission Paper SECY-93-107, recently sent to you by John Hoyle, will alter the role of the LSS Administrator (LSSA). Alterations include an expansion of the LSSA's program for ensuring all participants' compliance with the LSS rule. The program is known as the Compliance Assessment Program (CAP).

In preparation for our upcoming meeting, I am forwarding the enclosed overview of the proposed CAP. I will brief you on the scope of this program next week.

I look forward to meeting with you in Las Vegas.

A handwritten signature in dark ink, appearing to read "Gerald F. Cranford", is written over a faint, larger version of the same signature.

Gerald F. Cranford
Acting Licensing Support System Administrator

Enclosure: As Stated

9408300174 6511

Proposed LSSA Compliance Assessment Program (CAP)

for review by

Licensing Support System Advisory Review Panel

September 29, 1993

Prepared for the LSSA
by
LAPAT-ANDERSON Incorporated
with
Price Waterhouse

Proposed LSSA Compliance Assessment Program (CAP)

Table of Contents

1.0	Introduction	1
2.0	The Proposed CAP	1
2.1	The Participant Compliance Program Plan	2
2.2	The LSSA Audit Program	4
2.3	QA Facility Operations	5
2.4	Specific Areas of DOE Responsibility Requiring LSSA	
	2.4.1 LSS System Design and Development	5
	2.4.2 LSS Operation	7
	2.4.3 LSS Maintenance	8
	2.4.4 Submitter Assistance	8
	2.4.5 Database Searcher Training and Assistance	9
3.0	LSSA Certification of Participant Compliance	10

Proposed LSSA Compliance Assessment Program (CAP)

1.0 Introduction

Under the Licensing Support System (LSS) Rule (10 CFR Part 2, Subpart J), the LSS Administrator (LSSA) is currently responsible for consulting with the Department of Energy (DOE) on DOE's design and development of the LSS, and for the operation and maintenance of the LSS. An important element in managing this process is the development and implementation of the LSSA Compliance Assessment Program (CAP). The LSSA has the responsibility to evaluate and report on (thereby certifying) the status of LSS participant compliance with the obligations placed on them by the LSS Rule. The CAP will outline the requirements to which LSS participants must adhere in order to have their documentary material accepted for entry into the system and, through the system, have access to other participants' documentary materials. The LSSA will propose standards (subject to LSSARP review) for participant identification, preparation, and submission of documentary materials, and will develop a methodology for assessing participant compliance with those standards.

After studying the compliance evaluation requirements related to the LSS program, the LSSA developed a CAP approach based on the current LSS Rule. In a recent paper to the Commission (SECY-93-107 dated April 26, 1993), the NRC staff described options for alternative divisions of responsibility between DOE and NRC for development and operation of the LSS. In response to SECY-93-107, citing program efficiencies and significant cost savings, the Commission approved a new approach to the development and operation of the LSS. This approach would involve DOE assuming both the program and budget responsibilities for the design, development, and operation and maintenance of the LSS as an information storage and dissemination capability within DOE's InfoSTREAMS system. InfoSTREAMS consists of a number of activities and systems for upgrading and integrating DOE's Office of Civilian Radioactive Waste Management (OCRWM) office automation and records management functions. DOE would have responsibility for system requirements definition, while the LSSA, with advice from the LSSARP, would have responsibility for approval of system requirements, system oversight and quality assurance (QA).

This paper describes the CAP that is proposed based on this recommended realignment of responsibility between DOE and LSSA.

2.0 The Proposed CAP

Based on its responsibilities under the LSS Rule (to be amended), the LSSA is developing a plan designed to accurately assess all participant's compliance with their obligations to the LSS program. This plan provides both assistance to the participants and a program of QA reviews and audits intended to determine whether participants are properly identifying, preparing, and submitting their LSS documentary materials. Additionally, the plan includes review of DOE's

Proposed LSSA Compliance Assessment Program (CAP)

LSS design, and oversight of DOE's development, operation, and maintenance of the LSS as an information storage and dissemination capability within InfoSTREAMS. As the first step in this project, the LSSA is developing the *LSS Participant Commitments*, a document that defines in detail the participant responsibilities to be examined during the compliance evaluation process, and proposes standards against which performance will be measured.

Principal components of the overall compliance assessment strategy include:

- Participant Compliance Program Plans reviewed and approved by the LSSA,
- QA reviews of participant-submitted materials,
- periodic LSSA audits of participant document processing operations, and
- oversight of DOE's development, operation, and maintenance of the LSS.

2.1 The Participant Compliance Program Plan

The objectives and content of the Participant Compliance Program Plans are intended to directly reflect the objectives of the LSS and of the LSSA in maintaining the integrity of the database. Participant adherence to their Participant Compliance Program Plans is expected to better ensure compliance with and achievement of LSS and LSSA objectives. The LSSA will issue a guidance document, the *Format and Content of Participants' Compliance Program Plans*, to assist the participants in developing their Participant Compliance Program Plans. This LSSA guidance document will be reviewed and commented on by the LSSARP prior to issuance. Information currently proposed for inclusion in the Participant Compliance Program Plan is:

- Identification of a Designated LSS Official (DLO)
- Material Submission Plan, including
 - Estimates of documentary material backlog
 - Total population and exclusions
 - Breakdown by Priority Document Loading Schedule (PDLS) category (if required)
 - Breakdown by sources
 - Basis for volume estimations
 - Estimate of documentary material generation rate
 - Production schedule estimates
 - Plans/approaches for complying with the PDLS (if required)
- Processes, tasks, and subtasks to be performed
- Staffing plan
- Training plan
- Use of contractors (identifying contractor tasks and procurement plan)
- Quality control plan

Proposed LSSA Compliance Assessment Program (CAP)

- Correction handling plan
- Plans for process modification and updating, for internal and LSSA-generated input
- Plan/mechanism for tracking processing, flow of documentary material, and productivity
- General facilities plan
- Verification of resource budget
- Anticipated processing start-up date
- Reporting schedule (to LSSA), content, and formats (e.g., "Listing of Documents Determined Not Relevant")
- Content and frequency of Rule-mandated certifications to the LSSA

The sequence of events related to the Participant Compliance Program Plans is important (e.g., LSSA guidance, Participant Compliance Program Plan development, LSSA review and approval), and is described below:

- LSSA issues specific guidance to participants concerning the LSS access application process;
- Participant commits to providing a Participant Compliance Program Plan to the LSSA and provides some preliminary high-level plan information (e.g., identification of the DLO), in accordance with LSSA's access application guidance;
- Following LSSARP review and comment, LSSA issues specific guidance to provide participants with clear objectives, outlines, and required content of their Participant Compliance Program Plans as stated in the *Format and Content of Participants' Compliance Program Plans*;
- Participant develops and submits its Participant Compliance Program Plan to the LSSA for review and approval, modifying the plan as necessary based on LSSA feedback;
- Participant is approved to begin submitting documentary materials to the LSS, once Participant Compliance Program Plan is approved, and all other application requirements are satisfied;
- LSSA distributes all approved Participant Compliance Program Plans for review by LSSARP members;

Proposed LSSA Compliance Assessment Program (CAP)

- LSSA conducts compliance audits of participant document processing operations and QA reviews of submitted documentary materials throughout the life cycle of the LSS and LSS processing activities.

This last element, LSSA compliance auditing and QA review, is expected to be the principal methodology used by the LSSA to obtain the information necessary to accurately assess participant compliance and thereby certify compliance.

2.2 The LSSA Audit Program

A systematic program of QA audits involves examining two primary operational areas, covered by two audit types: "adequacy" and "process" audits. Initially, the LSSA will evaluate participant plans, programs, and procedures to determine their adequacy in prescribing a program which fulfills the requirements of the LSS Rule. A wide range of the program's functions will be examined during the adequacy audits to enable the LSSA to make these determinations. The areas to be examined include: organizational structure; personnel qualification and training; program design; procedure development and control; document processing; quality control; and corrective action procedures.

Once participants have actually begun document screening and processing operations, the LSSA will conduct process audits to evaluate, on a semi-annual basis:

- The adequacy of participant implementation of plans and procedures in the execution of the document processing functions, including screening, duplicate checking, unitization, header preparation, and image and ASCII preparation, as appropriate, and
- The effectiveness of appropriate management systems, such as training programs, document processing tracking and accountability systems, and corrective action procedures.

It should be noted that the adequacy of participant relevancy screening will be examined during LSSA audits by reviewing only a sample of documents determined not relevant by the participant being audited. The LSSA will rely on all participants to examine the "Listing of Documents Determined Not Relevant", required of each participant, and report disagreements to the LSSA, in order to ensure that all relevant material is entered into the LSS.

Semi-annual audits will cover the full scope of the participants' document processing programs. An LSSA contractor audit team of qualified personnel will conduct an audit at each participant site where document processing occurs. Interim observation audits (audits of limited scope which

Proposed LSSA Compliance Assessment Program (CAP)

focus on specific areas of participant operations) may be scheduled more frequently, particularly during the early stages of critical activities, or when procedures have been revised significantly.

2.3 QA Facility Operations

QA review of participant-submitted documentary materials will be performed at a QA Facility established by the LSSA. This facility will provide an independent, centralized location for the performance of all QA activity related to participant compliance with documentary material standards, as well as all activities related to the tracking of participant compliance with their Material Submission Plans. DOE will capture its own documentary materials using InfoSTREAMS document capture stations. Non-DOE participants may elect to capture their documentary materials at DOE-provided document capture stations, or may choose to submit their materials to DOE for capture. Non-DOE participants will prepare a header and an image (where appropriate) for their documentary material. DOE will do the same for its documentary material, and will also generate ASCII and linkages between headers, images, and ASCII for its own and all other participants' materials. These processed materials will reside in the LSS storage and dissemination capability within InfoSTREAMS.

The QA Facility will house activities related to reviewing the quality of participant documentary material submissions against the standards adopted by the LSSA in the *LSS Participant Commitments* and follow-on guidance. An LSSA-managed contractor staff will perform a QA review of participant-processed materials, using a random sampling methodology, to determine compliance with established standards relative to header preparation, image legibility, ASCII text format and accuracy, and linkages. This review will be accomplished by accessing the LSS through QA workstations installed at the QA Facility. The reviewer will select a statistically valid, random sample of a batch of a participant's material (grouped by day or week of loading to the LSS, for example) for examination and grading. The QA review will occur separately for each participant's material.

2.4 Specific Areas of DOE Responsibility Requiring LSSA Oversight

In addition to the audit and QA review associated with the LSSA review of DOE-processed documentary materials, SECY-93-107 places a high priority on LSSA involvement in reviewing DOE-proposed requirements for the LSS capability within InfoSTREAMS and oversight of the LSS-related activities of DOE in developing, operating and maintaining the LSS, including user training and support. The following sections describe those areas of LSSA responsibility.

2.4.1 LSS System Design and Development

SECY-93-107 refers to possible non-DOE participant concerns about any one participant's,

Proposed LSSA Compliance Assessment Program (CAP)

including DOE's, control over the design, development, and operation and maintenance of the LSS. To help alleviate such concerns, the Commission approved the NRC staff's recommendation that LSSA (with LSSARP advice) review and approve DOE-developed LSS/InfoSTREAMS system requirements before implementation, and that LSSA oversee DOE's performance of the operations and maintenance function. Up-front LSSA participation will be required during system planning to ensure that the LSS capability is designed in such a way that it can fulfill the requirements of the LSS Rule and avoid potential problems during system operation and maintenance. In this regard, the LSSA will review and approve DOE's proposed system requirements in the following areas:

- Planning and design of the LSS capability, including hardware and software, and storage capabilities
- Facilities strategy and plan for LSS-related operations, including workflow requirements and functional facility design requirements
- Identification of hardware/software to be purchased by participants (or provided by DOE) to permit system access
- Security requirements to ensure integrity of the LSS and appropriate access
- System telecommunications
- Operations and maintenance strategy and plan, including functional requirements for maintenance of the LSS, hardware/software maintenance and upgrades, and specifications related to, for example:
 - Document processing
 - Authority file maintenance
 - Submitter verification and change processing
 - E-mail submission and adjudicatory document handling
 - Technical support services
 - Facility management
 - System testing
 - Configuration management
 - Documentation

Proposed LSSA Compliance Assessment Program (CAP)

Generally, DOE's role in this area will be to propose requirements, while the LSSA will serve in a review capacity to ensure that the proposed requirements satisfy the objectives of the LSS program. The primary vehicles for LSSA oversight of system design and development will consist of documentation review, coordination through meetings with DOE, and periodic audits of system implementation. DOE's role will be to determine how to implement, then implement the LSSA-approved requirements within their InfoSTREAMS system. DOE responsibilities will be incorporated into the *LSS Participant Commitments*.

Additionally, it will be the LSSA's responsibility in this area to define operational procedures that will serve to protect the privacy of non-DOE participant document submitter or database searcher help-line inquiries and actual database searches. Such procedures will help obviate any potential non-DOE participant objection that DOE operation of the LSS would permit DOE surveillance of other participants' hearing strategy.

2.4.2 LSS Operation

The LSSA's responsibilities will include oversight of LSS start-up and operations. The areas for oversight of system operations include:

- Operations procedures, schedules and reporting mechanisms
- System acceptance testing
- LSS operation, including document capture of DOE materials and integration of non-DOE materials captured by participants
- Data base administration and security
- System capacity
- System contingency planning
- Telecommunications services
- System support services
- Operational performance data collection
- Change control procedures.

Proposed LSSA Compliance Assessment Program (CAP)

The primary vehicles for oversight of system implementation and operation will consist of documentation reviews, on-site observations, and semi-annual audits. The LSSA, with LSSARP advice, will develop compliance assessment methodologies (i.e., determining compliance standards and how they will be measured) as well as procedures for resolving areas of disagreement. In addition, LSSA evaluation and reporting to the Commission on DOE compliance will need to include DOE operations activities (as they affect the potential quality, integrity or availability of the LSS).

2.4.3 LSS Maintenance

Another area of LSSA responsibility will be the oversight of DOE's LSS maintenance activities. The areas for oversight of system maintenance include:

- Methods and procedures for maintaining and upgrading hardware and software
- System configuration management
- Hardware maintenance
- Software maintenance
- Telecommunications maintenance
- Maintenance of facility for LSS-related activities
- System upgrades

The primary vehicles for oversight of the maintenance function will include review of performance documentation, on-site observations, and semi-annual audits. LSSA evaluation and reporting to the Commission on DOE compliance will need to include DOE maintenance activities.

2.4.4 Submitter Assistance

Since DOE will design, develop, operate and maintain the LSS within InfoSTREAMS, and process all LSS material, DOE also will have the major responsibility for implementing submitter assistance. DOE will provide submitter technical assistance, including:

- Submitter technical assistance program design and development

Proposed LSSA Compliance Assessment Program (CAP)

- Submitter technical assistance in:
 - Indexing and cataloging
 - Header record database access
 - Authority file maintenance
 - ASCII and image file creation and maintenance
- Document capture contingency plan
- Document capture performance data collection.

LSSA will be responsible for oversight of DOE's technical assistance program. The primary vehicles for LSSA oversight will include documentation reviews, on-site observations and semi-annual audits. DOE's responsibilities will be incorporated into the *LSS Participants Commitments*.

2.4.5 Database Searcher Training and Assistance

Database searcher and technical assistance (i.e., technical support for LSS users) will become part of DOE's responsibilities, at least insofar as the assistance pertains to the technical aspects of using the system. Areas of DOE responsibility will include:

- LSS searcher training and technical support program design and development
- LSS searcher training in:
 - LSS access
 - Header field structure
 - Use of search program and search terms
 - Use of help features
 - Access to thesaurus and authority files

Proposed LSSA Compliance Assessment Program (CAP)

- Database searcher technical support and assistance including:
 - On-line help
 - Telephone response to system or program failure.

LSSA will also be responsible for oversight of DOE's database searcher training and technical assistance. The primary vehicles for LSSA oversight will include review of DOE's LSS searcher training program, direct participant feedback from training sessions, training monitoring, observation and audits of database user technical support and assistance operations, and documentation review. DOE responsibilities for database searcher training and technical assistance will be incorporated into the *LSS Participant Commitments*.

3.0 LSSA Certification of Participant Compliance

In accordance with his obligations under the LSS Rule, the LSSA will evaluate DOE compliance with the Rule at six-month intervals. Determinations of compliance status will be based on all information available to the LSSA at the time of assessment, but will center on QA Facility and LSSA audit results, as well as the adequacy of required documentation and reports. The LSSA's written compliance reports to the Commission will include his evaluation of DOE compliance as well as recommendations on any actions considered necessary to enable DOE to achieve compliance. Similarly, the LSSA will also prepare written compliance reports, at six-month intervals, evaluating the compliance status of all non-DOE participants. In all cases, the participants will receive copies of the reports for their review, and have an opportunity to comment on the compliance reports.

When appropriate, compliance evaluation reports will contain recommendations for improving participant compliance status. As part of the LSSA approach to compliance assessment under the CAP, these formal reports of compliance may be supplemented or preceded by informal reports and communications with participants concerning their compliance status. Participants determined not in compliance will be subject to loss of LSS access privileges, or other appropriate actions, as determined by the Pre-license Application Presiding Officer.

LSSA COMPLIANCE ASSESSMENT PROGRAM (CAP)

Presented by:

GERALD CRANFORD

ACTING LICENSING SUPPORT SYSTEM ADMINISTRATOR

MEETING OF THE LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL

**OCTOBER 5, 1993
LAS VEGAS, NEVADA**

**LSSARP PRESENTATION
OCTOBER 5, 1993**

OVERVIEW OF PROPOSED CAP

WHAT ARE THE LSSA'S RESPONSIBILITIES?

- DEFINE REQUIREMENTS FOR LSS PROGRAM PARTICIPATION
- PROVIDE GUIDANCE TO PARTICIPANTS CONCERNING COMPLIANCE
- EVALUATE PARTICIPANT PERFORMANCE AGAINST REQUIREMENTS
- OVERSEE DOE DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF LSS
- CERTIFY PARTICIPANT COMPLIANCE

DEFINE REQUIREMENTS

WHAT INFORMATION IS NEEDED FOR LSSA FACILITATION OF PARTICIPANT ACCESS TO ALL RELEVANT DOCUMENTARY MATERIAL?

- **BASIS FOR REQUIREMENTS:**
 - **NEED TO HAVE ADEQUATE INFORMATION FOR PLANNING**
 - **NEED TO AUDIT THAT ALL RELEVANT DOCUMENTARY MATERIAL IS IN THE DATABASE THROUGH REVIEW OF PLAN AND EXECUTION THEREOF**
 - **NEED FOR MEANS TO ENSURE THAT THE LSS IS AN ACCURATE AND COMPLETE DATABASE**
 - **NEED FOR WELL-MANAGED PARTICIPANT DOCUMENT PROCESSING OPERATIONS**

LSS PARTICIPANT COMMITMENTS

LSSA IS PREPARING A COMMITMENTS DOCUMENT THAT WILL:

- **CLEARLY DEFINE PARTICIPANT OBLIGATIONS (COMMITMENTS) NECESSARY FOR AN EFFECTIVE LSS PROGRAM**
- **PROPOSE STANDARDS AND NON-COMPLIANCE THRESHOLDS**
- **DEFINE METHOD OF MEASURING PARTICIPANT PERFORMANCE**

**THIS DOCUMENT WILL BE RELEASED FOR LSSARP REVIEW AND COMMENT
BEFORE FINALIZATION**

FOUR FUNCTIONAL AREAS OF LSS PARTICIPANT COMMITMENTS

- **GROUP ONE - PROPER IDENTIFICATION OF DOCUMENT UNIVERSE, PROPER RELEVANCY SCREENING, AND TIMELY SUBMISSION OF MATERIALS**
- **GROUP TWO - PHYSICAL CONDITION OF SUBMITTED MATERIAL AND ACCURATE CODING OF THE MATERIAL**
- **GROUP THREE - PARTICIPANT MANAGEMENT REQUIREMENTS AND CONDITIONS FOR GAINING AND RETAINING ACCESS**
- **GROUP FOUR - DOE OBLIGATIONS RELATIVE TO DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF THE LSS**

**GROUP 1 -- PROPER IDENTIFICATION OF DOCUMENT UNIVERSE, PROPER
RELEVANCY SCREENING, AND TIMELY SUBMISSION OF
MATERIALS**

**Commitments with specific processing standards and non-compliance
reporting thresholds**

- 1.A -- Document Universe Identification
- 1.B -- Material Submission Plans
- 1.C -- Document Universe Screening
- 1.D -- Accountability for Screened Materials
- 1.E -- Backlog Submission
- 1.F -- Timely Submission/Resubmission
- 1.G -- Use of E-Mail
- 1.H -- Hearing Exhibits
- 1.I -- Good Faith Discovery

**GROUP 2 -- PHYSICAL CONDITION OF SUBMITTED MATERIAL AND ACCURATE
CODING OF THE MATERIAL**

**Commitments with specific processing standards and
rejection/resubmission thresholds**

- 2.A -- Unitization
- 2.B -- Header Preparation
- 2.C -- Image Preparation
- 2.D -- ASCII Text Preparation
- 2.E -- Technical Investigation Package (Raw Data) Preparation
- 2.F -- Amendments After Verification Period

GROUP 3 -- PARTICIPANT MANAGEMENT REQUIREMENTS AND CONDITIONS FOR GAINING AND RETAINING ACCESS

**Commitments without specific processing standards
and compliance thresholds**

- 3.A -- Designated LSS Official
- 3.B -- Petitions for Access
- 3.C -- Compliance Program Plan
- 3.D -- Complying with Orders
- 3.E -- Cooperation with Advisory Review Process
- 3.F -- LSS Audits
- 3.G -- Access to Material Not Suitable for Entry
- 3.H -- DLO Certifications
- 3.I -- Participants' Written Procedures
- 3.J -- Participants' Training
- 3.K -- Reporting Requirements
- 3.L -- Duplicate Elimination
- 3.M -- Amendments Within Verification Period
- 3.N -- Contractor Compliance with LSS Rule
- 3.O -- LSS Access Privileges
- 3.P -- Participants' Costs
- 3.Q -- FOIA Responsibilities
- 3.R -- Public Access Terminals

GROUP 4 -- DOE OBLIGATIONS RELATIVE TO DESIGN, DEVELOPMENT, OPERATION AND MAINTENANCE OF THE LSS

To Be Determined

1.A	Commitment -- Document Universe Identification
------------	---

All LSS participants will report to the LSSA, for their potential LSS material, the location and content of each backlog repository and each generation/acquisition source (those that exist at the time Compliance Program Plans are submitted and any that arise thereafter) and do so promptly and in accordance with LSSA Processing Standards and Guidance. These will constitute all the sources of material to be screened for Topical Guidelines relevancy.

Commitment 1.A – Document Universe Identification

Processing Standard

Standard: DLOs must report all existing sources of potential LSS material at the time they submit their Compliance Program Plans and subsequently report any new potential sources in a timely manner.

Rationale: To either not be aware of or not disclose even a single potential source could prevent significant volumes of relevant LSS material from being entered into the LSS.

Commitment 1.A – Document Universe Identification

Non-Compliance Reporting Threshold

Threshold: Non-compliance will be reported if, after the initial report of backlog and existing sources is finalized in the participant's Compliance Program Plan, any valid source of potential LSS material is identified by someone other than the responsible DLO.

Rationale: Since it is not difficult for a DLO to either identify existing sources or establish procedures to stay abreast of new potential sources of LSS material, and given the importance of full disclosure to the discovery objective of the LSS, non-compliance should be reported if any valid source of potential LSS material is overlooked or not disclosed by a DLO.

DRAFT

Commitment 1.A -- Document Universe Identification

Compliance Assessment Method
<p>After becoming aware of an undisclosed potential source of LSS material from someone other than the responsible DLO, the LSSA will ask the responsible DLO to investigate this potential source and certify to the LSSA as to whether or not it is a valid potential source of LSS material. The LSSA will perform on-site audits when deemed necessary to validate this certification. Also, as deemed appropriate, the LSSA audit staff may proactively sample other document related collections/sources for possible LSS materials.</p>

LSS PARTICIPANT COMPLIANCE PROGRAM PLANS

**SETS THE STAGE FOR PARTICIPANT INVOLVEMENT
IN THE LSS PROGRAM**

**LSSARP PRESENTATION
OCTOBER 5, 1993**

LSS PARTICIPANT COMPLIANCE PROGRAM PLANS

- 1) LSS ACCESS APPLICATION
- 2) LSSA ISSUES *GUIDANCE ON THE FORMAT AND CONTENT OF LSS PARTICIPANTS' COMPLIANCE PROGRAM PLANS*
- 3) PARTICIPANT PREPARES ITS COMPLIANCE PROGRAM PLAN
- 4) LSSA REVIEWS AND APPROVES THE PLAN OR REQUIRES CHANGES TO MAKE PLAN MORE EFFECTIVE
- 5) PARTICIPANTS WILL BE AUDITED AGAINST THEIR PLANS
- 6) PARTICIPANT ADHERENCE TO PLAN BETTER ENSURES AN ACCURATE AND COMPLETE LSS DATABASE

WHAT WILL AN LSS PARTICIPANT COMPLIANCE PROGRAM PLAN CONTAIN?

- **IDENTIFICATION OF PARTICIPANT LSS MANAGEMENT STAFF**
- **MATERIAL SUBMISSION PLAN**
- **IMPLEMENTATION PLAN**

HOW WILL THE LSSA EVALUATE PARTICIPANT PERFORMANCE?

- LSSA REVIEW OF DOE-PROPOSED REQUIREMENTS FOR THE LSS
- LSSA OVERSIGHT OF DOE DEVELOPMENT, OPERATION, AND MAINTENANCE OF THE LSS
- LSSA AUDIT PROGRAM
- LSSA QA FACILITY

LSSA ROLE IN DOE DESIGN AND DEVELOPMENT OF LSS

- LSS WILL BE DEVELOPED BY DOE
- DOE WILL PROPOSE SYSTEM REQUIREMENTS
- LSSA WILL REVIEW AND APPROVE REQUIREMENTS WITH LSSARP ADVICE
- DOE WILL IMPLEMENT APPROVED REQUIREMENTS
- LSSA WILL AUDIT DOE'S IMPLEMENTATION AS PART OF LSSA AUDIT PROGRAM

WHAT AUDITING DOES LSSA DO?

- LSSA MANAGES AUDIT CONTRACTOR
- PERIODIC AUDITS OF DOE DEVELOPMENT OF LSS
- SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE OF LSS
- SEMI-ANNUAL AUDITS OF EACH PARTICIPANT DOCUMENT PROCESSING OPERATION (INCLUDING MULTIPLE SITES, AS APPROPRIATE)
- INTERIM OBSERVATION AUDITS
- ONGOING REVIEW OF REQUIRED PARTICIPANT REPORTS AND DOCUMENTATION

HOW ARE AUDITS OF DOE DONE?

- PERIODIC AUDITS OF DOE LSS DEVELOPMENT EFFORT TO ENSURE THAT LSSA-APPROVED REQUIREMENTS ARE IMPLEMENTED
- SEMI-ANNUAL AUDITS OF DOE OPERATION AND MAINTENANCE ONCE LSS IS IN PLACE TO DETERMINE:
 - ACCURACY AND COMPLETENESS OF DATA LOADED TO LSS BY DOE
 - ADHERENCE TO LOADING AND AVAILABILITY SCHEDULE
 - ADEQUACY OF DOE LSS MANAGEMENT SYSTEMS
 - ADEQUACY OF DOE TRAINING AND USER ASSISTANCE FOR PARTICIPANTS
- ONGOING MONITORING OF LSS AVAILABILITY AND FUNCTIONALITY BY QA FACILITY
- AUDIT RESULTS ARE KEY TO LSSA CERTIFICATION OF DOE COMPLIANCE

WHAT WILL THE LSSA QA FACILITY DO?

- QUALITY ASSURANCE REVIEW OF PARTICIPANT-SUBMITTED DOCUMENTARY MATERIALS
- AFTER REVIEW, PARTICIPANT SUBMISSIONS ARE ACCEPTED AS CONFORMING TO STANDARD, OR REJECTED
- WILL OPERATE FOR DURATION OF LSS PROGRAM
- LSSA-MANAGED, CONTRACTOR STAFFED FACILITY

HOW AND WHEN WILL LSSA CERTIFICATION TAKE PLACE?

- **LSSA CERTIFICATION OF DOE COMPLIANCE EVERY SIX MONTHS**
- **DETERMINATION OF OTHER PARTICIPANTS' COMPLIANCE COINCIDES WITH DOE CERTIFICATION SCHEDULE**
- **COMPLIANCE ASSESSMENT WILL BE BASED ON:**
 - **RESULTS OF LSSA AUDIT**
 - **QA FACILITY EVALUATIONS**
- **NON-COMPLIANCE ON THE PART OF ANY PARTICIPANT MAY RESULT IN LOSS OF LSS ACCESS OR OTHER APPROPRIATE ACTIONS, AS DETERMINED BY THE PRE-LICENSE APPLICATION PRESIDING OFFICER**

COMMENTS ON THE LSSA COMPLIANCE ASSESSMENT PROGRAM

SHOULD BE SENT TO:

**DAVID S. DRAPKIN, DIRECTOR
LSS SUPPORT AND OVERSIGHT SERVICES
DIRECTOR'S OFFICE
OFFICE OF INFORMATION RESOURCES MANAGEMENT
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555**

COMMENTS ARE DUE NO LATER THAN NOVEMBER 1, 1993

**LSSARP PRESENTATION
OCTOBER 5, 1993**

LSSA'S COMPLIANCE ASSESSMENT PROGRAM (CAP)

WILL BE MY BASIS

FOR ASSURING THE COMMISSION, DOE AND THE PARTICIPANTS

THAT THE PARTIES HAVE ENTERED THE PROPER DOCUMENTARY MATERIAL

AND THAT IT IS AVAILABLE

**LSSARP PRESENTATION
OCTOBER 5, 1993**

**InfoSTREAMS:
An Information Management
Environment for DOE OCRWM**



Department of Energy
Office of Civilian Radioactive Waste Management
Information Management Division
(202)586-4589
October 5, 1993

Agenda

- ➔ • InfoSTREAMS: Context, Mission and History
- Functional Overview and Architecture
- Electronic Security and Nuclear Records Management

InfoSTREAMS Context

- Sponsor:** DOE Office of Civilian Radioactive Waste Management (OCRWM) Information Management Division (IMD)
- Context:** Licensing of the High Level Nuclear Waste Repository will generate millions of pages of documentation, much of it destined to become a legal docket
- Federal Regulations require migration of text, image and header data to Licensing Support System, and microfilm to the National Archives
- OCRWM must evolve to an integrated information management environment to facilitate pre-licensing activities

InfoSTREAMS Mission

Office Automation Mission:

To provide OCRWM with an integrated and comprehensive capability to generate documents, to communicate electronically, and to develop and maintain program management and administrative data in a secure and efficient environment.

Records Management Mission:

To provide OCRWM the capability to identify, collect, store, retrieve, distribute, protect and dispose of the records which document the OCRWM organization, its functions, policies, decisions, procedures, and essential transactions. These include records appropriate for preservation because of their administrative, legal, licensing, scientific, research, or historical value.

Who Benefits?

- Document Authors
- Document Reviewers
- Researchers and Analysts
- Records Managers
- Program Management
- License Preparation Activities
- License Hearings

InfoSTREAMS History

June 1991 LSS 4 increments	TRW began evaluation of InfoSTREAMS and requirements. Phased development with defined
September 1991 began	InfoSTREAMS Increment 1 engineering
July 1992	Start of Increment 1 deployment
December 1992	Increment 2 preliminary design complete
Current	Increment 2 in code and integration

InfoSTREAMS Defined

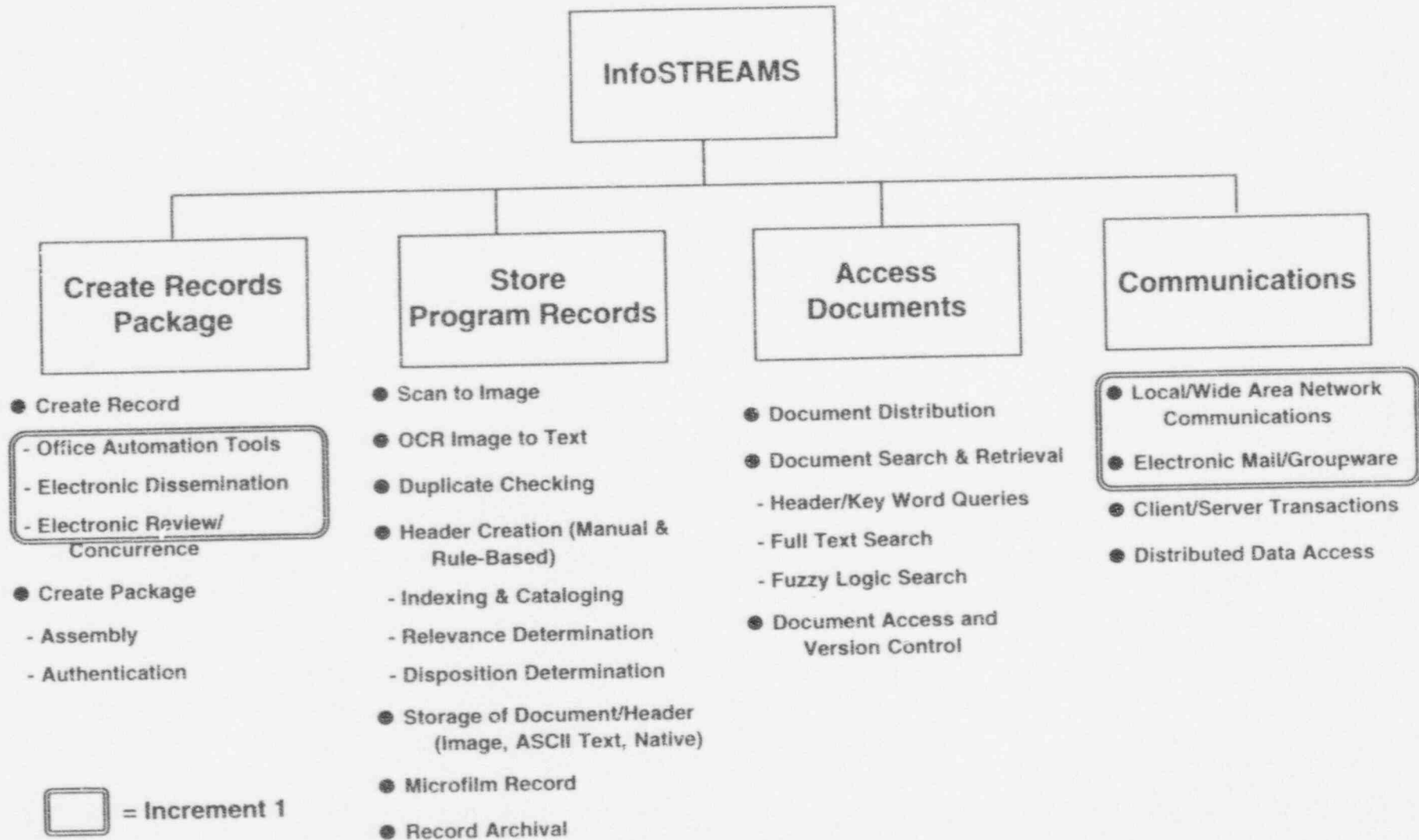
"Information SStorage, REtrieval, Access and Management Sys

- Nationwide distributed information management, document imaging and records archival environment
- Current increment provides electronic document creation, dissemination, and review using work group computing concepts
- Planned increments automate pre-licensing records management processes, provide state-of-the-art holdings query capability, and create an integrated IRM environment

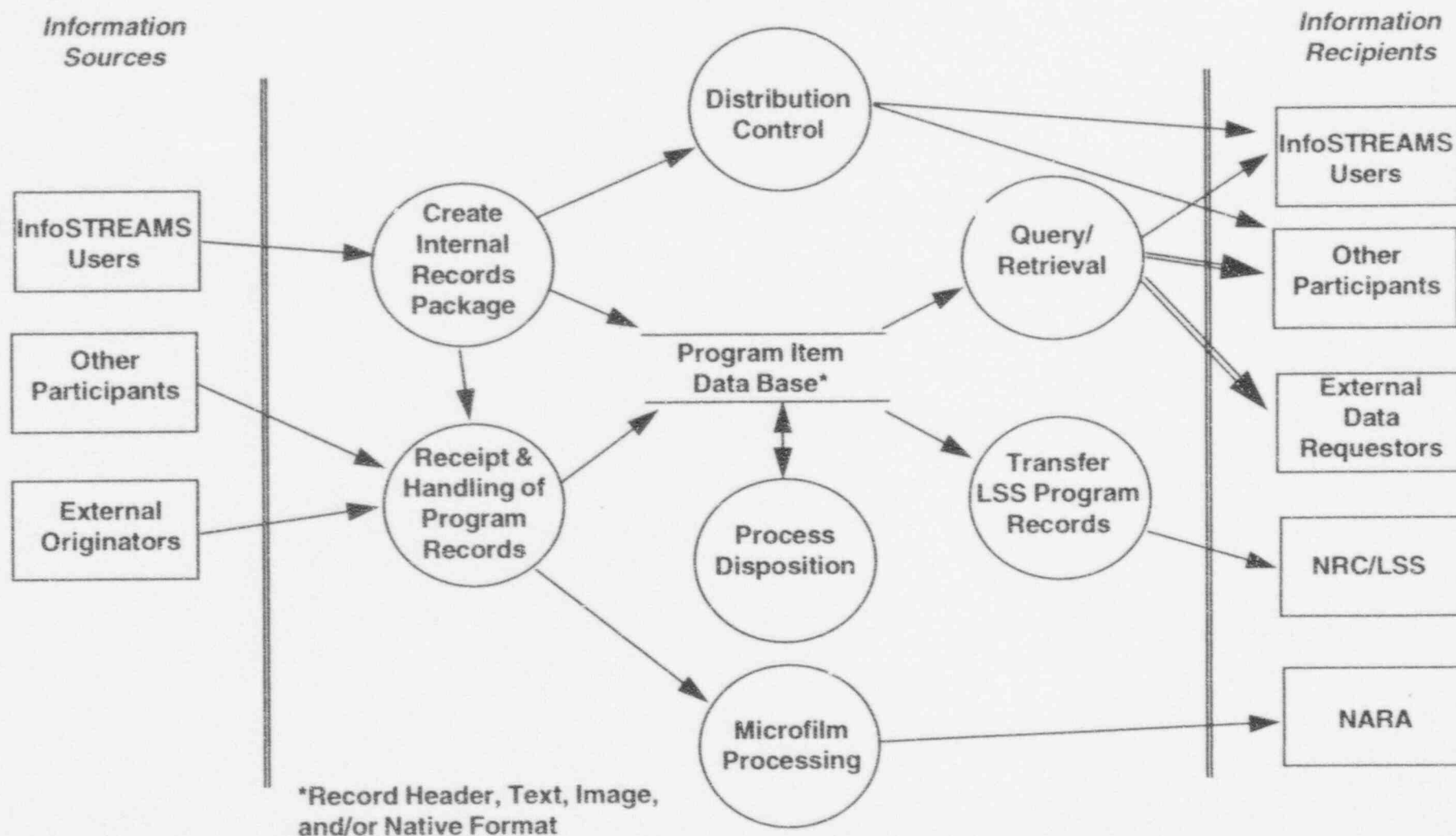
Agenda

- InfoSTREAMS: Context, Mission and History
- • Functional Overview and Architecture
- Electronic Security and Nuclear Records Management

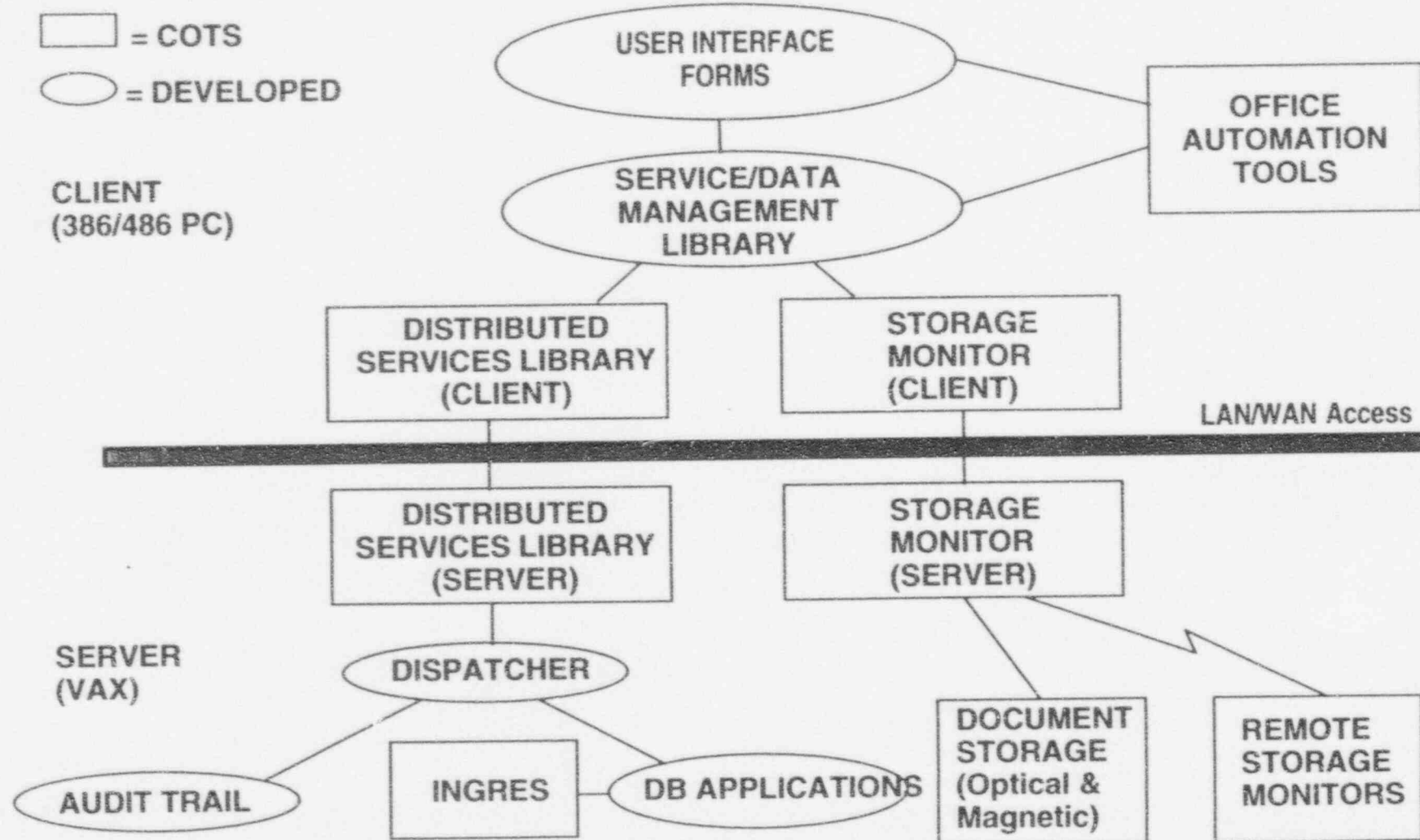
InfoSTREAMS Functional Hierarchy



InfoSTREAMS Data Flow



Physical Architecture



Future OCRWM Network - Geographic

Future OCRWM Network Nodes



InfoSTREAMS To LSS

What Are the Changes?

- Many InfoSTREAMS and LSS functional capabilities are common:
 - InfoSTREAMS tuned to document generation and management
 - LSS priority placed on query and distribution of license related material
- Flexibility of InfoSTREAMS architecture allows:
 - Increase in capacity to handle the LSS users
 - Increase on-line holdings to encompass all LSS documents
 - Increase throughput of text and database search engines to address LSS query characteristics
 - Increase capacity of document distribution capabilities to address the LSS requirements

Decision to include LSS features in InfoSTREAMS must be made now

Agenda

- InfoSTREAMS: Context, Mission and History
- Functional Overview
- • Electronic Security and Nuclear Records Management

Data Security/Integrity

- **Proper management of the pre-licensing material is essential to the licensing activity**
 - LSS requirements
 - Avoid procedural delays
- **Electronic environment can provide data protection mechanisms which are superior those available in a paper/microfilm environment**

Technical Solutions

- Statistical file "Snap Shots"
 - Cyclic Redundancy Check (CRC) embed at write, check at read
 - Proven in systems which handle classified material
- Combined with procedures and system security features, provides guarantee that document has not changed since...
 - Written
 - Reviewed
 - Quality Checked
 - Etc.

Digital Signature Standard (DSS)

- Incorporates "Snap Shot" concept, and encrypted user keys
- "Signed, Sealed and Delivered"
- Authentication of originator
- Not strictly a legal issue
 - Cultural acceptance and ability to embed in QA environment are key

Conclusion

- **InfoSTREAMS incorporates state-of-the-art technology and is a practical solution to**
 - **Meet the regulatory requirements (CRF, NARA)**
 - **Increase productivity**
 - **Provide data integrity protection**
 - **Provide a tool for compliance assessment and licensing support**

InfoSTREAMS
Text Information Management System
Study



Department of Energy
Office of Civilian Radioactive Waste Management
Information Management Division
(202)586-4589
October 6, 1993

Agenda

- Why a Text Information Management System Study
- InfoSTREAMS Query Concept
- Evaluation Criteria
- Candidate Products
- Study Follow On

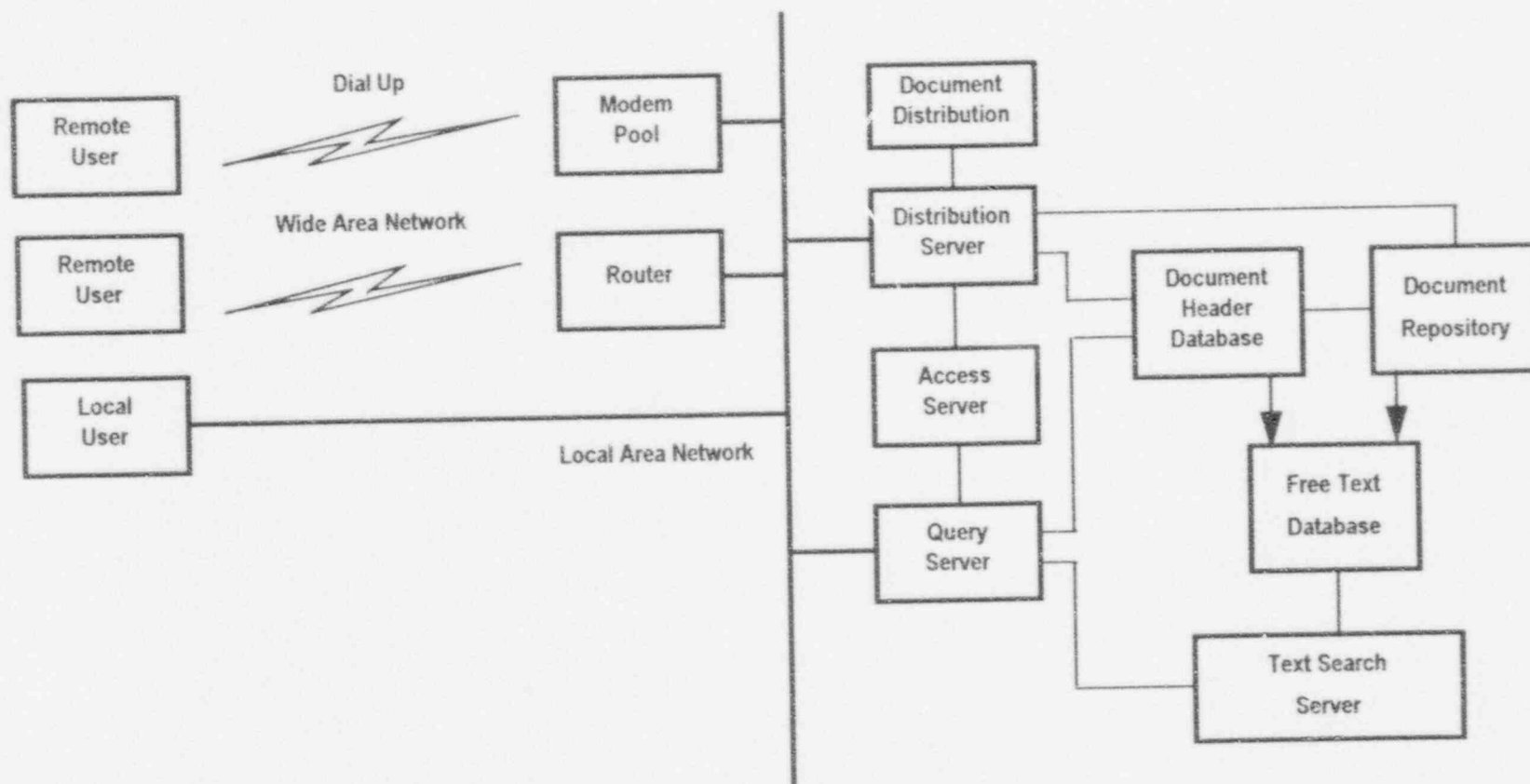
Why a TIMS Study?

- A rapid and comprehensive free text search is an essential capability for both InfoSTREAMS and the LSS
 - Free text search is one of many features in Text Information Management Systems offered by vendors
- TIMS technology is changing rapidly to accommodate increasingly more powerful features as text processing applications advances
 - Selection of a specific product must balance product features against InfoSTREAMS and LSS functional needs , characteristics of the InfoSTREAMS architecture, and life cycle cost

Why a TIMS Study? (Cont'd)

- **Study undertaken to identify the most promising products as candidates for the InfoSTREAMS free text search capability**
 - Over 50 commercial products surveyed to establish a list of 16 potential candidates for inclusion in the InfoSTREAMS architecture
- **Evaluation resulted in four products ranked highest in terms of satisfying the InfoSTREAMS and LSS functional requirements, and also suitable for integration in the InfoSTREAMS architecture**

InfoSTREAMS Query Architecture Concept



Evaluation Approach

- **Before start of product evaluation a set of evaluation criteria were defined**
 - Criteria selected reflect InfoSTREAMS functional requirements, integration into the InfoSTREAMS architecture, and life cycle concern
- **Initial product list established with over 50 TIMS products**
 - Vendor information collected and product suitability evaluated
- **First cut eliminated products which were not compatible with the InfoSTREAMS architecture**
 - Products for mainframes and personal computers eliminated
 - Sixteen viable candidates remained

Evaluation Approach (Cont'd)

- **Of the remaining products six were eliminated for technical and corporate viability reasons, leaving ten for more thorough evaluation**
- **Evaluation consisted of assessing product scores against the previously established criteria**

Key Evaluation Criteria

- **API Support:** - Assess the quality and capability of Application Program Interfaces
 - Provides insight into how easily the product can be integrated into the InfoSTREAMS application
- **Client/Server Support:** - Capability to function in a distributed environment and the ease of expanding capacity
 - Support of PC work stations as clients
 - Capacity expansion through addition of TIMS servers and server management capabilities

Key Evaluation Criteria (Cont'd)

- **Performance:** - Determine capability to handle the data and query volume expected in InfoSTREAMS and the LSS
 - InfoSTREAMS and LSS are large applications for this technology (LSS text holdings estimated to be in excess of 100 GB)
 - Comparative performance data hard to get
 - Boolean Retrieval: - Does the TIMS provide standard boolean retrieval methods
 - AND; OR; NOT, Proximity, Phrase, Word Stemming, Stop Word , Etc.

Key Evaluation Criteria (Cont'd)

- **Advanced Retrieval:** - Are advanced retrieval methods provided
 - Term Expansion, Thesaurus, Query by Example, Fuzzy Match
- **System Administration:** - Capability of system administration tools
 - On-Line back-up and indexing
 - Support recovery
 - Audit transactions, collect statistics
 - Security, access controls

Highest Ranked Products

- Based on evaluation criteria and current product features the highest ranked products (in alphabetical order by company) are:
 - ConQuest Software Inc. ConQuest
 - Fulcrum Technology Inc. Ful/Text SDK
 - Information Dimensions Inc. BASISPlus
 - Verity Inc. TOPIC
- A recommendation or selection of a specific product for inclusion in InfoSTREAMS has not been made

Study Follow On

- **Conduct technical discussions with vendors to perform a more detailed evaluation of integration with InfoSTREAMS**
 - Integration into InfoSTREAMS document management system and access control system using DSL
 - Track evolution of new features and capabilities in product offerings, and assess their impact on InfoSTREAMS
- **Obtain more insight into expected performance of products in the InfoSTREAMS environment**
 - Characterization of queries and databases to allow vendor assessment of expected performance

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: Licensing Support System
Advisory Review Panel

Docket No.

LOCATION: Las Vegas, Nevada

DATE: Wednesday, October 6, 1993

PAGES: 207 - 320

ANN RILEY & ASSOCIATES, LTD.

1612 K St., N.W., Suite 300

Washington, D.C. 20006

(202) 293-3950

940829 0443

115 8P

1 UNITED STATES
2 NUCLEAR REGULATORY COMMISSION

3 ***

4 LICENSING SUPPORT SYSTEM

5 ADVISORY REVIEW PANEL

6 ***

7
8 Holiday Inn

9 Magnolia Room

10 325 E. Flamingo

11 Las Vegas, Nevada

12
13 Wednesday, October 6, 1993

14
15 The panel met, pursuant to notice, at 8:40 a.m.,
16 before John C. Hoyle, Chairman.

1 PARTICIPANTS:

2
3 John C. Hoyle, LSSARP Chairman, NRC
4 Christopher Henkel, Edison Electric Institute
5 Jay Silberg, Attorney, Shaw, Pittman
6 Robert Holden, Director, Nuclear Waste
7 Program, National Congress of American Indians
8 Boyd Alexander, Assistant Commissioner,
9 Information Systems, Patent and Trademark Office
10 Daniel Graser, Acting Director, Information
11 Management Division, Department of Energy
12 Linda DeSell, Chief, Regulatory Integration
13 Branch, Office of Civilian Radioactive Waste
14 Management, Department of Energy
15 Corinne Macaluso, Regulatory Integration Branch,
16 Department of Energy
17 Dennis Bechtel, Clark County, Nevada
18 Malschy Murphy, Regulatory and Licensing Advisor,
19 Nye County, Nevada
20 Kirk Balcom, State of Nevada
21 Chip Cameron, Office of General Counsel, NRC
22 George Hallnor, Environmental Support Services,
23 TRW
24 Gerald Cranford, Acting LSS Administrator
25 Betsy Shelburne

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1612 K Street, N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

1 PARTICIPANTS [continued]:

2

3 Dave Drapkin

4 Tom Nartker, UNLV

5 Lloyd Levy

6 Mike Baughman, Intertech Consultants

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

P R O C E E D I N G S

[8:40 a.m.]

MR. HOYLE: We have two presentations this morning scheduled and Mal Murphy would like to also have a discussion of the topical guidelines. So we'll have that as the third item.

Our first is a presentation by Tom Nartker. Tom is a Professor of Computer Science at UNLV and Director of the Information Science Research Institute, where he is conducting work on OCR projects and text retrieval systems.

Tom, let's have your presentation, please.

MR. NARTKER: Thank you, John. As many of you know, I'm sure, UNLV has established a program of applied research in the two specific areas of technology which are important to DOE OCRWM type programs, the DOE OCRWM program and LSS kind of systems.

These two areas are, of course, optical character recognition and full text retrieval. They control the costs and the benefits of systems like the LSS. We have been operating now for about two-and-a-half years and a significant amount of work has been completed.

I will try to give you a quick overview of our activities this morning and talk about some of our most important results.

First, I will focus on practical, money-saving,

1 specific completed research results which could be used in a
2 future LSS system; that is, work which you think is of most
3 interest to you. In fact, we have begun discussions with
4 OCRWM, with Dan Graser, to implement systems, to actually
5 begin building some systems at UNLV, which can save the most
6 money.

7 We think we can save significant dollars and I
8 will tell you why. Second, I will give you a review of all
9 of our activities at the Institute, a quick review of
10 research projects that are in progress, now incomplete,
11 which have the potential to save more money or give improved
12 benefits.

13 I will give you an overview of the support and
14 funding we've been able to attract from other agencies to
15 support this kind of work, an overview of the funding we've
16 attracted from industry to support this kind of work.

17 I'll talk about our annual research symposium in
18 this area. Each year we sponsor, here in Las Vegas, a
19 symposium on document analysis and information retrieval,
20 which attracts about 150 to 200 scientists from around the
21 world. I will tell you about the plans for 1994. Finally,
22 I will give you the most specific evidence of the effect our
23 program has had on the industry in the last two-and-a-half
24 years.

25 First, specific research results that can save

1 money. The background is that one of the most important
2 requirements for the LSS system is for accurate text to
3 support a sufficient retrieval of meaningful documents for
4 LSS users. So a key requirement is for accurate text.

5 For new documents, if text is captured
6 electronically at the source, a hundred percent accuracy is
7 guaranteed. There will, however, be a significant number of
8 older or external documents, which text can only be made
9 available through OCR technology or through total manual-
10 key entry.

11 No current OCR technology can produce a hundred
12 percent accurate text or even close to a hundred percent
13 accurate text. Thus, for paper documents, the question
14 arises what accuracy is required for LSS users. The best
15 answer was provided by SAIC as part of the LSS prototype
16 tests they conducted. It addressed this accuracy question.

17 In these tests, they determined that 99.8 percent
18 character accuracy was required to properly support LSS
19 users. Note that this translates into an average of six
20 character errors on every page with 3,000 characters. If
21 you think about that, that seems a little high.

22 In the absence of more definitive results, this
23 has been the generally accepted requirement for the LSS, I
24 believe. SAIC found that none of the available OCR
25 technologies at that time would produce output text at 99.8

1 percent accuracy. That situation remains true today.

2 The only means to satisfy LSS accuracy
3 requirements, when SAIC did their original study, was to
4 provide expensive manual reentry and manual checking of all
5 documents, in addition to an initial OCR conversion step.
6 In fact, the cost of this additional manual entry and
7 checking dominated the cost of document capture for all
8 paper documents.

9 You may remember one-half of the projected \$200
10 million cost was for data capture. In fact, over half of
11 the data capture cost was directly linked to this manual
12 cleanup step. In 1992, when we first got started at UNLV,
13 we conducted our first thorough test of six of the most well
14 known commercially-available OCR systems using the LSS
15 prototype data prepared by SAIC.

16 This graph shows a summary of the results of that
17 test. The best device tested in 1992 was the Calera RS-
18 9000 and, in fact, it produced 98.67 percent correct output
19 text. Once again, SAIC determined that 99.8 percent correct
20 text was the probable LSS requirement. The best device in
21 1992 produced 98.67 percent accurate output.

22 If you calculate that out, that's about 40 errors
23 on every 3,000-character page. Clearly, character accuracy
24 is a very sensitive measure at this point. On this
25 particular graph, the Calera RS-9000 is represented by this

1 particular curve right here. Those curves show the
2 character accuracy as a function of page quality or OCR
3 difficulty for an initial group of 132 pages we used,
4 selected from the LSS prototype database, which we used to
5 test.

6 There were, on these pages, 278,000 characters.
7 So this test for each device represented 278,000 characters
8 of OCR. The characters are divided into the three groups;
9 the characters on bad pages, the characters on middle
10 quality, and the characters on best quality pages. But,
11 nevertheless, it's over a quarter of a million characters in
12 the OCR tests.

13 The devices tested were the Calera RS-9000, the
14 Xerox Curswile 5200, the Expervision Typereader, Omni Page
15 Professional, the Recognita Plus system and the Toshiba
16 system. Having built an automated system to conduct such
17 tests, we were able to use this system to try different
18 experiments and we have continued to do that.

19 One experiment which paid off the most is to
20 operate all six OCR systems in parallel. This was not a
21 particular surprise. We expected this might happen, but, in
22 fact, it has. We synchronized the text output from these
23 systems and attempted to choose on a character-at-a-time
24 basis, attempted to choose the best character output by a
25 simple majority voting type scheme or some slight

1 modification of majority voting.

2 In fact, our 1992 majority voting scheme, shown on
3 this graph as the top curve, produced 99.3 percent character
4 output. That's approximately 21 errors per page on a page
5 with 3,000 characters.

6 So this, in fact, is not a commercial device at
7 all. It shows the performance, the output character
8 accuracy performance of an engine we built at UNLV that, in
9 fact, is composed of all of the above devices, simply
10 connecting them in a way and trying to determine what the
11 correct character would be by majority vote.

12 The exciting thing about this is that with such a
13 simple idea, we were able to reduce the number of errors
14 made by the best device, by the best competing device, by 50
15 percent. In fact, the Calera RS-9000 made approximately
16 3,600 character errors on this test and this line shows the
17 accuracies resulting, but the total number of character
18 errors with that particular test was 3,600.

19 The ISI voting algorithm, in fact, cut that in
20 half. It made about 1,800 errors on the same test. We have
21 continued this research during 1993 with the newest and best
22 technologies available to us.

23 By the way, before I take this down, I will
24 mention to you what the overall accuracies of some of these
25 other devices were. I told you the Calera produced 98.67.

1 That's overall. On the bad quality pages, they were
2 actually down around 97 percent. On the intermediate
3 quality pages, they were up above 99 percent.

4 The Curswile 5200 was 98.31. The Expervision
5 Typereader was 97.73. The Omni Page Professional was 96.83.
6 The Recognita Plus system was 95.95. The Toshiba system was
7 95.64. These results are especially meaningful because this
8 data is directly sampled from the LSS prototype database.
9 These are LSS-type numbers.

10 This is a slightly different graph that shows some
11 of the results from 1992 tests. It's not shown in the same
12 way, but it happens to show what I think is most important
13 to us. So this year, using LSS prototype data as a measure,
14 we can produce an OCR machine, again, using a voting type
15 algorithm, which produces 99.73 percent character output.

16 At our current rate of improvement, we'll be able
17 to produce an OCR system which will exceed 99.8 percent
18 accuracy within the next six months and we're very confident
19 of that.

20 This particular curve actually shows character
21 efficiency and it's slightly different. The top graph
22 shows, in fact, the 1993 ISI voting algorithm and the top
23 point here shows that we're able, by correcting reject
24 characters in the output and we have our own scheme of
25 actually producing reject characters by vote, by correcting

1 reject characters, we can actually get to 99. something, and
2 that points end up being 99.73.

3 So we are, in fact, approaching very rapidly the
4 99.8 percent requirement for LSS documents, without manual
5 -- without expensive manual re-key, without expensive manual
6 correction, in completely automatic mode.

7 The availability of this kind of technology can
8 eliminate the need for manual checking for the LSS. Using
9 the 1988 estimated LSS dollar numbers, the \$200 million
10 figure, the savings which would result directly from the use
11 of this idea would most probably be between \$30 and \$60
12 million. That is over half of the \$200 million project cost
13 for data capture. So over \$100 million. Approximately \$110
14 million, as I recall.

15 Over half of that, which would be over \$50
16 million, was due to manual reentry. So, in fact, the \$30 to
17 \$60 million estimate in savings is probably conservative.
18 It's probably conservative especially when you consider that
19 perhaps the costs have increased since the original \$200
20 million estimate in 1988.

21 In fact, UNLV has begun discussions with the DOE,
22 with Dan Graser, and has proposed to build an operating
23 engine, OCR engine product tailored to the InfoSTREAMS
24 interface, which would achieve more than 99.8 percent
25 accuracy. We think that could be done perhaps not within a

1 year, but certainly in well under three years.

2 So we have started to talk about that and that is
3 probably the one issue which has the potential the soonest
4 to save the most money. We hope to -- it is our goal at the
5 university to try and tailor a design, an OCR engine, based
6 on some of the ideas, some of our research, that can save
7 significant money for this project.

8 Let me give you an overview. That's probably the
9 one aspect of the things we have done which you would be
10 most interested in, because it's the clearest place we can
11 save dollars in a very short time period.

12 As far as other projects at our Institute are
13 concerned, there are a large number which have more
14 potential for significant cost savings. Perhaps not as much
15 savings as represented by OCR accuracy, but significant,
16 nevertheless.

17 A good review of these projects I can show you by
18 just giving you a copy of our 1993 annual research report.
19 Let me pass those out.

20 MR. HOYLE: Tom hasn't got too many. We'll try to
21 give one per group, if we can.

22 MR. NARTKER: I'm missing some important groups.
23 Please just give me a call at -- my phone number is in
24 there. Give us a call at UNLV and we'll send some more out.
25 I think I brought a little more than this.

1 There are six different research projects written
2 up in there. I won't go through them all, but I will give
3 you kind of an overview of the results that you will read
4 about in that report.

5 One of the things we do every year is to conduct
6 an annual technology assessment test. We acquire one copy
7 of all of the best OCR devices that each vendor available
8 has to offer and we install them in our system and each year
9 we run a test versus DOE, versus LSS prototype data. Each
10 year we prepare more data and we prepared more measures of
11 performance, of goodness, more measures of performance.

12 As I told you before, our first round of testing
13 was conducted in 1992. The slides I'm going to show you now
14 are prepared from our 1993 tests and we're just getting
15 started this month and next month preparing for our 1994
16 round of testing.

17 The devices we tested in 1993 -- yes?

18 MR. BALCOM: Can I ask you a question? In terms
19 of throughput, are you also looking at like the page per
20 minute count between some of these various high end options,
21 like the voting? The voting machine, since it tries to
22 balance three or four or five or six different technologies,
23 does it take like three times as long?

24 MR. NARTKER: Actually, it's limited almost
25 completely the slowest device of the group. We operate all

1 devices in parallel and the voting machine works just about
2 as fast as the slowest device in the group. We do not
3 report -- we, of course, know about throughput
4 considerations. We know about the speed of these
5 technologies.

6 But speed is really not a very meaningful thing to
7 report on, for several reasons. It doesn't vary as much --
8 certainly, it varies by a factor of two, perhaps even more
9 than a factor of two, but in no case anything approaching a
10 factor of ten. So speed does vary somewhat, but compared to
11 accuracy, speed is simply not important.

12 MR. BALCOM: In terms of the cost savings, though,
13 since the people that will be operating this -- I was just
14 trying to get a feel for whether the old SAIC projections
15 are out of date because speed is so much faster now.

16 MR. NARTKER: Not especially. The dominant cost
17 factor, separate from speed, is accuracy, by far. You can
18 always buy another PC. If the machine is half the speed of
19 another machine, but ten percent more accurate, you buy two
20 PCs and run them in parallel. If that's not good enough,
21 buy ten PCs and run them, by 100. There is almost no limit
22 to the number of PCs you could afford if they will give you
23 good enough accuracy.

24 If they don't give you good enough accuracy, you
25 have to pay a manual typist to sit there and re-key and

1 reverify manually every document, and that's where the costs
2 really go outside.

3 So eventually we will probably report on
4 throughput, but we have focused our energies the first two
5 years on accuracy because it's such a dominant
6 consideration.

7 The specific technologies we tested in 1993 are
8 shown. The Care Corporation, Calera, CTC, CTA, Expervision,
9 Okon, Recognita, Xerox, and then the specific version
10 provided to us by these vendors and the actual version
11 number, because we ask each vendor to give us their latest
12 and greatest best technology, the best thing they can do.

13 We don't specifically test specific products. We
14 test technologies. By doing this, we hope, over a period of
15 three to five years, to have a profound effect on the market
16 to make the current level of technology more visible to
17 everyone, because that's one of the problems in this field.
18 The technology is so complex that even the Vice President of
19 a large company doesn't have the resources at his command to
20 make decisions in any reasonable period of time about which
21 technology best suits his needs, because it's too
22 complicated.

23 This is our 1993 graph showing character accuracy
24 versus page quality for all eight devices. In 1993, we
25 actually had a dead heat tie between three companies for the

1 best technology. The three lines at the top are, in fact,
2 completely over the top of one another. They are the new
3 Calera system, the Xerox system and the Expervision system.

4 Slightly behind them is the Care, the pink line.
5 Care, in fact, just about duplicated the performance of the
6 top three on normal pages, on good pages, but on poor
7 quality pages, Care's accuracy dropped off rather rapidly.
8 The other four products are shown as falling off even more.

9 We measure not only character accuracy and publish
10 that annual report showing to the world how these devices
11 compare, we measure word accuracy of all the words in these
12 documents, what percentage of them were correct. Notice the
13 word accuracy is somewhat lower than character accuracy.

14 The database used to test this year was slightly
15 different than last year's database. Once again, it was
16 page sampled from the LSS prototype database, but this year
17 it was 460 pages and these tests were conducted on 817,000
18 characters. So almost a million characters. We have built
19 an automated system to make this possible with just a few
20 keystrokes behind a computer system.

21 Another metric reported on in our annual report is
22 called non-stop word accuracy. If you use the text
23 retrieval system and know how they're built, you know that
24 within text retrieval systems, there are -- in the text
25 retrieval community, there are words called stop words and

1 the stop words are "in," "the," "and," "but." They are
2 words that have virtually no retrieval value.

3 You would never ask an information retrieval
4 system to give me all the documents in your memory that have
5 the word "the" in them. You'd almost always get them all,
6 wouldn't you? So there's no retrieval value to the word
7 "the" or "in" or "and."

8 It is only the non-stop words that have retrieval
9 value. In fact, in most retrieval systems, the stop words
10 are not even indexed. They are not even read into the
11 system. They're just eliminated and it's assumed that all
12 documents would probably have all stop words.

13 So you're not interested in all the word accuracy
14 because there are, in most cases, on the order of a hundred
15 common words, like "in" and "the," that aren't even indexed.
16 What you'd like to know is what is the accuracy on all the
17 words that are not stop words, because those are the ones
18 you're going to put in your text retrieval system. Those
19 are the ones that can cause you trouble.

20 We have invented a metric called non-stop word
21 accuracy and, in fact, measured that for the same 460 LSS
22 pages. It's interesting to compare the last three graphs
23 I've showed you side-by-side on the same scale on the same
24 page. This shows a trend which we have observed is
25 consistent in all of our testing.

1 That is the word accuracy is always lower than
2 character accuracy and that non-stop word accuracy is always
3 lower than word accuracy.

4 MR. HOYLE: Tom, let me ask you a question.

5 MR. NARTKER: Yes.

6 MR. HOYLE: Of the number of pages that you used,
7 how many were in the quality group five versus group one?

8 MR. NARTKER: The groups are defined in such a way
9 that the number of characters in each group is approximately
10 the same. It's approximately the same. It's within a few
11 percentage points of being the same number of characters in
12 each of the five groups.

13 Another metric we've defined on these pages is
14 called marked character efficiency. This actually shows
15 what the raw output of accuracy is of each of the devices.
16 It shows if you go in and find all of the reject characters,
17 which is the first point on the curve, and you go in and
18 find all the characters marked suspect, which is the second
19 and third and fourth points, it shows you what accuracy you
20 can obtain on the ordinate of the Y axis, plotted as a
21 function of the total percentage of the characters that were
22 marked that you have to look at to do that.

23 So the further out you are here shows you how much
24 work you have to do. The further up you go here shows you
25 what you get for doing that work and using each particular

1 technology. Marked character efficiency is a new metric
2 we've introduced. These curves show rather graphically how
3 these devices perform in a new way.

4 Once again, the three top performers were, in
5 fact, Expervision, Calera and Xerox. They all produced --
6 now they're up to about 99 -- you can get 99.3 percent
7 accuracy. As of today, the best device produces about 99.3
8 percent accuracy on DOE data, according to our best testing
9 results.

10 This is another metric. You will find it as the
11 third paper in that annual report. This shows the cost of
12 correcting automatic zoning errors. I don't want to get
13 into a lot of details and talking about intricacies of these
14 technologies. If you're interested, we could talk about it
15 later.

16 This is a new metric we've never introduced. It
17 has never been published before. It's a brand new idea. It
18 is the first time that anyone has ever come up with a way of
19 measuring how good devices do when they try and
20 automatically zone -- provide decomposition of a document at
21 a high level.

22 When we talk about zoning in OCR, we're talking
23 about the action of finding the photographs and not trying
24 to OCR the photographs because maybe there's no text on the
25 photograph. Differentiating between photographs and graphs

1 and main body text and tables and organizing; if there is
2 three-column newspaper-style print, decolumnizing the three
3 columns so that the text reads column-wise down.

4 If it's a table, on the other hand, of data, you
5 don't want to decolumnize a table. So how good vendors do
6 and properly decolumnizing multiple column input text, but
7 not decolumnizing the tables was something very interesting
8 to us.

9 This particular set of graphs shows that. On
10 these 460 LSS pages, this shows the cost of correcting
11 automatic zoning errors for the eight technologies. The
12 interesting curves are here. These show the costs for
13 multi-column pages and the better people are down at the
14 bottom. Lower cost is better.

15 So for the technologies tested, there were a few
16 that did pretty good in decolumnizing multiple column text,
17 but only two vendors had properly addressed the question of
18 trying to recognize when it's a table and you don't want to
19 decolumnize. Those two vendors are shown here. If you're
20 interested, they were Expervision and Xerox.

21 Another kind of test we ran was to take the ground
22 true text in our database, the text we knew that was
23 correct, that was already on the pages, and generate ideal
24 perfect images of those pages using a postscript processor
25 on our UNIX machine.

1 That is we produced a perfectly clean set of
2 documents at 12-point albetica, 12-point typed Roman, and
3 another complete set of documents at 12-point courier, and
4 we tested each of these versus absolutely perfect images,
5 where there was no speckle and no touching characters
6 resulting from second and third and fourth generation
7 photocopy process or from the scanning process or from
8 coffee stains or anything else.

9 We generated virtually perfect sort of
10 mathematically or computer-perfect images inside the machine
11 and sent the perfect images off to each of the OCR engines
12 and measured how good they did.

13 One might expect, because it's clear that the
14 thing that gives OCR devices most trouble is degraded
15 images, photocopies, Xerox copies, because of that, that if
16 you generated mathematically perfect images inside a
17 computer, that the devices would -- maybe some of them would
18 do a hundred percent correct.

19 In fact, on this particular test, which is
20 reported as the third article, I believe, in that annual
21 report, we tested nine complete copies from the database,
22 10-point, 12-point and 14-point, courier, albetica and typed
23 Roman versus the eight devices. On this test, we don't
24 identify who is who.

25 But the most important thing you can see is even

1 for a very idealized situation of characters generated
2 inside a computer by a postscript processor, that today's
3 technology does not produce a hundred percent correct
4 accuracy.

5 In fact, in a fairly large number of cases, it's
6 not as good as 99.8 for very perfect characters. We also
7 have completed several projects in experimenting with text
8 retrieval systems. If you look in the annual report, you
9 will see there is a noisy data project reported where we're
10 trying to measure what effects a person using an information
11 retrieval system notices as the data in that system gets
12 dirtier and dirtier or noisier and noisier, has more and
13 more character error, at what level of character error does
14 the use of the system become unacceptable to a retrieval
15 person.

16 It turns out that kind of data is not known.
17 There is no -- there is a lot of folklore in the business
18 and a lot of speculation, but there really has been no
19 definitive report that gives any insight into the
20 relationship between errors in text and retrieval
21 efficiency.

22 So there's a noisy data project in there. There's
23 also a project attempting to use text retrieval to do some
24 global type correction. So we have several approaches to
25 improving accuracy besides the voting algorithm, which I've

1 already told you about, and one of them is described in our
2 annual report.

3 During these last two years of operation, we have
4 secured several other grants from other Federal agencies.
5 From the Office of Research and Development, we managed to
6 secure an additional 145,000 in 1991 and another 140,000 or
7 145,000 in 1992. This year we have secured support from the
8 Department of Defense to extend this work and to actually
9 begin doing this kind of testing on foreign languages.

10 We, in fact, this year have an additional \$790,000
11 to begin doing testing not only on English devices, but on
12 Japanese and Zorilic. So by January, we are committed to be
13 producing the kind of performance comparisons I have shown
14 you not just for English, but also for Japanese OCR devices
15 and for Russian Zorilic OCR devices.

16 At the same time, we have initiated an industrial
17 affiliates program where we have solicited support from
18 companies who do business in this area. A collection of
19 companies -- we have asked these companies to contribute
20 annual membership fees, \$25,000 each, to support our work.
21 So far, five companies have signed up. We have \$125,000
22 from industry and we have good indications there are three
23 or four more who are very interested. We expect to see
24 probably two more companies sign up between now and
25 Christmas.

ANN RILEY & ASSOCIATES, LTD.
Court Reporters
1612 K Street, N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

1 The brochure we have describing our affiliates
2 program is here. It's a little smaller and I have a few
3 more copies of that. Everyone can have a copy of that. You
4 can read that when you get time. That shows the benefits
5 and shows the goals of our research center. So you can,
6 indeed, learn quite a lot about us, what we're doing, by
7 reading carefully the annual report and that industrial
8 affiliates program brochure.

9 In addition to that, we, as I told you at the
10 beginning, sponsor an annual symposium on document analysis
11 and information retrieval. It's the only symposium that's
12 dedicated to both subjects at the same time and the
13 interaction between recognition accuracy and retrieval
14 effectiveness.

15 Most academic researchers work in one area or the
16 other and very few have considered that the two areas, in
17 fact, are intimately connected. We believe our symposium is
18 starting to be very successful because of this specific
19 feature.

20 The first annual symposium was in 1992 and, in
21 fact, I have a -- I just brought one copy of the
22 proceedings. This is the proceedings from our 1992
23 symposium, which was held in March of 1992 at the Tropicana
24 Hotel. Our 1993 symposium grew a little bit. It was held
25 in April of this year at Caesar's Palace. The 1994

1 symposium is scheduled for April 11 at Alexis Park.

2 Papers are arriving as we speak. We have about 38
3 submissions so far. We expect about 50. Approximately 30
4 to 35 of the papers will be accepted for presentation.

5 We currently have participation from ten foreign
6 countries and we expect about 200 people at this symposium.

7 Finally, we think the most profound evidence which
8 our annual technology assessment test program has had is in
9 the product improvements made by OCR vendors between 1992
10 and 1993. In fact, I told you we did -- and I showed you a
11 curve when we started showing the performance of devices in
12 1992. Subsequently, I have shown you some more graphs
13 showing the performance of devices from some of the same
14 vendors in 1993.

15 It's worthwhile to ask, well, the data you used to
16 test in 1992 was different from the data you used to test in
17 1993. The data we tested with in 1993 was a great deal more
18 -- was several times more, 817,000 characters instead of
19 278,000.

20 But you might ask how did the competing vendors do
21 between their 1992 products and their 1993 products. In
22 fact, there was very significant improvement. In 1992, five
23 of the six participating vendors were Care, Calera,
24 Expervision, Recognita and Xerox. The version tested was,
25 as you will remember, the RS-9000, the Curswile 5200, and so

1 forth.

2 The actual number of errors made on the 1991 data
3 -- that is the 278,000 characters in 1992 -- are shown in
4 this table. The number of errors made by the Calera RS-
5 9000, I told you, was 3,600. It was actually, in fact,
6 3,709. The number of errors made by the second device,
7 which I told you was the Xerox Curswile 5200, was 4,716.
8 The third device was Expervision, 6,318. Of course, the
9 worst of this five was the Recognita device, 11,282
10 character errors.

11 We took the 1993 version of the Care product and
12 the Calera product, the 1993 version of each of these
13 products, and we ran the same data across that to see how
14 many errors would be produced by the 1993 products. In
15 every case, in every single case, the improvement was
16 greater than 25 percent. There was more than a 25 percent
17 reduction.

18 In one case, one vendor, in fact, reduced the
19 number of errors by 52 percent between his 1992 product and
20 his 1993 product.

21 We know from talking to the technical staff of
22 these companies that we at least have a little bit to do
23 with that, because until UNLV began to do these tests and
24 publish them nationally for the world to see, it was quite
25 invisible how good the products were and how they compared.

1 Vendors could make assertions and it was -- PC
2 Magazine could run a test on four pages of maybe 2,000
3 characters, which was simply not sufficiently -- not a
4 sufficient sample size to be statistically significant.

5 So until we began to establish a system which
6 would compare the performance of devices on millions of
7 characters at a time, management was not motivated to spend
8 money on product improvement. Management was motivated to
9 bring their products out on more platforms, to conduct more
10 expensive advertising campaigns, to build more glitzy color
11 graphic interfaces to their products, to give expensive
12 demonstrations of conducts and other kinds of shows, but
13 they were not particularly motivated to invest a lot of
14 money in product improvement.

15 We think it's changed and we think we have
16 something to do with it. Perhaps in the long run, the most
17 valuable service we provide to the industry is in doing that
18 kind of thing and we hope to continue.

19 Any questions?

20 MR. HOYLE: Tom, did the cost of the products go
21 up very much between --

22 MR. NARTKER: Actually, it went down very
23 significantly. We paid -- when we got started, we paid
24 \$21,000 for the Curswile 5200. We still have it. A much
25 better product exists today. It's the new PC Stanwards

1 product that costs \$99. You could buy it yourself, \$99. It
2 is much better, more than 25 percent better than the
3 products which less than two years ago we paid \$21,000 for.

4 We paid \$30,000 for the Calera RX-9000. You can
5 now buy technology from Calera for well under \$1,000 that's
6 better, much better than the Calera RS-9000. That pattern
7 holds true across the market.

8 The market prices are changing certainly yearly,
9 maybe every few months. The market is very dynamic. The
10 thing you might not recognize is that the need for OCR
11 technology is probably greater than what you're aware of, if
12 you haven't paid a lot of attention to this kind of market.

13 What we really need is a Xerox machine where every
14 time you take a document up to the Xerox machine, the
15 machine first prompts you when you put the document in do
16 you want a paper copy of this document or do you want a
17 floppy disk copy of this document in ASCII text or do you
18 want both, because, in fact, almost every document you work
19 with, you'd really like to have it available on your PC so
20 you can manipulate the text and so you can make use of it
21 and other documents, so you can electronically forward it to
22 you friends.

23 Information in electronic form is significantly
24 more valuable than in paper form. The market is felt to be
25 about to explode. Think for a minute about the market for

1 Xerox machines. How big has the market for Xerox machines
2 been for the last over 30 years versus how big the market is
3 for OCR devices?

4 Most vendors believe that the measure of the
5 ultimate market for OCR technology is, in fact, the size of
6 the current Xerox machine photocopy market, which is huge.

7 Thank you.

8 MR. HOYLE: Thank you very much, Tom. George, are
9 you ready for your presentation?

10 MR. HALLNOR: What I will do here today is to very
11 briefly discuss a little bit of a study we did on text
12 information management systems, and that has a potential
13 component for InfoSTREAMS and also the LSS in terms of the
14 text search capability.

15 Specifically, I want to address why we undertook
16 the systems study here, what we view the concept of errors
17 against text in InfoSTREAMS and also anticipated in the LSS,
18 what the evaluation criteria was, and what we recommend for
19 a follow-on study.

20 It's very clear that a very rapid comprehensive
21 free text search capability is essential for both
22 InfoSTREAMS and the LSS. Free text search happens to be a
23 key component in what is known as the text information
24 management systems offered by a number of vendors.

25 The technology is changing very rapidly. So the

1 reason we wanted to take a quick look at this right now is
2 we wanted to get some baseline on what is out there and then
3 follow the technology over the next year or so to see what
4 we actually then want to build into the InfoSTREAMS and into
5 the LSS.

6 What we need to do in the selection of the product
7 is balance the features against both InfoSTREAMS and LSS
8 functional needs, the characteristics of the queries in
9 InfoSTREAMS and LSS, and, of course, we believe that the
10 queries will be different in the two systems and also, of
11 course, the architecture of the InfoSTREAMS is something we
12 haven't taken into account.

13 We started this study looking at the most
14 promising candidates to support a free text search
15 capability. Over 50 commercial products were identified and
16 the 50 established the 16 potential inclusion of the
17 architecture.

18 The evaluation resulted in four products that
19 ranked the highest in terms of satisfying the potential
20 constraints of InfoSTREAMS and LSS, as we see it, and then
21 would be suitable for integration in that architecture.

22 MR. SILBERG: When you talk about the need for a
23 rapid free text search, what criteria did you use and how
24 rapid is rapid and what was that based on?

25 MR. HALLNOR: We did not have a real scientific

1 means to identify that. We looked at search times for what
2 we considered a reasonable query that would give you been
3 ten and a hundred hits on the database of at least five
4 million pages, in the range of 30 seconds to two minutes to
5 find those hits doing a free text search.

6 In terms of the architecture, on the left, you see
7 the users that are connected to this text search complex,
8 server complex, either through dial-up, through local area
9 network. The query would be entered into the query server
10 system, which is another part of the picture.

11 An accessor will be queried when you -- when the
12 query server receives the user request for information, the
13 accessor will verify the user indeed has a right to do the
14 search. The query will be issued into both the document
15 header database, because there may be queries that are more
16 of a key word search, author, data, generation, specific
17 titles and so forth, and that can be handled obviously by
18 the database, and a full text search will be conducted with
19 constraints that are imposed by the query itself.

20 The text search engine would be a system that is
21 loosely coupled with the rest of InfoSTREAMS and it has its
22 own free text database that has been downloaded from the
23 document storage.

24 So the free text database we have is really a copy
25 of the originals that they have in our document repository.

1 So the data in this search system is not the data that you
2 would get back. It is actually referenced -- the queries
3 are referenced back to the header database and the header
4 database will be used to pull out the information you wanted
5 out of the document repository.

6 So we will always be assured that what we call the
7 original is actually what is going to be seen. Before we
8 started the evaluation, we identified a number of evaluation
9 criteria, and I will touch upon a few of the key areas.

10 Clearly, the criteria were selected to reflect the
11 use of InfoSTREAMS functional requirements, actual type of
12 experience, what had to be done, and also architecture and
13 life cycle concerns that were at issue.

14 As I mentioned, the initial product list had 50
15 products in it. We collected vendor information on that and
16 evaluated suitability of the product. The first cut
17 eliminated products that did not functionally address the
18 problems with InfoSTREAMS and LSS and also, of course,
19 things that were incompatible with the architecture.

20 Therefore, products that were mainframe oriented
21 and products that were only based on a personal computer
22 were not included in the set that we were looking for. So
23 there were 16 after the first weeding out of the vendor
24 offers.

25 Of those 16, six were eliminated for technical

1 reasons. They did not have certain query type capabilities.
2 They did not have the application program interfaces that
3 were required to integrate into the architecture or
4 something of that nature, or they were eliminated for
5 corporate viability reasons.

6 There are a number of products out there that
7 essentially are offered by a one-man company and we think
8 that is a little bit too risky for our needs in this
9 environment.

10 Then with the remaining products, what we did is
11 we evaluated each one and scored them against what we
12 considered the criteria. A key evaluation criteria is the
13 application interface, because we don't want a product that
14 is sold as an encapsulated product, where you can't use
15 interface and text search and the document management system
16 as one entity which cannot be broken apart.

17 The reason for that is we would like to keep the
18 common consistency of the user interface so there's not an
19 abrupt change in how the system operates in going from the
20 document integration, from the document routing and for
21 concurrence, and also for any other normal database queries
22 that we have already set up in InfoSTREAMS.

23 Also, of course, the application program interface
24 allows us to tailor the product in a manner that it fits
25 into the client server architecture that industry is using

1 at this time.

2 The client server support is obviously an
3 important factor. We would want the product -- to
4 understand the concept of client server as an inherent part
5 of the product and use a PC workstation for the clients.

6 Many of the information management systems out
7 there are UNIX-based systems, assuming an X terminal as the
8 client side rather than the PC. So that is an issue we have
9 here. The UNIX-based is something that is substantially
10 more costly and not as user-friendly as the PC as we'd like
11 to see that in the system.

12 The other thing we looked at very carefully is we
13 want to have the capability on the server side to expand the
14 system to address large databases through -- we can section
15 free text search into searches of multiple independent
16 databases concurrently to reduce the wait time that an
17 individual researcher would have to experience on the access
18 of data.

19 Another key criteria, of course, was the
20 capability to handle the query volumes expected in
21 InfoSTREAMS and LSS. The baseline we used there was, of
22 course, what we know we will have within InfoSTREAMS in
23 terms of its holdings and we also used the study, the SAIC
24 study in terms of estimating the number of pages that will
25 be on-line at certain times through the life cycle of this.

1 It's clear that both InfoSTREAMS and LSS are
2 rather large applications for this. LSS text holdings, the
3 text is estimated to be in excess of 100 gigabytes. There
4 are very few systems that have been put in place today out
5 there that uses that.

6 The other curious thing is the performance data is
7 very hard to get and that the industry, as such, has no
8 really established benchmarks. So there's a lot of hearsay
9 and there's this particular application here, but those
10 applications may or may not be relevant in LSS.

11 MR. BALCOM: Are there any client server
12 applications, to your knowledge, that are this size?

13 MR. HALLNOR: No, not as far as we know. The
14 strongest client server support was from a product called
15 Falcrom, which has a very large marketshare. They have
16 marketshare in that they have the search end in CD-ROM
17 that's used to distribute large databases and so forth.

18 But they do have the architectural concepts and
19 they also have an understanding of the issue of parallelism
20 and those things. There is, to my knowledge, nothing of
21 this kind of architecture. There may be some mainframe
22 systems that have this size.

23 MR. BALCOM: The reason I ask is because this is a
24 departure from the old study, not that anybody is wedded to
25 the SAIC study.

1 But eliminating mainframe only software, we're in
2 a different ballgame, it seems to me.

3 MR. HALLNOR: That's correct. But on the other
4 hand, there's a lot of systems being built today that are
5 heading this way. In the medical and insurance worlds,
6 these kinds of systems are coming in to search and they have
7 very large databases, too. So I think that we're not the
8 pioneers necessarily, but we're certainly at the edge of
9 what's out there.

10 MR. ALEXANDER: Actually, there is at least one,
11 Chemical Abstracts. They are messenger systems that run on
12 distributed processors. The 39.50 client server. We use it
13 on about 400 gigabytes.

14 MR. BALCOM: What's the software?

15 MR. ALEXANDER: They developed it. It's called
16 their messenger software.

17 MR. BALCOM: And was that one of the systems that
18 you looked at?

19 MR. HALLNOR: No, it was not. That is not a
20 commercial product.

21 MR. ALEXANDER: It's a license software product.
22 You can buy it. We bought it.

23 MR. HALLNOR: I don't recognize it as a thing we
24 might have looked at.

25 MR. BALCOM: Also, Dan, may I ask you is this a

1 --could we get a copy of this study? Could you make this
2 study available to the ARP? I'm a little bit concerned
3 about the mainframe -- the distinction between the mainframe
4 and the client server world and I personally would feel
5 better if I knew more about this.

6 MR. HALLNOR: These aren't distributed yet. It's
7 not mainframe oriented.

8 MR. GRASER: Let me respond to that. There's a
9 certain sensitivity about the study itself because we
10 actually went through the drill of assigning various weights
11 and scores that -- we just have not made a public
12 distribution of that.

13 Furthermore, we're probably approaching a point
14 where we need to make a decision in terms of procurement
15 activity. So certain sections of the report certainly; the
16 discussion sections of the various capabilities of the
17 software. So perhaps with having the opportunity to look at
18 it and ensure that we don't go out and compromise our future
19 activities, we could probably do that, yes.

20 MR. BALCOM: I think it's something that the ARP
21 ought to take a look at in terms of -- because of the fact
22 that for InfoSTREAMS, it might serve you very well, but when
23 you add -- when you multiply the volume by 600 percent or
24 1,000 percent, it seems to me that it's something we ought
25 to be looking at.

1 MR. CAMERON: Boyd, as a point of information, in
2 your system, you used advisory panels.

3 MR. ALEXANDER: We had an industry advisory panel.

4 MR. CAMERON: I'm just wondering how we handle --
5 this is going to come up probably time and time again about
6 how do we handle the sensitivity of information, like Dan is
7 pointing out, and still have the panel involved in
8 decisionmaking.

9 I know in operating in the procurement context,
10 there's going to be a lot of those types of issues. I
11 wondered how you might have handled it at Trademark.

12 MR. ALEXANDER: We had the Institute share the
13 panel and then they got people who were involved in the
14 standards of whatever technology you're looking at. We got
15 major -- ten co-representatives from industry. We had ten
16 different incorporation experts who had done it before, not
17 people who had heard about it or read about it, but who had
18 done it, come in and they came to us twice.

19 They spent three days one time, came back a year
20 later for another three days. This is looking at what we
21 had done and the progress we had made, gave us advice on
22 what technology to use and not to use, completely unbiased.
23 They were only paid their expenses. So there was no
24 consulting fee. We paid them \$150 a day for three days
25 each. That turned out to be invaluable.

1 They gave us a thumbs-up on part of our design and
2 suggested major changes in others and it was fairly cheap.

3 MR. CAMERON: Did they have access to material
4 that would --

5 MR. ALEXANDER: We gave them all the information
6 about a month ahead of time, all of the requirements, all of
7 our technical papers, etcetera, and then we had a library
8 there for them and then we had a lot of text searchable
9 information, as well. They had free access to that. They
10 made a non-disclosure agreement.

11 MR. CAMERON: So that's how you -- they signed a
12 non-disclosure agreement.

13 MR. ALEXANDER: Yes. It was a sanctioned advisory
14 panel through GSA. It took us about four months to set it
15 up. It was chaired by Jim Burroughs at NIST, National
16 Institute of Science and Technology.

17 MR. HOYLE: Were the meetings closed?

18 MR. ALEXANDER: They were closed to -- I guess
19 vendors were not involved. It was just them and the staff
20 and our own vendors at the time who were doing the work, but
21 other outside vendors were not allowed.

22 It was very profitable. It paid off very nicely.
23 And you have an unbiased report. None of these people were
24 -- one of the key things in selecting the members were that
25 they weren't going to do business with us. So we had

1 insurance companies, we had some aircraft corporations,
2 things like that, and these were people who had similar
3 problems and they solved it in whatever method at that time.

4 The technology has changed. That was in 1988 and
5 1990, but the concept works, I think, very well.

6 MR. CAMERON: I guess that's one thing we'll have
7 to keep in mind for the panel's operation in the future, how
8 we handle that type of sensitive procurement information.

9 MR. GRASER: I think what you are doing is
10 probably verbalizing, the first time I've heard it, a need
11 for the panel to have independent technologist resources
12 available to them, if, in fact, the level of -- I mean, we
13 have a certain comprehension here within the group, but some
14 of the things that we are talking about here, if you really
15 wanted to know the inside skinny, you would say let us have
16 access to some sort of technologist group.

17 It could be an individual, it could be an advisory
18 subcommittee or whatever the case may be. Maybe that's the
19 thing that's surfacing here in this discussion.

20 MR. SILBERG: It doesn't necessarily have to be
21 this group. I would feel confident if DOE or the M&O went
22 out and got a group like, let's say, that you put together
23 that is unrelated to the program, but has actually faced
24 these problems.

25 I don't think the people around this table, except

1 maybe Kirk and you guys, we certainly, between Chris and I,
2 don't have that kind of expertise. I'd feel much more
3 comfortable with the people who had really faced these
4 problems, and I would want you on that panel as someone who
5 has faced that problem.

6 But I am concerned, George, with your statement
7 that you are not aware of the one system that's up and
8 running that actually is of the size we're talking about.
9 That tells me that we're missing something. With the
10 investment that's being made, we need to make sure we have
11 access to all the stuff out there that's really relevant.

12 I'm concerned that we don't have that today.

13 MR. CAMERON: It's one of the values of the
14 Advisory Review Panel, as pointed out, that this type of
15 information comes on.

16 MR. SILBERG: But as I said, I don't think that
17 needs to be something that's a part of this panel or an
18 adjunct to this panel, but it sure would be nice to have it
19 done.

20 MR. CAMERON: Well, we can't advise on
21 procurements anyway in the way that some people are talking
22 about. I don't we can.

23 MR. ALEXANDER: This wasn't so much related to
24 procurement. There was a question about our system that was
25 raised by OMB and it was a goldplated, was it going to do

1 the job, would it work when we scaled it up from our test
2 bed to full size, what's the likelihood of it failing, what
3 would the performance be, would it be slow.

4 I happen to think some of the timings I'm hearing
5 here are very slow for text searching. I would think
6 anything over a second for text searching would be
7 unacceptable. At least in our world it is.

8 MR. MURPHY: Over a second for what?

9 MR. ALEXANDER: Response time. When you put in a
10 query to a text database, to wait 30 seconds or a few
11 minutes is -- I wouldn't --

12 MR. MURPHY: Not for my purposes.

13 MR. ALEXANDER: It depends on what your purposes
14 are. But if you do that and you're doing it many times over
15 a large database, after a while, you get tired.

16 MR. MURPHY: For your purposes --

17 MR. ALEXANDER: Yes, for our purposes.

18 MR. MURPHY: It wouldn't work.

19 MR. ALEXANDER: It depends on your requirements.

20 MR. SILBERG: For instance, on this chemical
21 abstract system, are they on a one-second delay?

22 MR. ALEXANDER: It's less. It's about seven-
23 tenths of a second.

24 MR. BALCOM: Is that a full text system?

25 MR. ALEXANDER: Full text, complete inverted file,

1 all except the stop words, go in search capability. But
2 it's a license product. That isn't one we developed and we
3 wouldn't want one. They developed for their chemical
4 abstract databases.

5 MR. BALCOM: Wasn't one of their components part
6 of the original PTO system?

7 MR. ALEXANDER: It was one of the original parts.
8 That was one them that passed muster when the review team
9 looked at it, because it was optimized for search. Now, I
10 don't know a lot about InfoSTREAMS, but I get the impression
11 that it's optimized for document handling, document
12 creation, and not for text search and they're getting ready
13 to add a text search capability.

14 So now is a good time to look at text search
15 systems meeting your requirements. You certainly pay more
16 for a higher performance system. There's no question about
17 it.

18 MR. MURPHY: Of course you do.

19 MR. HALLNOR: Of course, part of the performance
20 issues were the type of volume and retrievals available
21 there and we certainly want to have all the standard things
22 in there.

23 We also felt that advanced retrieval methods were
24 important and those are beginning to get integrated into
25 these commercial products right now, things like expansion.

1 There's a thesaurus that you can add to the search. For
2 example, match searches are going to increasingly important.
3 I think that sample may be something that LSS people would
4 use significantly. That allows you to extract documents of
5 similar content very easily.

6 The other thing we looked at also, which -- of
7 course, many of these products are an integral part of a
8 close products. In some instances, we may have a product
9 that has a very good system demonstration feature, but
10 something that may not necessarily integrate well into the
11 InfoSTREAMS architecture.

12 But we are looking at things like on-line backup
13 and indexing, the support recovery, the audit transactions
14 in the text search, collecting of statistics, security and
15 access. Some of those, of course, may fall outside of the
16 InfoSTREAMS architecture and outside of text searching
17 itself.

18 The products -- the evaluation resulted in the
19 four highest ranked products and they were very close, the
20 way we did our judgment, and they are listed here in terms
21 of alphabetical order. Comquest Software, Incorporated is
22 newly started up. They have about 30 individuals in the
23 company and they have some very novel techniques.

24 So they are a very interesting concept, especially
25 in advanced retrieval. The technology and information

1 dimensions are known now in this world. They have solid
2 systems on the market that actually use a variety of
3 applications and they have a larger marketshare than the
4 others listed here. Ameritech, Incorporated now has a very
5 nice product that works well for this kind of application.

6 The one thing I want to stress is that this was a
7 preliminary study to just get variance and obviously other
8 systems should be looked at, too. So the selection has not
9 been made.

10 Our suggestion is that we do some more in-depth
11 technical discussions with vendors out there to look at how
12 well these products will integrate in the InfoSTREAMS
13 architecture and, above all, also get a better handle on the
14 performance characteristics within the world that we live
15 in.

16 What I think we have to do is get down to the
17 point of trying to get sample databases that they can
18 possibly load up in their own systems and test against them,
19 but it's very hard to do that.

20 So that's where we stand today. Are there
21 questions?

22 [No response.]

23 MR. NARTKER: I meant to invite any of you who
24 have time this afternoon, after you adjourn this meeting,
25 after lunch, if you'd like, drop by the university and visit

1 our lab. You're certainly welcome. We'd be glad to conduct
2 a little tour for anybody who is around.

3 If you'd like, please let me know or just come on
4 by. My office is in Room B-382. Our lab is in -- we're in
5 the Engineering Building. Our lab is Room B-333 on the
6 third floor. We'd be glad to invite you. If you'd like to
7 wander around, we'll give you a short tour.

8 MR. HOYLE: Thank you, Tom. Why don't we take a
9 break now and come back and talk about the topical
10 guidelines.

11 [Recess.]

12 MR. HOYLE: I think all the members are back in
13 the room. Why don't we try to get started again, please.

14 Let me make an announcement. First, there are a
15 few in the room who are going out to Yucca Mountain
16 tomorrow. There will be a DOE bus arriving here at the
17 lobby entrance at 6:45 tomorrow morning, 6:45. It's going
18 to leave promptly at 7:00. There are eight or nine or ten
19 of us going out there who need to be ready to leave at 7:00.

20 The topical guidelines is the discussion we want
21 to turn to now. Mr. Murphy suggested that we do this
22 yesterday. I would like to note that I didn't bring very
23 many copies along, but I had sent it out to the members when
24 I sent the paper and the Commission position on the
25 Alternative 3. I think that letter was dated June 14 and I

1 sent the topical guidelines along at that time.

2 The announcement of availability of the draft
3 topical guidelines for comment then appeared a month or so
4 later, July 27, 1993, in the Federal Register. The document
5 itself is dated July. So we did try to get it into the
6 hands of the Committee members, but I did not specifically
7 ask for comments back to me.

8 But with that as background, let's talk about
9 them. Mal?

10 MR. MURPHY: Yes. I don't think this is going to
11 take very long. One of the reasons I brought it up was
12 procedural, John. It seems to me that one of the functions
13 of this Advisory Review Panel, certainly a function we
14 performed in our meeting in Reno in 1991, I guess it was, or
15 1990, was to review the topical guidelines and we went
16 through a very, very heated process of providing input and
17 advice to the Commission staff on them.

18 I just assumed that when the draft NUREG was
19 issued and the new topical guidelines were proposed that as
20 a matter of course, they would be brought back to this body
21 for its outside the Federal Register notice and comment sort
22 of process, that they would be brought back to this body to
23 see, for example, whether or not the later that Jay Silberg
24 so carefully drafted and which you then turned into the memo
25 to Bob Bernero had been responded to the way we hoped it

1 would be.

2 So I was surprised to see that the topical
3 guidelines were not on the agenda and that's why I brought
4 it up.

5 Substantively, I hope, at least, that the concerns
6 we raised at the meeting in Reno and which you expressed to
7 Bob in your memorandum have been addressed in the new draft
8 of the topical guidelines, but I need to clarify that. Chip
9 may be the one to answer this or maybe Joe Hallanich.

10 The argument was over primarily the exclusion of
11 environmental information and transportation information.
12 That has now apparently been included in the topical
13 guidelines and I need to satisfy myself that there are no
14 limitations on the environmental or transportation
15 information that the topical guidelines will encompass.

16 Let me just ask that question. Are we referring,
17 for example, to national transportation information, all
18 transportation information that the Department of Energy
19 relied on in drafting its environmental impact statement?
20 That appears to be what is said.

21 MR. CAMERON: The inclusion of the environmental
22 and transportation issue is tied to the adoption of the EIS.
23 I think that what's included follows from that premise; in
24 other words, keying on the scope of the Department's
25 environmental impact statement.

1 I would recommend, though, that as individual
2 members of the panel comment on the topical guidelines, that
3 they be very, very specific about their concerns in that
4 regard so that we can directly address any of those
5 concerns.

6 MR. MURPHY: How about environmental? At one
7 point in time in the topical guidelines, the socioeconomic
8 information was included. That is not -- that's gone now,
9 but the environmental information is in there, as well as
10 transportation. Does environmental information include the
11 socioeconomic environment? Is DOE going to -- and us --
12 going to be putting socioeconomic information into the LSS?

13 MR. CAMERON: I guess, again, that turns on what
14 the scope of the Department's environmental impact statement
15 is going to be.

16 MR. MURPHY: Well, they have to address
17 socioeconomic. They can't draft an environmental impact
18 statement without socioeconomic information, unless they
19 want -- that's a guaranteed reversal.

20 MR. CAMERON: Then I would think that that would
21 be within the scope. But comment on that and let us clarify
22 that.

23 MR. MURPHY: I think that's probably going to be
24 necessary. I think the NUREG itself should indicate that
25 the term "environment" includes the socioeconomic

1 environment.

2 MR. CAMERON: Rather than just the birds and --

3 MR. MURPHY: The physical environment.

4 MR. CAMERON: -- bunnies.

5 MR. MURPHY: Right.

6 MR. CAMERON: I think the analogy is that if we
7 weren't adopting the Department's environmental impact
8 statement -- and I guess this is the issue. If we weren't
9 adopting the environmental impact statement, if we were
10 preparing an environmental impact statement on our licensing
11 action, what would be in the NRC's environmental impact
12 statement? What should be in the NRC's environmental impact
13 statement on more licensing action?

14 I think that we need to further clarify that.
15 Robert?

16 MR. HOLDEN: Included in the socioeconomic studies
17 should be, in bold letters, cultural resource management
18 issues, because that's been quite an issue for tribes,
19 particularly in the Yucca Mountain Project Office area.

20 MR. CAMERON: Good point, well taken.

21 MR. HOLDEN: With tribal advisory boards, the
22 whole nine yards in terms of cultural resource management
23 issues.

24 MR. SILBERG: I think that the basic philosophy
25 has to be that any information that's going to be developed

1 to answer environmental issues in the NRC process or which
2 is relevant to that needs to be in the system.

3 This wording, looking at it, may be a little too
4 restrictive, because it talks about the issues are limited
5 to those needed to determine whether it's practical to adopt
6 -- for NRC to adopt the EIS. I think the bottom line is
7 whatever is in the NRC EIS, all that information and what
8 leads up to it needs to be in the system.

9 MR. CAMERON: You mean in the DOE --

10 MR. SILBERG: No, no. In the NRC EIS and to the
11 extent that the DOE EIS is adopted.

12 MR. BECHTEL: Since that appears to be -- the
13 environmental appears to be open to interpretation right
14 now, would it be any -- I know at one time, we had a section
15 that specifically said socioeconomic. I would recommend
16 that, as a representative of an affected local government,
17 that we would like to have it included as a separate section
18 again.

19 MR. SILBERG: Right now they just have the one --

20 MR. BECHTEL: I know.

21 MR. SILBERG: -- line that says environmental.

22 MR. BECHTEL: Yes, I know. And that's open to
23 interpretation. If, in fact, it does encompass the entire
24 EIS, I guess it would be part of it, because that's part of
25 the scoping. But it's no real clear as noted.

1 MR. BAUGHMAN: Mal, I think it's also important to
2 note that the EIS would also include transportation. The
3 transportation is broken out as a distinct topic. It was my
4 sense that in the last couple of years, whenever we were
5 working hard together, that we had reached some general
6 consensus on the inclusion of socioeconomics explicitly and
7 now we see that it's been taken out and I'm not quite sure
8 why.

9 MR. SILBERG: I think the only reason it's been
10 taken out is because they've put in a one-liner which they
11 think is global or at least --

12 MR. CAMERON: Yes. That's the idea.

13 MR. MURPHY: I think Chip assumes that
14 socioeconomic information is subsumed, and Joe is nodding
15 his head, is subsumed within the phrase "environmental." I
16 just think that that ought to be made clear. We'll include
17 that in our written comments.

18 MR. BAUGHMAN: I guess the other thing I'm curious
19 about is the inclusion of environmental issues seems to be
20 kind of couched again in letting us figure out whether or
21 not it's practical to adopt EIS. It seems to me as though
22 the parties that might become party to the actual licensing
23 process may challenge other aspects of licensing, like the
24 risk assessment work, which would involve population
25 exposure and some of these things which would come back to

1 economic demographics of population kinds of issues.

2 I guess I'm a little concerned that the only
3 perhaps justification for including environmental issues is
4 couched in determining whether or not we adopt the EIS.
5 There may be a lot of other reasons to consider
6 environmental issues and, particularly socioeconomic issues
7 as different aspects of licensing are challenged.

8 MR. SILBERG: That would fall, as I read this,
9 under other parts of the analysis, like the 5.3.3
10 consequence analysis for radioactive releases. That
11 obviously has to include your doses in the individual
12 population, which obviously has to include where is the
13 nearest person and where are your populations and where are
14 your projected populations out however long you want to go
15 out.

16 MR. CAMERON: I would agree with Jay on that,
17 Mike. I think that your point is just another example of
18 why it is efficient to put the environmental information and
19 environmental, in the broad scope, into the licensing
20 support system.

21 MR. SILBERG: I do have a question on the
22 guidelines. I don't know if you can answer it, Chip. In
23 1.10, where it says information relevant to NRC findings
24 regarding compliance with statutes other than, and then it
25 says the Atomic Energy Act, Energy Organization Act, the

1 NWPA, and then it adds like the American Indian Religious
2 Freedom Act and the Endangered Species Act, but it doesn't
3 list NEPA in either the first group of statutes or the
4 second group of statutes. I'm just curious as to why NEPA
5 is --

6 MR. CAMERON: So you found a hole in this. No.
7 The idea there, Jay, is that often the compliance with other
8 statutes, such as Endangered Species, American Indian
9 Religious Freedom Act, is all wrapped up in the NEPA
10 compliance document. We didn't mean to exclude NEPA there
11 and we better spell that out.

12 MR. SILBERG: I just think your primary set of
13 statutes on which NRC findings are required --

14 MR. CAMERON: NEPA should be up in the front.

15 MR. SILBERG: I would think NEPA ought to be
16 included in there.

17 MR. CAMERON: Good point.

18 MR. HOYLE: Any other comments?

19 MR. BALCOM: I have a small issue I want to raise
20 on behalf of the state. I'm doing this on the basis of
21 incomplete information. It won't take but a second.

22 The state is attempting to depose some scientists
23 now and there is a concern -- Harry Swainston has a concern
24 that there may be something in the rule or the topical
25 guidelines that would exclude those depositions maybe on the

1 basis of deliberative process or some other basis.

2 So I simply want to raise that concern. I've
3 talked to a couple people informally and there may not be an
4 issue there, but I want to put it out there anyway, having
5 said that.

6 MR. HENKEL: The state wants those definitions
7 inserted in the LSS?

8 MR. BALCOM: Yes.

9 MR. SILBERG: If those depositions take place.

10 MR. BALCOM: If the depositions take place,
11 there's a slight concern that they may not make it into the
12 LSS for some reason. Once again, I don't have the whole
13 story here.

14 MR. HOYLE: Whose documents would they be?

15 MR. BALCOM: Well, they would be the state -- the
16 state would take the depositions.

17 MR. SILBERG: The state can put them in.

18 MR. BALCOM: Right, but there may be a
19 deliberative process problem.

20 MR. SILBERG: If there is a privilege, then it
21 goes in under the rules in Subpart J that deal with
22 privilege.

23 MR. BALCOM: And since Harry's --

24 MR. SILBERG: I'm not sure I understand why that

25 --

1 MR. MURPHY: Well, I think he must be concerned
2 about exhibits to those depositions, memoranda and stuff
3 that these scientists may have written.

4 MR. SILBERG: If those memoranda or statements
5 that they make are somehow privileged, we'll already have
6 developed some procedures to handle privileged information.
7 I would think those procedures probably will work.

8 MR. MURPHY: But, again, the privilege attaches to
9 the scientist in that case, if there is one. If the state
10 can get its hands on that memorandum, the state can put it
11 in the LSS, if it's got it, if it's successful in taking the
12 deposition.

13 MR. SILBERG: But it may be in the LSS with a
14 privilege flag attached to it is all I'm saying.

15 MR. CAMERON: I would agree with what Jay and Mal
16 are saying. Again, speaking from even less information
17 perhaps than Kirk has, I thought that the problem was that
18 the Department of Justice might have raised concerns about
19 those depositions going into the LSS.

20 MR. BALCOM: Could be. Harry is not here, so I
21 can't give you the full story. We may address it in the
22 comments somehow.

23 MR. HOYLE: Okay. I would remind the members that
24 although I would include your comments on the topical
25 guidelines in my own writeup of the meeting, but comments

1 should also be sent by you as individual organizations to
2 the agency. There is an address and everything for that.
3 It would be most helpful if they were received by the end of
4 October.

5 Any other business to talk about before we go back
6 over where we are and what we want to do?

7 [No response.]

8 MR. HOYLE: Let's talk about where we are and what
9 we want to do. The issue of control was raised yesterday,
10 control of non-DOE participants' documents. I think we
11 ought to see if there's more to discuss on that today.
12 Otherwise, I think we -- we left it that we would owe the
13 Committee members some additional information. I think
14 let's clarify exactly what information members might want to
15 help decide within a couple months, if that timing is all
16 right by DOE, that Alternative 3 or some variation of it is
17 the way to go.

18 DOE needs to get going on its design now. So I
19 open the floor for discussion.

20 MR. SILBERG: Let me frame a question to Mal and
21 Kirk and Bob and anybody else who I think has or might have
22 had a philosophical problem with DOE control.

23 That is are there circumstances -- well, first of
24 all, does that philosophical problem still exist today?

25 MR. BECHTEL: Yes.

1 MR. SILBERG: Second, are there circumstances or
2 controls which you can envision which would sufficiently
3 alleviate that concern for you that you would be willing to
4 accept DOE control?

5 MR. MURPHY: I think that's what we need to talk
6 more about, but let me -- it seems to me we went through
7 this same analogy during the original negotiations, but let
8 me do that again. Let me analogize this to litigation,
9 which you and I might be more familiar with, Jay.

10 If we conceive of this as a large antitrust action
11 in which someone -- some plaintiff is suing the General
12 Motors Corporation and the Federal Court is going to decide
13 whether or not the General Motors Corporation engaged in
14 price fixing and the Federal Court says we're going to do
15 this by an electronic data and document information
16 management system.

17 So that all of the data that you guys generate
18 from each other in the course of discovery is going to be
19 handled electronically during discovery, as well as during
20 the trial itself. And we want you, the plaintiff, or we
21 want you, the defendant, General Motors Corporation, to turn
22 over your documents for entry into that system to the
23 plaintiff.

24 The Department of Energy here is the plaintiff in
25 my analogy. No way, absolutely no way, under any

1 circumstances, would, in any other context, a defendant be
2 required to give their documents to the plaintiff to input
3 into a system and manage that.

4 Using that sort of philosophical analogy, I cannot
5 conceive of any circumstances under which we who, in a very
6 loose term, may be considered in the same sort of position
7 as a defendant in litigation, would be willing to give our
8 documents to the license applicant for inputting into the
9 system.

10 MR. SILBERG: Let me put the question a little
11 differently or term the analogy a little differently. If,
12 in fact, there is discovery and you are asked by the
13 plaintiff to turn over all your documents, he will, in fact,
14 to the extent he receives those documents, put them into his
15 system.

16 MR. MURPHY: That's right.

17 MR. SILBERG: So the question is not so much are
18 you required to turn over your documents to the plaintiff,
19 but are you entitled and can you rely on using his system as
20 a way of searching those documents and his own -- and the
21 plaintiff's own documents, with some controls.

22 For instance, if EDS, the data processing arm of
23 General Motors, I think they still are, were being used by
24 GM to run their database, a kind of separate company, and
25 the defendants, as part of discovery, turned their documents

1 over to EDS and General Motors turned their documents over
2 to EDS and the Court appointed a special master to monitor
3 how EDS operated its database to make it available to all
4 parties and accuracy and all that stuff, that's, I think, a
5 little bit more the analogy that we're talking about here.

6 That still may not be acceptable and I can
7 understand that, but there are some differences and there
8 are some controls and it's not quite the same private
9 adversarial nature, because while DOE is the license
10 applicant, it is also a governmental entity which, I think,
11 puts it in a little bit different position.

12 In addition to its responsibility to its
13 shareholders, it's got political oversight, it's got public
14 accountability, etcetera.

15 MR. MURPHY: Have you read the public trust and
16 confidence report?

17 MR. SILBERG: Yes.

18 MR. MURPHY: Do I need to say anything more?

19 MR. SILBERG: I think you still need to respond to
20 the analogy.

21 MR. MURPHY: Let me just respond to that. I don't
22 mean to be directing this to any individual in this room or
23 in the Department of Energy, but this Alternative 3 is
24 asking the State of Nevada, Nye County, other affected units
25 of local government, American Congress of -- National

1 Congress of American Indians, individual indian tribes,
2 environmental organizations to turn over their documents and
3 to rely on a department for the accurate and timely
4 inclusion of those documents into the LSS, to rely on a
5 department which has, on more than one occasion, on numerous
6 occasions given parties such as I represent ample reason for
7 doubting the integrity of that department.

8 All you need to do is look at the proceedings of
9 the Secretary of Energy's Public Trust and Confidence Task
10 Force to understand what I'm talking about. We are not
11 willing to do that.

12 But you also have to keep in mind that what this
13 -- what we are talking about here is the result of a
14 compromise. The parties to the negotiated rulemaking gave
15 up their right to conduct hard copy discovery under
16 currently existing Nuclear Regulatory Commission discovery
17 processes, gave up their right to stretch this licensing
18 proceeding out for seven to ten to twelve years while we
19 looked at every single paper copy of data that was produced.

20 In turn for compromising away that right to hard
21 copy discovery, we got what we felt, at least, was an
22 assurance from the Nuclear Regulatory Commission that the
23 system which was going to manage the documents which the
24 Department of Energy produced, as well as the documents
25 which Nye County produces, would be under the control of the

1 neutral adjudicatory body, the Nuclear Regulatory
2 Commission; that we would not be required to turn over our
3 work product.

4 I'm not worried about the massive amounts of
5 documents that we get from the Department of Energy or from
6 Sandia or Livermore. I'm talking about the documents that
7 we ourselves produce, that we would not be required to turn
8 that work product over and rely on the Department of Energy
9 to input our documents before they input their own.

10 MR. CAMERON: Just a question, Mal. The concern
11 is somehow that the Department would deliberately input
12 those documents incorrectly. Is the concern that the
13 Department would not put those documents in in a timely
14 manner? Those concerns, I think, could be met through
15 controls.

16 MR. MURPHY: Well, they can be met through
17 controls, but, by the same token, you're asking those of us
18 on this side of the project to rely on government, to
19 control government in carrying out this function and in
20 protecting the rights of the affected units of local
21 government in the state.

22 We compromised down to the point where we said we
23 were willing to rely on the NRC as an independent regulatory
24 agency to do that. I think it's unreasonable to expect us
25 to compromise further or to accede to the -- and I want to

1 use this word advised now -- accede to the NRC's reneging on
2 that promise and requiring us to now accede to or agree to a
3 process that some of the parties in the negotiation, at
4 least, vehemently opposed in arriving at the consensus that
5 we all worked so hard to get.

6 The NRC has already on one occasion taken back
7 from some of the parties, governmental organizations, the
8 Indian tribes, etcetera, not so much the state and Nye
9 County, but in its second round of rulemaking in cranking
10 down on intervention and the timeliness of contention
11 filing, etcetera, they already took away half of the benefit
12 of the compromises that the environmental organizations and
13 the tribes and others made.

14 Now you're asking us to agree to give back some of
15 the other compromises that we got the benefit of. I am not
16 going to recommend to my principals in Nye County, the Nye
17 County policymakers that they agree to do that.

18 MR. SILBERG: Is the concern with the inputting of
19 the documents?

20 MR. MURPHY: The concern is in turning over
21 control of this system to the Department of Energy.

22 MR. CAMERON: There's two issues here. One is the
23 integrity of document input and the second issue is control
24 of the system. You indicated that there may be a way that
25 controls could solve the problem in terms of the input.

1 There may be a way that controls can also solve the concerns
2 in terms of control of the system.

3 But talking about what people gave up in the
4 negotiating Committee sessions, I think that the giving up
5 of hard copy discovery, the quid pro quo there was the fact
6 that we were going to get a full text system that would make
7 all of the parties' jobs easier in going through the license
8 application. I think that that's still an important point
9 here.

10 If you look over the past three or four years
11 since the rule was negotiated, it hasn't been that the NRC
12 or the Department hasn't been trying to get this system
13 moving, get it under development. I think that what the
14 Commission believes at this point is that this type of
15 division of responsibility, which is sort of administrative,
16 running the system, system design, is the best way to bring
17 the LSS to fruition; in other words, that quid pro quo for
18 giving up hard copy discovery.

19 It's a practical issue, as far as I'm concerned,
20 and trying to see a system come into effect that works and,
21 yes, the NRC is going to have to monitor DOE's inputting of
22 the documents and DOE's administration of the system.

23 MR. MURPHY: The NRC is currently monitoring DOE's
24 conduct of its site characterization program and talk to Joe
25 about how frustrating that can be when the Department of

1 Energy, on a daily basis, just blightfully ignores all of
2 the technical advice and guidance that they're given by the
3 NRC, the State of Nevada, the Technical Review Board,
4 National Academy of Sciences, everybody else in the world.

5 My own personal feeling is that if they wanted
6 this whole bloody Yucca Mountain project conducted more
7 efficiently, they ought to turn it over to the Office of
8 Information Resources Management, because they've been able
9 to accomplish something in the Department of Energy and
10 nobody else has.

11 MR. SILBERG: You're talking about the fee
12 collection part of it.

13 MR. MURPHY: The fee collection, they do okay,
14 too. But it comes down asking us to give up the benefit of
15 our bargain in return for we don't see -- sure, we may get
16 an LSS out of it that way, but we're going to get an LSS in
17 any case because the Department of Energy is -- they're
18 going to do this under any circumstances.

19 And now you're asking us to give up the benefit of
20 a bargain that we fought hard for in 1988. I don't see why
21 we should be willing to do that when there's an alternative.
22 Why don't the non-DOE parties just turn over their documents
23 and rely on the LSS Administrator for inputting the non-DOE
24 documents?

25 MR. CAMERON: Into what system?

1 MR. SILBERG: Yes. That's part one. The second
2 part is control, operation and maintenance of the system.

3 MR. MURPHY: Even under the current rule, it was
4 always envisioned that the Department of Energy design and
5 develop the system and get it running and functioning and
6 then turn it over to the Licensing Support System
7 Administrator.

8 We're now talking about perhaps the DOE keeping
9 the system for a little bit longer than we had originally
10 envisioned, but that's more a detail than a real substantive
11 concern, I think.

12 They are still required -- they would still be
13 required to turn over the -- before licensing starts, turn
14 over the system to the LSSA. I think even under Alternative
15 3, the staff is suggesting a rule amendment to require them
16 to do that within -- I can't remember, what it is -- three
17 years now?

18 MR. SILBERG: No, not to turn over the system. As
19 I understood it, Alternative 3 was the system would remain
20 in DOE's care and feeding.

21 MR. MURPHY: That's right.

22 MR. SILBERG: And the document input would be all
23 done within the DOE -- by the DOE worker bees. I don't
24 recall anything about turning the system over to the LSSA
25 for operation and maintenance. The staff recommendation was

1 to require the system to be up and running three years
2 before license application. That was rejected by the
3 Commission in favor of --

4 MR. MURPHY: You may be right. Let me ask John
5 what this -- maybe I'm not reading this language correctly.
6 I'm looking at the last sentence beginning on the bottom of
7 Page 11 on the SECY 93-107 and proceeding to the top of Page
8 12.

9 It says "In order to give DOE more incentive to
10 assure that the LSS will be available, this provision should
11 be changed so that the NRC determines when and under what
12 procedures it will accept the DOE license application for
13 staff review. This change will tie NRC acceptance of the
14 DOE application not only to the completeness of their
15 application, but also to DOE's success in furnishing the LSS
16 as a vehicle."

17 I read that as under the current LSS rule,
18 furnishing the LSS to the LSS Administrator.

19 MR. CAMERON: No. Furnishing is used in the sense
20 of having the system up and running. Furnishing is value-
21 neutral in terms of who is running the system in the context
22 of the language you just read.

23 So if you go back to the discussion description of
24 Alternative 3, the big point there, the big change is that
25 DOE would be maintaining and running the system, albeit with

1 supervision and oversight from the LSS Administrator.

2 MR. MURPHY: Then I have the same sort of a
3 problem. I think at some point in time, that system has to
4 come under the direct control of the NRC.

5 MR. HENKEL: Mal, I have another question for you.
6 I may be struck dead for suggesting that the DOE bring on
7 another contractor, but is it conceivable that perhaps since
8 the InfoSTREAMS system would be managed by a contractor,
9 i.e., TRW, anyway, that some sort of an independent
10 contractual relationship be set up with another contractor
11 such that they will be satisfied?

12 MR. MURPHY: I'm only speaking for Nye County.

13 MR. HENKEL: That's true, but Nye County, the
14 state, and other parties.

15 MR. MURPHY: It wouldn't satisfy my concern. My
16 concern is that the system be controlled by the adjudicatory
17 body that's going to make the decision as to whether or not
18 to grant the construction authorization. Maybe you can ramp
19 up the compliance and audit program to a point sufficient
20 that it becomes virtual control. I would be willing to
21 consider that.

22 It could become the functional equivalent of LSSA
23 control. I'm not worried about nomenclature. I'm worried
24 about who in the office on a daily basis is going to have
25 the authority to say do this, do that or you're fired. I

1 don't want that to be a Department -- I don't want Dan to be
2 put in the position of having to tell his supervisor I'm
3 working on Nye County data today, I'm not working on DOE
4 data, and be told you're getting paid by DOE, we're putting
5 DOE data in.

6 MR. SILBERG: One part of the equation that we
7 haven't talked about, which I think ought to go some
8 distance to satisfy your concern, is the role of the pre-
9 licensing application by the Safety Licensing Board,
10 whatever we call that. There you do have a body independent
11 of NRC staff and, indeed, independent of the LSSA that you
12 could bring any complaints to.

13 As someone who has adjudicatory authority over
14 everybody, it would certainly have the ability to order DOE
15 or NRC staff or LSSA to do things that you thought were not
16 being done and should be done.

17 So I think you already have existing in the rule a
18 mechanism to provide substantial independent oversight and
19 control.

20 MR. MURPHY: All of those things are true, but the
21 political reality is that you're asking Nye County, Nevada
22 to agree to a process where the project manager and the
23 county administrator and the county commissioners are going
24 to go back to their people and say guess what we've done,
25 we've agreed to turn over our documents to the Department of

1 Energy, but don't worry, in this case, you can trust them.

2 We are not going to do that without some further
3 neutral non-DOE assurances that this system is going to
4 function the way we bargained for it.

5 MR. SILBERG: I guess I don't understand why you
6 have a concern over turning over your documents. I would be
7 more concerned about access to DOE's documents than I would
8 be about your documents. Turning over your documents --

9 MR. MURPHY: We're also concerned about that.

10 MR. SILBERG: But turning over your documents is
11 no different than normal paper discovery when you drive the
12 truck up to the back door to their lawyer's offices and say
13 take these 94,000 cartons and have fun.

14 You do that regularly in any big case litigation
15 and the fact that you're turning over your documents,
16 actually copies of your documents to your adversaries, who
17 cares? I don't think that loading up the LSS with your
18 documents or my documents or Nevada's documents or tribes'
19 documents or whoever is any different than that.

20 My concern -- you know, there is an accuracy
21 concern, which I look at as, pardon the insult, concerning
22 the computer nerds of the world, as to how much accuracy we
23 can get out of these machines and is it good enough.

24 I can't see that anybody is going to sit there in
25 that room and say, well, for Nye County's documents, I'm

1 going to delete all the "ands" and change them to "nots" or
2 something like that. We're not talking about mechanical
3 kind of electronic operations that are party-neutral.

4 MR. MURPHY: We're concerned about the priorities
5 that are going to be given to various kinds of work,
6 management of the system, the things of that nature. But we
7 also have the perception issue.

8 MR. SILBERG: I agree that --

9 MR. CAMERON: That seems to be the key issue.

10 MR. SILBERG: The politics and the perception is a
11 significant concern that you guys have. I understand that.
12 In the commercial world, what people do is called out-
13 sourcing. People turn over their entire data processing
14 operation to some third party and they contract for it.

15 MR. MURPHY: That's good. That's what we
16 originally wanted in the negotiations. We wanted someone
17 other than DOE or the NRC to run the LSS. We'll agree to
18 that.

19 MR. SILBERG: In fact, that's what you're going to
20 have if you're going to have some contractor doing that.

21 MR. MURPHY: I don't mean a contractor. I mean
22 someone with independent standing in the Federal Government.
23 Turn it over to the Patent and Trademark Office.

24 MR. CAMERON: Boyd, do you want that?

25 MR. ALEXANDER: Let me work up an estimate for

1 you.

2 MR. MURPHY: Just a simple yes or no will do.

3 MR. ALEXANDER: Anything is possible. We work for
4 a fee. We don't get any taxpayer money. So I'm more than
5 happy to talk.

6 MR. SILBERG: Put in those terms, I'm sure Jay
7 Silberg's firm would be happy to do it.

8 MR. MURPHY: I don't want to hog all the time
9 here, John. Other people have concerns, as well.

10 MR. HENKEL: I think this is the principal issue,
11 Mal. I don't think you're hogging the time at all. We've
12 put off the cost issues until further information. The
13 question is will the local units of government in the State
14 of Nevada, are they willing to accept DOE as the primary
15 manager of Option 3.

16 MR. CAMERON: I think that turns on how it's
17 presented, too. We've talked a lot about controls, about
18 the fact that turning over documents is similar to what you
19 would have to do during physical discovery, that a
20 contractor would be running the system for DOE, that we have
21 a pre-license application Licensing Board.

22 There's a lot of things that could mitigate the
23 public perception about, hey, guess what, we just turned
24 over all of our documents to the Department of Energy or put
25 it as boldly as you want it.

1 So is there a way to deal with the public
2 perception problem by working out an alternative system
3 here?

4 MR. SILBERG: The first part, to say you're
5 turning over all your documents, that's kind of a --

6 MR. CAMERON: I understand that.

7 MR. MURPHY: That's used loosely.

8 MR. HOYLE: I think another element that we
9 haven't mentioned today and we didn't really get into the
10 cost issue much yet, but the Commission started off with
11 trying to see if there was a way to save or avoid major
12 costs. They didn't just arbitrarily decide to renege, as
13 you put it, on an earlier promise.

14 MR. MURPHY: They did.

15 MR. HOYLE: But they decided to look for an
16 approach that would save some money. I think that has to be
17 kept in the mix here. If there were no cost avoidance, if
18 there were no cost saving, the Commission wouldn't have been
19 proposing this.

20 MR. MURPHY: This approach saves the NRC money.
21 It doesn't save the total system any money.

22 MR. SILBERG: That's the question we have.

23 MR. HENKEL: That's the exact question we have.

24 MR. MURPHY: It just transfers costs to the
25 Department of Energy. I can understand that the NRC -- and

1 I agree with the NRC's concern in that respect. They ought
2 to be more worried about making sure that the Division of
3 High Level Waste Management has enough money to adequately
4 oversee the technical work that's being done out there. I'm
5 not arguing. I'm not faulting the NRC for that concern.

6 But that's what Alternative 3 does. It doesn't
7 save the licensing support system any money. It just saves
8 the NRC money.

9 MR. SILBERG: We don't know that.

10 MR. MURPHY: That's right. You don't know that
11 and we won't know that until we see the cost information.

12 MR. CAMERON: Take another cost issue that is more
13 important than just where the pool for the money comes from.
14 Making -- and this goes to sort of changed circumstances, in
15 a sense, since we did negotiate the rule.

16 When you get more involved in the design of these
17 complex and implementation of these costs or these systems,
18 you find out that making a handoff from DOE, as the system
19 designer and developer, and its contractors to another
20 agency, the NRC and its contractors to run the system, this
21 creates the potential for massive cost problems and
22 inefficiencies.

23 Dan might be able to speak more to that,
24 definitely could speak more, and Boyd, than I could. I'm
25 not saying it's impossible. It's just we recognized when we

1 got involved in this that that would be a big problem and
2 it's a con that's identified -- it's either a pro or a con,
3 an issue identified in the Commission paper.

4 Dan, you had something to say before.

5 MR. GRASER: No. I was going to speak back to
6 just an additional comment on the control issue. I would
7 just like to verbalize a concern also that everybody is
8 affected by this control issue and obviously looking out in
9 the long term, Mal gave a hypothetical situation about a
10 truckload of stuff driving up at the 11th hour and why
11 didn't you get it in on time sort of issue.

12 The other one that I'd like to raise obviously is
13 that if DOE were operating the system and responsible for
14 maintaining the operation of that system during the critical
15 periods, pre-license hearing and during the license hearing
16 timeframes, that we would probably also have to have some
17 kind of an environment where we would have a comfort level
18 that if the system had normal technical problems during any
19 of those critical timeframes, that that would not reflect on
20 our status during the license hearing, as well, as if it
21 were something that were being done intentionally.

22 Obviously, being honest people in an honest
23 environment, we would say the mainframe crashed, but the
24 optics of the situation, depending on the timing, could
25 perhaps put the Department of Energy in a situation where

1 the optics of it look terrible.

2 And talk about bad PR in the past, there is
3 another opportunity for that sort of bad PR in the future,
4 even though it was totally innocent and totally unprotected.
5 So I think in terms of control, we also have to be forward
6 looking and say does it put us in a potential situation
7 where I would have to go to my management say I don't think
8 we should place ourselves in a situation of an act of -- not
9 an act of God, but it's like an act of God in the computer
10 world when you have a crash and it impacts on everybody's
11 ability to move forward during a critical period.

12 So that's a concern, as well, and I just wanted to
13 make sure I verbalized that.

14 MR. BAUGHMAN: I guess beyond perception, one of
15 the things that I think may be -- DOE is struggling right
16 now with this budget in terms of getting work done out on
17 the site, to characterize the site and actually get itself
18 to the point of being able to submit a license application.

19 I wonder if they assume this program entirely.
20 How do we know that resources that are required to get this
21 system up and operating aren't going to be deferred to
22 support site characterization activities and, in the end, we
23 don't have the system that you all are looking for or
24 perhaps the system isn't quite up to snuff because we've
25 made some tradeoffs along the way.

1 I think there are some real concerns in terms of
2 resource allocation, whereas at least, the way it was
3 envisioned, those monies would flow to the NRC and the NRC
4 would be responsible for implementing that system.

5 MR. GRASER: We still have that problem, because
6 the design and implementation under the rule right now is
7 still being done under DOE money.

8 MR. BAUGHMAN: But there is some compelling -- you
9 are accountable to another party, in a sense, to keep coming
10 forward with that product, whereas if you have it all
11 internalized, then everybody is looking in to see what
12 you're doing, but you have control.

13 MR. SILBERG: The rule recognized that and we
14 created the doomsday device. Subpart J self-destructs and
15 we revert back to Subpart G if the LSS isn't up and running
16 by six months before submission of the license application.

17 MR. MURPHY: I like the alternative even better.
18 If you don't have it ready within three years, we won't take
19 your license application. I mean three years in advance of
20 licensing.

21 MR. BAUGHMAN: I don't think that's what the SECY
22 says.

23 MR. CAMERON: The SECY says that the Commission
24 rejected that proposal. But I think on Mike's point, we've
25 already seen that particular phenomenon happening where

1 money that should have been spent in developing the system
2 was traded off to the technical.

3 MR. BAUGHMAN: I agree, and that's where it comes
4 back to this public perception thing again. I feel in some
5 ways we've been led to this decision by the DOE and its
6 contractors because of their own management actions. By
7 making choices along the way, we have been led into this
8 point where we're assuming that the NRC is now kind of
9 throwing up its hands and saying we're not going to be able
10 to do it ourselves, guys, and we're not going to be able to
11 have the resources, we have not been given the resources.

12 It's been a dogfight between the NRC and DOE on
13 resources on this issue. I have a sense we're kind of just
14 throwing in the towel and saying, well, we lose. My view is
15 so do all the other parties and I'm not sure that's the way
16 to go about doing business.

17 MR. HENKEL: Mike, we have to recognize that DOE
18 is responsible for developing the nation's waste management
19 system. It's their management decisions that are going to
20 determine success or failure of the system. We can't begin
21 to try and determine every management decision they make
22 that makes or breaks the system.

23 If they understand that failure to have the LSS
24 operating in a timely manner is going to postpone or
25 preclude their license application, then that's a management

1 decision they have to make.

2 We're going to hold them accountable. We're not
3 going to be pleased if they postpone things because this the
4 system wasn't up and operating. But I don't think we should
5 try to control their management process because of the LSS
6 system.

7 MR. MURPHY: And I think it's primarily Congress'
8 responsibility, not DOE's. If DOE had been given all the
9 money that they asked for by Congress, I assume the LSS
10 would have been under development. Correct?

11 MR. GRASER: That's fair.

12 MR. CAMERON: Maybe a way to work at this is,
13 picking up on some things that Chris said and that Mike
14 said, is that we -- we at the NRC ran into two problems that
15 led us to this point now.

16 One, and this is no reflection on Dan or Barbara
17 or anybody at DOE, getting some progress to be made on
18 design and development of the system in terms of the
19 schedule that we thought was necessary, etcetera, etcetera,
20 etcetera, and that was a resource problem at DOE.

21 The second one was getting any sort of assurance
22 that we were going to be able to get the money to run the
23 system. The Commission, operating on an agreement that was
24 reached during the negotiated rulemaking, where the money to
25 run the system, for our running of the system, would come

1 from DOE, not being able to really get anywhere with DOE on
2 that, but primarily, at least at the later portions of this
3 debate, because OMB, under the Bush Administration, said
4 that we don't want a split between program responsibility,
5 that is, running the system, and budget responsibility,
6 where that money is going to come from.

7 Mike is right. It's been a real dogfight on both
8 of those issues. We're looking for a way to try to resolve
9 that. The cost savings issue, I think, may be neutral.
10 It's saving money by using InfoSTREAMS. We can still do
11 that through whatever -- however we configure this thing.

12 That's what brings us to this point, trying to
13 figure out some way to get the system completed.

14 MR. HOLDEN: At this point, I would like to weigh
15 in on how NCAI is probably come down on this. We probably
16 need to go back and talk with one of our representatives, a
17 consultant who tracked this issue, worked with a lot of you
18 folks at the table here in previous years.

19 At this point, it seems to me, as I recall, that
20 the parties come down and support Mal's supposition there.
21 But, in addition, NCAI is a constituent organization and
22 those tribes -- we can't speak in the place of those tribes.
23 We can supplement their positions.

24 But in the meeting in Las Vegas in the spring, 20
25 tribal representatives from 20 tribes and bands in this

1 area, the Yucca Mountain project area, informed DOE of the
2 lackluster performance of DOE in just providing them basic
3 public information.

4 On top of that, some tribes in this area are
5 involved in numerous litigation over minerals and water.
6 Lots of Las Vegas is run by Indian water. Those water
7 rights went under significant and lengthy litigation and the
8 tribes, whenever these court decisions say that, well, the
9 counties, the state or whomever is entitled to have this
10 water, some of the people say that the tribes want half the
11 water rights. No, we lost. When we win, we lose because
12 those tribes had all of it at one time.

13 And these even innocent studies, hydrological and
14 mineral data, that are performed by USGS, the Bureau of
15 Indian Affairs, so forth, when it makes its way into certain
16 files and archives, it can be brought up and used against
17 them. So that's something else that's a concern in terms of
18 privileged data.

19 But I probably need to speak with those tribes,
20 many tribes, particularly in this area in terms of what they
21 come down on this. If they don't think it's going to be
22 positive in terms of what they were saying in March, I'll
23 just have to get back to them on that, get back to this
24 Committee on that.

25 MR. HOYLE: Dennis?

1 MR. BECHTEL: I can't speak for all the counties,
2 but I think with respect to Clark County, I think it would
3 be our preference to have an independent entity controlling
4 the information. I think the perception is a large issue
5 and I think -- I don't think you're going to be able to
6 avoid it and I think the only way to avoid it would be to
7 have an independent entity, preferably the NRC, controlling
8 the system.

9 With regard to your other question about
10 information we may need, I think it's important that we have
11 this technical document that looks at the 11 alternatives
12 and any backup to that document. As far as the document
13 itself, Dan, maybe you might be able to answer this, were
14 there any options considered that looked at a non-DOE
15 control of the system?

16 MR. GRASER: Yes.

17 MR. BECHTEL: We're just kind of curious. Why
18 were those not considered further?

19 MR. GRASER: How can I say this delicately? A
20 number of options and alternatives were discussed and when
21 initially presented to the Chairman, the response back from
22 the Chairman was that they were not in line with his
23 expectation. That's the most close to characterization that
24 I can place on it.

25 There were a number of other alternatives. For

1 example, having the database, in fact, be maintained and
2 operated by someone, like Mead Data Center or Chem
3 Abstracts, there were distribution alternatives in terms of
4 just publishing CD-ROM versions of the entire database and
5 making them available to everybody and not having the grand
6 design of telecommunications and so forth.

7 A fair large number of technical, because the
8 focus and the mandate that was given, is it technically
9 feasible to reuse InfoSTREAMS. If you're going off on any
10 other tangent, that wasn't what Chairman Selin wanted to see
11 at the time. That's my interpretation of it.

12 MR. CAMERON: Dan, can I ask you a question about
13 that? I may have misspoke before. What some members of the
14 panel are espousing, I think, fit into Alternative 2, as
15 presented to the Commission.

16 MR. MURPHY: That's right.

17 MR. CAMERON: In other words, we would still use
18 InfoSTREAMS to capture non-DOE data. But at some point, the
19 system would be turned over to the NRC to operate. Now,
20 there would still be cost savings realized associated with
21 using InfoSTREAMS; maybe not the full cost savings that we
22 were talking about if DOE would continue to operate it, but
23 there would still be cost savings associated.

24 MR. GRASER: All three of the alternatives that
25 were finally elucidated showed some degree of cost savings,

1 yes.

2 MR. BAUGHMAN: Isn't it likely, Chip, that a
3 contractor would actually run this for you, as well?

4 MR. CAMERON: That's right. I wanted to point
5 that out. For the NRC, we would be using a contractor.

6 MR. BAUGHMAN: And DOE is using a contractor. In
7 my experience with the work here at Yucca Mountain, when you
8 have a change in contractors, the key personnel move with
9 the contract. So my sense would be that if DOE were to
10 develop this system and they're paying TRW or SASC or
11 whomever, they've got contractors doing this and they know
12 how to run and operate the system and they are the ideal
13 candidate to manage that system.

14 When it gets turned over to NRC, NRC's contractor
15 assumes responsibility this, that person is going to go to
16 work for that contractor. There's a very high likelihood of
17 that. So this handoff -- the issue of handoff being
18 difficult and all that strikes me, though, that these things
19 are handed off all the time.

20 I don't know why it wouldn't work.

21 MR. HENKEL: That's precisely why I was thinking
22 that perhaps another contractor, other than TRW, should
23 develop and implement InfoSTREAMS and then when the handoff
24 was made, it's just the source of funding for that contract
25 issue.

1 MR. BAUGHMAN: And the contractor is actually
2 under NRC.

3 MR. HENKEL: That's what I'm saying.

4 MR. BAUGHMAN: The individual now is employed
5 under NRC.

6 MR. HENKEL: That's what I'm saying. Rather than
7 relying on a theoretical handoff of these employees, you
8 just transfer the contract, lock, stock and barrel from DOE
9 to NRC.

10 MR. GRASER: Illegal. Can't do that.

11 MR. HENKEL: There's no way to do that.

12 MR. GRASER: No. There's no way to do that.

13 MR. BAUGHMAN: The difficulty, also, would be that
14 TRW isn't de facto to perform it, as well.

15 MR. HENKEL: That's one of the reasons that I'm
16 suggesting that perhaps a contractor other than TRW should
17 be the one running the system. Again, I will probably be
18 struck dead for suggesting that.

19 MR. CAMERON: The thing would be that the scope of
20 work would include design and development, operation and
21 maintenance for this particular contractor, and I think this
22 gets to the illegal part. It's can you change who your
23 funding agency is.

24 MR. GRASER: You can have an interagency transfer
25 of funds.

1 MR. CAMERON: You would have two different
2 contracting officers.

3 MR. GRASER: The issue is who controls the dollar.
4 Whoever controls the dollar controls the pace, the tempo and
5 the direction of the work. Fundamentally, you can channel
6 it any direction you want, but whoever ultimately is the guy
7 who has -- I'm taking from the Treasury and I'm giving to
8 accomplish a mission, whoever is in that catbird seat has
9 the control of the resource.

10 That is control down to a very technical level.
11 It is not really just a question of day-to-day maintenance,
12 because I think the oversight plan that was presented would
13 respond to that. They were actually talking about having
14 on-site representatives of the ARP -- not the ARP, the
15 LSSA's office being right there.

16 So in terms of the actual management of the
17 system, that's a much smaller issue and it's certainly
18 workable. It's just like the actual transfer. Yes, indeed,
19 it can be done. The expectation is it can be happening
20 overnight with no disruption of service.

21 Loosely using the term guarantee, I could no
22 guarantee that we could unplug it from the DOE FTS network
23 on a Friday afternoon at 5:00 and plug it in to an NRC FTS-
24 2000 network and not experience any disruption in our
25 telecommunications network.

1 And it goes beyond the people, because certainly
2 people transfer. But the amount of work and the amount of
3 coordination that would be necessary, for example, to
4 transfer software license maintenance agreements and
5 hardware maintenance agreements, not saying it can't be
6 done, but it is certainly a larger effort for an
7 administrative churning drill.

8 If people were really concerned about costs, there
9 would have to be a certain period of overlap between the
10 contractors and everything and it's an administrative cost
11 to do that. We're not saying it can't be done, but we're
12 just saying that is not, certainly from a management
13 perspective, the best way to go about doing it.

14 MR. MURPHY: Let me just clarify something, Chip.
15 I misspoke. What we would prefer is Alternative 1, not
16 Alternative 2.

17 MR. CAMERON: I know you would prefer Alternative
18 1. I was making an assumption that we still might be able
19 to realize the cost savings -- some cost savings by using
20 DOE InfoSTREAMS to capture documents. It seemed to me that
21 the big issue that it really is coming down to here is not
22 that DOE is capturing our Nye County documents, but DOE is
23 controlling the system.

24 So I thought that, okay, at least we might be in
25 the Alternative 2 ballgame, which is realizing some cost

1 savings from using InfoSTREAMS. DOE is still doing the
2 design and development of the LSS based on the InfoSTREAMS
3 design and development, but at some point there would be a
4 turnover to NRC to operate and maintain the system. That
5 comes down to the money issue.

6 Originally conceived as money being in DOE's
7 budget and being transferred to NRC to run the system or
8 having the money directly in the NRC budget to run the
9 system. Betsy, did you want to clarify something?

10 MS. SHELBURNE: I just want to make sure --
11 correct me in terms of how we did Alternative 2 versus 3.
12 If there was to be an LSS based on InfoSTREAMS development,
13 we would still have to develop a separate system from
14 InfoSTREAMS that you would hand over to us. Right? So
15 we're not talking about handing over --

16 MR. CAMERON: InfoSTREAMS.

17 MS. SHELBURNE: -- what they envisioned under
18 Alternative 3, because that's basically an expanded records
19 management system. They're not going to hand over. They're
20 going to replicate the 90 percent, separate machines, if
21 that's what Alternative 2 is.

22 MR. CAMERON: Alternative 2 is more expensive than
23 Alternative 3.

24 MS. SHELBURNE: The delta, if you look at the
25 paper, between one and two, the savings would only be about,

1 I think, only 17 or 18 million, because of the idea of a
2 separate system that we took control of. So it's not moving
3 a contractor in and out. It's replicating that --
4 duplicating something.

5 I just want to make sure that that's clear in
6 terms of -- there will still be an InfoSTREAMS management
7 contract for DOE's purposes.

8 MR. BAUGHMAN: Is InfoSTREAMS presently an
9 underutilized system?

10 MR. GRASER: It's presently a system that is in
11 the process of being developed.

12 MR. BAUGHMAN: So presumably, though, if this
13 program becomes the major -- which I assume it would become
14 the major funder of development of InfoSTREAMS. This
15 strikes me as though this initiative would be the largest
16 use that InfoSTREAMS could match.

17 So the dollars that are supporting building
18 InfoSTREAMS are going to flow primarily for this single
19 purpose. It would strike as though that all the additional
20 equipment you acquire, all the technical capabilities and
21 licensing and all these things that are set up, if done
22 correctly, could all be done in such a way that they were
23 moved through interagency agreement or whatever.

24 From day one, the intent is -- because if your
25 system right now is -- you know, you're going to have to buy

1 more equipment. You're going to have to -- everything is
2 --you're, in a sense, building this up from the ground. So
3 all of that can be designed to move.

4 There's no additional cost, then. That's what I'm
5 saying.

6 MR. SILBERG: If they move it, DOE will still want
7 to maintain the entire InfoSTREAMS database, which will
8 include the LSS database and you'll have the database in the
9 LSS portion of that in two different places instead of only
10 in one place.

11 MR. BAUGHMAN: Right. But I think that that
12 should be a lesser objective. If DOE wants to do that,
13 fine, but that's a lesser objective than meeting the three
14 licensing requirements of the NRC. If that means that they
15 have to give up a lot of capability in the short run and the
16 NRC all of a sudden has it and you've got to now in several
17 budget cycles pick up that equipment, whatnot, to get back
18 to that capability you had before you let all this stuff go,
19 so be it.

20 MR. HENKEL: I guess at least a question I have
21 had is is there a way to develop InfoSTREAMS and the LSS
22 within the InfoSTREAMS system such that it is somewhat
23 independent of DOE from day one, so that it addresses your
24 concerns, as well as is available to DOE to facilitate its
25 day-to-day management of the program.

1 MR. SILBERG: You mean have InfoSTREAMS itself be
2 independent of DOE?

3 MR. HENKEL: I don't think you could do it totally
4 independent, but is there some middle ground here?

5 MR. CAMERON: The rule contemplated that if DOE or
6 any other party wanted to use the LSS as its records
7 management system, that it could do so. But I know that
8 there are legal requirements associated with agency
9 recordkeeping and things like that that could be satisfied,
10 I suppose, by hard copy documents.

11 One of the things that we looked at originally,
12 and it's mentioned in the Commission paper, was a proposal
13 that the NRC take over design, development, operation and
14 maintenance; in other words, centralize the whole thing.

15 MR. SILBERG: Of InfoSTREAMS and LSS?

16 MR. CAMERON: No, of LSS. We would be -- that
17 proposal would have the LSS independent of anything that DOE
18 was doing, although DOE's development of InfoSTREAMS would
19 be DOE's way of complying with their LSS document
20 preparation and submission requirements.

21 So now we've gone to the other extreme of having
22 DOE design, develop, operate and maintain.

23 MR. CRANFORD: I just want to respond to Chris'
24 question about developing a separate LSS on an InfoSTREAMS
25 basis. From a technological standpoint, and Dan can either

1 agree or disagree with me on this one, it certainly can be
2 done, but all of the time and effort that has gone into
3 InfoSTREAMS development up until now, unless Dan had the
4 presence of mind to assume that we'd ever get to a point
5 where we'd ever ask to make this type of a decision, that
6 you'd basically be starting from scratch.

7 So whatever you would have saved in your
8 InfoSTREAMS development you would have to, in all
9 likelihood, repeat those costs. So it's not like you can
10 just take a tool that you designed for a particular purpose
11 and then in the middle of that development cycle decide,
12 well, I'm going to use it for maybe something else.

13 MR. HENKEL: I think maybe you misunderstood me a
14 little bit. I was suggesting that is there a compelling
15 reason why InfoSTREAMS itself has to be internal to DOE. If
16 there isn't, can we separate out the entire InfoSTREAMS
17 system, as well as the LSS as an integral part of that
18 system, and somehow set it up somewhat independently so that
19 we can address some of the concerns that have been expressed
20 here from day one?

21 MR. MURPHY: Could you say that, in a paper to the
22 Commission and by rule, that DOE would design, develop,
23 install, operate and maintain the LSS information storage
24 and dissemination capability within InfoSTREAMS under the
25 control and direction of the LSS Administrator?

1 MR. CAMERON: Depending on what you mean by
2 control.

3 MR. GRASER: Let me respond to one of the
4 statements that Chris asked, is there a compelling reason
5 why infoSTREAMS at all even needs to be developed. The
6 answer is yes, because InfoSTREAMS has as its primary
7 mission our internal records management for which we have 36
8 CFR obligations, we have DOE order obligations, we have NARA
9 requirements.

10 We are doing InfoSTREAMS. We conceived of, we
11 implemented, we are moving forward with InfoSTREAMS in
12 response to our own internal requirements. It was not the
13 Department of Energy's idea to seize upon making InfoSTREAMS
14 do double duty. That was at the request of Chairman Selin
15 that that be examined. We were not the ones to put that on
16 the table.

17 MR. HENKEL: You missed a key phrase in what I
18 said. I'm not saying that InfoSTREAMS is perhaps not
19 justified. I'm saying does it have to be internal to the
20 Department of Energy. It can still serve the same function.

21 MR. GRASER: Yes. It has to be internal to the
22 Department of Energy because we are solely charged with our
23 responsibility for maintaining a system of records in
24 response to 36 CFR type requirements. Yes. I have a
25 mandate, Federal reg mandate that I be able to maintain and

1 control the system of records.

2 MR. CAMERON: How does that tie in with Mal's -- I
3 won't call it a suggestion, but Mal's question about control
4 and supervision? I don't remember your exact words.

5 MR. MURPHY: Why not just say DOE would design,
6 develop, install, operate and maintain the LSS information
7 storage and dissemination capability within InfoSTREAMS,
8 under the control and direction of the Licensing Support
9 System Administrator?

10 MR. CAMERON: And then you get down to what is
11 control and supervision.

12 MR. MURPHY: Just the LSS portion of InfoSTREAMS,
13 under the LSS Administrator's direction and control.

14 MR. CAMERON: How is that different from maybe
15 what we thought we had in Alternative 3?

16 MR. SILBERG: There's a difference between audit
17 and oversight and control.

18 MR. MURPHY: Right.

19 MR. HENKEL: Exactly.

20 MR. CRANFORD: What Mal is suggesting implies to
21 me that we would have presence on the site in the day-to-
22 day. The database administrator would be either one of our
23 contractors or one of our employees, that type of thing. In
24 order to effectively have control, you've got to be the DBA.
25 There's no --

1 MR. MURPHY: Well, I don't know about that.
2 That's within your ability, but somehow --

3 MR. CAMERON: Database administrator, DBA.

4 MR. MURPHY: But somehow when the kind of
5 decisions that Dan referred to come up, the decisions are
6 made by the LSSA or subject to that control.

7 MR. GRASER: I don't want to offer a design from
8 the hip and I don't even want to entertain design by
9 Committee. What I would like to hear is what environment do
10 you expect the LSS to be developed in and under what sort of
11 control constraints.

12 If I can identify what the requirement is, if
13 there will be a requirement, then perhaps, within a certain
14 amount of time, we can turn around and say, architecturally,
15 what we have done with InfoSTREAMS --

16 MR. SILBERG: No. We're not talking about the
17 design of the database and the architecture of the software
18 or anything. We're talking about management administration
19 and control over the people.

20 MR. GRASER: The feasibility will -- the
21 InfoSTREAMS technological infrastructure will support a
22 means whereby the entire plateau of 15-plus million pages
23 over and above what InfoSTREAMS was going to have, how can
24 that be controlled, effectively controlled by somebody
25 outside of the Department of Energy?

1 I need to have time to examine whether or not the
2 architecture would support setting up a separately
3 controllable adjunct database environment, which is the LSS
4 collection.

5 MR. SILBERG: Put aside the computer aspect of the
6 question. From the standpoint of a government agency's
7 requirements, can one government agency or a group of
8 government employees within one agency put itself under the
9 control of another government agency. I think that's the
10 major question.

11 Hardware we can solve at some cost, but, legally,
12 is there a mechanism by which three DOE employees can say
13 we're going to listen to this guy over at One White Flint.
14 If he tells us to jump, we will jump. If the guy up in
15 Forestville tells me to jump, I'm going to say go talk to
16 the guy in White Flint.

17 Is that --

18 MR. CAMERON: Is there any analogies --

19 MR. SILBERG: -- permissible under the way the
20 U.S. Government operates?

21 MR. MURPHY: We're reinventing government these
22 days.

23 MR. CAMERON: That's right. I forgot. I'm sorry.

24 MR. MURPHY: I don't want to hear this we've never
25 done it that way before.

1 MR. MURPHY: Dan had a good point. What about
2 that DOE would design, develop and install the LSS system
3 under InfoSTREAMS and would operate and maintain it subject
4 to the direction and control of the LSS Administrator?

5 MR. SILBERG: Can you do that bureaucratically?

6 MR. MURPHY: That's the question.

7 MR. GRASER: I have no idea.

8 MR. MURPHY: Well, let's find out. That might
9 solve a big problem.

10 MR. HOLDEN: I'm not sure of the mechanics or
11 procedurally how it's done, but isn't that what IPAs are all
12 about, the individual and the temporary?

13 MR. CAMERON: Governmental personnel.

14 MR. HOLDEN: Transfer or something, whatever it
15 is.

16 MR. ALEXANDER: The point that Dan made earlier,
17 really control rests where the dollars are. If the dollars
18 are still in DOE, I don't know how effective that control
19 would be. He's going to control the dollars. He'll just say
20 I won't pay for that.

21 MR. GRASER: It was the dollar issue that launched
22 some of this discussion in the first place.

23 MR. ALEXANDER: If you want to ask for special
24 legislation in your authorization, if you really want to do
25 this with a temporary transfer of the funds and the people

1 to overcome this objection, propose legislation to allow
2 that to occur.

3 That's the best way to do it, if you really want
4 to do it.

5 MR. CAMERON: I think we need to think about what
6 is the basic base roots of the problem here. It's not
7 necessarily the turnover from one contractor -- one agency's
8 contractors to another, although that's problematic. It
9 seems like it comes down to who is going to be able to get
10 the money.

11 There is another part. There are cost savings
12 involved with one agency, with DOE doing the whole thing.
13 Then there's the big issue of where do the dollars come from
14 to do this. I guess the thought was that it would be easier
15 for DOE to have the dollars to do this in terms of operation
16 than NRC. That's an untested supposition.

17 But if we had -- let me just throw this
18 hypothetical out there. If we knew -- if Congress said
19 we're going to give you, NRC, so many millions of dollars a
20 year to operate and maintain this system, no big deal, would
21 we really be here today examining these alternatives.

22 MR. BAUGHMAN: One has to ask what has prevented
23 Congress from doing that.

24 MR. MURPHY: Lack of wisdom.

25 MR. BAUGHMAN: If that's the root problem, aren't

1 we working a little downstream in terms of problem solving
2 and maybe we ought to go to the root problem?

3 MR. CAMERON: I guess it's going more upstream
4 from that. It comes down to does the Commission -- is the
5 Commission ready to ask the Congress to give us those funds
6 to operate and maintain the system.

7 Is that a true statement, John?

8 MR. MURPHY: I think you got your answer to that.

9 MR. HOYLE: All along, I think the Commission has
10 been very concerned about funding this project within its
11 own budget. Its budget is relatively small. This would be
12 a very large amount in the budget. Congress comes along and
13 says, all right, we're going to cut ten percent. They might
14 say and don't take it out of the LSS.

15 So NRC's small budget get cut a larger amount. So
16 I don't know if the Commission is prepared to go any
17 further.

18 MR. CAMERON: And I don't want to downplay the
19 Chairman's or the Commission's concerns, either, with the
20 potential cost savings involved from having the InfoSTREAMS
21 design used for capture of operation and maintenance.

22 I know that some of you remain to be convinced
23 about the cost savings because you want to see the data, but
24 I don't want to downplay the fact that there are some
25 substantial cost savings associated with Alternative 3.

1 MR. MURPHY: Also, I don't want anybody to get the
2 impression that I think the LSS should take precedence over
3 the technical oversight, either. If there's a choice
4 between developing the LSS and making sure that the science
5 out at Yucca Mountain is done correctly, then the science is
6 obviously going to take precedence.

7 I think I've said this before. In that respect,
8 I'm not arguing that the NRC's fear that budget cuts will
9 impact more severely their ability to technically oversee
10 this characterization program, we don't want that to happen.

11 We think more needs to be done in that area than
12 less.

13 MR. HOYLE: Well, we've got a number of issues
14 that we've brought out. I think Mal and others have made a
15 valiant attempt here to look for that sacred middle ground
16 that will work. He also said a few magic words a moment
17 ago, reinventing the government.

18 I think we are looking here for a solution that
19 might be a little bit unique, but when you put that up
20 against perceptions, concerns that have built up over a
21 period of time by those out here in Nevada, particularly,
22 you almost meet a brick wall and you can't go beyond.

23 So I think we still need to spend a little time at
24 this. I don't know whether there's some other way or forum
25 in which we could do it, other than just plowing through it

1 like we're doing.

2 MR. CAMERON: I think at some point, we can go
3 back and report to the Commission on what transpired at this
4 meeting, but I think at some point it might be useful, apart
5 from the cost issue that we're going to take up later, if
6 the sense of the panel was expressed to the Commission --
7 and I know there is not consensus here.

8 I don't know if there was non-consensus, but I
9 don't want to assume that there is consensus among the panel
10 on their feelings about Alternative 3. But even majority,
11 minority -- I mean, that's one option is to have the panel
12 develop some type of a response to the Commission on this.

13 That means you're going to have to sort of try to
14 figure out how to coordinate it, but --

15 MR. SILBERG: Well, we can do what we did the last
16 time. This time I guess I'd let Mal -- I think it's his
17 concern more than mine. What we did last time is one party
18 draft a letter, circulate it around, and to the extent
19 people had different views, we wound up with a letter from
20 John that kind of summarized the views and laid out some
21 variance on those views and at least one party submitted its
22 own separate views. We can certainly do that.

23 I don't think it would take an inordinate amount
24 of time to do that. I think we all understand everybody
25 else's positions on this.

1 MR. HOYLE: Mal, what do you think?

2 MR. MURPHY: I'd be certainly willing to do that,
3 but I think you also -- don't you need to report on the
4 results of this panel meeting? In that report, you're going
5 to have to say what you think you heard. But, sure, I'd be
6 willing to -- I sort of hesitate to try to put Dan's
7 concerns in words, but I can try that.

8 I'll circulate a letter that certainly expresses
9 the concerns that I feel on the control issue. I will
10 perhaps suggest some language as an alternative that might
11 go some way towards satisfying those concerns.

12 MR. CAMERON: We can report back on this meeting
13 and say strong message to follow.

14 MR. MURPHY: Send a telegram, Chip.

15 MR. BALCOM: In terms of any recommendations, I
16 would also ask that Boyd be involved in that process. I
17 heard him mention a couple things and you may be a little
18 more familiar with some interagency ways of dealing with
19 issues like this and simply to make sure that, if you're
20 willing, that you put your two cents in there about that.

21 I also want to say that the State of Nevada also
22 is opposed to Alternative 3, probably more from the
23 standpoint of the control of Department of Energy documents
24 than its own documents.

25 MR. HOYLE: Mal, I will look through the

1 transcript and share with you, as well, my initial thoughts
2 on what I see out of here on this topic and then will
3 circulate, as soon as I can, some material to everyone.

4 MR. SILBERG: Can I suggest -- I don't know who
5 the right person is to do this, but the solution that Mal
6 posed about having DOE folks who were running the LSS
7 portion be under the control of an NRC person.

8 The NRC and the DOE folks who understand
9 government bureaucracies, I would encourage someone to take
10 a look at that and see whether that's a non-starter or
11 whether that's feasible. If it's feasible, I don't think it
12 bothers us one way or the other, from our standpoint.

13 Alternative 3 is probably acceptable, but if this
14 is a solution which will allow cost savings, if any, from
15 Alternative 3 to go forward, but solve problems of Mal and
16 Kirk and others, it's probably okay. But let's find out
17 whether, bureaucratically, it's possible or not.

18 MR. GRASER: It may, in fact, be feasible, but
19 still objectionable. In terms of saying I have an
20 InfoSTREAMS that is also the LSS and it is doing double
21 duty, I don't know if it would pass muster within the IRM
22 and records management, powers that be within the Department
23 of Energy, while the system is doing that double duty, to be
24 able to say those guys are working for NRC.

25 So obviously we would have to look very closely

1 --I'm just saying we will look at whether or not it's
2 feasible. We will address the issues of whether or not
3 that's going to cause other sorts of administrative
4 headaches to the extent that we would say no. But I will do
5 as suggested and go off and explore whether it's feasible.

6 MR. MURPHY: But don't look at it as though
7 they're working for the NRC. There's lots of circumstances
8 in life where we operate independently, but somebody else is
9 controlling the intersection or the street we move down when
10 we come to an intersection. That's all I'm talking about.

11 MR. GRASER: And all I'm saying is that DOE
12 bureaucracies tend to look at what they see in black and
13 white rather than what the operative world really reflects.

14 MR. HOLDEN: In terms of cost and what's happening
15 up to this point, if anything goes down the tubes, all that
16 investment goes down the drain. That wouldn't be the first
17 time something like that has happened within this program,
18 going back to the second repository days and so forth and
19 even in the days of when sites were narrowed down to three.

20 There was a drill that sat on Gable Mountain at
21 the reservation, which was a visionquest site for the Yakima
22 Indian people, that sat there at over a million dollars a
23 day cost to the taxpayers just waiting to drill and it sat
24 there for over a year.

25 MR. MURPHY: I want to make one other point before

1 we leave, and that has to deal with the technical
2 feasibility of InfoSTREAMS to do this job. I think, Dan,
3 that without InfoSTREAMS currently having the ability -- I
4 shouldn't say ability.

5 Without InfoSTREAMS currently capturing that
6 Defense high level waste information, you've got a big, big
7 problem that somebody needs to take a look at. You are not
8 going to have an acceptable licensing support system when
9 the time comes to do whatever we're going to do with it,
10 unless you've got all of that Defense high level waste
11 information into that system.

12 MR. GRASER: As long as everybody is taking the
13 opportunity to say one last thing, I would just like to make
14 the offer before all of the members of the panel that we
15 have had hour-long or hour-and-a-half-long snapshots at
16 InfoSTREAMS and I know there are a number of the members of
17 the panel who have a strong foundation in ADP activities and
18 in the complexity of systems.

19 I would just like to extend the offer to anyone,
20 but specifically those who feel that they would really like
21 to get down and ask very specific questions about the
22 hardware and the software and the architecture that we're
23 building for InfoSTREAMS, I'd like to extend the offer that
24 if you get in touch with me after the meeting, I will be
25 happy to set up a point in time where you can sit down and

1 talk with the system architects and engineers and ask very
2 specific technological questions that may leave you with a
3 feeling of unease right now.

4 In addition to offering that availability for in-
5 depth technical discussions, in the February timeframe, we
6 will be rolling out our Increment 2, which will complete our
7 whole desktop office automation side of the system, and I'd
8 like to extend the opportunity to everybody, at that time,
9 also, please, if you have an interest in seeing a
10 demonstration of the system, get in touch with me.

11 The third piece of technology is that we have an
12 operational document capture system. We have a template for
13 using it in a very similar manner to the way the document
14 capture systems would be used under the old SAIC design.
15 They are essentially standalone, remotely located and feed
16 into a central processing environment.

17 We have developed a paper documenting how that can
18 be distributed in an enterprise-wide environment and I'd
19 like to offer that we provide John with a copy of that and
20 that it be included with additional package information.

21 It may very well be that when you see how we are
22 doing document capture system in a distributed environment,
23 that may be at least one piece of the discomfort level that
24 you could look at, at least, and having something in your
25 hands to give you a foundation for making an analysis.

1 So I will get my hands on a copy of that report
2 and get it to John. I want to encourage you to look at it
3 critically and see if it fits or doesn't fit.

4 But the bottom line is that pieces of technology
5 are being developed by the Department of Energy in a context
6 where, if you look at them, they all come very close to
7 meeting pieces of the licensing support system
8 functionality.

9 If you wanted to take a philosophical look at it,
10 even though we haven't had LSS line item budget money
11 because of the OMB feedback on the 1989 budget cycle, the
12 bottom line is that pieces of licensing support system
13 technology, for all intents and purposes, are being built.
14 The degree of reusability is something that I need to come
15 to closure on and I would like everybody to walk away
16 understanding that I have a certain degree of urgency in
17 knowing whether or not I should be designing a big bread box
18 or a medium size bread box or a small bread box.

19 That's the stake that I have in getting some
20 movement on these issues.

21 MR. HOYLE: If we got and circulated information
22 and corresponded with one another through me, perhaps, do
23 you feel that if we had another meeting in, say, the middle
24 of January timeframe, would that still be timely, in your
25 view, if a decision were made at that point as to

1 Alternative --

2 MR. GRASER: Yes, that would be timely. I
3 certainly did not have any expectation that we would get any
4 closure on these issues during this meeting. I did expect
5 that there would be a period of time that would be required
6 to work these issues through. So January is fine with me.

7 MR. MURPHY: I think that's a good idea.

8 MR. HOYLE: I don't see any need to set up any
9 subcommittees at this time to look at any particular
10 individual things, unless -- I saw one hand shoot up in the
11 back of the room, but we need to do first things first here,
12 in my view.

13 What do you want to talk about?

14 MS. SHELBURNE: Well, several of the issues that
15 Dan brought up yesterday, the header definition, the
16 copyright -- I've forgotten the other one -- whether or not
17 LSS would be independent or part of InfoSTREAMS, that stuff
18 needs to be discussed.

19 I would like to suggest, and I think other people
20 that have left the room now have got issues related to
21 locking in the header definition and the indexing groups.

22 MR. HOYLE: Betsy has suggested that at least we
23 breathe new life into Kirk's Subcommittee on Headers. Kirk,
24 are you willing to restart?

25 MR. MURPHY: Sure.

1 MR. CAMERON: Enthusiasm.

2 MR. HOYLE: Volunteers for that subcommittee?

3 MR. BECHTEL: I can volunteer a member of my staff
4 who is not here.

5 MR. HOYLE: So at least we would have Clark County
6 and DOE, NRC, and the State of Nevada.

7 MS. SHELBURNE: What about the copyright issue?

8 MR. HOYLE: Could that same group study that
9 issue?

10 MR. GRASER: We need to do some more work on that
11 first before it goes to --

12 MR. CAMERON: We're not sure that that's an
13 unalterable position.

14 MR. HOYLE: How about DOE's word changes to the
15 rule based on technology advancement?

16 MR. GRASER: There is very much contention on the
17 foundational issues.

18 MR. SILBERG: I don't think, from our standpoint,
19 that those are tied to control. Do you want to have the
20 rule make sense technologically? I don't think anybody is
21 going to object to that kind of stuff. Those, I think, are
22 going to be uncontroversial.

23 MR. MURPHY: I think that's right.

24 MR. SILBERG: To the extent we have to make
25 changes later, you just do that and that will go through. I

1 wouldn't bother with a separate --

2 MR. GRASER: But not as a separate drill. Do it
3 all once and then decide which direction we're going to go.

4 MR. SILBERG: I don't see any philosophical
5 problem with making those kinds of changes to the rule, to
6 just make it make sense in today's environment, do you?

7 MR. CAMERON: And if we need to do a rule change
8 to reflect whatever alternative is selected here, then we
9 could wrap that all up into one.

10 MR. SILBERG: Yes. Unless there is some other
11 reason to start playing around with Subpart J, to go through
12 another rulemaking docket at this point for those changes
13 makes no sense.

14 MR. CAMERON: I agree.

15 MR. BALCOM: Let me just briefly add about the
16 header working group. It seems a lot of those changed are
17 tied to InfoSTREAMS. I wonder if there's a potential here
18 for InfoSTREAMS to be in jeopardy and maybe the working
19 group could meet once to talk about this.

20 But if InfoSTREAMS doesn't end up being the
21 vehicle, then --

22 MR. GRASER: The original 28 fields would still
23 stand. Although there probably are a couple of fields that,
24 regardless of what happens with InfoSTREAMS, you might want
25 to consider including WBS numbers or QA status, for example.

1 I think that is something that the Committee could focus on
2 which is InfoSTREAMS dependent.

3 MR. SILBERG: Just for my naive understanding,
4 would all of those fields be mandatory?

5 MR. GRASER: No.

6 MR. SILBERG: Because to the extent you're putting
7 it in on DOE documents and you need those for InfoSTREAMS
8 purposes, a lot of that looked to me non-essential for LSS
9 purposes, particularly for non-DOE participants.

10 MR. GRASER: But if you had it as a freebie, you
11 would take it.

12 MR. SILBERG: To the extent that it didn't
13 increase the effort we had to take to create the header in
14 the first place.

15 MR. CAMERON: At least by the participant.

16 MR. SILBERG: Right.

17 MR. GRASER: Right.

18 MR. HOYLE: Okay. I will go through the
19 transcript and try to pull out all the pertinent things.
20 Are there more promises that were made here that we want to
21 talk about? I'll find them in the text.

22 MR. BECHTEL: Just one other --

23 MR. HOYLE: Dan promised excerpts of DOE's --
24 TRW's review of the text processing products.

25 MR. GRASER: Right.

1 MR. HOYLE: Dennis?

2 MR. BECHTEL: Just to make sure that all the
3 affected counties that weren't here maybe are able to get
4 the handouts.

5 MR. SILBERG: What do we want to do in terms of
6 comments on the compliance assessment program? It seems to
7 me that that's -- the effort in going through that and
8 recasting it or improving it or whatever doesn't make sense
9 at this point in time, until we understand where we're going
10 on Alternative 3 or whatever.

11 MR. CAMERON: Only one part of it deals with the
12 system audit and the rest would apply regardless of what
13 alternative was chosen. But it still might not make sense
14 to comment at this point. What's the contracting situation?
15 What do we need to do on that?

16 MR. DRAPKIN: What we need to do is obviously to
17 come to closure as quickly as we can. What I would like is
18 our suggestions. These may not be comments specific to the
19 document that you have, but addressing your concerns and how
20 better controls, better audit controls, more teeth, whatever
21 you think would be appropriate given in the context of
22 Alternative 3 for those portions that apply just to
23 Alternative 3.

24 The portions that apply generally, we would like
25 your comments as quickly as we could get them. There's

1 nothing that precludes us from having another comment
2 period.

3 MR. CAMERON: So you would like comments on those
4 portions of CAP that are not dependent on Alternative 3.

5 MR. DRAPKIN: Right. And if you have problems
6 with Alternative 3 and you want to express some opinion on
7 how to solve that problem through the compliance assessment
8 program, I'd certainly like to hear about it.

9 MR. SILBERG: The reason you want this now is so
10 you can wrap up this contract you have or other reasons?

11 MR. DRAPKIN: It's principally a contracting
12 issue, I think. We have a schedule and funds that get
13 expended at a certain rate. We'd certainly like to make use
14 of that in a productive way.

15 MR. HOYLE: Is there anything else? Jay, were you
16 finished?

17 [No response.]

18 MR. HOYLE: Thank you very, very much. I will set
19 up -- well, I will be sending you material and then we'll
20 look -- please think about mid-January. Do you want to come
21 east?

22 MR. HENKEL: No. Tahoe.

23 MR. CAMERON: In January?

24 MR. HOYLE: Reno.

25 MR. HENKEL: We don't want to go to Reno either,

1 right?

2 MR. HOYLE: Reno's great.

3 MR. HENKEL: And get really close to a weekend,
4 too.

5 MR. HOYLE: I should have made the offer to anyone
6 in the audience, any member of the public who would like to
7 make any statements. You may submit them, if you'd like,
8 but is there anyone who wants to make a statement at this
9 time?

10 [No response.]

11 MR. HOYLE: Thank you very much.

12 [Whereupon, at 12:21 p.m., the meeting was
13 concluded.]

14

15

16

17

18

19

20

21

22

23

24

25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings
before the United States Nuclear Regulatory
Commission
in the matter of:

NAME OF PROCEEDING: Licensing System Review Panel

DOCKET NUMBER:

PLACE OF PROCEEDING: Las Vegas, NV

were held as herein appears, and that this is the
original transcript thereof for the file of the
United States Nuclear Regulatory Commission taken
by me and thereafter reduced to typewriting by me
or under the direction of the court reporting
company, and that the transcript is a true and
accurate record of the foregoing proceedings.

Margaret Nickson
Official Reporter
Ann Riley & Associates, Ltd.



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

November 1, 1990

MEMORANDUM FOR: Lloyd J. Donnelly, LSS Administrator
FROM: John C. Hoyle, Chairman, LSS Advisory Review Panel
SUBJECT: REPORT ON MEETING OF LSS ADVISORY REVIEW PANEL

The LSS Advisory Review Panel, which was established by the Commission in December 1989, held its fourth meeting on October 10 and 11, 1990, in Reno, Nevada. A summary of the meeting activity follows:

1. Panel Administrative Issues

The Panel discussed administrative matters and approved the minutes of the June 7, 1990, meeting.

2. Approval of Document Header Fields

The Panel resumed its discussion (from the June 7, 1990, meeting) of information which should be required to be in the header fields and concluded that the "copyee" and "copyee organization" fields are not necessary. Two additional fields may be proposed for inclusion after further revision by the header working group. A vote will be taken at the next meeting.

3. Abstracting of LSS Documents

The Panel reviewed the information paper on abstracting prepared by your office and agreed that alternative C.3 should be used for abstracting LSS documents. Alternative C.3 provides (for specific document types) for storing abstracts in headers for those documents which have abstracts available, but not preparing abstracts just for this field and not allowing this field to be searchable.

4. Topical Guidelines

Mr. Stuart Treby, NRC staff, led a discussion of the changes proposed by NRC to the Interim Topical Guidelines for the content of the LSS. The Panel members, other than NRC, took the position that if substantive revisions are to be made in the Interim Topical Guidelines, such as the proposed

9011130107 4pp

deletion of environmental and transportation related documents, they should be made in a formal rulemaking. The Panel members agreed that an appropriate letter should be sent to NRC expressing their views on this subject. I am preparing such a letter at this time.

5. LSS Development

The Panel was briefed by Ms. Barbara Cerny, DOE, on the current LSS implementation schedule. The current schedule calls for the first node of the system to be operational at UNLV in September 1993.

6. Science Applications International Corporation (SAIC) Design Documentation

Mr. David Nippert, Ms. Dona Mennella, and Mr. Edward Timmes, briefed the Panel on SAIC's design documents including the capture system, the search and image system, and the communications system. Final documents will be submitted to DOE in November 1990. The Panel members will be provided copies.

7. Status of Compliance Evaluation Program and of Priority Document Production Schedule

Mr. Francis X. Cameron, LSSA, brought the Panel up to date on what the LSSA's contractors are doing with respect to assisting LSSA in the formulation of a plan to evaluate LSS participants' compliance with the LSS and in the development of a priority document production schedule for initial loading of the system. He presented a schedule showing the relative times for future activities in LSS development.

8. Handling of Non-Documentary Material in the LSS

Mr. Rawley Johnson and Mr. Charles Acree of the Center for Nuclear Waste Regulatory Analyses described their work under contract with LSSA to address the handling of non-documentary data in the LSS.

9. Schedule for Next Meeting

The next Panel meeting is tentatively scheduled for June 12 and 13, 1991, in Bethesda, Maryland. The following agenda items are proposed for discussion at that time:

Final SAIC Design Documentation
Priority Loading Issues

Planning for Participants' Access to the LSS
Compliance Evaluation Plans
Office of LSSA Work Breakdown Structure
Project Management for LSS Procurement

cc: Chairman Carr
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
OGC
SECY
LSSARP Members
LSS Internal Steering Committee

ENCLOSURE 5

INDEX

TO

TRANSCRIPT OF LSS ADVISORY REVIEW PANEL OCTOBER 10 AND 11, 1990, MEETING

	<u>Page</u>
Introduction of Members	4
Approval of Minutes of June 7, 1990, Meeting	7
LSS Implementation Schedule	9
SAIC Design Documentation	49
Capture System	54
Search and Image System	63
Communications System	92
Revised Topical Guidelines	140
Header Information	187
Abstracting of LSS Documents	199
Handling of Technical Data	257
Planning for Future Activities	322
Discussion of Future Meetings	343

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: Nuclear Regulatory Commission

Title: LSS Advisory Review Panel Meeting

Docket No.

LOCATION: Reno, Nevada

DATE: Wednesday, October 10, 1990 PAGES: 1 - 215

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300
Washington, D.C. 20006
(202) 293-3950

9011130112

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

3
4 - - - - -

5
6 LSS ADVISORY REVIEW PANEL MEETING

7
8
9 - - - - -

10 Quality Inn
11 3800 South Virginia Street
12 Zephyr Room
13 Reno, Nevada
14 Wednesday, October 10, 1990
15

16 The above-entitled meeting convened at 8:30 a.m.,
17 pursuant to notice, John Hoyle, Chairman, presiding.
18
19
20
21
22
23
24
25

1 Appearances:

2 Marilee Rood, NRC-LSSA
3 Peter Cummings, City of Las Vegas, Nevada
4 Kirk Balcom, State of Nevada
5 Malachy Murphy, State of Nevada
6 Bill Hooton, National Archives
7 Chris Henkel, EEI/Waste
8 Jay Silberg, Shaw Pittman (EEI/Waste)
9 John Hoyle, NRC (Chairman)
10 Stuart Treby, NRC/OGC
11 Elgie Holstein, Nye County, Nevada
12 Dennis Bechtel, Clark County, Nevada
13 Liza Vibert, D.A., Clark County
14 Corinne Macaluso, ^{DOE/OCRWM}~~D.A., Clark County~~
15 Barbara Cerny, ^{DOE/OCRWM}~~D.A., Clark County~~
16 Lenard Smith, Lincoln County, Nevada
17 Boyd L. Alexander, U.S. Patent & Trademark Office
18 Linda Desell, DOE/OCRWM

19 Also Present:

20 Edward A. Timmes, Jr., SAIC
21 Tom Nartker, UNLV-ISRI
22 Kazem Taghva, UNLV-ISRI
23 Rawley Johnson, SWRI-CNWRA
24 Charles Acree, SWRI-CNWRA
25 Avi Bender, Contel

1 Also Present: (continued)

2 Bruce Foster, SAIC

3 Lynn Scattolin, NRC-LSSA

4 Elizabeth Shelburne, NRC-LSSA

5 Harry W. Swinston, State of Nevada

6 Chip Cameron, NRC-LSSA

7 Dana Mennella, SAIC

8 David Nippert, SAIC

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

P R O C E E D I N G S

CHAIRMAN HOYLE: Okay. I think we're ready to begin the meeting. Good morning, ladies and gentlemen. My name is John Hoyle. This is the fourth meeting of the Licensing Support System Advisory Review Panel.

The panel is a formal advisory committee of the Nuclear Regulatory Commission, having been established in December, 1989. Our meeting today is open for observation by members of the public. If there are members of the public here who wish to make an oral statement, please see Marilee Rood to my left or myself about making arrangements for such statements. We'll be pleased to receive any written statements that any member of the public may have for our files.

The first thing we usually do is go around the table and I ask everyone to introduce themselves and mention where they're from. I do want to assure everyone that the Federal Government is in business today. We are a little shorthanded ourselves, by virtue of budget problems, but we have at least three individuals back in Rockville, Maryland on the telephone on the speaker phone, so I will ask them to identify themselves as well.

Perhaps I will start with those in Washington.

Steve?

MR. SCOTT: Steve Scott, Office of Information

1 Resources Management, Nuclear Regulatory Commission.

2 CHAIRMAN HOYLE: Mark?

3 MR. DELLIGATTI: Mark Delligatti, Division of High
4 Level Waste Management, Office of Nuclear Material Safety
5 and Safeguards.

6 CHAIRMAN HOYLE: Ann?

7 MS. GARCIA: Ann Garcia, Division of High Level
8 Waste Management, Nuclear Material Safety and Safeguards.

9 CHAIRMAN HOYLE: Fine. Thank you very much. As I
10 said at the start, I am John Hoyle. I'm from the Office of
11 the Secretary of the Nuclear Regulatory Commission. And let
12 me go to my right, starting with Stu.

13 MR. TREBY: My name is Stuart Treby. I'm
14 Assistant
15 General Counsel for Rulemaking and Fuel Cycles with the
16 Nuclear Regulatory Commission.

17 MR. HOLSTEIN: I'm Elgie Holstein representing Nye
18 County, Nevada.

19 MR. BECHTEL: Dennis Bechtel, the planning
20 coordinator for Clark County, Nevada.

21 MS. VIBERT: Liza Vibert. I'm with the D.A.'s
22 office in Clark County, Nevada.

23 MS. DESELL: Linda Desell with the Department of
24 Energy/Office of Civilian Radioactive Waste Management.

25 MS. MACALUSO: Corinne Macaluso with the

1 Department of Energy/Office of Civilian Radioactive Waste
2 Management.

3 MS. CERNY: And I'm Barbara Cerny with the same.

4 MR. SMITH: I'm Lenard Smith from Lincoln County,
5 Nevada.

6 MR. ALEXANDER: I'm Boyd Alexander. I'm Deputy
7 Commissioner for Information Systems, Department of
8 Commerce, and I'm losing my voice again this morning. I
9 don't know why. It must be the air out here.

10 CHAIRMAN HOYLE: Okay.

11 MR. CUMMINGS: I'm Pete Cummings from the City
12 Manager's office for the City of Las Vegas.

13 MR. BALCOM: Kirk Balcom representing the State of
14 Nevada.

15 MR. MURPHY: I'm Mal Murphy representing Nevada.

16 MR. HENKEL: Chris Henkel, Edison Electric
17 Institute.

18 MR. SILBERG: Jay Silberg, Shaw, Pittman, Potts,
19 and Troberg representing Edison Electric Institute and
20 Utility U Waste.

21 MS. ROOD: Marilee Rood from the office of the LSS
22 Administrator.

23 CHAIRMAN HOYLE: Okay. We have those in the
24 audience behind us who will be making our presentations for
25 us today from SAIC and from the Southwest -- the Center for

1 Nuclear Waste Regulatory Analyses -- who else do I have back
2 there?

3 Welcome everyone to this meeting in this facility.
4 We'll begin by starting with the agenda. The reference is
5 administrative issues. The only item that I want to bring
6 up at this time is the draft minutes of the last meeting.
7 These are the minutes of the meeting held on June the 7th
8 back in Bethesda. We circulated those to members of the
9 committee on August the 7th and I would ask whether there
10 are any changes to be made or comments? This was the first
11 time we had a full transcript of a meeting rather than just
12 handwritten minutes. Do I have any comments on the minutes?

13 (No response.)

14 CHAIRMAN HOYLE: Hearing none, I would consider
15 them approved and I'll certify them for the record.

16 The -- are there any other administrative issues
17 that anyone would like to bring up at this time? Yes,
18 Linda.

19 MS. DESELL: I would like to let the entire group
20 know that Corinne Macaluso, sitting to my right, will be
21 replacing me as the alternate representative for the
22 Department of Energy and, if you could direct all
23 correspondence that was previously directed to me should be
24 directed now to her.

25 CHAIRMAN HOYLE: All right. Thank you. Thank you

1 for your participation --

2 MS. DESELL: Thank you.

3 CHAIRMAN HOYLE: -- up till now.

4 MR. DELLIGATTI: John, this is Mark Delligatti.
5 We're not able to hear Linda Desell and Corey when they
6 speak.

7 CHAIRMAN HOYLE: All right. Let's all take note
8 that -- the problem, Mark, is that we just have the one
9 phone. It's parked over here near me. We are sitting
10 around a very large horseshoe-shaped table. We'll try our
11 best to speak up.

12 MR. DELLIGATTI: Okay. Thank you.

13 MR. HENKEL: Would the Court permit it to maybe be
14 put on the center table? That might help things.

15 CHAIRMAN HOYLE: We're going to -- we have a
16 suggestion to put it on the -- we have a center table where
17 we've got a view graph. Why don't we try it there, so we'll
18 move it. Marilee will move it.

19 (Pause.)

20 CHAIRMAN HOYLE: We are making a transcript of
21 this meeting as we did the last one. So we do need to speak
22 up, not only for those back in Rockville, but we need to
23 make sure that the court reporter can hear us as well and
24 for those that are going to give us presentations today, I
25 would hope that they speak up, they identify themselves for

1 the record, please.

2 MR. SILBERG: Can you hear us in Washington now?

3 MR. DELLIGATTI: So far, yeah, that's fine.

4 CHAIRMAN HOYLE: All right. We're yelling. Okay.

5 The next item on the agenda is listed as status of LSS
6 development and status of Repository Program. And I call on
7 Barbara Cerny, the DOE representative, to lead us in this --
8 in this status report. Barbara.

9 MS. CERNY: Okay. I'm just going to give a status
10 report on the LSS. Are you giving the status report on the
11 program or are we just doing the LSS?

12 MS. DESELL: I believe it would be difficult to
13 give a status on the program at the moment, considering the
14 budget situation. It really hasn't changed that much from
15 the last meeting.

16 CHAIRMAN HOYLE: Okay. We were hoping to hear any
17 changes that may have occurred. If there are none, --

18 MS. DESELL: There are none.

19 CHAIRMAN HOYLE: -- I don't think we need to hear
20 anything on that.

21 MS. CERNY: Budget's over at OMB of course, like
22 everyone's budget, so we get a passback on that.

23 CHAIRMAN HOYLE: Okay.

24 MS. CERNY: I do have one -- one view graph that I
25 want to show. Well, I'll just -- just start.

1 (Pause.)

2 CHAIRMAN HOYLE: Why don't we bring the telephone
3 back here.

4 MS. DESELL: I think the table needs to be moved
5 away from the screen.

6 (Pause.)

7 MS. CERNY: You know, we're going to have a
8 presentation next from SAIC on the design documents, the
9 draft that has just been reviewed last week, and it's all
10 the major components of the LSS and I guess first I really
11 want to thank people who have taken part in this from the
12 office of the LSS Administrator and from the State of
13 Nevada, particularly Kirk Balcom and Lynn Scattolini, Betsy
14 Shelburne, Avi Bender, and Jim Shields.

15 The meetings were really very intensive and I
16 think that they provided good input to this process. And,
17 you know, now we believe that we're -- we really can
18 describe a system. You know, I read those documents and --
19 but this is the first time that I really feel we have a
20 system. There's enough understood about it now and they're
21 really magnificent documents. I'm just so pleased to think
22 we were so lucky to have SAIC doing this for us.

23 And we're really ready now to develop a
24 specification and then to initiate the procurement.

25 MR. DELLIGATTI: Excuse me, Barbara. I hate to

1 interrupt but it's breaking up. We're not getting it back
2 here.

3 MS. CERNY: Well, I can't talk any louder.

4 MR. DELLIGATTI: I know. It's not a question of
5 your loudness. I think it's a question of wherever the
6 microphone is.

7 MS. CERNY: Well, the real problem --

8 CHAIRMAN HOYLE: These mikes are just for the
9 court reporter, I believe.

10 MS. CERNY: Does this mike have -- this mike
11 doesn't help? It's --

12 CHAIRMAN HOYLE: Barbara, may I suggest that you
13 use the podium?

14 MS. CERNY: Okay.

15 CHAIRMAN HOYLE: Let's try that.

16 MS. CERNY: We could try that. Okay. I'm at the
17 podium. Can you hear me better now, you on the telephone?

18 MS. DESELL: Mark?

19 MS. CERNY: Mark? No.

20 MS. DESELL: I think we've lost them. I hear a
21 ringing.

22 CHAIRMAN HOYLE: Yeah, the line's gone.

23 (Pause.)

24 MS. CERNY: Okay? Can you hear?

25 MR. DELLIGATTI: You're fine.

1 MS. CERNY: Wonderful, wonderful. Okay. We'll
2 use the podium then. I think that will work.

3 Just let me go back a little bit. As you recall,
4 back last May, John Bartlett made the decision that we would
5 put the LSS off for two years because the program had
6 slipped for six, the license application. And just within
7 the past few weeks, there have been subsequent discussions
8 with DOE and NRC in which they agreed to try once again for
9 a 1993 target.

10 Now, this as you can see is contingent on
11 availability of '92 and '93 funds, as is everything else in
12 the program. There has been money in the -- there is money
13 in the budget for the LSS but, of course, it is all subject
14 now to OMB approval and we expect our passback usually comes
15 around Thanksgiving. But, in the meantime, we're proceeding
16 with this schedule and I'll describe this to you.

17 The final draft of the LSS design -- this is the
18 document that I was referring to that is so excellent that
19 was reviewed last week -- was the 5th of October and we look
20 at accepting that design finally by the end of November and
21 that's the point at which the SAIC contract is over. And so
22 we would then begin working on a -- the FEDSIM contract to
23 get the RFP out to further develop the specifications.

24 MR. SILBERG: Barbara, does that contract end on
25 that date or on the acceptance of the final LSS design?

1 MS. CERNY: On that date.

2 MR. SILBERG: Whether or not you meet the --

3 MS. CERNY: Oh, we're going to -- yeah, I mean it
4 -- there's a little slippage in there, but basically that
5 document is -- and a few other deliverables that we have is
6 the -- the end of the contract.

7 FEDSIM -- does anyone need to know anything about
8 who FEDSIM is? Does everyone know? I think we've -- okay.

9 We had started last spring a work statement for
10 FEDSIM that we had put aside because there was a decision
11 made to put off the procurement for two years or -- and
12 we're now picking that up again and going back into that and
13 we'll start to work with FEDSIM. And the process that
14 FEDSIM goes through then, we give them the work statement.
15 They have blanket awards with a number of contractors --
16 awards that came through a blanket contract and they submit
17 that work statement then to their contractors who will bid
18 on it. The whole process is actually quite fast. You know,
19 given it's Government work, it's quite fast. And we would
20 expect then to have FEDSIM on board by middle of April.

21 We're looking then to go out with a request for
22 comment again for the solicitation, just as we did for the
23 capture stations. We found that very valuable to go out and
24 get industry response, November of next year.

25 And then the final RFP after we -- we get the

1 comments back and fold them into the document, we would look
2 to April of '92 and then the implementation of the contract
3 would be awarded by November of '92. In the -- that period
4 in there, because this is such a big procurement, we would
5 look for it to be out on the street for between 90 and 120
6 days and of course it has to have an SEB because it's --
7 because of the size of the contract, so the reviewing of the
8 proposals takes longer.

9 And in that period, we would also ask for a live
10 test from the vendors who are bidding on this of hardware
11 and really varilla software on the hardware. For example,
12 the DBMS that is proposed, can it run on that hardware
13 platform? You know, obviously they aren't going to go into
14 doing these specialized applications program, but that we
15 would want that kind of a test and that will take time to
16 go, depending on the number of vendors who bid on this. The
17 idea is that you want your software optimized for your
18 hardware and that is, you know, -- one of the evaluation
19 criteria will have something to do with that I'm sure.

20 Then the first cluster of equipment would be
21 installed in August of '93 and at that point what -- and
22 what will go on in that period between November and August,
23 the detailed software design, once we have the hardware, the
24 functionality for the application software, the kind of
25 tools that are available with the hardware and software

1 combinations, some of the code development, they'll all be -
2 - there will be interim deliverables in there but we won't
3 actually have the equipment installed until we have, you
4 know, the software or a good bit of it because then there
5 won't be any -- there wouldn't be anything to test
6 otherwise, and so then that test period of one month for
7 acceptance will actually be quite fast because we'll have
8 most of the software up by then and we can really see, you
9 know, if there are bugs, can we break it in that month.

10 So if things go well and budgets get approved,
11 that's what we're going to be aiming for. Yes?

12 MR. ALEXANDER: Just one question, Barbara. The
13 FEDSIM activity and then the acquisition support contractor,
14 can you tell me the difference or what each is doing? This
15 -- I know what FEDSIM normally does and they can do maybe
16 what the contractor does.

17 MS. CERNY: Oh, yeah.

18 MR. ALEXANDER: Unless they -- unless they select
19 the contractor for you to then do the evaluation criteria,
20 do everything else.

21 MS. CERNY: No, that's just phrasing. That's --
22 the acquisition support contractor is a FEDSIM contractor.

23 MR. ALEXANDER: Yeah.

24 MS. CERNY: Okay, so FEDSIM will still be managing
25 but this October to April period is when FEDSIM takes the

1 task to their contractors out for bid.

2 MR. ALEXANDER: Okay.

3 MS. CERNY: And then who -- whatever contractor is
4 selected by FEDSIM, then we'll begin.

5 MR. ALEXANDER: Does the contractor then deliver
6 an acquisition plan to you at some time?

7 MR. ALEXANDER: Yes, exactly. They go all the way
8 -- they develop then the RFC and the RFC.

9 MR. ALEXANDER: And the whole plan, including the
10 evaluation --

11 MS. CERNY: The whole plan.

12 MR. ALEXANDER: -- criteria and the testing?

13 MS. CERNY: The evaluation criteria, testing;
14 that's right. That's the support we're going to get from
15 FEDSIM.

16 MR. ALEXANDER: Will we get to see that
17 acquisition plan?

18 MS. CERNY: Oh, absolutely.

19 MR. ALEXANDER: Okay.

20 MS. CERNY: Absolutely. It's just our -- it's
21 just the contractual vehicle for doing it. We'll still have
22 of course some FEDSIM managers involved in this.

23 MR. ALEXANDER: My view is this I think is a very
24 optimistic schedule. It's going to be awfully tough --

25 MS. CERNY: Oh, I agree.

1 MR. ALEXANDER: -- to have it in that time. You
2 ought to add six months at least I think, --

3 MS. CERNY: I agree.

4 MR. ALEXANDER: -- but that's just an opinion.

5 MS. CERNY: Well, you know, what we're doing is,
6 you know, we're trying to do the best we can do with the
7 agreements that were made and if everyone understands if it
8 isn't met because things slip, it isn't met because things
9 slip. I -- but I agree with you.

10 MR. ALEXANDER: Sometimes it helps to plan for
11 slippage.

12 MS. CERNY: Very optimistic; that's right.

13 CHAIRMAN HOYLE: Barbara, where will the first
14 cluster of equipment be located?

15 MS. CERNY: University of Nevada, Las Vegas. SAIC
16 is going to give the detailed presentation about this design
17 document, but what I would just like to do is hit a few of
18 the points that I found, you know, to be a change or really
19 further our understanding of what we needed, things that we
20 really didn't know beforehand that I think are quite
21 significant, so, you know, maybe as they go through this you
22 could kind of focus on these.

23 And they're all the result of this very systematic
24 scrutiny that they gave to really four different elements --
25 one, the negotiated rule, Congressional direction, our

1 findings in the prototype effort which were really very
2 important, and then those that are mandated by federal ADP
3 regulations.

4 And the rule of course gave us very little
5 latitude in some areas, so their design really, if they're
6 to meet the spirit and intent of the rule, there were not
7 really alternatives in some cases and, similarly, the
8 Congressional direction that LSS shall be physically located
9 at the University of Nevada, Las Vegas is an external force
10 that drove many of the factors of our design and, again,
11 limited our options and alternatives because that's where
12 the mainframe will be so, you know, we -- the whole
13 communications analysis then was done with the host being
14 there, rather than looking at alternatives of Washington,
15 let's say, or UNLV.

16 The prototype effort was really very interesting.
17 As we discussed before, you can't really ask people how they
18 will use such a system. It is only through some kind of a
19 test bed or instrument -- well, instrumented test bed that
20 that really was that you start to get some answers relevant
21 to the design and how it will be used. And one of the
22 outcomes of that was Level I work stations. Those of you
23 who were involved in the negotiation will remember we kept
24 saying, "Well, people will just be able to use PC's for the
25 text portion if they didn't need images, their PC's." Well,

1 it turns out, and as SAIC will go more deeply into that,
2 that when the design team examined how the search system
3 software could really meet the user requirements and the
4 performance, the time requirements that came out of the
5 needs analysis, that you just can't use PC's. We really
6 have to have a more sophisticated Level I work station.

7 Now, there really are some changes and that data
8 loading -- when we sized, initially sized, disk space that
9 we would need, when they really started looking at how big
10 the database was, how we would update the database, the
11 requirements for access to the database, they came up with
12 the solution that will double the amount of disk storage
13 drives because they'll have to be updating one while --
14 basically they'll be mirrored, updating one while the other
15 is on line for access, so that of course will have a -- that
16 has a design impact. It will have a cost impact.

17 Let's see, and telecommunications. When we looked
18 once again at the number of users, the usage patterns that
19 we learned in -- through the prototype, the size of the LSS
20 documents, it turned out to be bigger than we expected. How
21 we need to have images cashed at the work stations, they
22 came up with a configuration that has a mainframe and then
23 servers that will serve a cluster of work stations to get
24 the robust telecommunications that are really required.

25 The sophistication of the system I think will be

1 much greater than we anticipated, at least I did when we
2 started, in that if you want it to be very simple, very
3 simple for the general public but also sophisticated enough
4 for intermediaries or very sophisticated users, we need a
5 broad range of search tools and a very highly engineered
6 user interface screen, and so that's -- I'm sure they'll be
7 discussing some of these user tools which I find very
8 exciting. I think we are going to be pushing the technology
9 in this direction as our requirements, you know.

10 Database vendors I think will be very interested in the
11 kinds of search tools that we feel we need to support this
12 system when you have this full text environment in which you
13 also have images available to you.

14 So at this point, we feel it's technologically
15 feasible. We're following the directives that were
16 established in the rule. And we know the magnitude of the
17 problem. And so before we go forth with any major
18 expenditures, I think we really do understand where we are
19 headed.

20 It's --

21 MR. SILBERG: Barb, --

22 MS. CERNY: Yes?

23 MR. SILBERG: -- excuse me. You say you know the
24 magnitude of the problem.

25 MS. CERNY: Yeah.

1 MR. SILBERG: Have you gone back to look at any
2 changes in cost estimates?

3 MS. CERNY: Costs. I checked.

4 MR. SILBERG: Right.

5 MS. CERNY: Yes. We are --

6 MR. SILBERG: You haven't heard that broken record
7 in at least three months.

8 MS. CERNY: But I remembered it. I remembered it.
9 Absolutely and all I can say -- we are and that's -- we
10 expect in November -- we just got this document last week
11 so, you know, obviously this is all hot off the press.

12 We're -- and there are some cost analyses and
13 implications in it and in the November time frame, we will
14 have a revised cost estimate but I can tell you it's going
15 to be much higher than we originally anticipated because of
16 some of these factors that I'm giving you.

17 And the other factor is with the license delayed
18 -- application delayed for seven years, we'll be capturing
19 data over a longer period of time and, although the number
20 of capture stations don't change, we'll be operating them
21 longer and also if we were to -- we looked initially at a
22 ten-year life cycle, system life cycle. But if we were to
23 go in with new technology at the end of that period, if we
24 started in '93, that would be right in the middle of the
25 license hearing and we probably aren't going to want to do

1 that. So we will probably look for -- at a longer life
2 cycle for this system at this -- you know, at this time.

3 Yes?

4 MR. HOOTON: Barbara, what provisions have you
5 made talking about a life cycle cost -- cost tables and
6 things, what provisions have you made for down the road
7 beyond your ten-year life; what are you going to do with
8 your media? What are you going to do with your data
9 migration? How have you factored that into the cost?

10 MS. CERNY: We haven't. The cost for -- the cost
11 that we're looking at right now, Bill, is the -- is the
12 first ten-year life cycle cost and that's -- that's as far
13 as we've gotten with it and they'll be -- that will be
14 redone and I'll have those numbers but, yes, Jay -- yes,
15 Jay, there will be a cost increase, significant,
16 significant.

17 MR. HENKEL: Barbara, you talked about pushing the
18 envelope of technology. Have you given any consideration to
19 using proven off-the-shelf type components that we can
20 hopefully make sure that the system works right the first
21 time as opposed to pushing the envelope out to the point
22 where the system's reliability may be a little worse than
23 we'd hoped for?

24 MS. CERNY: Oh, absolutely, and that's -- the SAIC
25 design document, we use off-the-shelf technology wherever it

1 exists, and then their design document is written in terms
2 of all the components of the system and what additional
3 software will have to be written to provide the
4 functionality required by the intent of the rule and from
5 the user needs analysis. Okay? And they -- and they go
6 through that very explicitly, you know, where we can use
7 off-the-shelf software and then what has to be done to it.

8 Now, in terms of -- all right. Take an example.
9 Database management system will be off the shelf, but you
10 will want some user search aids that will just give you more
11 -- well, more user friendliness, more capabilities. I'm not
12 going to talk about those right now, give their talk and I'm
13 not going to do that 'cause that's what they're going to
14 talk about.

15 All right. Now, they will have to be written on
16 top of the DBMS. If for some reason you can't -- the DBMS
17 let's say won't support them, well, you just won't use those
18 or you find -- figure out another way to do it or you write
19 some other application software, but it's all going to be
20 done very modularly so that the foundation is off-the-shelf
21 software and then the hardware is, you know, a systems
22 integration problem to get the pieces plugged together.

23 But, yeah, I think what their analysis has shown,
24 that it is technologically feasible with off-the-shelf
25 software to provide the basic capabilities upon which we

1 believe can be written, the enhanced functionality that the
2 rule and the requirement system needs analysis requires.

3 MR. ALEXANDER: Can we get a copy of the design,
4 Barbara?

5 MS. CERNY: Yes. Yes, when we get the draft,
6 absolutely.

7 MR. ALEXANDER: Okay.

8 CHAIRMAN HOYLE: Barbara, --

9 MS. CERNY: Yeah?

10 CHAIRMAN HOYLE: -- a question from the LSSA
11 office.

12 MS. CERNY: Sure.

13 MR. CAMERON: Barbara, I just wanted to clarify
14 something that might be useful for the panel members to --
15 to know. As I understand it, one of the tasks that the
16 FEDSIM acquisition support contractor will perform is to
17 take a look at the costs of various aspects of the system in
18 the context of an alternative design analysis and I would
19 imagine that
20 -- that that would look at an alternative way to, for
21 example, do the telecommunications part of the LSS in terms
22 of image availability and that might come up with a much
23 lower cost than what is in the original design.

24 But before the RFP goes out, the FEDSIM contractor
25 will take a look at alternatives, not -- from a cost effec-

1 tiveness standpoint and that that might be incorporated into
2 the RFP. I think that's the way that -- we're certainly
3 looking at the RFP development process in that way.

4 MS. CERNY: You know, I would respond yes and no
5 to that. Certainly from telecommunications standpoint,
6 we're looking right now -- SAIC before they finish their
7 contract is looking at alternate telecommunications schemes.
8 You know, they did this very elaborate modeling based on
9 user geographic locations and routing, traffic -- proposed
10 traffic volumes and so they're going to be looking at that
11 and if there are other ways to do it.

12 But in some cases, like search aids, you're really
13 not going to know -- I mean, you can -- you can say, "Well,
14 we want to do rank order of documents based on frequency of
15 word occurrences and that has to be written on top of DBMS
16 and there's some very technical problems that once you
17 actually get into, depending on what the DBMS is, whether
18 you can actually get into that system, to the code of that
19 system and have the performance you need, you don't know
20 that until you get into it because you don't know the DBMS
21 and there's no way of doing that kind of analysis. You can
22 say in your specification, "We want these certain search
23 aids. Lay out the functionality." But will they all
24 really be possible? I don't know. That's why I say this is
25 a yes and no answer. In some cases we can look at it. In

1 some cases I don't believe we can because we are out at the
2 edge of technology in some cases.

3 MR. CAMERON: Well, I realize that there may be
4 certain portions of the design that are not going to be
5 amenable to that type of analysis, --

6 MS. CERNY: Yeah.

7 MR. CAMERON: -- but I think that it's important
8 for the panel to understand is that there will be some
9 further cost benefit and alternative design analysis that
10 will be going on in the future before the RFP is issued and
11 that might have a impact on what the cost of the system will
12 be.

13 MS. CERNY: Okay. What are some of the -- yes?

14 MS. SCATTOLINI: Barbara, I have some concern
15 about characterizing what we're doing as on the edge of
16 technology. I wouldn't want to give the panel a wrong
17 impression. I think when you use that term, you're talking
18 more about some special application software, and certainly
19 there's some integration that needs to be done. But as far
20 as the basic components of the LSS, hardware, the DBMS, and
21 baseline software, it is all off-the-shelf and exists today.

22 MS. CERNY: I think I said that, you know, that we
23 -- didn't I -- isn't that what I said, that it -- the basic
24 software and hardware is there. It's the sophistication
25 that we add to it. But in some senses, this is such a large

1 system and it's that sophistication I think that will make
2 or break this system when we really get down to it, for it
3 to satisfy the user needs, and that's why I say I think we
4 really are pushing the edge of technology, though we know
5 the LSS is technically feasible at this point. We can build
6 it.

7 MS. SCATTOLINI: Again, we may be saying the same
8 thing. I just wanted to clarify for the sake of the panel
9 that our office view is that basic software and all of the
10 hardware is off the shelf. We're talking about doing this
11 developing some special application software to provide the
12 functionality that is needed for the user and certainly to
13 provide software that's needed to integrate -- I just don't
14 want to give you the impression that this is some research
15 project or something on that order.

16 MR. HOLSTEIN: So would it then be fair to say
17 that the principal reasons for cost increases, at least so
18 far as you can predict them at this point, are attributable
19 more to the -- to the longer time period, the life -- the
20 longer life cycle now anticipated as opposed to earlier?

21 MS. CERNY: The longer life cycle and also those
22 design -- the reason I'm mentioning these design features is
23 that these have a cost associated with them as well. And
24 when we really look at what it will cost to do the telecom-
25 munications, what it will cost to do the application

1 development, it just all does add and it's a combination of
2 things but I think, yes, the longer period is certainly one
3 big reason.

4 MR. HENKEL: Do you have any sense yet of how big
5 the cost increase will be?

6 MS. CERNY: Big.

7 MR. HENKEL: You said big, but I mean is that a --

8 MS. CERNY: Big.

9 MR. HENKEL: -- 200 percent increase or a 20
10 percent increase?

11 MS. CERNY: Until we work out the numbers, I don't
12 -- you know, I don't want to stand here and have them
13 written down by our transcriber.

14 MR. HENKEL: Do you have any idea when you might
15 have a new cost estimate available?

16 MS. CERNY: November.

17 MR. HENKEL: November?

18 MS. CERNY: Yeah, we're working on that. I mean,
19 now that -- we couldn't do it, you know, until we had the
20 design document. We now have the design document, yes, so
21 we're working on that.

22 We're really now just beginning implementation and
23 it's going to be very complex from this point. In a sense,
24 this was the easy part. You know, first we have to go
25 through this procurement which, as you know, procurements

1 are always difficult. And then the eventual takeover by the
2 NRC becomes really very complex, just how that transition is
3 done, and the operational procedures that have to be
4 developed and implemented, hardware and software
5 configuration management, this -- with a life cycle this
6 long. There's just a lot of very complex issues that we're
7 embarking upon now so, you know, in a sense we now know we
8 have -- we have a system that is feasible. We feel we
9 understand it and I think the really difficult part is about
10 to begin.

11 One -- you know, if this is going to be at the
12 University of Nevada, Las Vegas, then they're going to have
13 to start planning to provide space and we may have to have
14 that space before we know what the equipment is or just
15 exactly how big the space has to be because, you know, they
16 have to go and do their planning in parallel with the work
17 that we're doing here. So that -- that's a rather complex
18 issue, too.

19 Let's see. I think that's about all the -- okay.
20 ARP's role, there are a few issues that have come up that I
21 know some of you are aware of that I just -- I just throw
22 out as some of the types of things I think we're going to
23 have to be considering.

24 Now that we know that the Level 1 work stations
25 will have to be upgraded, should this be covered under the

1 LSS budget? Who's going to pay for it? The rule excludes
2 personnel information but of course, as you know, the LSS
3 will be the repository for the QA records for the program.
4 And the QA records require personnel information.

5 There's copyrighted materials, gaining clearance
6 for copyrighted materials. This is -- this is potentially a
7 serious problem. Who establishes and staffs the copyright
8 clearance operation? How are we going to administer payment
9 of requested royalties on a per print basis? Will users be
10 charged if they request a print of copyrighted material?
11 Can we legally get around this some way because of the kind
12 of system it is? You know, these are legal issues, but they
13 could be operationally potentially very complex.

14 If we charge back, does this go into the Nuclear
15 Waste Fund? Can we put it in the Nuclear Waste Fund? Is
16 there legislation that is needed in order to charge back? I
17 mean, I just throw these out. There are lawyers here who
18 could maybe answer these off the top of their heads.

19 But, you know, these are the kinds of issues that
20 are starting to come up as we move into the next -- next
21 phase and really begin implementation now.

22 Anybody have any further questions? Otherwise,
23 I'll turn it over to SAIC.

24 MR. ALEXANDER: Just one final one, and this may
25 not be the time to address it, but this is a big project

1 over a long period of time. Having suffered all sorts of
2 scars myself in a similar project, one thing we didn't do at
3 the beginning that I hope is being done now and that is to
4 establish what I would call a program office with people to
5 manage the project. Is something like that being set up to
6 worry about keeping the schedule, dealing with the
7 contractor, worrying about costs, looking at alternatives?
8 Is there a program management office someplace in the
9 Department or in the Commission itself? Somebody's got to
10 manage this and it's going to take more than a person. It's
11 going to take a staff of people to worry about QA and
12 project management, configuration management. My voice is
13 going to quit altogether in a minute but that -- they should
14 be in place now. They should be.

15 CHAIRMAN HOYLE: Barbara could speak to what DOE
16 has in terms of organization, but the NRC has established
17 the Office of the LSS Administrator.

18 MR. ALEXANDER: Yeah.

19 CHAIRMAN HOYLE: Where that function will be
20 managed.

21 MR. ALEXANDER: But it takes -- John, it takes a
22 number of people, at least three or four or five, at some
23 point in time just to get started and that's frankly where
24 we lost control and our contractors gained control and we
25 had cost overruns because we weren't doing the job of

1 managing the contractors in the beginning, very serious but
2 very important step to have that in place about now.

3 CHAIRMAN HOYLE: Let me ask Chip Cameron to
4 address that. Chip, would you have any ideas?

5 MR. CAMERON: Yeah. Part of the problem we start
6 with here is that there is a division of responsibility for
7 design and development and administration of the system.
8 DOE is going to be -- has the responsibility under the rule
9 for design and development and they are going to be
10 procuring the system and overseeing the contractor. All of
11 this has to be done in consultations with the LSS
12 Administrator's office and we've been working very closely
13 with Barbara and her staff on this. But we realize the
14 critical importance of what you're -- you're talking about,
15 Boyd, in terms of oversight of the contractor, and I think
16 that Barbara and her staff also realize that. But we're
17 going to make sure that that oversight is exercised because
18 we do have the responsibility for administration and
19 operation of the system. And we're going to have to help
20 DOE out in that respect, I think, even though it's their
21 responsibility because we have the availability of more
22 staff resources to do that at this point than they do.

23 And, Barbara, if you want to add anything to that,
24 please do.

25 MS. CERNY: No. They're very good points and

1 you're absolutely right. I mean, that's all I would add to
2 it at this point.

3 Okay.

4 MR. SILBERG: Do you have any sense -- you said
5 that this is a very optimistic schedule. If you had to pick
6 a less optimistic but more I don't want to say overly
7 conservative but kind of a middle of the road schedule, what
8 would the bottom line look like?

9 MS. CERNY: I can't -- I can't say off the top of
10 my head. But this -- you know, except to agree that this is
11 very optimistic but we are -- as I said, we are trying to
12 meet through this schedule a commitment that was made.

13 MR. SILBERG: Boyd, --

14 MS. CERNY: And this is the way it lays out.

15 MR. ALEXANDER: I think that's a mistake. I
16 really do. You can't be driven by a schedule that may not
17 be reasonably attainable and I don't believe that is.

18 MR. SILBERG: What do you think is a more
19 reasonable schedule?

20 MR. ALEXANDER: I think they're at least six
21 months off, if not longer.

22 MR. SILBERG: Six months at the end of the
23 process?

24 MR. ALEXANDER: Yeah -- well, it needs to be
25 stretched out because they're going to have problems all

1 through the procurement process. It looks to me like if you
2 did this on a curve chart, you're probably talking about --
3 this is your more optimistic or early finish, early -- early
4 finish dates, and you really need to see what's the other
5 side, late, start late, finish dates, the worst case, and
6 then try to manage in between. In our own case, we were
7 driven by a schedule for -- similar to this where we had to
8 meet a deadline and, very frankly, because we were throwing
9 almost everything to the wind, we would take any change the
10 contractor gave us to make it possible to meet that -- the
11 date. We began to realize that we couldn't. We were not
12 controlling the versions of software that were being put in
13 and they were being put in almost randomly. There was no
14 control. When we got to the date that we were ready to do
15 that, if we would have deployed that system it would have
16 been an utter disaster and it would have been killed. The
17 system would not have survived. And we were going headfirst
18 to meet a very optimistic date.

19 What happened was OMB and some other people who
20 had some experience stepped in and said -- these were
21 industry advisors -- said, "This is crazy. You're not going
22 to make it at all. Sit down and take the time to plan this
23 out, do it right, get organized, get ready to manage the
24 project, control the cost, and control the schedule, and
25 deal with the vendors in a businesslike way."

1 And what I see here is -- and I don't mean to be
2 this critical, but I think you're gearing up for the same
3 sort of disaster and I think you shouldn't do it. I think
4 you should take a look at the schedule and look at the worst
5 case 'cause often what is the worst case occurs. And you've
6 got to be prepared now, it to be in your plan, and you ought
7 to have a program office that's managing that and
8 controlling it and telling you that, yes, you are or no,
9 you're not going to meet that date and why you're not and
10 have somebody that's technically capable of dealing with the
11 contractor so that they're not pulling you around by a ring
12 in your nose. And I'm just very concerned about what I see
13 here.

14 Just lessons learned. I mean, we -- we had cost
15 overruns. We had delays that were unacceptable. If you
16 tell people right up front it's going to take longer, I
17 mean, when you really think it will, it's much better than
18 leading up to expectations and then at the very end having
19 the whole thing blow up and slide out maybe years rather
20 than months, which could happen.

21 MR. TREBY: Well, I agree. I don't think we want
22 to run into the problems that you're identifying. But it
23 seems to me that there is planning that's been done in the
24 past. There is, at least on the NRC side, this LSSA office
25 that's got resources to work on this and I don't know what

1 DOE is, but I don't see anything on this schedule over here
2 that involves planning.

3 I would think that now that we have a final draft
4 of the LSS design that we've done the planning and it's a
5 matter of going through the different steps there of
6 acquiring the material. Where am I wrong?

7 MR. SILBERG: Boyd -- I think Boyd is talking
8 about a different kind of planning.

9 MR. ALEXANDER: Yes.

10 MR. SILBERG: You're talking about planning for
11 designing the system. There's been a lot of time looking at
12 what functions the system ought to have. What Boyd is
13 talking about is the planning for managing --

14 MR. ALEXANDER: Exactly.

15 MR. SILBERG: -- the procurement and the
16 installation, you know, like the construction project
17 manager on a big construction job. You've got the architect
18 engineer who's now giving you some blueprints. Now, you've
19 got to go out and procure the services, and it's not the
20 same people and it's not the same function, and people who
21 come up with the best plans in the world, when they get to
22 installing it in the field, if they don't have the right
23 talent put together to manage the folks who are going to be
24 digging the holes and pouring the concrete and putting the
25 wires together, the program is going to go out of control.

1 And we've seen that in the nuclear industry and
2 we've learned a lot of lessons and I would hope that DOE,
3 you know, will learn the same lessons and not make the
4 mistakes that we made in the 1970's.

5 MR. ALEXANDER: That's exactly my point.

6 MR. TREBY: Well, does DOE have a project manager
7 for the construction --

8 MS. CERNY: Yeah. I mean, DOE will have to staff
9 up to do this. You know, that's what they have --

10 MS. DESELL: Basically Barbara is our project
11 manager. I mean, it's her job to get the system designed.

12 MS. CERNY: To -- and we have, you know, made a
13 commitment to try to do it by 1993 and that has staff that
14 will have to be -- we have staff that will have to be added
15 to do it. I mean, that's -- and, you know, as we are able
16 to hire people, we will. At the moment, there's a freeze on
17 hiring. We don't have a budget. You know, as soon as we
18 can deal with these things, we will deal with them.

19 MR. TREBY: Will these be DOE people or will you
20 be hiring another contractor, like SAI?

21 MS. CERNY: Oh, well, that's what FEDSIM is doing,
22 so we will have -- but we have to have more DOE people to
23 manage what we have going on there. The FEDSIM effort is 17
24 FTE, and FEDSIM will be managing their -- the contractor but
25 we're going to be working very closely with them, as we did

1 with SAIC. So we need additional staff on our side to do
2 it, but we would never get 17 FTE or, you know, so that's
3 why we went to the FEDSIM vehicle. In fact, we were looking
4 at having a deputy trail boss being a FEDSIM/DOE -- a FEDSIM
5 federal employee to give that kind of very tight interaction
6 and we, you know, talked to GSA about that concept.

7 MR. SILBERG: Boyd, can the FEDSIM operate in that
8 project management function; did it for you?

9 MR. ALEXANDER: I'm not sure what their
10 capabilities are now that they're part of GSA. They have a
11 -- they have some in-house capabilities I know and then they
12 have contractors and it's certainly possible that they could
13 act for you as a program almost till you got your own staff
14 on board. If not, then I would certainly get an unbiased
15 contractor to do it for you, but you simply have to do that.
16 We finally -- besides having our own staff, we hired
17 McDonnell-Douglas to help us with our management of the
18 product and to some extent the Miter Corporation, and we
19 have, as you might say, a quote, unquote, had an edge --
20 edge of technology system inside and with some components at
21 work, but we found simply that we lost a lot of time and I
22 think we had cost overruns because of the way the project
23 was being managed till we had that. So the answer to your
24 question is, yes, but you need to tell them exactly what you
25 need in that program office to manage the project and I

1 would -- and then certainly as a substitute, Barbara, I
2 would suggest you do that and maybe have a complement and
3 then have them eventually come down so the costs aren't
4 quite as much and your staff build up so that it takes over,
5 but it certainly -- it has to be done and it should be done.
6 If there's a chance, I would have them have that in the
7 FEDSIM contract to help develop a program control --
8 management and control office. It's just key to getting the
9 thing in anywhere near that time frame. There -- I just
10 don't know what the assumptions are behind this. You know,
11 if I had a list of assumptions that we assume this will
12 happen, this will happen, this will
13 happen, --

14 MS. CERNY: Yeah, I have that.

15 MR. ALEXANDER: -- then that might -- it might
16 help understand it a little bit.

17 MS. CERNY: I have that but it's all very, very,
18 very detailed, down to days.

19 MR. ALEXANDER: I'd love to see a copy of that
20 sometime.

21 MS. CERNY: Okay. Certainly. We have it all time
22 lined out.

23 MR. CAMERON: Barbara, I just want to say one
24 thing for the panel's interest related to what Boyd was
25 talking about and that is this is one piece of the

1 management puzzle, but our office is developing a automated
2 work breakdown structure for the entire project which will
3 not only include the design and development and the
4 implementation and procurement for the system, but also all
5 the other components that have to come together for this
6 project to be successful, such as making sure that you have
7 a properly equipped facility, ready on time, making sure
8 that the documents to be loaded into the system get there on
9 time, and this project management tool that we're developing
10 will show critical path tasks and will also show
11 interdependencies of tasks and what changes to schedules do
12 to other parts of the schedule. So we would just emphasize
13 that what Boyd is saying is extremely important.

14 MR. ALEXANDER: That's reassuring. Do you have in
15 there decision points where you go this far and then you
16 have to make a decision to do this or this and, if not,
17 there's a contingency plan that you follow to recoup or
18 regroup, to do whatever you need to do?

19 MR. CAMERON: Yeah, that will --

20 MR. ALEXANDER: Okay.

21 MR. CAMERON: We're going to plan that part into
22 it.

23 MR. SILBERG: Chip, is that system that you're
24 developing being done just by NRC or is it jointly with DOE
25 and, if not, why isn't it?

1 MR. CAMERON: Since we have a broader respon-
2 sibility, we're undertaking this on our own, but we would
3 expect, and I think that Barbara can talk to this -- I know
4 that they're going to have a similar work breakdown
5 structure for their part of the program and we would want to
6 ensure that that's consistent with what we have and -- for
7 our part of the work breakdown and the structure.

8 MR. SILBERG: Is there any overlap? I mean, are
9 you looking at some of the same things in the front part in
10 terms of the design and procurement or do you just take over
11 at a point where DOE turns the system over to you?

12 MR. CAMERON: Well, no. We're doing the whole
13 project because we have to make sure that the system gets
14 successfully implemented. We're taking a review of what our
15 responsibilities are. And the difference, for example, in
16 our -- so there is going to be an overlap. The difference
17 in our work breakdown structure might be that it's going to
18 be on a much higher level for the DOE portion. For example,
19 we will not have steps in our process on the internal DOE
20 contract review process. We will only have the outcome of
21 that process. For example, RFP issued or -- or not RFP, but
22 FEDSIM contractor acquired, so we're taking it up a couple
23 of levels and it won't be as detailed as the DOE's work
24 breakdown structure would be, but we think it's necessary to
25 include in our project planning everything that has to come

1 together for the LSS to --

2 MR. SILBERG: No, I don't disagree with it. My
3 only question is, is DOE and NRC talking to each other so
4 you don't develop two systems which go by each other in the
5 middle of the night and don't communicate?

6 MR. CAMERON: Yeah, that's -- that's a very good
7 point.

8 MR. SILBERG: Now, I would think that your upper
9 level DOE thing ought to be the same as what DOE thinks it
10 is.

11 MR. CAMERON: Well, they have to be -- they have
12 to be consistent and we are talking. We haven't seen what
13 the DOE -- we haven't exchanged work breakdown structure and
14 products as of this point, and I'm not sure where the DOE
15 planning is on that.

16 MR. SILBERG: Can I just encourage that there be
17 some joint work? It just doesn't make sense for two groups
18 to be doing the same or related things and not talking to
19 each other.

20 MS. SCATTOLINI: Well, we are talking to each
21 other. If there's a task in our work, for example, struc-
22 ture, that relates to DOE, we are certainly discussing with
23 the DOE and making sure that the date basically -- the date
24 that we have agreed upon is DOE's planned date.

25 CHAIRMAN HOYLE: Let me ask whether the sense of

1 the committee, the sense of the panel, is to write a letter
2 to DOE, perhaps to NRC as well, a joint letter, urging or
3 expressing concern about the schedule and anything else we
4 want to express concern about or encourage more discussion
5 and communication? Are we perhaps doing enough of that
6 right here at the table with DOE hearing and NRC/LSSA office
7 or do you feel we ought to write a letter at this point?

8 Boyd, do you think that would have helped if
9 someone had done that early on in your program?

10 MR. ALEXANDER: I don't know. I -- the effect of
11 it might have. My view would be that -- that this panel
12 would have, as we're seeing today, certainly detailed --
13 well, verbatim coverage of the remarks that are made. What
14 I would think would be appropriate, and maybe, John, it's a
15 cover letter but a cover letter that transmits these reports
16 and maybe highlights concerns, but this panel probably
17 should come up with a report to DOE or whoever it should go
18 to, and then a letter that transmits that highlighting or
19 stating things that are of highest concern or of interest or
20 questions. Maybe that's an appropriate way to transmit
21 officially so that it has been sent and people can say,
22 "Well, yes, we've done that," and I'm not a whole lot for
23 bureaucratic approaches, but maybe in this case that's an
24 appropriate thing to do.

25 MR. SILBERG: I think it would be useful just to

1 memorialize at least some of -- I don't know. I think the
2 concerns are shared. There certainly are concerns on a
3 couple of the key points and I think Boyd's experience is
4 terribly valuable for this committee and I wouldn't at all
5 mind seeing a letter saying, you know, we were discussing
6 where we stood. The committee had a -- the panel had a
7 number of concerns, including, you know, the need for
8 project management, the need for consistency on work
9 breakdown schedule, questions on scheduling contingencies
10 and the like and that, you know, we would like to hear a
11 report back at our next meeting or the meeting after as to
12 how those problems are being handled.

13 I think that way, you know, we can make sure that
14 it gets, you know, attention at the right levels in the
15 various organizations.

16 CHAIRMAN HOYLE: I certainly would agree with that
17 and could develop such a letter. Does the committee agree
18 that we ought to -- ought to develop such a letter?

19 MR. MURPHY: I frankly don't know what good such a
20 letter will do. If I understand what's gone on properly in
21 the last several months and what Barbara has said, she's
22 produced a schedule here which is optimistic but designed to
23 -- to meet on behalf of the Department a commitment the
24 Secretary made to the Chairman of the NRC to get an LSS
25 system, you know, first cluster on line by '93 and I don't

1 know what good it's going to do to write her a letter
2 saying, "We're concerned that the schedule is optimistic."
3 She's already told us it is.

4 MS. CERNY: Yeah. I mean, we -- we --

5 MR. TREBY: I don't know -- I'm sure Barbara
6 doesn't need a letter from us, but --

7 MS. CERNY: I know, but --

8 MR. TREBY: -- would a letter seem helpful in
9 getting additional resources, if that's what you need to get
10 your project management office established or something?

11 MR. MURPHY: Who should the letter be addressed
12 to?

13 MR. ALEXANDER: Could maybe I suggest an
14 alternative to that, that at some point in there there's a
15 statement or a decision point -- let's just put it that way
16 -- in that schedule where the schedule will be revisited at
17 a reasonable amount of time to make sure that it's still
18 reasonable to obtain and, if not, come up with changing it
19 because I know what happens if you try to do anything to
20 meet a date so that you don't go past it and you start
21 taking shortcuts, those shortcuts lead to -- can lead to
22 mistakes and can raise your cost. If you're willing to take
23 that kind of a risk, say "We'll do anything we have to do to
24 meet that date, no matter what," then you shouldn't change
25 it. But I would leave myself in there at a very minimum a

1 milestone in there that says reevaluate the schedule, cost
2 progress to date, whatever, to determine if it's still a
3 realistic schedule. I think that's common sense.

4 MS. DESELL: Boyd, I think perhaps Barbara may not
5 have put it in there, but we do that kind of a reevaluation
6 on an annual basis as a part of the program in any case,
7 simply to produce our total system life cycle costs, et
8 cetera, on an annual basis to report on our use of the fund,
9 so costs and schedules are reviewed every year on an exten-
10 sive basis.

11 MS. CERNY: And, you know, I don't -- as I said, I
12 -- this is very optimistic. It could well slip, depending
13 on the program. I mean, right now, you know, we still
14 aren't
15 -- we don't have staff. We don't have budget approvals.
16 And until that breaks loose, I can't go ahead and staff up.
17 So, you know, from the very -- and I know NRC understands
18 this. You know, we will try. But there just -- there are
19 just other extenuating circumstances that could make this
20 slip. Yes?

21 MR. CAMERON: I just -- from our office's point of
22 view, although the points that Jay summarized are under the
23 panel's discussion I think are all -- all noteworthy and
24 valuable points.

25 And I just wanted to clarify in terms of Mal's

1 remark about the schedule. The NRC, our office included,
2 and the Chairman included, is not pushing DOE to know of the
3 first note on a schedule that's unreasonable. The '93 date
4 was originally picked because it was thought that that might
5 be a reasonable schedule, but I think that certainly we do
6 have to look at this again and reevaluate it and it's
7 already been reevaluated from what we talked about with DOE
8 a few weeks ago. Our concern was that as soon as reasonably
9 possible, we should try to get a pilot LSS running so that
10 we could begin to -- to test and evaluate the system on a
11 small scale in view of the expansion of the system later on.
12 So I just don't want to leave the impression that the
13 Chairman of the NRC is -- is forcing some type of
14 unreasonable schedule on --

15 MR. MURPHY: I don't -- I didn't suggest that. I
16 don't think that schedule is all that unreasonable. I think
17 what -- if there's any unreasonableness in it, it's the
18 whole federal system which requires all of that -- all of
19 that -- all of them to go -- everybody to go through all of
20 that stuff. I don't think it's --

21 MR. SILBERG: We all agree but to change that
22 system might take several centuries.

23 MS. CERNY: You know, my favorite line, Mal, is
24 "Give me a roll of quarters and a phone booth and I'll build
25 the LSS."

1 MR. MURPHY: Right. They'll buy some.

2 MS. CERNY: That's right. But in fact we can't.

3 MR. MURPHY: Well, --

4 CHAIRMAN HOYLE: Well, I'm not sure now how we
5 want to leave this. I don't get a strong sense of the need
6 to write a letter. I believe we have talked about the need
7 to
8 -- to have contingency planning within the schedule. Unless
9 someone wants to return to that issue, let's drop it at
10 that.

11 MR. SILBERG: I would like to hear at a future
12 meeting what's being done on the project management side.

13 CHAIRMAN HOYLE: All right. That's fair. Okay.
14 Barbara, do you have anything more?

15 MS. CERNY: No, I'm finished.

16 CHAIRMAN HOYLE: Why don't we take a short break
17 and then come with SAIC.

18 MS. CERNY: Thank you.

19 (A brief recess was held.)

20 CHAIRMAN HOYLE: Before I ask Barbara to introduce
21 the SAIC briefing team, why don't I make sure everyone knows
22 that Bill Hooton has joined us up at the table. Bill is
23 from the National Archives office.

24 Bill, why don't you tell us exactly who you are.

25 MR. HOOTON: I'm the Director of the Digital Image

1 and Optical Disk Projects at the National Archives and I was
2 sitting in the back and I couldn't hear so I moved up, and
3 then I had a nice name tag so I decided to use it.

4 MR. SILBERG: You now have a seat at the table.

5 CHAIRMAN HOYLE: Yes. All right. Barbara, please
6 begin.

7 MS. CERNY: Okay. Well, as I said before the
8 break, the second half of the morning was going to be a
9 presentation by SAIC on this design document that they put
10 together that I think is such a masterful job.

11 Dave Nippert and Dona Mennella and Ed Timmes will
12 all be presenting different parts of this. So at this point
13 we'll turn it over to Dave.

14 MR. NIPPERT: Thank you, Barbara. For those of
15 you who don't know me, I'm the project manager for SAIC of
16 the LSS project and I'm going to give a brief overview and
17 then we have three sections of which I'll be a part of, Dona
18 will be a part of, and Ed Timmes will be a part of.

19 The LSS concept shown in the bottom part of this
20 slide which involves data capture, which is one large system
21 component of the LSS, the search and the image system, which
22 takes all the data that's been prepared by data capture, and
23 telecommunications system then which allows all the users to
24 get to the information that's stored in the search and the
25 image system.

1 And we have produced three major functional design
2 documents for each of these components -- capture system,
3 search and image system, and the communications system, and
4 we're going to give you an overview of the major features of
5 each of those in the briefing we have this morning.

6 Due to the time constraints and the amount of
7 material that we have to cover, I'd like to ask that you
8 hold off questioning until the end so that we can get
9 through the whole presentation but we will try to leave 20
10 minutes or so at the end of the presentation for questions.

11 MR. SILBERG: These slides, I assume, will show up
12 in the meeting minutes, John?

13 CHAIRMAN HOYLE: Yes, Jay, they will. If we're
14 given --

15 MR. NIPPERT: I've got about five sets with me I
16 can put on the table. That's all I wanted to carry on the
17 airplane. But we'll make sure that you've got a set for
18 distribution.

19 CHAIRMAN HOYLE: Dave, you will give us a set?

20 MR. NIPPERT: Yes.

21 CHAIRMAN HOYLE: Okay. Thank you.

22 MR. NIPPERT: If we look at the whole life cycle
23 of the LSS from the time we started with the preliminary
24 needs analysis all the way to the operation, systems design
25 is the point of the project that we're in right now and

1 we're very near the end of this and what we have produced
2 are the three documents I showed you on the earlier slide --
3 the capture system, search and image system, and the
4 communications systems design document.

5 But the -- what -- the work that's going on in
6 here is based on work that's been done earlier in the
7 project and particularly the prototype test bed and the
8 testing we did. Now, I know a number of you that are here
9 today participated in those tests. We found them quite
10 helpful and we got some insights and I don't think there was
11 any other way to obtain, to develop the system-level
12 requirements document which is based on this. Also, the
13 rule, our particular contract document, and the preliminary
14 needs analysis data scope and the conceptual design that was
15 done early in the project.

16 There were some key concepts in terminology, and I
17 want to take just a minute or two to explain right now what
18 I think will help to understand the rest of our
19 presentation.

20 One of the concept is the unit. As we went
21 through the prototype development and started handling the
22 data that came into the LSS, we found out that the concept
23 of a document wasn't sufficient to understand what the
24 smallest record or the individual that people would retrieve
25 out of the system would be. So we replaced the term

1 "document" with the term "unit."

2 In a lot of cases, those will be one in the same.
3 For instance, if somebody writes a letter, that document, is
4 a unit that's in the LSS. But if we have a book that's been
5 authored by a number of different authors, and each of them
6 have a significant different subject, even though they're
7 all in one document of the book, we will take and put them
8 into the LSS in the terms of units, and each of the chapters
9 in that case becomes a unit.

10 Also, if a letter and an attachment are submitted,
11 the letter is a unit and the attachment is a unit because
12 the attachment may appear at other times in the submittals
13 to the LSS, and one fo the guidelines we had was to minimize
14 the amount of duplication, so we want to identify each
15 individual thing as a unit and be able to test whether it's
16 already come into the LSS through one or other earlier
17 submittals.

18 For each unit, if it's a normal type of document,
19 the LSS will create three representations of that. One is a
20 header which contains bibliographic and subject data that
21 summarizes the whole document or the whole unit. Next is a
22 conversion of the text that's in the document into an ASCE
23 format that's searchable; third, we take the hard copy
24 version of the document and convert it into bit mapped
25 images.

1 Both the ASCE text and the images are organized on
2 a document basis, and then within a document on a page basis
3 so we can maintain a relationship between the page of text
4 and a page of images.

5 One other major concept that we've come up with
6 because of the size of the database, the number of pages of
7 information and the amount of ASCE text that has been
8 searched, is that there is no technology today that would
9 let us all put that into one great big database and search
10 it. The indexes would be way too large and it would take
11 forever to do.

12 So in order to make this a manageable and
13 searchable system, we're going to divide the database into
14 what we call partitions, and for the amount of information
15 we have, it looks like we need on the order of 20
16 partitions.

17 Now, each of the information in the partition will
18 be stored in exactly the same representation. There'll be
19 headers in the ASCE text in each of the partitions, but it
20 lets us divide the searches into small enough chunks that we
21 can manage it and produce the response that we need for the
22 users. As we go through the rest of the presentation, I
23 think you will see where partitions play a role in when we
24 do the search, in when we retrieve the documents.

25 Donna is going to give us the presentation of the

1 capture system, and then I'll give the presentation on the
2 search and the image system, and then last we'll have a
3 presentation of the communication system.

4 So I'll turn the floor over to Dona Mennella.

5 MS. MENNELLA: As Dave mentioned, I'm going to
6 talk about the LSS capture system. The first thing I'm
7 going to do is tell you how the capture system looks, and
8 then I'm going inside the capture system to tell you what
9 all the different pieces are and how they interact.

10 This will be the initial capture system prior to
11 the search and image system coming up. There are a few
12 principles I'd like to point out here. The first one is
13 that this is a distributed system. It's located in
14 proximity to the data sources.

15 The system is also a modular system. The stations
16 are sized for 3,000 pages a day in a two-shift operation.
17 The capture system is also independent of retrievable
18 computing resources. Data capture does not have to wait for
19 retrieval capability to start. The optical disk output goes
20 directly to the database load, and that can happen at any
21 time.

22 The stations are also connected to a common
23 resource for duplicate checking and for cataloging support.
24 In addition, scanning and ASCE conversion operate on a page
25 basis using bar code tracking. The input data is not

1 preserved; this is all destroyed at the end of the process.

2 MR. SILBERG: When you say the input data, do you
3 mean the hard copy?

4 MS. MENNELLA: The hard copy, yes.

5 After the LSS search and image system is
6 operational, then the capture system becomes a central
7 resource for detailed duplicate checking and cataloging
8 support, and the corrections station is now added to provide
9 corrections and updating capabilities.

10 The capture station receives the submitter's
11 input, provides a worm disk output for the database load.
12 The input can be many things. It could be the hard copy,
13 floppy disk, magnetic tape, microfilm, and E-mail filings,
14 all of which are put into the capture system, and the worm
15 disk is the output of all the headers, the images, and the
16 ASCE text. As I said, the input material is destroyed.

17 These are the capture system processes that we've
18 identified. First, we have initial processing. As it
19 proceeds through that, by going through the steps of the
20 initial processing, and then it goes to scanning, and some
21 documents that are things like logs or other non-document
22 materials will then go directly to cataloging from initial
23 processing. Everything else will get up to scanning.

24 From scanning, most of the things that can be
25 converted to ASCE will go there, but things that are imaged

1 only will go directly to the catalogue. Everything finally
2 goes to the final QC and data preparation.

3 This is what happens in initial processing. The
4 first step is boxes, packages and envelopes, however the
5 submitter sent the things to the capture station are
6 received into the receiving station, and they are logged
7 into a receiving database.

8 At this time, if things do not correspond to what
9 the submitter says he has sent to the capture station, they
10 are rejected and things are returned to the submitter.

11 Things are logged into the receiving database and
12 then go to the beginning of what we call the first
13 cataloging stage. There, the items are checked for
14 readability and conformance. If it is a hard copy, the hard
15 copy is checked to make sure everything is readable in the
16 copy. If the copy is illegible, it is returned to the
17 submitter unless the submitter has indicated this is the
18 best available copy, in which case it will be processed as
19 is.

20 If it is microfilm, a hard copy is printed, and
21 that accompanies the -- if there is an ASCE file with the
22 hard copy, the hard copy and the ASCE will proceed together.
23 If it is magnetic media, it will be loaded into a temporary
24 ASCE storage area for the cataloging process.

25 The next step is to subdivide the documents into

1 units if necessary, and we have come up with a set of
2 unitization rules that each document proceeds through. The
3 result of this is one or more units that are entered into
4 the system.

5 We have devised a set of LSS pointers to indicate
6 the relationships between these units or among the units if
7 there are more than two, to allow the user to retrieve full
8 sets the way they were sent to the capture station.

9 After this point, an accession number is assigned
10 to each unit. The accession number is then printed out on a
11 bar code, and each page receives an accession number. Now,
12 there is an accession number for the entire unit, and each
13 page receives that accession number with a page number
14 extension. We have done this because we have separated the
15 documents when they got to scanning to page units so that
16 each page is processed individually.

17 E-mail filings come into the system through the E-
18 mail capability. These are then loaded into the ASCE
19 storage area, and they are processed on a priority basis.

20 At this point, it is assumed in many cases that
21 the submitter will have provided their own header, and the
22 header is verified. It's verified for two things. It's
23 verified against the document itself to make sure that the
24 information on the submitter's header matches the
25 information in the document, and also it is verified against

1 the rules that have been established for each of the fields
2 in the header. Many of the fields are ruled by a controlled
3 vocabulary, and in the cases where the submitter has not
4 used the control vocabulary, these units have to be put into
5 the proper format.

6 At this point, there are certain key fields that
7 have been entered in that are used for the dupcheck process,
8 and when the cataloguer is through entering these fields,
9 the software itself will automatically tell the cataloguer
10 whether it has found a duplicate in the system. At this
11 point, the cataloguer can retrieve just a citation for the
12 unit that is a duplicate, and can look at it further; can
13 even look at the header.

14 When the search and image system is operational,
15 they can look at the ASCE or the image to determine whether
16 this is a true duplicate. We have tested the duplicate
17 check algorithm in the capture simulation process. We just
18 went through, and it really works beautifully.

19 Once things have completed initial processing,
20 they go on to scanning. As I mentioned, the electronic
21 image from the hard copy is processed on a page-by-page
22 basis. This enables the scanning process to send pages up
23 for rekeying if that is necessary, while not holding up
24 pages that do not have to be rekeyed, it can go through the
25 process. Also, pages that are to be imaged only can be

1 separated and go on to imaging, and not have to carry
2 through the whole process.

3 At the end of the entire process, when I get to
4 process control, you will see that there is a mechanism for
5 reassembling all the units, all the pages of the units that
6 have gone through the processing regardless of where they
7 have gone. By having the page number on the bar code, these
8 pages can be reassembled.

9 The images are compressed and stored, and
10 electronic images are created for the E-mail filing.

11 The next process is ASCE conversion. One of the
12 things that I didn't mention that occurs in initial
13 processing is the catalogers get to look at the pages and
14 determine what the text flow is.

15 As you know, the documents are not published in
16 any kind of standard format, and we have documents that have
17 columns, documents that have boxes across the columns,
18 things that have author biographies at the end of the
19 column, all of which, if the page was columnized as is
20 standard and put in the order that it appears on the page,
21 would interfere with proximity searching for the text. So
22 the initial processes order the columns and the text on the
23 page to tell the ASCE conversion people what the flow of
24 text should be for that page.

25 In ASCE conversion, decisions are made whether to

1 rekey or whether to OCR and edit. Regardless of which is
2 done, the result is a quality of 99.8 percent accuracy on
3 each page.

4 The LSS spell check dictionaries will be
5 maintained by the LSS; have been created by the prototype
6 process and by the capture simulation process, and these
7 dictionaries will be turned over.

8 From, there, the ASCE conversion goes through a
9 quality control check to ensure that everything has been
10 done to the page.

11 At this point, the unit returns to the cataloging
12 area for completion of the subject cataloging fields.
13 Cataloging tools that are available -- remember, I mentioned
14 that the pages will all be assembled -- in process control,
15 the indicator to process control that all the pages have
16 been returned from wherever they are: imaging, from ASCE
17 conversation, and from rekeying. They are now ready for
18 cataloging.

19 This initiates a print process to print out a hard
20 copy for the cataloger. The cataloger has this hard copy,
21 and they have a thesaurus, they have the controlled
22 vocabularies., previously completed headers that they can
23 retrieve for similar documents, and they have indexed text
24 that they can bring up from their screen, and word counts
25 from the unit.

1 We have produced a thesaurus that is slightly
2 different from your traditional thesaurus. In order to make
3 the retrieval a lot better, we have developed a thesaurus in
4 extensive trees to allow for exploding terms down to their
5 narrowest level. So we have bent some of the thesaurus
6 rules to include terms in the narrowed broader term
7 relationships that are normally in related term
8 relationships in your traditional thesaurus.

9 The controlled vocabularies govern fields such as
10 author organization, document condition, sponsoring agency,
11 any field where it is useful to have a controlled vocabulary
12 to allow the user to put in one term. For example, the user
13 just puts in DOE if they want the Department of Energy; they
14 don't have to worry whether it's Department of Energy, US
15 DOE, US Department of Energy, or the nine different ways the
16 Department of Energy could be represented.

17 After the header has been catalogued, a quality
18 control check is performed on all the fields in the header.
19 At this stage, all the information goes to a final QC data
20 check. This is the point where we verify that headers and
21 image and ASCE text are available for every page in the unit
22 that requires each one of those.

23 The ASCE text pages must correspond to the image
24 pages. There must be an image page for every ASCE text
25 page. There may be image pages that do not have an ASCE

1 text, but there must be an image page for every ASCE text
2 page.

3 The data is then organized and written to a load
4 disk for transmittal to the search and image system and to
5 the archive. Governing this whole process is our process
6 control system.

7 This process control system governs the entire
8 process from the time a unit or document appears at the
9 receiving station until it's written to the load disk. This
10 provides an audit trail for any of the units that have come
11 into the system. If the user calls up and says, "I don't
12 find my unit in the system," the process control can tell
13 the submitter what happened to his document and where it is.

14 The last function for the capture system is the
15 correction station. When the ASCE and header and images are
16 all ready to go and have been loaded so the submitter can
17 see them, the submitter has 60 days prior to the license
18 application to look at the image, the ASCE and the header
19 and provide any correction to any of the pieces before the
20 record is locked.

21 Once the record is locked and has been loaded on
22 the search and image system, any corrections are submitted
23 as an entirely new document, and are submitted to the system
24 and processed the same way the original is processed, and
25 the pointer field will tie the two documents together. We

1 do not delete any of the documents after they have been
2 locked.

3 That's it.

4 MR. NIPPERT: Okay. Next, we'll go through the
5 design of the search and image system. There are a lot of
6 features in that, and we'll try just to hit the highlight
7 today.

8 The major design parameters that kind of
9 determined both the size and the needs of the system are
10 shown on this chart. One of the things -- and we talked
11 this morning about cost. Number of users is something
12 that's considerably higher than when we went back and did
13 the first cost-benefit analysis.

14 Based on when we went out and looked at who might
15 use this, and this was in support of the design of our
16 communication system, we came up with an identification of
17 472 users in 260 workstations, and in the peak period, all
18 of those workstations would have users added and would be on
19 line. So that became our peak demand load, the user size.

20 The users are geographically spread across the
21 United States. They are grouped pretty much in the State of
22 Nevada and in the Washington, D.C. area, and then the rest
23 of them are scattered around the country in various regional
24 offices, national laboratories, and support contractor
25 sites.

1 We have redone a data scope analysis that was done
2 early in 1980 originally. With a change in the program
3 schedule, we wanted to go back and take a look at that data
4 scope and see if the size of the database, particularly the
5 number of pages we thought were going to enter, had changed
6 very much.

7 The total number of pages that we find in the
8 database at license hearing time is real close to the same
9 numbers that we had when we looked at it two years ago.

10 What has changed, though, is the size of the given
11 document. Originally when we started, we estimated that the
12 average page per document was around eight. With our
13 experience with the prototype and the capture station
14 simulation, and looking at the relevancy of documents that
15 are in the current DOE record systems, that page count per
16 document is now up to around 30. So whereas we've got about
17 the same number of pages that we'd estimated, it looks like
18 the number of documents in the system we think will be less
19 than what we'd originally estimated..

20 Another feature of this system is not only are
21 there on-line search and retrieval, but after a user has
22 found the particular document or set of documents they're
23 interested in, they can ask for them to be printed. So
24 there is the capability to have printing at the central
25 site, and then distribution on those printed documents. The

1 estimate that we made of how much that would be during peak
2 year is that would be ten million pages of printing,
3 binding, addressing, and shipping.

4 There are two levels of workstations. Barbara
5 talked about those a little bit earlier this morning. Level
6 I, it has no image capability, but it does have the
7 capability to support windows, which is a key portion of our
8 interface, and we'll see a little bit of that in here later;
9 and then Level II workstations, which are those that have
10 on-line image display capability and a larger screen that
11 can do side-by-side display of images and text and headers.

12 These are the primary functions to be accommodated
13 by the search and image system: 1) Allow the user to enter
14 whatever their search statement is, and you will see we've
15 got a wide variety of ways to do that; and, as the second
16 thing shows, some aids to help them conduct their searches
17 through this very, very large database.

18 Then after they've found something, their search
19 is returned to result set, we've got some tools to help
20 understand the make up of that result set. That's what the
21 display analysis functions are. Then, of course, we have
22 various ways of looking at the result sets, the documents,
23 and the contents of the documents in the display.

24 The print capabilities -- I've already talked a
25 little bit about the batch print. We also have the ability

1 to do local printing at the area where the user is located.

2 All the data that's prepared by the capture system
3 gets sent to the search and image system, and then has to
4 get loaded into the LSS database, so we have the database
5 load functions. The amount of information we put in during
6 the processing of the backlog and right before license
7 application is significant. We'll talk about those numbers
8 a little later.

9 Then there are systems administration functions
10 that must be supported to maintain the integrity of the
11 database to do the charging for the services such as
12 printing that the users will pay for, and also to maintain
13 the operation of the system and to set limits on things that
14 users are able to do, the size of files that they can
15 download, for instance, and maintain the system parameters,
16 and maintain the optimum performance of the system.

17 Looking at the first function, query build here,
18 we really have two modes that can be done. One is a series
19 of window software and picklists, and I'll show you what I
20 mean by picklist here in just a minute, and also, if
21 somebody didn't want to do all that, for the query part of
22 the thing, they can type in the query if they've learned the
23 format and the syntax that's to be used with the system. So
24 there can be direct type in, or there can be the use of
25 these windows, and those can be mixed. We'll go through

1 several examples.

2 [Pause.]

3 MR. NIPPERT: Okay. We're at the chart just after
4 query build, it's the first user screen presentation. This
5 is the area in which the search is constructed. When the
6 search has been completed, it's started by pushing this
7 button called Start Search. If somebody decides in the
8 middle that they want to start over, they don't like what
9 they're doing, they can erase the search definition.

10 After the search has been completed, then this are
11 of the screen displays the search history, the searches that
12 have been done and the size of the results, the number of
13 documents that have been found.

14 Also, I talked about partition. The partition to
15 which the search is going to be applied is on that top line.

16 This begins to show the use of the pull down
17 menus, which is over here. In this case, set up has been
18 activated, and the user is going to define their default set
19 of partitions in which they want to search. So they pull
20 this menu down; they pick partitions. This window is popped
21 up in the middle, and we've listed the partitions.

22 At this time, the particular criteria and the
23 names of the partitions have no been determined, so we've
24 just got generic ones up here, A through J. But in actual
25 implementation, they will have names and criterias, and

1 those will be what appear in here.

2 They can select any number of them that they want.
3 To indicate that something is selected, this is the button
4 you hit. You move to each locations either with a mouse,
5 which is probably the preferred way, or you can also move
6 there by the way of cursor keys, and then select. As the
7 selections are made, you can see they appear up in the
8 selected partitions part of the screen.

9 Now, to continue showing how a search can be
10 created by the use of windows and picklist, we've gone here
11 and we've selected the search function on the main menu bar,
12 this pull down menu, and the user has decided that they want
13 to search a particular title by author name. What appears
14 here now is a list of the authors that appear in the system
15 and the number of occurrences of those authors within the
16 particular partitions that the user has selected to be
17 active at this particular time.

18 This window scrolls. That's what this is over
19 here. There's a way to scroll through these. Also, if you
20 want to go to a particular author's name, and it's down in
21 the "S"es or something and you don't want to scroll all the
22 way down there, you can just type an "S" and it will scroll
23 all the way down to the field of "S"es in this particular
24 area.

25 You can highlight and you can obviously pick more

1 than one author to search for. It starts to build the
2 author part of your search down here. If you want to look
3 for one author or another author, you can select that kind
4 of logical operator. Over here, you can use a name, or, in
5 this case, the order has been selected. Once you select
6 that, the operator stays selected until you decide you want
7 to change it, switch to your next one. If you want to use
8 parenthesis to show the particular range in which an
9 operator operates, then those are available, also.

10 Once you've completed all the authors, that
11 portion of the search, you select "Okay," and then that
12 would move up onto the search for line, and that's the
13 start.

14 That can be the end of your query, in which case
15 you want to go over here and hit "start search." You can
16 type in the rest of the query from the keyboard if you
17 wanted to, or you can select any of the other terms upon
18 which you'd like to build this search.

19 This is an example of a window and selecting and
20 doing a date range search on the document date field.
21 Again, the document date has been selected over here as the
22 field that's of interest. In this case, we ask for a range
23 of dates; they get put here, and then added on, appended to
24 the search statement that we're creating.

25 Once the search statement has been completed, and

1 that's as much as the user wants to put in that particular
2 statement, start search is pushed. At that time, the
3 statement is then gone and analyzed; an estimate is made of
4 how long the search is going to take; an estimate appears to
5 the user. It's also checked against an upper limit that's
6 set so that we don't let users create such complex searchers
7 that one particular user could tie up all of the resources
8 of the system. So there is some upper limit that could be
9 maintained by the system's administrator.

10 Assuming it's less than that, the search starts,
11 and it goes a partition at a time. As the results come
12 back, they come back into these areas showing the number of
13 units to satisfy the conditions that were in the search
14 statement.

15 When it's all done, then the total of all the
16 partitions to which that particular search was applied is
17 also shown at that particular time.

18 CHAIRMAN HOYLE: Excuse me a second. Dave, would
19 you go back to the prior chart? Just read me of what is
20 search number one there? Could you read what search number
21 one is.

22 MR. NIPPERT: Search number one -- this statement
23 down here is exactly the one up here, but what it says is
24 they look for an author, which is Aaronson with an R and
25 Aaronson with an RC, or Aaronson with an RC, and that the

1 document date is less than 1990 -- greater than 1990 and
2 less than December 31st, 1992.

3 That particular -- this same search was applied to
4 Partitions A, B, and C. In Partition A, they found 23 units
5 that met that criteria, 80 in Partition B, and 188 in
6 Partition C.

7 CHAIRMAN HOYLE: Thank you.

8 MR. NIPPERT: Now let's look at the search aids
9 that are available. We have a thesaurus, a like-unit
10 search, a word search within a particular unit, near spell,
11 and retrieval of related documents.

12 Donna talked a little bit about the use of the
13 thesaurus in the cataloging procedure, and terms selected
14 from the thesaurus go into a header field called
15 Descriptors. Use of the thesaurus search aid provides
16 output from that thesaurus on line for the user so they
17 understand the structure of the thesaurus and can choose
18 descriptors from displays of that structure and get input
19 into their search term.

20 In this case, we've overlaid it, but you can see
21 down here this stands for Descriptor., You pick what
22 particular descriptor you're interested in, and it would
23 appear down on this line, and then you go up into the search
24 statement.

25 There are three different displays of the output

1 in the thesaurus: an alphabetical listing, a hierarchical
2 listing, and a key words in context listing, which is what's
3 shown in this particular window.

4 In the alphabetical listing are the terms, the
5 near terms, and the related terms also appear. There is
6 also help available to go and select each of these things
7 and actually come up with a definition of the term that's
8 available.

9 The explode capabilities don't explain this
10 particular thesaurus has lower level terms. If you want to
11 select a particular term and make sure you get all the lower
12 level term, you select the explode feature, and it will
13 automatically put all those narrower defined terms or
14 related terms in your search for you.

15 The second search aid is near spell. This is
16 primarily for use in searching the full text, because there
17 are a number of alternate spellings of words, or there, in
18 fact, can be misspellings of words. Even though we're
19 trying to get the accuracy up to 99.8 percent, there will
20 still be errors in the database.

21 So if one wants to go and search either the full
22 text or any of the fields that are in the header that are
23 searchable in the same way that the full text is searched,
24 you can ask for near spell, and it will take alternate
25 spellings and common misspellings and add that to your

1 search for you.

2 In this case, Repeat stands for publication data.
3 So that's a field in the header that you want to look for,
4 for instance, the journal in which a particular article may
5 have appeared.

6 Let's go on and look at some more.

7 Now, these first two searchings, which came from
8 picking this one here with the thesaurus and the near spell,
9 those are used when you're back in the search mode. These
10 other three search aids come into play once you've already
11 done a search, and you're starting to go through the
12 material that you found as a result of your search.

13 So the first one we have here is a descriptor
14 profile search. What that means is I found a document, and
15 it's close to what I'm looking for, it's of some interest.

16 So what I want to do is go and now inquire the
17 database, Are there other documents that treat the same
18 subject that this document has?. One of the ways we have of
19 determining what the subject matter of the document is are
20 the descriptors that have been assigned to them.

21 So this is an example of, for interest, I was
22 looking at the header of a particular document, I've decided
23 it's of interest. I can then go and pick this descriptor
24 profile search. It shows me all the descriptors, for
25 instance, that are in that document, and I can now choose to

1 launch searches looking for documents that have those same
2 descriptors.

3 The choices are in here. If I want to un-select
4 any of those because even though it's in this document it's
5 not of interest to me, I can go through here and de-select
6 any of those, and then launch the search.

7 Text search within a document -- again, I've been
8 looking at a document, found one that's of interest, but
9 let's say maybe it's got 50 pages of text, and I don't want
10 to sit there and go through and display each of those pages
11 one at a time, I want to find out where in the document some
12 particular term or particular subject is discussed.

13 I may have used a very complicated or very broad
14 kind of a search to originally get me to this document, but
15 now I'm interested in a particular subject. So now I can
16 specify those terms or phrases that I want to look at just
17 within this document and launch a search. That's what I can
18 do with this capability here. So it looks only within the
19 document that I've already selected from some other thing,
20 and I've just searched the ASCE text within that unit.

21 The last search aid is related to the pointers
22 that Donna mentioned back in the cataloging process, and
23 also when we divide documents into units and create
24 relationships, those relationships that are shown do what we
25 call pointers: they take the documents and they point back

1 and forth between This document was an attachment to this
2 document, This document was attached to this document. So
3 we can go here and reconstruct any of those sets of groups
4 of documents as they were submitted.

5 The kinds of relationships that we have are
6 attachments which refers to corrections that have been
7 submitted, documents that comment on each other, documents
8 which belong to each other -- for instance, are a part of a
9 book.

10 Another key concept is the concept of packages.
11 Particularly, there'll be QA packages, they'll be packages
12 adjoined. When all those packages come in, every document
13 that's in there gets a package identification assigned to
14 it. The use of this feature lets you go and find all those
15 documents that were part of the package that's the
16 particular one you're looking at.

17 The last kind of relationship we have are
18 versions. This is a replacement of a later version, an
19 earlier version. You can find versions in both directions
20 related to the particular units you're looking for.

21 Okay. The series of things we've talked about now
22 are things that let you go and search or retrieve, things
23 that were of interest, and some aids to help you get to what
24 you wanted to find.

25 Once you've done the search, and we want to

1 understand what we have, this set of tools are the results
2 analysis tools. Some of them help us understand, and some
3 of us help merge and order the results.

4 This is an example of going through and trying to
5 understand the contents of the results of this search by
6 doing a descriptor frequency count. What it does is it goes
7 through the whole results that I have, looks at the
8 descriptors in there, and counts how many documents appear
9 with those. In this case, the result of the search that was
10 done was a total of 922 units in it. Of those, 47 of them
11 had fractures assigned as descriptors. Fractures (geologic)
12 43, and you can see the rest of the list. These are listed
13 in most frequently occurring down to least frequently
14 occurring set of the descriptors.

15 Now, this also is going to be applied to some
16 other fields in the header, but we're not quite sure those
17 fields make sense doing this kind of analysis, but that's a
18 refinement we're going to do before we finalize the design.

19 Result set display in word density order is
20 another way to take the result set and find those documents
21 that talk about your phrases in the order in which they're
22 treated in the document. So word density is another one.

23 What density means here is we take the number of
24 occurrences of the term you're interested in and divide it
25 by the total number of terms or words that are in that unit.

1 If we just dealt with the raw numbers, then large
2 documents would tend to always come first, so we take the
3 ones that have the most dense -- in other words, that occurs
4 with the greatest frequency, the greatest percentage of
5 times in a unit -- and it takes all of the documents in
6 there and puts them in that order. So if you look at them
7 from document to document to document, you find the first
8 document here is the one that had the greatest use of the
9 words "nuclear waste" and "containment."

10 We have the ability to sort result sets on up to
11 three fields. Again, that puts your results in a given
12 order, so when you start down through it, you'll see that
13 the documents that -- in this case, it's sorted on titles;
14 you'll see those titles on the list of words that have an
15 "A" in the first one, and so on down through.

16 Okay. Next let's look at how we actually display
17 information that's been found in the system in the
18 searching. Here's a similar thing to what we saw before.
19 We've done a search; we did it through three partitions.
20 Now we've got to come up the display, and we go down the
21 various options that we have.

22 We can look at result set list; we can look at
23 headers; we can look at all of the fields in the header, or
24 the user can specify those fields that they want to see for
25 display. We can look at the full text of the unit; we can

1 look at the images that are available; and, if we're on a
2 Level II workstation, we can place displays side by side.

3 Here's an example of looking at a result set and
4 taking a few key fields out of the headers that I want to
5 look at with each of the units that are in my result set.

6 I can also come down now and, as I'm looking at
7 this thing, I can select documents of interest to me in that
8 result set either save as a special set of documents that
9 I'm interested in to do further searches on, or to print
10 them out, or to do further analysis. This box indicates
11 that this particular unit has been saved as of particular
12 interest to me, and it's been marked.

13 This is an example of looking at all the fields in
14 the header. If you'd slide this up a little bit, let me
15 talk about the choices we've got at the bottom of the screen
16 here.

17 When we're looking at a result set, there are
18 several ways we can navigate through that result set. One
19 of them is to go to the next occurrence. Let's say that we
20 did a search on a particular author. If I want to find the
21 next time that that author was matched in here, I hit "next
22 occurrence," and it will go to them.

23 If I was in the full text display, and I was
24 looking up the term "nuclear," I'd hit "next occurrence" to
25 find the next time "nuclear" appeared in that document for

1 me. We can also go backwards by looking for the previous
2 occurrence.

3 Since I'm looking at headers, pages don't mean
4 anything, so we'll talk about those a little bit later. I
5 could also look at the next unit that's in my result set, or
6 I can look at the previous unit, and I can back up within my
7 result set.

8 This is an example of an ASCE display. It turns
9 out it's kind of a table, so it's not as normal as a
10 paragraph might look. But in this case now, since we're
11 looking in the ASCE display, in the first place, if any of
12 the terms on this page had been terms that had been in my
13 search, they would be highlighted.

14 If I want to go to the ASCE text, I can ask for
15 the previous page; I can ask for the next page; I can ask to
16 go forward or backward by X number of pages; and I can also
17 go to a given page number, if I want to go to that page
18 number. So if somebody has looked at the table of contents
19 of the document, and they've seen that something is of
20 interest to their particular point, they can come down here,
21 hit the "go to page" number, enter that page number, and it
22 will go to that page number within this document.

23 This is a sketch of what a display might look like
24 from a Level II workstation when one has chosen to put the
25 header on one side and a page with an image on the other

1 side. Where this example shows only a graphing, most of our
2 image lists that are stored in the system will be images
3 directly out of documents and will have some text on them,
4 too. The text on them will look just like the hard copy
5 that was submitted.

6 This is an example of the image side-by-side
7 display. Again, within image, we can do the same thing --
8 we can do all the things with the page navigation on image
9 that we talked about on the ASCE text. The one thing on the
10 images, though, nothing is highlighted. The words that
11 we've used in our search or the terms that we've used in our
12 search aren't highlighted on the images. They are on the
13 ASCE text.

14 Okay. The print capabilities that are associated
15 with the system is local printing. It can be done off of
16 the local area networks that users are tied to, or printers
17 tied directly to their workstations if they're in a location
18 where they're the only workstation.

19 The limit that's been specified right now is to
20 try to limit the output for a given user to 100 pages so
21 that we don't have one particular user tying up the system.
22 Again, these kinds of limits are things that would be
23 administered by the systems administrator, and could be
24 easily changed as the situations warrant.

25 The remote printing. The user selects a set of

1 documents or a particular document that they want to be
2 printed. Normally, that would be printed from the bit
3 mapped images so that the print-out they get looks like the
4 document that was originally submitted as it had been
5 scanned. A packing label is put onto it; it's shipped then
6 to the user.

7 There is also a list of address files that are
8 maintained, and if users want to send documents to other
9 people -- for instance, if an intermediary is working for
10 somebody else and they want to do a search and then send the
11 results to that person, or a bibliographic search to that
12 person, they can pick an address that's been registered with
13 the administrator and send them to those people, also.

14 Also included in the print belt is collection
15 information so that users can be charged for the printing.
16 Also, there is a check that's going to be put in the
17 printing as to whether or not a document has any
18 restrictions on copyright. If there is a need to restrict
19 the reprint of documents due to copyright, there will be a
20 field in the header that would keep us from doing that.

21 Database load is a major activity that has to
22 occur, of course, to take on the product from the capture's
23 system and load it into the search and handling system. The
24 headers in the ASCE text are loaded onto magnetic disk.
25 Very fast magnetic disks are necessary to support the search

1 and the retrieval of the headers in the text.

2 The images are stored on optical disk and in
3 jukeboxes for retrieval. All the searching is done on the
4 headers in the text, and once you've found the page that
5 you're interested in, then you go and retrieve the images
6 based on the document and the page that you're interested
7 in.

8 The rate at which we have to support database
9 load, at the peak right now, depending on when this starts,
10 looks like we'd have up to five capture stations operating,
11 each of them having 3,000 pages a day. That would give us
12 15,000 pages a day. I've got per week on here. That's
13 wrong. It's 15,000 pages a day that have to get loaded at
14 peak time, and that gives us an average of about 45 million
15 characters that have to be loaded.

16 Now, that may have crossed a number of different
17 databases, but that database load in a full text database is
18 a large undertaking, and it takes a fair amount of time to
19 do that.

20 As Barbara mentioned, one of the things that we've
21 come up with in the design is we think the way -- the only
22 way to maintain access to all the data that's already been
23 loaded and still get the data load done in a timely manner
24 is to have two sets of disk, one of which the users are
25 searching off of, the other of which we're doing the load

1 off of. When we get the load done, we do a copy and a
2 switch.

3 It also provides a way of back up. With the
4 number of disks that we have to have to store over the
5 amount of information that we will have in the database,
6 failure rates of the magnetic spindles is probably one of th
7 weakest parts in the system. So having an on-line back-up
8 available we think will greatly add to the system's
9 availability time, also.

10 The system's administration -- there are a number
11 of functions that need to be supported. So systems
12 administrators, through the use of special passwords, will
13 have the capability to go in and do the kinds of things that
14 are shown on this chart.

15 Control, all the controlled vocabularies that each
16 of the capture systems are using; display the results of the
17 reports coming from the process control database that Donna
18 described in the capture system; also, analyze the
19 production rates and how efficient that is going; do the
20 operational configuration management of the whole system,
21 the configuration of the software and the hardware in the
22 database; assign user privileges, registered user names; set
23 tables as to what privileges and limits need to be imposed;
24 maintain system operating performance parameters to optimize
25 the performance of the system; special tools to do data

1 integrity with all the loading of the database, and, of
2 course, database integrity is real key, and we have to make
3 sure that the indices and the contents stay in sync. Data
4 load administration -- determining the priorities and the
5 order in which the data loads are going to happen, and make
6 sure that they are successfully completed; network
7 management. One of them I don't have on here, but doing any
8 building and charge back that's necessary.

9 We've looked at all the major features of the
10 system's design. Now what I want to do is kind of talk
11 about the hardware that's necessary to support the system.

12 In our design document, we've also talked about
13 all the software, estimated how much of this can be done
14 through commercial off-the-shelf software and how much of it
15 we think is application specific that needs to be built on
16 top of commercial off-the-shelf, and to integrate the whole
17 thing.

18 One of the things that fundamental to the design
19 and DOE is a strong believer of is the whole application's
20 portability profile and open systems. Certainly, we think
21 this whole system -- all those standards ought to be applied
22 to this system in the procurement. That's certainly going
23 to help maintain the life cycle and the upgradeability, and
24 also, I think, is going to make sure that a wider range of
25 things will play together when the system goes to be

1 integrated.

2 Some of that's just moving along. For instance,
3 the GOSIP requirement just started, just came into effect
4 just within the last month or six weeks. But they fit all
5 the telecommunications requirements.

6 MR. SILBERG: What kind of requirements are those?
7 I'm sorry.

8 MR. NIPPERT: GOSIP, which stands for Government
9 Open System -- what's that?

10 MR. TIMMES: Open Systems Interconnect Profile,
11 and that is the suite of protocols that is mandated by 146.

12 MR. NIPPERT: But it really does try to give a set
13 of standards, and it's something a number of vendors will
14 support. People don't want themselves in one-vendor
15 situations. It will avoid some of the kinds of problems
16 that were discussed earlier.

17 This is kind of a busy chart. It shows kind of
18 the whole search and image hardware. Out here it shows
19 we've got a group of users, maybe located pretty close
20 together in a building or within a couple of floors; we've
21 got a server out here that's handling X windows and the main
22 user interface functions of the system in doing your initial
23 interpretation of the user's queries.

24 Also, we attach images and text down here. When
25 the user starts to do display, we send information down

1 here, and then let him interact locally with it.

2 We show both Level I and Level II workstations can
3 be tied to this, and we also can have printers tied to the
4 server, and there's some kind of a local area network that
5 ties all these together.

6 People that aren't located but want to come in via
7 some kind of a dial-up system, at the central site, there's
8 a set of remote servers for these people to come in on a
9 dial-up thing, but these servers then serve the same purpose
10 as the ones do where people are tied in by a local area
11 network.

12 They come in and go through a live area network.
13 This is our communication link. There's a communications
14 controller. This is just a hardware data distribution
15 interface channel that's going to tie together our search
16 from the image and the print portions of the system, and
17 it's what the communications system ties into.

18 The search system is kind of a large CPU. It's
19 primarily acting as the database manager support, both to do
20 the load, and to support the searches on the headers in the
21 text. We've got a number of controllers, and we only show
22 three.

23 There are some printers here. These are just for
24 maintaining systems operations. There are no real products
25 that the users have come off of that, and then some

1 terminals for the people that are actually operating the
2 system right here.

3 The optical drives are tied onto this system
4 because the products from the capture system are put on
5 optical disks, and put on optical disks because we want to
6 make sure that we don't have any probability that something
7 gets destroyed on them, and also to archive them, so if
8 there's ever any question about the data as it came off the
9 capture station that went into here, we've got it on the
10 optical disk. But we take it off the optical disk, load it
11 into here, and the headers and the text go on the magnetic
12 drives in the search system.

13 The image system would take them off the optical
14 drives that we get again from the capture station. The
15 capture station, we think, is going to produce five-and-a-
16 quarter optical disks because one week's work of a capture
17 station won't even quite fill one five-and-a-quarter optical
18 disk, and we certainly want to move that stuff out at least
19 as frequently as once a week, so larger optical disks really
20 don't buy us anything in that environment. But we think
21 that the size that will be put in the jukeboxes there would
22 certainly be either the twelve- or the 14-inch or whatever
23 at that particular time that we load it. So we'll take them
24 off of here and then load them onto the optical jukeboxes
25 here.

1 I'm sorry, this is the optical drive. Carriage
2 drives do back-ups of the indexes and the print server files
3 that we maintain on the image system.

4 Image system -- once somebody requests a document,
5 we're going to get that whole document, and we're going to
6 attach all the images locally back here on the image server,
7 assuming that once somebody starts to look through the
8 document, they're going to look through more and more pages
9 on that document, and we don't want to make too many
10 accesses back to the optical disk. We'll attach a smaller
11 subset of those down to the LAN server for the images.

12 The image system is also, then, when we attach the
13 print server since we think most of what we're going to
14 print is coming from the images. So this is another server
15 that's dedicated to taking the print request, scheduling
16 high-speed laser printers that can print either from the
17 images or ASCE or headers or outputs from headers that are
18 requested.

19 Earlier, the Level I workstation was mentioned,
20 and how it's grown. Level I workstation basically needs to
21 run the window software that supports all the interfaces
22 that we showed you in the earlier screens. So it needs to
23 be basically, to run windows efficiently, something like a
24 386 type of machine with a mouse, it needs a fair amount of
25 memory, and it needs a good resolution display so you can

1 see all the ICONS that are displayed as part of the window's
2 software.

3 Modems, if you're talking remotely, or even modems
4 as a back-up for your communication system, are included.
5 Hard disk for downloading information -- the system does
6 include the ability to download information onto your system
7 and then do things with it locally if you want. You can put
8 a dot matrix here, or, if you're tied to a LAN, there will
9 be several printers tied to the LAN.

10 The Level II workstation -- the primary thing is
11 it's got a bigger display. It's got the capability to
12 display images, and it can do side-by-side displays.

13 Right now, we'd recommend a 19-inch monitor which
14 would actually take the 8 1/2 by 11 images, and it would be
15 shrunk a little bit to both fit on there. But it's pretty
16 close to full-size display, but the cost differential
17 between those and the larger ones that give you full size is
18 pretty large still at this particular point in time.

19 MR. SILBERG: What's the difference in cost
20 between the Level I and Level II workstations, order of
21 magnitude?

22 MR. NIPPERT: Order of magnitude is right now
23 probably in the order of \$3,000.

24 MR. SILBERG: Is that the difference?

25 MR. NIPPERT: That's the differential. As more

1 and more people get into images, the image drivers and
2 display devices are coming down in price. But it's the
3 controller and the display device that makes the big
4 difference in the cost differential between the two systems.

5 MR. ALEXANDER: Is the resolution finer on this
6 one than on the other screen resolutions?

7 MR. NIPPERT: It is, and certainly when it's
8 displaying the images. It's a finer resolution. With this
9 one, you need something like 120 dots per inch.

10 MS. CERNY: Dave, are we still talking in the
11 range of \$13,000 for a Level II workstation? What is the
12 current estimate?

13 MR. NIPPERT: No. I think the price of that has
14 come down. We are right now looking at the cost thing.

15 MS. CERNY: I know.

16 MR. NIPPERT: So I don't have it. But, no, I
17 think it's below \$13,000.

18 MS. CERNY: It's down now.

19 MR. NIPPERT: Where are we? Let me go back and
20 cover two more things. There are two features of the system
21 we haven't talked about that I think are worth mentioning,
22 and I've got a little bit of time here, so if I can find one
23 more slide.

24 [Pause.]

25 MR. NIPPERT: There were two things located on

1 this main menu bar that I didn't talk about. One of them is
2 a clipboard, and what that is a capability, when somebody is
3 looking at a document, if they see some text or something in
4 the header that they like, they can go in and they can do a
5 copy and paste that into a note file that they keep. So as
6 people are doing searches of the system, and they find
7 things of interest, they can start to build a note file. So
8 that's what the clipboard does.

9 The same lets you go, and if you've got searches
10 that you're doing over and over again, you can save those
11 searches so you don't have to reconstruct them or type them
12 in every time. If you have result set that you want to save
13 and do further analysis on, you can save that.

14 So you can save work so that after you've gone
15 through an hour or two hours' worth of work, you can pick
16 the best part of what you've done, put it into a saved file,
17 and get it back.

18 Save also is where we support, actually, a
19 suspend. If a user wants to take a break, stop the work
20 where they are, they can take a snapshot of where they were,
21 suspend, go do what they're going to do, and come back and
22 pick up from where they were.

23 So there's a whole series of windows and features
24 that talked about that, but in the order of time, I didn't
25 get into that in any more detail.

1 That completes it now. We'll let Ed Timmes give
2 you an overview of the communications system.

3 MR. SILBERG: While you're setting up, just one
4 question. On your hard copy printouts, that works out to be
5 about 30,000 pages a day of hard copies being printed out
6 and sent off to people? Is that your ten million a year?

7 MR. NIPPERT: Yes.

8 MR. SILBERG: It seems like a large number.

9 MR. NIPPERT: At peak demand, we've got 260 users
10 working on the system. Each document is 30 pages long, so
11 you get -- they find a few documents that they're interested
12 in, and they say, Instead of looking through all this, I'm
13 going to actually go through the hard copy. I think we've a
14 long way away yet from a paperless society. Some people,
15 when the documents are entered, they're going to want
16 versions of those things to take and mark up and so forth.

17 So, yes, it's a pretty large number. Particularly
18 in that area, we thought it's best not to undersize it. If
19 you undersize that, those little eight-page-per-minute
20 printers don't have very long duty cycles on them, and so
21 forth.

22 MR. TIMMES: I'm going to review the
23 communications systems design, and there are two topics I'll
24 cover. One is, talk about the whole design process and do a
25 very quick overview of what was involved in actually doing

1 the communication systems design; secondly, I'll discuss the
2 network architecture to include the topology, and also the
3 major equipment components.

4 In the design process, one of the main items that
5 we based the design on is we did an analysis of the expected
6 geographic distribution of the LSS users. That was done by
7 data that was gathered; also, the analysis of the prototype
8 test that was done before. This was used as the basis for
9 us to determine what is the distribution of the users, what
10 sort of geographic regions they are located in, what is the
11 expected traffic load that we can expect in the busy hour
12 for the LSS that the network must be able to support.

13 Once we gathered that baseline data, then we used
14 our network modeling tool to optimize the communication
15 circuit loading and the bandwidth. We based that on a five-
16 second average communications response time, and then also
17 looking at the various loadings on the various
18 communications circuit.

19 So what that did for us, it allowed us to actually
20 optimize and say, Okay, for this type of configuration, the
21 number of users in one population area, we'll talk about
22 what data range is needed to support that five-second
23 response time, and how can it handle growth, and some other
24 factors?

25 The design itself was GOSIP compliant. Again, all

1 that really means is that it allows different types of
2 networks to talk to each other in an open environment, and
3 it allows different vendors, if they adhere to these
4 standards, different types of vendor equipment will be able
5 to inter-operate with each other.

6 The services and equipment specified was based on
7 what is going to be available in the 1995 time frame. I
8 know from the schedule that you saw earlier, with the stage
9 in late 1993, I wanted to point out a couple of things in
10 the design process. One, that is just the initial staging
11 of the first clusters. It'll take some time after that to
12 get it actually fielded nationwide. Then the services and
13 the equipment we looked at are available today.

14 The real issue that we were looking at was, what
15 is going to be very cost effective in that time frame,
16 especially when you look at ISDN as one technology? Today,
17 it's available in limited areas and not very cost effective.
18 We expect it to be out in the 1995 time frame, and so we
19 have some recommendations for that.

20 As far as the implementation at each one of the
21 sites, we provide some local implementation alternatives.
22 Again, your particular configurations for each of the
23 agencies' organizations will be different based on your
24 current network environment, how many PCs you've got out
25 there, how many terminals you are actually going to have set

1 up. We give some examples and different options, and
2 specify what the interface and the memory requirements are
3 to talk to the LSS communications system.

4 I put this chart up here to show you the
5 distribution of the users. Dave Nippert earlier did give
6 you an overview as far as the total number of users. From a
7 communications design standpoint, it's very important for us
8 to differentiate between the Type 1 and the Type 2
9 workstations because the Type 1 workstations do not have the
10 capability to transmit images. As you'll see, it was the
11 images that really caused the drivers as far as the sizing
12 of the communications based on the size of a typical image
13 page.

14 MR. SILBERG: Why do you switch to totally Level
15 II workstations in the post-licensing phase?

16 MR. TIMMES: From a design standpoint, it was our
17 understanding the requirement was that in the post-licensing
18 phase, all the workstations out there will be image capable,
19 and so we had to size the network for a worst case that
20 every station could be potentially requesting images.

21 Do you want to add to that, Dave?

22 MR. NIPPERT: Yes. There are two things. One,
23 based on the rule, people, through public document rooms
24 before the license application, don't have image access, but
25 at the time of the license application had image access.

1 MR. SILBERG: Oh, I'm sorry, that was post-license
2 application, not post-licensing.

3 MR. NIPPERT: Right. Post-license application is
4 the demarcation point, and so there's the one thing in the
5 rule that controls the class of users to have that --

6 MR. SILBERG: I just misread that. I'm sorry.

7 MR. NIPPERT: We also think, at that time, this
8 cost differential that's now \$3,000 is going to be even
9 less, and so everybody is going to want the same access to
10 the system. So again, what we're trying to do with size --

11 MR. SILBERG: Okay. Okay.

12 MR. NIPPERT: Okay.

13 MR. TIMMES: This next chart I'm putting up is a
14 graphic representation of the design of the architecture.
15 As you can see, we've designed a distributed network where,
16 besides the central site at Las Vegas, we have five other
17 regional nodes.

18 Now, these nodes were selected based on the
19 geographic distribution of the users, and if you actually
20 look at some of the user location profiles, you'll see each
21 one of those areas have a reasonable number of workstations.

22 What we tried to do was minimize the multiple
23 communications lines that may be required out of one
24 location and put a regional nodal site there. We do have
25 various communications links between each one of these

1 nodes, and they're in there primarily for back-up purposes.

2 You notice from the distribution, of course, the
3 heaviest concentration of users other than the Nevada area
4 is the Washington, D.C. area. For availability purposes, we
5 specified that two nodes be put in the Washington area, one
6 at NRC and one at DOE. Then we've put in two separate
7 communications links there to provide back up in case of a
8 failure of one particular node. We don't want to have any
9 one node serviced by only one communications circuit.

10 Interestingly enough, the node that was put up in
11 the Reno area, the reason we did that -- in Nevada, once you
12 get outside of Las Vegas, out into some of the outer
13 counties, most of the communications circuits are routed
14 through Reno, through the serving office in Reno, and then
15 is transported back down here to Las Vegas. So for cost
16 purposes, it made sense for us to go ahead and just apply
17 the service to Reno, centralize them and combine them on one
18 circuit.

19 Our modeling tool that I mentioned earlier also
20 has a tariff database, and we can actually plot out
21 graphically the actual central offices and others.

22 Yes?

23 MR. HOLSTEIN: Can you explain the relationship
24 between the 260 total workstations you calculate as your
25 peak on-line demand with the 472 users? Did one come before

1 -- was one derived from the other, or were they derived
2 separately somehow?

3 MR. TIMMES: They were derived based on -- first,
4 we did a bottom-up roll-up as far as the number of users
5 that required based on our surveys that we did with NRC and
6 DOE and some of the other agencies, and we came up with a
7 total population of 472 users. Then there was an allocation
8 of workstations to the user populations.

9 In some of the earlier work that Dave referred to,
10 in 1988, we were initially looking at 175 users -- 350
11 users, with approximately half of those having workstations
12 available for a two-for-one ratio. What we did was we kept
13 that ratio, but based on a new population base, which we
14 felt very strongly was accurate, and used that to disperse
15 the total number of workstations.

16 MR. HOLSTEIN: And that 350 -- I'm sorry -- was
17 what?

18 MR. SILBERG: That was the earlier number.

19 MR. HOLSTEIN: From which experience?

20 MR. TIMMES: The original estimates in the
21 requirement documents from the 1988 time frame were 350
22 users were expected to use the LSS, and that there would be
23 one workstation for every two users. So there was a two-
24 for-one ratio.

25 Now, you look and say, Okay, there is 472, so the

1 total number should be 236. It's not. The reason is there
2 were some specific requirements levied for the public
3 document rooms where it was stated that the public document
4 rooms would have three workstations at each public document
5 room site. That sort of skewed the numbers a little bit and
6 drove it up to the total number you see.

7 MR. HOLSTEIN: Okay. Then in your surveys of DOE,
8 NRC and other Federal agencies, you were just referencing
9 getting their estimates of the number of users. Were their
10 responses to your surveys based on, for example in NRC's
11 case, their previous experience in licensing, or were they
12 based on other public information type experiences, or both?

13 MR. TIMMES: Hopefully, a combination of all
14 those. We had pointed contacts at a lot of the agencies.
15 I'll give an example -- the National Labs. I personally
16 talked to Los Alamos and to Lawrence Livermore, and we were
17 given points of contact that were people that were going to
18 be involved with the LSS.

19 So we sat down with them -- in these cases,
20 telephonically -- and we had a very detailed questionnaire
21 we sent out, and explained the LSS and what was going on,
22 and these people were aware of the program.

23 They came back and told us how many people
24 actually, at their organization, were going to be involved
25 with the LSS. That is the data that we used because we did

1 not have any better figures. Those numbers were reviewed
2 with DOE and NRC in the review meetings.

3 MR. HOLSTEIN: Did DOE -- does someone know
4 whether DOE approached it in the same way in responding to
5 you, or did they use some other -- that is to say, were they
6 looking specifically at estimates of future LSS users, or
7 were they basing their assumptions on some other experiences
8 they've had?

9 MR. TIMMES: In some cases, it was some other
10 experience. Again, it depended by organization. I talked of
11 various elements. For instance, with NRC and DOE, because
12 they have so many organizations that are involved, in NRC's
13 case, we were given one point of contact, who then went out
14 and queried each one of these organizations, or said, based
15 on their understanding of those organizations, these are the
16 numbers.

17 There are two separate reports that are out that
18 are separate design documents. They're called
19 "Communications Integration Reviews," one for NRC and DOE,
20 that combine all those figures together, and we can make
21 those available.

22 MR. SILBERG: Does the list of users include the
23 M&O contractor?

24 MR. TREBY: Yes, they do. We planned for M&O in
25 the Greater Washington, D.C. area and also in the Greater

1 Nevada and Las Vegas areas.

2 MR. SILBERG: Chris thought he also didn't see any
3 utilities listed as a user. Did you guys forget us?

4 MR. ^{Timmer}TREBY: There was not a specific category line
5 item for utilities.

6 Let me just say from that standpoint that the
7 design itself, as you can see, is very modular. And the
8 connection points are going to be your nearest regional
9 node.

10 And what we have tried to do, what I don't show
11 here is all the actual users connected. What we need is the
12 modeling tool to actually determine where the most cost-
13 effective connection point is, and again, it is mileage-
14 based, based on the tariffs. And so most users will connect
15 to their nearest regional node.

16 In some other cases, we have users that, because
17 of their anticipated load, and the number of hours that they
18 would be connected, they would be using dial-up facilities.
19 And it made sense for them just to connect directly to the
20 ULB host, so that if I went in to a regional host, and then
21 had it all the way transported back, the difference in cost
22 is not that great.

23 I am now putting up the chart for the post-
24 licensing phase. Nothing has changed in the architecture,
25 except for the size of the communication circuits.

1 As I mentioned earlier, the biggest driver for us
2 is the transmission of mapped images over the communications
3 network.

4 We assumed that each mapped image was 75 kilobytes
5 in size, and that in an average request, we would send six
6 pages of image per request. As you start doing the map, the
7 actual load on the communications network becomes sizable.
8 So you can see what has happened is you get to the full
9 transitioning, with a lot of the imaging, the communications
10 circuits themselves, have increased substantially in size.

11 It's part of the cost/benefit analysis. We're
12 looking at some options to see if there are some ways that
13 we can minimize that, and then that's what's going on.
14 Right now, we're looking at what we can do to maybe
15 decentralize images in different locations.

16 From the equipment standpoint, really, the user
17 types are the three that I showed you. You've got
18 situations where you've just got a single workstation out
19 there. And obviously, you have multiple workstations. In
20 the case of a public document room, there's going to be
21 three workstations there. And then for the other
22 organizations, again, the total number of workstations is
23 based on the population for the particular user agency. And
24 that, in some cases, ranges from one, two, to three, up to
25 20, 30, and much higher.

1 So what we find out is, based on this type of
2 distribution of population, those are some of the options
3 that you are looking at.

4 For a single workstation in the pre-phase, we are
5 only looking at a dial-up circuit, using a dial-up modem,
6 and go directly to the nearest regional node, or to the
7 central site.

8 In the post-phase, we will be looking at using the
9 ISDN, integrated services digital network, terminal adaptor.
10 And with the technology that is available today, it is
11 slowly being fielded in some areas. By the mid-1990s it
12 should be much more pervasive nationwide.

13 But what it allows you to do is more cost-
14 effective, and you get the circuit speed that you need to
15 see the applications, the images, and other texts, in the
16 five-second average response time range.

17 For multiple workstations, we realize that users
18 will have a network environment that already exists, and
19 there are a couple options as far as you can actually
20 connect. You may choose to put in a dedicated local area
21 network for just those workstations. You might want to tie
22 to a local area network that you already have, and put some
23 bridges and routers out there, or any combination of that.
24 And then the backbone network consists of the routers at
25 each one of the nodes. FDDI will use bridges and RSDN

1 services to connect.

2 As part of this we are also saying that the FTS-
3 2000 services, based on the mandate, will be used to provide
4 the communication circuits.

5 That finishes my portion of the briefing. I will
6 turn it back over to Dave Nippert.

7 MR. NIPPERT: Based on your schedule, we are
8 opening up for questions.

9 CHAIRMAN HOYLE: The floor is open to questions.

10 MR. SILBERG: What's the benefit? You said in one
11 of your earlier presentations, I think, on the subject, you
12 would destroy all the hard copy that comes in, and yet you
13 generate hard copy through the hard system that goes back to
14 the catalog. Does that make sense?

15 MR. NIPPERT: Well, we have been through two
16 experiences, on the prototype database, and we also went
17 back, and after we did the Capture design base, we went
18 through a simulation of operating the Capture system, based
19 on that design, for 30,000 pages.

20 What we found was the most effective way to move
21 things through, is to separate the pages and don't try to
22 keep that document together.

23 If you do that, the problem at the end, to try to
24 make and sure you put the document back together exactly as
25 it was, you know, is a large, manual, costly process. It

1 looked to us to be just cheaper not to go through that
2 exercise.

3 MR. SILBERG: Boyd, do you have any similar, or
4 how does your system operate?

5 MR. ALEXANDER: That question popped into my head,
6 too, as well. I wasn't quite sure how the usage, you know,
7 where people would be to get that.

8 If all of the paper comes in centrally, in one
9 place, then if you distribute it, it might be difficult to
10 provide that.

11 I would like to think about that. It is one of
12 the questions I had.

13 MR. SILBERG: What do you guys do?

14 MR. ALEXANDER: Well, we have all of ours in one
15 location. And one of our copies, we're just now getting
16 ready to distribute that. That will be done electronically.
17 But we're going toward the belief that the user can and
18 should be able to print out what they want. You're going to
19 have amended, I would assume, amended documents in there,
20 and maybe changes. We didn't talk a lot about updating, et
21 cetera. But I need to think a little bit about that, and
22 put in some calls.

23 MR. SILBERG: Do you break up documents into
24 individual page units?

25 MR. ALEXANDER: No. You can search for them in

1 the database that way. But they're not broken up. They
2 come in and then they are scanned in and you can search for
3 them as a page or a document, or whatever.

4 MR. SILBERG: Could I ask just one overall
5 question? This is a design. Is this going to be put out
6 for people to compete for, to build the system for you? And
7 if that is the case, is this whole system going to be
8 mandatory, or can people come in with a completely different
9 design?

10 CHAIRMAN HOYLE: DOE, can you answer that?

11 MS. CERNY: Not really. We want to keep it as
12 functionally, the requirements as functional as we can. The
13 more specific you become, you are going to be down to
14 specifying basically equipment and software.

15 So we are going to be looking at functional
16 requirements. So in that sense, they can come in, you know,
17 and bid what they have against those requirements.

18 Can they come in and bid a completely different
19 approach?

20 MR. ALEXANDER: If it would meet your design, your
21 requirements.

22 MS. CERNY: Well, that's why I can't really answer
23 this very well.

24 MR. ALEXANDER: It's a specific design.

25 MS. CERNY: It is.

1 MR. ALEXANDER: By the way, I liked what I saw.
2 It's possible somebody out there might have a different
3 twist, maybe something a little more cost-effective. You
4 don't know. And what my concern would be, if this is a
5 mandatory, you have to meet everything we have here, then
6 you may have only one bidder, the cost may be very high.
7 And there might be something better.

8 So I think you need to leave your options open,
9 one, to get a lower cost; and two, to get maybe a better
10 design, or an improvement on this theme.

11 Not that this isn't good. I was impressed with
12 this. But I would not send this out and say you have to do
13 this, guys, just give us your cost for doing it.

14 MR. HOOTEN: I might offer a suggestion, Boyd. I
15 would concur 100 percent. I wrote that down.

16 MR. ALEXANDER: Yes.

17 MR. HOOTEN: This is a real slick design,
18 especially very detailed in the header, obviously in the
19 header portion.

20 What maybe you could do, because I know your aim
21 is to go out eventually with a very functional design --

22 MS. CERNY: Yes.

23 MR. HOOTEN: -- in terms of the hardware and
24 everything else. The header, and the search criteria, and
25 all of that is very specific, and even down to the slightest

1 detail about bringing windows in and all that sort of thing.

2 What you may do is say look, this particular
3 design meets everything that we need to do. You must at
4 least do this. Something along these lines. In other
5 words, give us this kind of capability.

6 However, if you have something that offers every
7 single one of these capabilities in a different, using a
8 different systemic methodology or something like that, hey,
9 propose it. And then we have to, it is a lot more trouble
10 than trying to do your evaluation.

11 It could very well be that by utilizing something
12 that may not even have existed when you guys started your
13 design, you know, I guess this has been a couple years in
14 the work at least, maybe longer. Maybe by the time the RFP
15 goes out, maybe two, or three, or four, or five more years,
16 however long it is, there will be other changes as well.

17 And to show this as a model and say look, this is,
18 we agree with all of this and it is wonderful, and you
19 either do it this way or give us something else that gives
20 us the same capability, or even maybe more capability, for a
21 possibly lower price.

22 MS. CERNY: Yes. I don't see that this is
23 excluding that. I mean, at this point, the functions that
24 we need, you know, that's what I was saying sort of at the
25 beginning this morning. This analysis came out of the

1 requirements of the rule and of the needs analysis. And it
2 has been very well studied, and you say yes, it's very
3 detailed.

4 Well, there aren't a lot of alternatives, if we
5 are going to meet the intent of the rule and to meet what
6 our users say they need and we've found they need during the
7 prototype.

8 The windows that we use, specifying windows, the
9 type of user interfaces, that is just a model. You know,
10 we're not going to say make us one that looks like this,
11 but, rather, this is what they must do. So I don't see that
12 they will be precluded, provided they meet the functionality
13 that we specify.

14 MR. CAMERON: If I could just make a comment from
15 our office's perspective, we look at the SAIC work as very
16 good work and a good foundation for proceeding forward with
17 the design and specifications for the system. But we don't
18 look at it as being something that locks in place the design
19 or the specifications, because we are also interested in
20 trying to give bidders on this as much flexibility as
21 possible to come up with innovative and cost-effective
22 solutions for what we want.

23 And, accordingly, we look to the FEDSIM contracts,
24 some of the acquisition support documents that are going to
25 be done, as identifying design alternatives, that maybe

1 there is a particular design alternative that you do want to
2 eliminate, or assert reason, because it just much too
3 costly. And maybe that would be taking the flexibility out
4 of the RFP on that.

5 But generally we think more work needs to be done
6 along those lines, and we don't want to put ourselves into a
7 rigid straitjacket from this point out.

8 And I think that Barbara makes a good point about
9 how much of this is driven by the rule. We do want to
10 achieve the functionalities that were set forth in the rule.
11 But I think that if you look at some design alternatives, we
12 are talking, Jay was talking about the 10 million pages a
13 day of hard copy distribution. We're talking about pushing
14 images, electronically, across the country.

15 It may be that if we focus on selected issues,
16 that maybe there is another way to provide the functionality
17 of the rule, not the Cadillac model, but maybe there is a
18 cheaper way to provide the basic Chevrolet model for meeting
19 those objectives.

20 And I think that we really need to take a hard
21 look at what the alternatives are, and in that regard I
22 think that some of the panel's comments on some of these
23 issues that are raised by the SASE design work, I think,
24 would be useful for us to know what issues are of concern, s
25 that we could take a real close look at those later on down

1 the line.

2 MR. HOOTEN: Maybe it's a good time for me. I've
3 got several pages of questions here, that obviously it's
4 probably not going to be a good time to bring all those up.
5 And most of them probably are, I'm sure, things that you
6 guys thought of. This is just a very broad overview, and
7 certainly not the kind of forum to get into very much
8 detail.

9 But there were some things that you did get into
10 some detail on, that raised at least questions in my mind
11 about, you know, I'm just kind of curious why you took this
12 particular way to go.

13 John, how do you want to, do you want me to write
14 these up and submit them in writing, or how do you want me
15 to do that?

16 CHAIRMAN HOYLE: Would any of them be of a more
17 broad nature? I would think any detail questions you ought
18 to put in writing and let me send it over to them.

19 MR. HOOTEN: Well, the detail level is about the
20 level of which we have gone here.

21 MR. ALEXANDER: I have a similar list of
22 questions.

23 MR. HOOTEN: Probably the same ones.

24 MR. ALEXANDER: I'm worried about training; I'm
25 worried about quality control; I'm worried about some of the

1 communications. There are a lot of things in there that are
2 detailed, and probably wouldn't be worth taking the time. I
3 can submit those in writing.

4 CHAIRMAN HOYLE: We are very fortunate to have
5 both of you on the committee. You are the ones with the
6 experience. And there are various levels of computer
7 experience around the table. Some of us have very, very
8 little.

9 I guess I would ask any of the members of the
10 panel to comment on how you think we should proceed.

11 MR. MURPHY: We've got 30 minutes to go before the
12 lunch break. Let's hear the questions.

13 CHAIRMAN HOYLE: Well, it sounds like they have
14 more than 30 minutes worth. I certainly want to utilize the
15 30 minutes for questioning, as best we can. But any other
16 comments from the administrators?

17 MR. CAMERON: The whole issue comes up about how
18 the panel is going to have its most productive input on the
19 design part that's been done. And I think some of these
20 questions may just be informational, but yet they may raise
21 issues that we will want to consider in the future when the
22 RFP is being put together.

23 I would like to hear a discussion of some of them
24 now. But if it was possible to have a set of questions from
25 the panel on the design and maybe get some feedback from

1 SAIC, or I don't even know if that's possible under your
2 contract, or from DOE, at least it might flag some important
3 issues that we should watch in the future. And that would
4 be really important.

5 MR. SILBERG: Why don't we start to ask some of
6 the questions, and see where we go, and submit the rest of
7 them in writing and get written responses or responses at
8 the next meeting?

9 MR. TREBY: I would agree with that, rather than
10 spending time having a discussion as to whether we should
11 ask the questions or not, let's just ask the questions and
12 use the time productively.

13 MR. HOOTEN: Well, except for that, I think my
14 point is I don't mean to bring these things out like, gee,
15 you guys didn't think of these things. Obviously you
16 thought of these things. But it's just that you didn't
17 bring them out here, or you brought out issues that were
18 sort of counter to maybe something that we think about. And
19 I would just want some kind of an explanation of why you
20 took that tack, or whatever, I mean however you do it.

21 MR. NIPPERT: I think the general discussion is
22 educational.

23 MR. HOLSTEIN: I sense the direction we are moving
24 in. Our experts are going to launch into some pretty
25 detailed questions here. So if you don't mind, I would just

1 like to jump in with one question which is specifically
2 related to something you've said, that I just plain missed.

3 And that is, could you repeat the basis on which
4 you decided to approach this unitization concept in which,
5 as I recall your examples, a book would be broken out into
6 separate units representing different chapters; the second
7 example, I believe was that a document with a cover letter,
8 which is a kind of document we have discussed in the past on
9 this panel, would also be broken into separate, kind of
10 units.

11 Would you go back over the rationalization for
12 that?

13 MR. NIPPERT: Let me let Donna hold this
14 discussion. She is an information systems expert and also
15 actually has hands-on experience as we built the prototype
16 and simulation data.

17 MS. MENNELLA: I won't go into a lot of detail of
18 how we came up with the rules, but let me give you some
19 examples, in the ones that you've cited.

20 For example, we found when a letter came in with
21 an attachment, that attachment could be repeated in several
22 other areas, be part of another letter, be part of a meeting
23 package.

24 Rather than capture that attachment many, many
25 times, in some cases, we tried to keep duplication at a

1 minimum, to cut down on the cost of loading, and also cut
2 down on the number of hits a user would retrieve, that would
3 be the same document.

4 So we gave that attachment as a separate unit, so
5 that when it comes in with another letter, what we do is set
6 it so that the attachment is only there once.

7 In the case of, for example, conference
8 proceedings where each of the proceedings, each of the
9 papers in the proceedings are separately authored, if you
10 want to be able to capture that particular paper in the
11 conference, it will have to be a separate unit. So
12 therefore, each of the papers in the conference proceedings
13 goes in with its own title and its own authors.

14 But we also have the conference proceedings as a
15 whole. So if your hit is the conference proceedings as a
16 whole, you can see all the parts, and you can retrieve all
17 the parts. But if your search only hits one of the papers,
18 all that you will retrieve is just the one paper.

19 MR. HOLSTEIN: Two quick followups. I assume in a
20 situation where you have a book or other volume --

21 MS. MENNELLA: For example, the Site
22 Characterization Plan, which is something like 6,000 pages,
23 that would be really a burden on the user to have to bring
24 up that whole Site Characterization Plan.

25 So therefore, the other reason is, each chapter in

1 the Site Characterization Plan is a specific target. For
2 example, geology, hydrology, geochemistry. So each of those
3 chapters is a separate unit.

4 Now, the header for the site characterization as a
5 whole contains all the table of contents, the glossaries,
6 and the indexes attached to that header, and then each
7 chapter has its own references in its particular unit.

8 MR. HOLSTEIN: Are there any circumstances under
9 which a single document -- and the NRC's various contractors
10 seem produce a lot of these, particularly on the various
11 technical issues -- under which a single document that is
12 broken up into chapters, but the whole document has the same
13 set of authors, any circumstances under which that would be
14 broken up into different chapters?

15 In other words, are these rules applied regardless
16 of the structure of the document? In other words, if a
17 document has chapters, is it automatically broken up?

18 MS. MENNELLA: No. No, it has to be, there are
19 two drivers. One is currently anything that is 1,000 pages
20 or more. So if the document is more than 1,000 pages, it
21 will be broken up. And topical areas. If the document is
22 less than 1,000 pages and it is all one topic, and it is all
23 one author or group of authors, there's no reason for
24 breaking it up.

25 MR. HOLSTEIN: Okay. One last followup question.

1 And that is on your example of the cover letters, are
2 transmittal letters treated in that way as well? Is a
3 transmittal letter treated as a cover letter?

4 MS. MENNELLA: Yes.

5 MR. HOLSTEIN: Okay.

6 MS. MENNELLA: And normally the impression is just
7 cover letters and transmittal letters, that we separate the
8 attachments from. It's any letter that has attachments with
9 it. The attachments are generally not designed just for
10 that letter. The attachments are things that would show up
11 under their own name.

12 MR. HOLSTEIN: Thank you, Mr. Chairman.

13 CHAIRMAN HOYLE: Okay. Bill, do you want to start
14 off?

15 MR. HOOTEN: Well, let me start with what Boyd was
16 talking about before, about the structure of the documents,
17 the paper. This is a fairly general question.

18 Did you investigate eye-readable backup for that
19 purpose, since you are destroying the original document?
20 Did you investigate maybe one disaster copy on microfilm,
21 printing off one eye-readable copy on microfilm?

22 MS. CERNY: Everything that we put into the
23 system, which will of course be about 90 percent of it, we
24 have on microfilm.

25 MR. HOOTEN: Okay. So you have that anyway, then?

1 MS. CERNY: Anyway.

2 MR. HOOTEN: So you've got duplicate copy?

3 MS. CERNY: Right.

4 CHAIRMAN HOYLE: NRC would have everything.

5 MS. CERNY: And they would have everything.

6 MR. MURPHY: I don't think any submitter is going
7 to be silly enough to send their original or only copy to
8 the LSO.

9 MR. HOOTEN: Okay. The other, maybe starting with
10 a --

11 MR. NIPPERT: One of the reasons we end up
12 separating so many of the pages is that about anything from
13 20 to 30 percent of the documents that we have seen so far
14 are not as high quality as OCR 11, until they get rekeyed.
15 And the rekey process is a separate process. It is only
16 selected pages. You don't want to rekey any more than you
17 have to. So you would like to separate out those bad pages,
18 the ones that have been smeared or there is some reason they
19 didn't go through the copy machine. It happens frequently
20 enough that it is a large problem, it is not just an
21 isolated problem.

22 I don't remember the other --

23 MR. HOOTEN: Well, in the capture, since the
24 capture side of it is so important, one thing that puzzled
25 me was you said that on the stuff that is microfilmed now,

1 you would print paper from the microfilm and then scan the
2 paper. Why would you do that?

3 MR. NIPPERT: The volume that we estimate is going
4 to come in that way is really low.

5 MR. HOOTEN: Oh. So you don't --

6 MR. NIPPERT: We did look at -- versus the state-
7 of-the-art right now, reading directly off the microfilm.
8 They are just about equal. But the cost is pretty high in
9 that equipment. We didn't think there was a high enough
10 volume to have to --

11 MR. HOOTEN: I didn't know what your volume was.

12 MS. CERNY: Let me just say also, after that, what
13 we are doing right now, although legally after we microfilm
14 the hard copy, we can get rid of the paper, I'm not doing
15 it. I'm storing every piece of paper now until this system
16 gets up so that we can get the best copy, and we don't have
17 to deal with the microfilm. Then we will have to of course
18 deal with the microfilm on what has been microfilmed and
19 then the hard copy has been destroyed, and there is very
20 little of that.

21 MR. HOOTEN: The image itself, the digital image
22 itself, I think you mentioned that you are using an average,
23 or you are assuming an average of 75K? Are you basing that
24 on 300 DPI?

25 MR. NIPPERT: Yes.

1 MR. HOOTEN: Okay. I guess I've got a series of
2 questions about that.

3 First of all, why, how did you come up with 300.
4 And let me just give you the series of questions, and you
5 can answer them.

6 Why 300? Did you look at forms removal? And is
7 that even appropriate, is forms removal appropriate to look
8 at here? What sort of enhancement and compression are you
9 assuming here? I'm getting at that 75K, how that all came
10 about. And the aspect of the enhancement being one of the
11 biggest issues in this technology these days, how much of a
12 factor did that play, not only in determining your
13 compressed file size, your final compressed file size, but
14 also your ability to do OCR more effectively by being able
15 to create a much better image?

16 So that's a sort of a lot of questions about the
17 same thing.

18 MR. ALEXANDER: One more question, if I could, on
19 the 300 DPI. If that's the way you are going to get it in
20 storage, but you're only going to print out at 120 DPI, why?
21 Why not store 120 and save storage space?

22 MR. NIPPERT: 300 DPI is because to produce the
23 hard copy you need 300 DPI, at least, we think, to reproduce
24 the hard copy as good as the original was at this particular
25 time.

1 Now, we have looked, we came over and have talked
2 to you, and we still are looking at that study, and we
3 haven't finished that study. So we may not stay where we're
4 at, at 300 DPI right now. Right now, we think to reproduce
5 the hard copy, that's the driver, the 300 DPI.

6 The display technology basically right now is at
7 120 DPI. Another alternative that we are looking at is
8 actually to decompress, to come down to 120, then recompress
9 and send it out over the image for the display purposes.
10 And we have just looked at what the DPU requirements are to
11 go through that whole thing on the front-end side and then
12 send them down over the com. line. But that's another way
13 to reduce the amount that we send down.

14 The 75K instrument that we got, we got by actually
15 looking at the image sizes we got, we scanned 130,000 pages
16 that we got.

17 Some of those are over a million bytes.

18 MR. HOOTEN: And the 120 display was adequate to
19 resolve it -- whatever you had?

20 MR. NIPPERT: Most of it is adequate. There is
21 some real small stuff that you do need. In fact, zoom is a
22 capability that we think --

23 MR. ALEXANDER: Just one question.

24 MR. NIPPERT: So that becomes another issue as to
25 whether or not it makes sense to --

1 MR. ALEXANDER: Question. Are you shipping across
2 the com. lines at 300 dots per inch, or what, or 120?

3 MR. NIPPERT: No. We're shipping across the com.
4 lines, the compressed images that are stored, at 300 DPI.

5 MR. ALEXANDER: Maybe I can suggest a tradeoff.
6 If you have for printing a database just for printing, at
7 300 DPI, and then you are just going to package that stuff
8 and just print it and mail it through the mail, but to cut
9 down on your, the rest of your storage costs and your
10 communication costs, you can ship that at 150 or 120 DPI
11 across your com. lines and improve your performance and
12 reduce your cost of communication.

13 MR. NIPPERT: We have three different alternatives
14 that we are looking at referring to com. costs, and those
15 encompass a whole range of things that we are looking at.

16 MR. ALEXANDER: I think if you look at the cost
17 alternative, if you were costing at 300 dots per inch and
18 shipping, and with a big bandwidth, cut it in half, and cut
19 your cost in half and improve your performance, with no
20 effect on the other subjects, and reduce your costs
21 considerably.

22 MR. NIPPERT: The other thing I think we need to
23 think about here a little bit is looking at the image close,
24 wheel it back, and develop user profiles out of the user
25 tests. We didn't discuss any of those today.

1 But basically what we found in the user tests are
2 the user, to answer a particular question, takes on the
3 average of a half an hour to formulate the query, launch a
4 couple of queries, and look at the results that they have
5 had. When they've done that, they've launched nearly half
6 an hour of six query samplings, and they have looked at
7 three sets of results. Half of them they have actually
8 thrown away. You can just tell by the number of hits
9 they've got they weren't very interested in it. And then
10 they start looking at pages.

11 But in our prototype we didn't have a very robust
12 image system. And so we're not sure we have a good feeling
13 of the amount of images that people are going to look at in
14 the system.

15 We have also done a survey of other systems where
16 we have gone out and looked at other people's systems, and I
17 think the thing that is really clear on the use of images is
18 the more responsive the images are, the more the people make
19 use of them. And so it's kind of if you make it fast
20 enough, then the images each time somebody looks at it, is
21 way low.

22 MR. ALEXANDER: Another problem would be, if it
23 takes a half an hour to do that, why don't you have them do
24 their query, send out their query, if it's a half hour,
25 offline, don't tie up the communications at all, and then

1 let them stage that query and set it up and then ship their
2 query all at one time.

3 MR. NIPPERT: Most of that is done out at the
4 workstation. So it is not at the system. The reason why I
5 say half an hour is the user is sitting and pounding the
6 keyboard real, real, heavy, or there is a lot of break time
7 in using the system to try to get the information out of it.

8 So even though we've got 260 users out here, the
9 transactions that are generated are not like --

10 MR. ALEXANDER: No, but you have connect time.

11 MR. NIPPERT: Connect time really does not drive
12 very much in our analysis.

13 MR. ALEXANDER: Another thought, with very
14 complicated search systems, and a person comes up and
15 finally finds a way that that search strategy worked, and he
16 was able to go through all these windows and come down and
17 get exactly what he wanted, a very precise capture of the
18 images, it would be very nice if the system would allow him
19 to retain that search strategy so that the next time he came
20 in he could say give me search strategy number two.

21 MR. NIPPERT: That is exactly the capability we're
22 talking about, right at the very end -- that can exactly be
23 done.

24 MR. ALEXANDER: Clipboard was saving the results,
25 as I understand.

1 MR. NIPPERT: And search strategy.

2 MR. ALEXANDER: And search strategy; that's good,
3 yes.

4 MR. BENDER: Just a followup to Bill's question,
5 on the 300 DPI, because of the OCR requirements, is that a
6 consideration?

7 MR. HOOTEN: It's not necessary any more.

8 MR. BENDER: Not necessarily?

9 MR. HOOTEN: It used to be. But that's why I
10 asked about the image enhancement. A lot of the stuff you
11 guys saw over at our place, you really are able to use 200
12 now, with the new kinds of enhancements, to use to get good,
13 real good results.

14 MR. BENDER: Some of those documents aren't in
15 that great of a shape.

16 MR. HOOTEN: It's hard for me to comment, because
17 I haven't seen your documents. So I don't know what the
18 hell I'm talking about here. So really, I'm just throwing
19 questions out.

20 MR. ALEXANDER: Of course, in regard to that,
21 they've really only got the technology by at least three
22 years, right now, a lot of it might be looking at ICR rather
23 than OCR. And that would make it a different ballgame.

24 MR. HOOTEN: What about the forms removal aspect;
25 is that not feasible for this universe of documents?

1 MR. NIPPERT: Talk a little bit more about the
2 forms removal.

3 MR. HOOTEN: Forms removal, for those of you who
4 don't know what I'm talking about, is a very new technique
5 for any time you've got redundant forms, whether or not you
6 may have 500 different redundant forms, it is a way to not
7 have to store that form each time. You simply store the
8 fill-ins, and when you regenerate the image, whether it is a
9 printed image, printed either on paper or on the screen, you
10 generate the form again, because you know that this is Form
11 Q and you generate that form and then you fill in everything
12 else.

13 And even in cases where, like Army Personnel is
14 using it, and they have hundreds of forms, or a lot of
15 forms, and so you think, well, gee, why bother? Why bother,
16 because they are saving 90 percent of their storage space.
17 And it is tremendous. I mean, it is the biggest; data and
18 image enhancement I think are the two biggest new things in
19 the technology, because it affects so much. And any time
20 you can get that image down in size, then your whole system
21 is so efficient in terms of communications and also in terms
22 of storage compaction.

23 So those things are really, really important. I
24 don't know; I haven't seen your universe.

25 MR. NIPPERT: Well, I don't think the forms, there

1 are very, very few forms, really, to start with. And the
2 universe that the documents come from go all the way back to
3 the textbooks that were printed in the 1800s, and a lot of
4 references from other things, internally produced, and there
5 were no particular standards followed.

6 CHAIRMAN HOYLE: Let me ask a quickie. What is
7 ICR?

8 MR. ALEXANDER: Image character recognition.
9 Intelligent character recognition, I'm sorry. Intelligent
10 character recognition.

11 CHAIRMAN HOYLE: And that is just coming in?

12 MR. ALEXANDER: Yes. Gives you more flexibility.
13 Reads things you might not be able to in OCR, essentially.
14 You may want to look at fuzzy searching techniques. That is
15 a technology that has come in as well. Somebody might bid
16 that to you. You were talking a little bit about it here,
17 you were getting into some of that. But that is again a
18 technology that somebody might have. In fact, I know a
19 number who do. That would be very useful in this particular
20 application. And they should not be shut out by at least
21 saying think about this way for your test.

22 I'd like, if you could, to address a little bit
23 about your quality control of the image data base prior to
24 loading it into the operational systems. How do you assure
25 that there aren't missing pages, and there aren't pages that

1 compress and decompress badly, that are legible because of
2 this scanning, et cetera, and what your QC limitations might
3 be.

4 MR. NIPPERT: There are several QC steps. One of
5 the reasons, as Donna mentioned, we print out a hard copy of
6 the document for the -- to use, is so in fact we do print
7 out every image that we have captured, and somebody is going
8 to look at it as part of their standard operation. So that
9 is the first case, that we make sure everything can
10 decompress and print back out as part of the process, before
11 we actually decide we're going to load the document.

12 MR. HOOTEN: On that step, why would you print it,
13 though? I don't understand that.

14 MR. ALEXANDER: Yes. I don't understand that.

15 MR. HOOTEN: Why not use the screen? I mean, you
16 do the same thing, you're still decompressing. But why
17 create paper when you don't have to?

18 MR. ALEXANDER: Or reproduce exactly what was
19 submitted to you with some enhancements.

20 MR. NIPPERT: The catalogers felt that they could
21 go through those pages, make marks on it, and what they
22 want, much easier than we can build a full-blown image
23 system right there in the middle of the -- to give them the
24 quick response of going through those images. You're
25 driving up the cost of the hardware in that cataloging, for

1 each of those catalogers in there, considerably, we think,
2 if you give them all that capability.

3 MR. ALEXANDER: What are they going to mark up
4 that they need to see?

5 MR. NIPPERT: They are trying to determine what
6 the right subjects are that are in this document. They want
7 to take a whole scan through the whole document to determine
8 what the subjects are. When they start applying terms,
9 they're going to highlight them, and they're going to see
10 how often they occur.

11 MR. SILBERG: You're talking about a 1,000 page
12 document. That just doesn't seem to make a lot of sense.
13 First you throw the document out, then you produce it again.

14 MR. NIPPERT: Scanning 1,000 pages on-line, it
15 takes a lot of horsepower to do that, also.

16 MR. ALEXANDER: We look at, let's see, 2,000,
17 16,000 pages a week. And our, we'll call them catalogers,
18 do it all on-line; they do all the classification and
19 indexing, et cetera, do it on-line and ship it. We don't
20 print everything that comes in. If we wanted to see it, we
21 could go look at it.

22 MR. SILBERG: Or do it before you take the
23 document apart.

24 MR. ALEXANDER: I really question that is a
25 reasonable thing to do. I mean, that's why you have an

1 automated system

2 MR. NIPPERT: We can talk about off-line. We've
3 looked at the cost of it. It's tremendous. I think this is
4 much more --

5 MR. ALEXANDER: Can I suggest something? That
6 when it comes in, why don't you have them look at the paper
7 as it comes in and mark that up and then do it?

8 MR. SILBERG: Right.

9 MS. MENNELLA: We were trying to provide many
10 tools for the catalogers to use. They can do that. They
11 can look at the paper when it comes in, and mark it up.

12 MR. ALEXANDER: Sure.

13 MS. MENNELLA: But what they lose at that point is
14 the other tool that we've given them, which is the word
15 counts for the document, which cannot be generated until the
16 document is converted to ASKI.

17 MR. ALEXANDER: You can do that later.

18 MR. NIPPERT: You can't mark them up until after
19 you scan them, because you don't want those marks when you
20 go into the scanning. So if you are going to mark them, you
21 have to catch them at the end of the scanning process.

22 MR. ALEXANDER: Scan then and then mark them, then
23 index them, and let them go. Don't reprint them, gee.

24 MS. MENNELLA: Then you have to reassemble them,
25 if you do it after scanning.

1 MR. ALEXANDER: Well, you need to look at the
2 costs, on the surface. And I admit I have very little
3 knowledge of how this works. But I do know of a system we
4 have that is very similar. I don't see that this is the
5 best way to do it, the most cost-effective way. But if your
6 costs show that is the cheapest way, then that is the way
7 you should go.

8 MR. HOOTEN: In terms of the order in which this
9 occurs, what are you printing this from? Is this already on
10 OD at this point? Is there a check, any time within the
11 process, after you have written to -- is there a spotcheck
12 or whatever to make sure that it compressed properly,
13 decompressed properly, on the disk, and what you have is in
14 fact a reliable image off of the alpha disk?

15 MR. NIPPERT: Yes. There are samples made of that.
16 And we also actually were running two optical disks at the
17 time, so in case one of those gets destroyed or something,
18 we maintain one at the system and ship one, and then later
19 on they are going to come back together and we're going to
20 send one to the search and one to the image system.

21 MR. HOOTEN: But you are doing some kind of
22 spotcheck?

23 MR. NIPPERT: Yes, we are.

24 MR. HOOTEN: Not as it is being recorded? Not as
25 it is being recorded?

1 MR. NIPPERT: No --

2 MR. HOOTEN: Good.

3 MR. NIPPERT: And then also that disk goes and
4 forms the entry into this duplicate chip, detailed duplicate
5 chip database, so they are read at that time, too.

6 MR. HOOTEN: I don't think anybody answered the
7 question about the compression. What kind of compression
8 are you assuming to get to your 75K image? What type of
9 compression?

10 MR. NIPPERT: Group 4.

11 MR. HOOTEN: Just standard, unmodified Group 4?

12 MR. ALEXANDER: What about training; there wasn't
13 a lot in there about training.

14 MR. NIPPERT: It's really modified Group 4, so we
15 don't have the thing where one bit throws us off.

16 MR. HOOTEN: Good.

17 MR. ALEXANDER: What about, what is your estimated
18 time to learn the system, training the users? If a user
19 uses it once a month, he's not going to keep up. I notice
20 you had a help thing up here, so I'm sure you have help on-
21 line. But initial training, keeping them up to date, if a
22 person doesn't use it, will there be training assistance or
23 training, I mean search assistance necessary in all these
24 locations, to help people that are not that familiar? What
25 does that whole training utilization search look like, the

1 apparent costs?

2 MR. NIPPERT: We haven't gone through the cost
3 thing. We're in the process of doing that right now. But
4 in the design of the on-line help, there is another mode,
5 one what we'd call kind of a novice mode, that you can come
6 on, and it's one of those things in the setup that you can
7 turn in on, and every time you do that, there will be a
8 paragraph telling you the choices you have and explaining
9 what is going on. Somebody can come up and actually
10 practice doing searches is part of that.

11 Our experience, I think, both from the user test
12 that we did and some other systems we had, is learning how
13 to use the system we don't think is a big thing. The bigger
14 thing is understanding the data that is in the database and
15 the rules that have been used to select the data and
16 organize the data and put it into the database, and the
17 contents that people are looking for.

18 We've found in the user tests that's where the
19 users had the most trouble, understanding how to go in and
20 find the information and how it's organized. Learning
21 whatever the user interface is, is much less trouble. I
22 don't want to say it is zero, because that's not true, but
23 it is the content of the database and whether or not you can
24 ever build anything on-line that's going to tell you whether
25 you are going to have just people that really know that and

1 are going to become the experts. I just don't know the
2 answer to that at this point in time.

3 MR. ALEXANDER: That point is important;
4 understanding the database and what's there needs to be part
5 of the training, because if you don't know what's there, you
6 are not going to know how to get it.

7 MR. NIPPERT: Absolutely.

8 MR. ALEXANDER: Somebody ought to do a first cut
9 at how long does it take to train somebody to do the system
10 so you can multiply that by four or five hundred users. And
11 then how do you keep them up to date? Will you have to hire
12 people to do searches, because people can't remember how to
13 do it. Those kinds of things need to be addressed.

14 MS. CERNY: My gut feeling has always been that
15 the system is going to be too large and too complex for an
16 average user who really wants information from it, not just
17 to dabble in it, but really wants information to do it
18 without the assistance of a professional who really knows
19 this database, and that we can talk about yes, let's get all
20 400 users trained so they can do it; I don't believe that's
21 going to happen. And I think it is going to be important to
22 have a staff of professionals to assist. Yes, if they want
23 to go through it, fine, we should provide them with tools
24 and provide them with training, et cetera.

25 Now, we'll see how it comes out. But that's

1 really what I think.

2 MR. ALEXANDER: Those costs need to be rolled into
3 the total costs.

4 MS. CERNY: Yes, well, we always are looking in
5 these costs at having intermediaries as part of the staff,
6 operations staff.

7 MS. SHELBURNE: Also, I think part of OEM plan,
8 when looking when looking at the design and concern about
9 the use of the interface, is training sessions just for that
10 concern of understanding the database, making sure people
11 know what's behind the user interface.

12 Also part of using the interface is questions, you
13 know, bulletin boards and announcements of changes or
14 anything need be. So one of the things from the Office of
15 the LSS Administrator's point of view is a big part of this
16 work is training, going on site to train, and hotlines so
17 people can call. Traditionally, we have always, in NRC,
18 done searches for people on request. So, all of those
19 things, we are looking at to assure that people, depending
20 on where they're coming from, get what they need.

21 MR. ALEXANDER: We're getting close to the end.
22 Another area that I have, keeping some in operation, we need
23 to worry about the disasters or worst case. I'm not talking
24 about a building burning down, but could you talk a little
25 bit about your data load philosophy -- are you on the juice?

1 Are you going to load this stuff just one time, and there'll
2 be no back-up optical disk if something happens to that
3 optical disk, or is there --

4 MR. NIPPERT: That design includes replicated
5 jukebox into the central cell. One of the variations we're
6 going to look at is taking the replicated jukeboxes and
7 separate them so we cut down long-haul shifting of the
8 images. But yes, there'll be at least one complete
9 duplication of the jukeboxes.

10 CHAIRMAN HOYLE: Going back to one of my formal
11 suggestions is, have the back-up, which is a good idea, use
12 that for print. Store that. Use the other one, get
13 everything on that jukebox at 120 or 150 or whatever looks
14 optimal, and go from there. You've already got the basis
15 for cutting down your communications costs and improving
16 your performance.

17 MR. ALEXANDER: All right. We'll take a look at
18 that.

19 CHAIRMAN HOYLE: Boyd, are you doing that now?

20 MR. ALEXANDER: Yes.

21 CHAIRMAN HOYLE: You're doing printing from your
22 back-ups.

23 MR. ALEXANDER: Yes.

24 CHAIRMAN HOYLE: And shipping from another set.
25 Shipping out of cross-communication lines. Bill, you want

1 anymore?

2 MR. HOOTEN: I could go on.

3 CHAIRMAN HOYLE: Let me ask this: Are the SAIC
4 people going to stay tomorrow, or is today your only day?

5 MR. NIPPERT: I'm going to be here for both days.
6 Ed's leaving this afternoon, I think, so I guess if you've
7 got any questions on his feelings, let's get those on the
8 table now.

9 CHAIRMAN HOYLE: How about Bill and Boyd, are you
10 staying tomorrow?

11 MR. ALEXANDER: Yes. I didn't know if we'll have
12 time at the end, if we get through everything maybe there
13 could be some other period.

14 MR. HOOTEN: I think we've covered, one way or the
15 other, most of mine. I've got a couple more.

16 CHAIRMAN HOYLE: I would ask Bill and Boyd to get
17 together and see if you've got any questions remaining that
18 are common and maybe get them written down and maybe we
19 could give them to the group before we leave, and if there's
20 time they could answer them here. If now, we'll send them
21 to them or send them to Barbara and let Barbara get some
22 answers for us.

23 MR. ALEXANDER: Actually, what I'd appreciate you
24 doing, rather than rushing them through, if you could give
25 them maybe to -- those went by pretty quick out there. I'd

1 love to have the opportunity to look at the set that you're
2 going to give us with the minutes and then take some time to
3 think through, because I think it would be a better quality
4 deal and I'd rather not do it twice, if that would be all
5 right with you, John.

6 MS. CERNY: You know, and better yet, when we get
7 our final document from SAIC, I'd really like you to look at
8 that. Of course, it's about that thick -- because this is
9 such a tip of the iceberg.

10 MR. ALEXANDER: That's what I perceive, Barbara,
11 because a lot of the stuff -- and I'm sure they've done a
12 lot of thinking again, no matter what they have sounded
13 like, I liked the design. It was very nice. I happen to be
14 an advocate of windows and I think that's a very user-
15 friendly interface. But I'd like to see what's below it and
16 some of your other talk. So, if we could look at that in
17 more detailed design before doing anymore, it would be more
18 appropriate. And it would give them time to take time to
19 react to those questions.

20 MS. CERNY: No, this is really very useful. I'm
21 delighted you're here.

22 CHAIRMAN HOYLE: Okay, I appreciate very much the
23 briefing by Dave and Donna and Ed. Thank you, Barbara, for
24 bringing the team out here and briefing us.

25 What we'll do is take a lunch break. There is

1 some sentiment for coming back earlier than 2:00 to get on
2 with the topical guidelines discussion. There are some
3 folks who are going to be leaving this evening. How about
4 if we try to get back at 1:30.

5 [Whereupon, the meeting recessed for lunch at
6 12:35 p.m., to reconvene at 1:30 p.m.]

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

AFTERNOON SESSION

[2:00 p.m.]

CHAIRMAN HOYLE: Why don't we get started. We're going to get started. The one topic for this afternoon is revised Topical Guidelines presentation by NRC. We've allowed 14 hours to debate on this one, as you can see. Stu has handed out -- Stuart Treby has handed out a -- a 1-page document overview that he's going to use to speak from. So, Stu, the floor is yours. You're welcome to use the podium.

MR. TREBY: My theory is to give you all lots of time to have your debate, so I suspect that my presentation will be quite brief. I would estimate about 15 minutes. I have five points that I want to talk about. I guess I would suggest that I run through my 5 points and then we can start having questions and discussion about the Topical Guidelines.

As a first point, the starting point is the existing interim Topical Guidelines. Those of you who were involved in the negotiations of the LSS rule -- the amendment to Part 2, recall that as part of that amendment, we established a set of Topical Guidelines. This set of guidelines were indicated as being interim, until the staff would get together and develop what was stated in the statement of considerations as a more precise set of guidelines to be issued in the form of a NRC Regulatory

1 Guide.

2 The Topical Guidelines that were put out with the
3 rule, the interim ones, consisted of three different
4 categories: One was the category of document; then there
5 was a list of sort of general topics; then the third was a
6 list of specific topics, which was the largest list, it
7 seemed to be modeled, for the most part, after the
8 environmental assessments prepared in connection with the
9 DOE site selection process.

10 There appeared to be a lot of repetition in those
11 lists and when the staff went about developing the Topical
12 Guidelines a process consisted of first preparing a draft
13 Format and Content Reg Guide, which I hope you all received,
14 either at the end of last week or the beginning of this
15 week. This is the model upon which the Topical Guidelines
16 have been developed.

17 In the Format and Content Reg Guide, we -- we
18 being the staff, went through Part 60 of the regulations to
19 determine all of the regulatory requirements that would be
20 necessary in order to license the repository, and included
21 all of those requirements into this Format and Content Reg
22 Guide. As I said, this was then the -- the model that was
23 used to come up with the Topical Guidelines.

24 The process was to use the same team of NRC staff
25 people who had prepared the Content and Format Guide to

1 prepare a draft Topical Guidelines to then show those
2 Topical Guidelines to the Commission to get their comments
3 and input and then to provide the document to this Advisory
4 Committee for your comments and input.

5 The underlying assumptions in preparing the
6 Topical Guideline was to, again, base it on the Format and
7 Content Reg Guide, to make sure that all the regulatory
8 requirements from 10 CFR Part 60 are addressed.

9 The intent was to have the Topical Guidelines very
10 broad. We did not want to make them prescriptive to list
11 each and every document, but by the process of listing the
12 topic, that it was intended that each topic should be as
13 inclusive as possible, as broad as possible, so that if you
14 had any document that related to geology, and was relevant
15 to the licensing of the repository, then clearly that was a
16 document that ought to be provided to the LSS System.

17 The other underlying assumption is that the
18 Topical Guidelines will not be used as any detailed topical
19 index or header index. That will be a separate process to
20 be done by the LSS Administrators Office.

21 Also, as was noted in the Statement of
22 Consideration, the Topical Guidelines would not be the basis
23 or the scope of the -- the contentions that might admitted
24 in the process. The principal purpose of the Topical
25 Guidelines is to indicate those documents that are relevant

1 or likely to lead to relevant information with regard to the
2 licensing process, to be as broad as possible so that they
3 could be in the system for all the parties to have access to
4 and to use during the pre-application stage, and then during
5 the litigation.

6 The -- in the process of revising the existing
7 Interim Topical Guidelines, the first thing we did, with
8 regard to the first list, which was the categories of
9 documents. For the most part, that list has been retained
10 and made as an appendix to the -- to the topical guidelines
11 that we're proposing.

12 The second and third list which are the general
13 topics and the specific topics, we believe that all the
14 information fell within the revised format developed by the
15 staff, with the exception of environmental information and
16 transportation information. The reason that those two items
17 were deleted is that the nuclear waste policy act provides
18 that the NRC, to the extent practicable, should adopt DOE's
19 Environmental Impact Statement.

20 The Commission went through a rulemaking in Part
21 51 which implements that direction and our regulations
22 provide in 5126C that that is what the NRC plans to do, that
23 is, to adopt, to the extent practicable, the DOE
24 Environmental Impact Statement.

25 The criteria for adopting the Environmental Impact

1 -- the DOE's Environmental Impact Statement are set out in
2 Part 51.109. Basically, it provides that the Commission
3 will not adopt the DOE EIS if there is significant new
4 information, or if the decision, with regard to the
5 repository is different than whatever is being proposed in
6 the application. If the repository is moved or there are
7 some significant changes made to the application, then the
8 Environmental Impact Statement may need to be supplemented.

9 What the Topical Guidelines do provide is that the
10 DOE Environmental Impact Statement will be put into the LSS
11 and any information that might be needed for the Commission
12 to make a determination whether it can be adopted, should be
13 put into the LSS.

14 MR. MURPHY: Stu, can I stop you right there? Are
15 we going to take questions now, or just later?

16 MR. TREBY: No, I'll take a question now.

17 MR. MURPHY: How do you determine and who
18 determines what environmental information, pertaining to the
19 Department of Energy's EIS is or is not necessary for the
20 NRC's decision to adopt or not to adopt?

21 MR. SILBERG: And how do you determine that 10
22 years in advance?

23 MR. MURPHY: Right. How do you determine that 10
24 -- thank you. How do you determine that 10 years --

25 MR. SILBERG: I don't want to appear to be on your

1 side now.

2 [Laughter.]

3 MR. TREBY: I guess the answer to that is that the
4 -- well the first one, who decides the issue, is the
5 Licensing Board.

6 MR. MURPHY: No, no. The Topical Guidelines are
7 to be used to guide -- guide the folks working for Barbara
8 who are deciding what document to put into the LSS. That's
9 why we've created them in the first place, was to give some
10 assistance to DOE's people and Nevada's people and the NRC's
11 people in deciding which scrap of paper can be discarded,
12 and which goes into the LSS.

13 MR. TREBY: I guess the --

14 MR. MURPHY: You're not requiring them to
15 determine, as Jay says, 10 years in advance, what
16 information might or might not be necessary in deciding
17 whether or not the NRC can or cannot adopt the EIS.

18 MR. TREBY: I guess one approach would be that no
19 environmental information should go in until the --

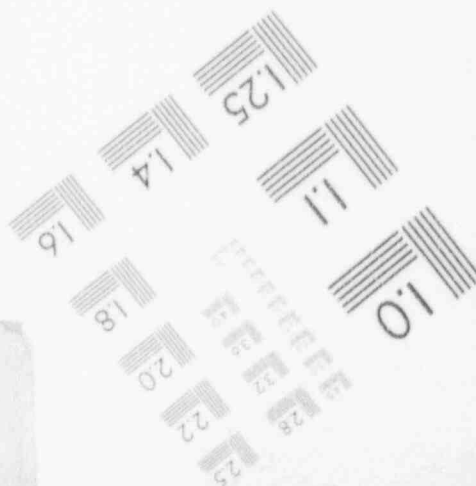
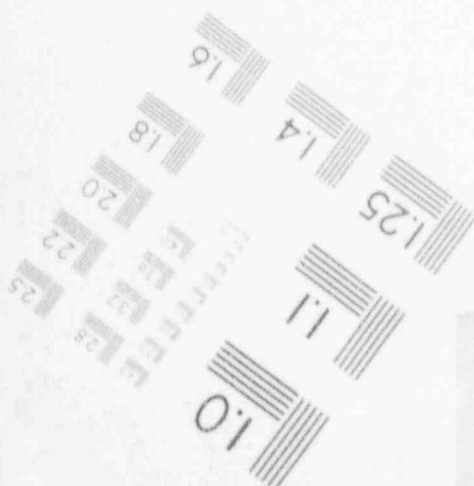
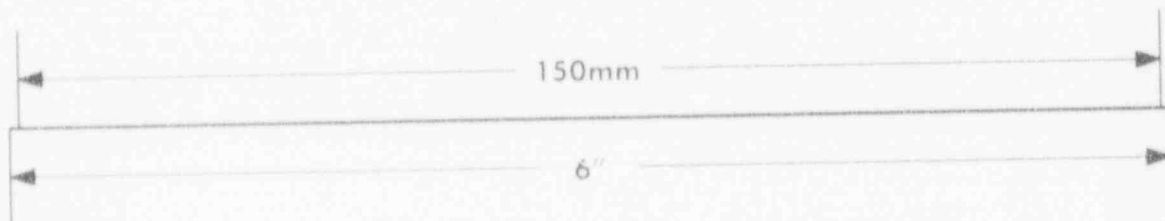
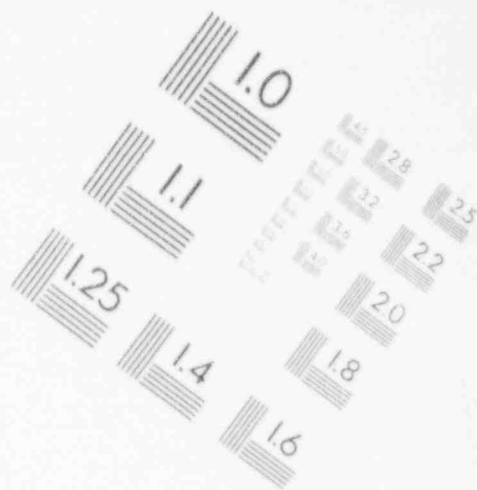
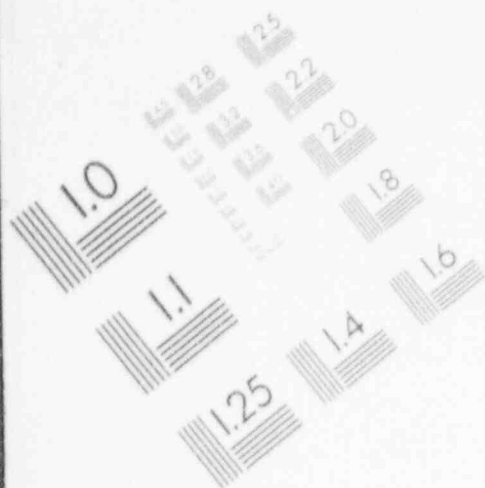
20 MR. MURPHY: Wrong Stuart, wrong. All
21 environmental information --

22 MR. TREBY: Well, that would be another option.

23 MS. DESELL: That's the conservative option to
24 take, but the thing would be if, you know -- if we're
25 supposed to put in only that information relevant to

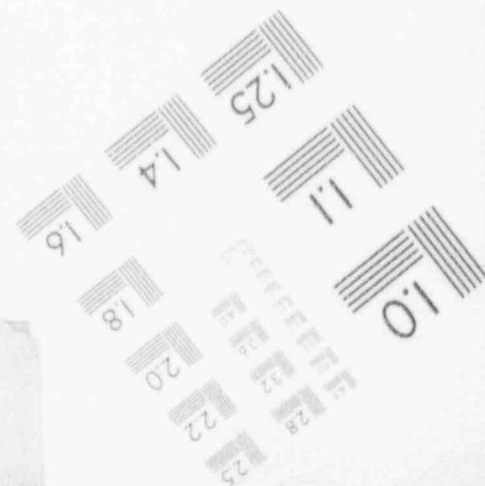
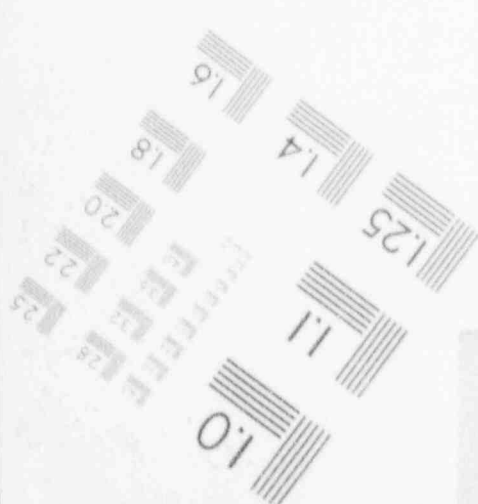
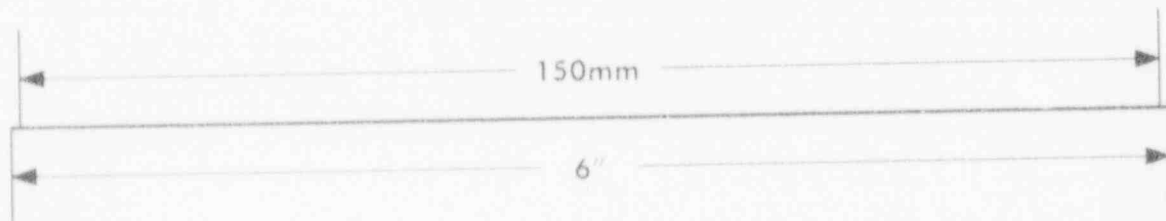
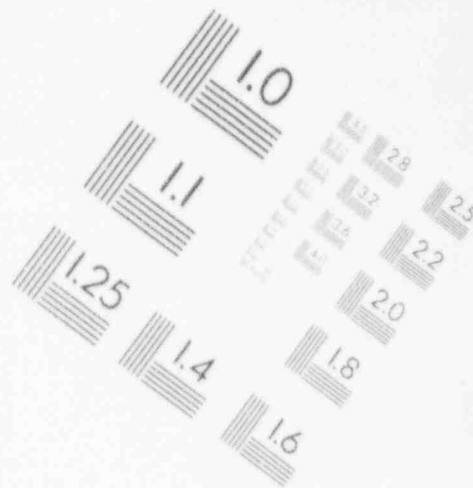
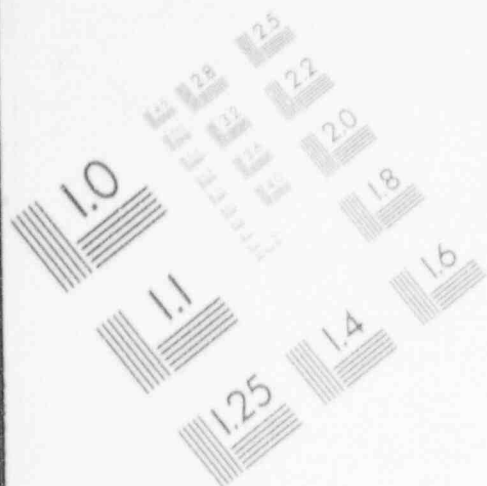
1

IMAGE EVALUATION
TEST TARGET (MT-3)



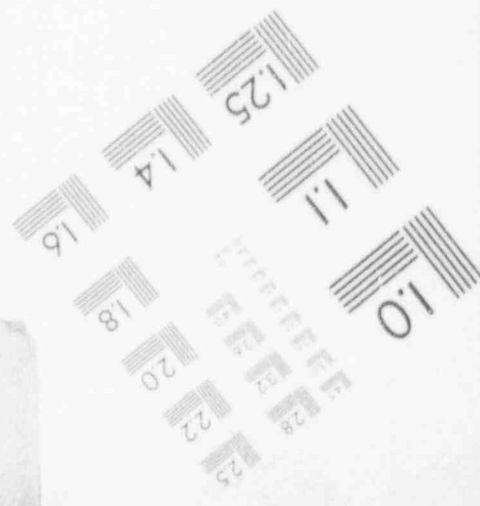
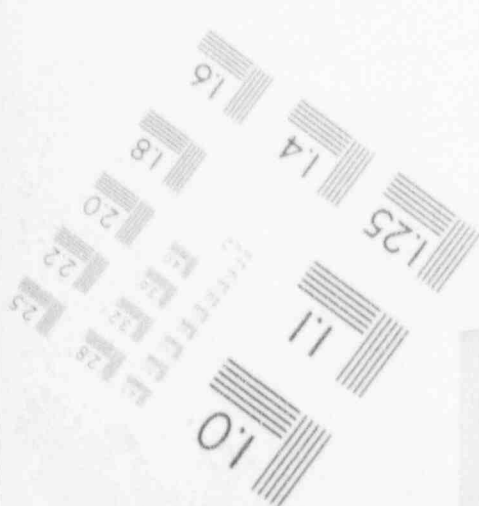
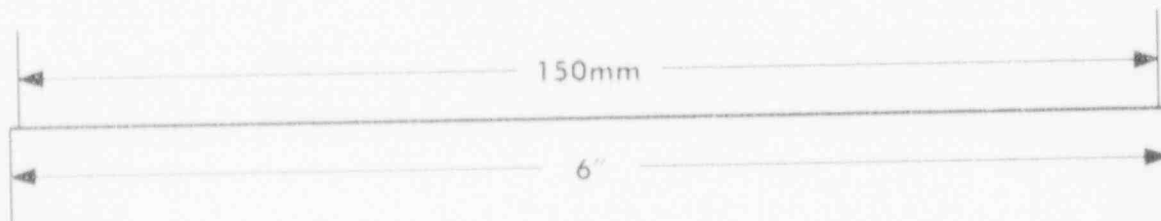
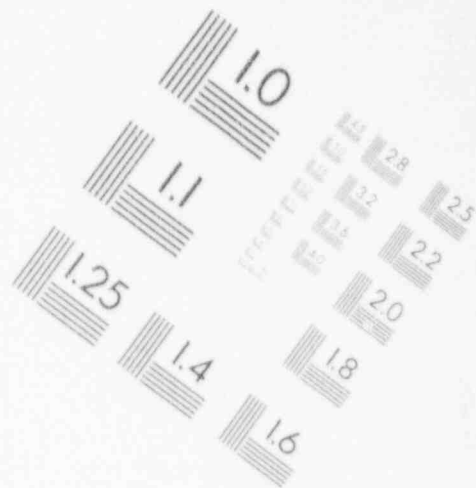
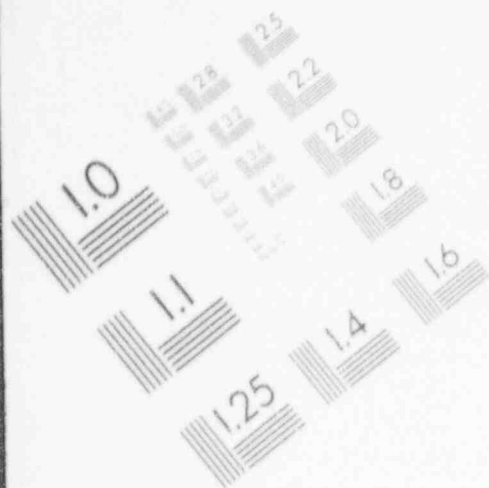
1

IMAGE EVALUATION
TEST TARGET (MT-3)



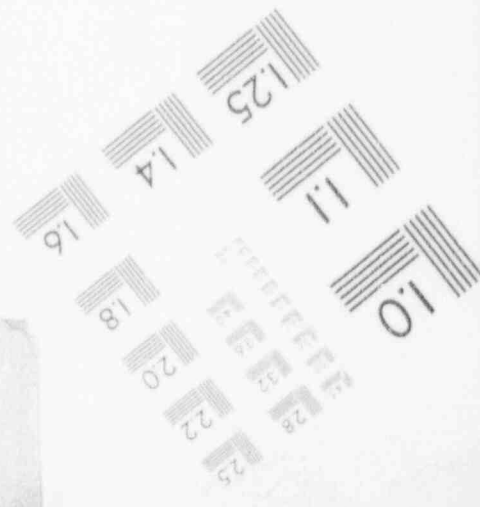
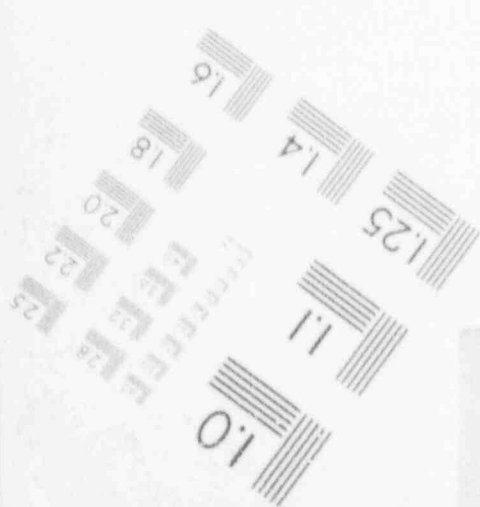
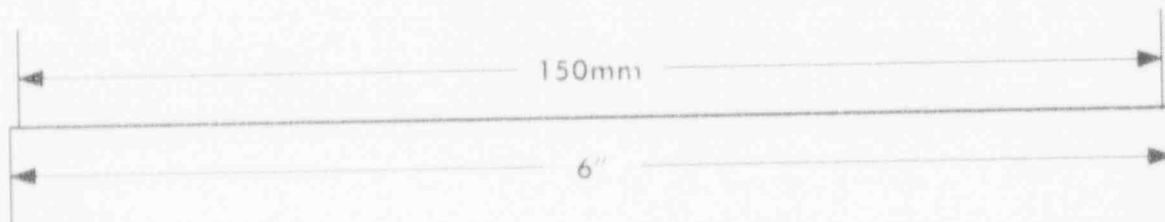
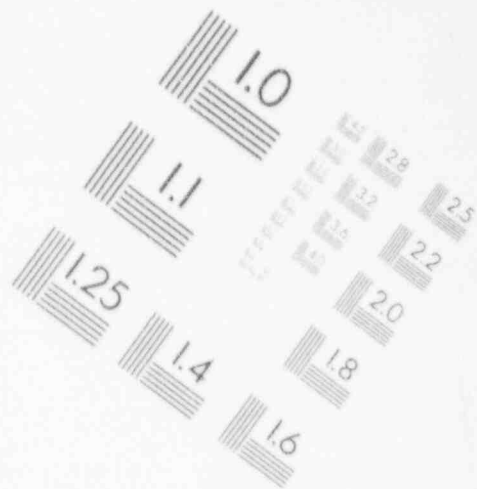
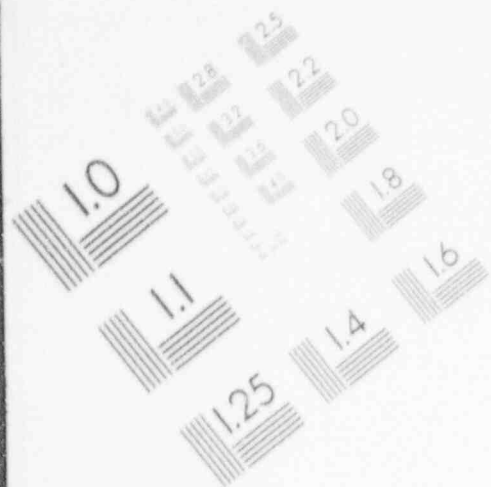
1

IMAGE EVALUATION TEST TARGET (MT-3)



1

IMAGE EVALUATION
TEST TARGET (MT-3)



1 adoption, I don't know how much -- what kind of crystal ball
2 we're going to use.

3 MR. MURPHY: What's the information in the EIS?
4 What environmental data which was used to reach conclusions
5 expressed to the EIS is not conceptual -- is not relevant or
6 necessary to the decision as to whether or not the NRC can
7 adopt that document? Give me an example of environmental
8 information which categorically can be excluded from the
9 NRC's consideration as to whether or not to adopt the
10 information -- the document.

11 MR. TREBY: Some transportation information on the
12 environmental impacts of transporting through the state of
13 New York or New Jersey on its way to the repository -- what
14 impacts that would have?

15 MS. CERNY: We're not including transportation, so
16 that's not -- that's not an answer to the question.

17 MR. TREBY: Well, transportation is an
18 environmental issue. You should be including
19 transportation.

20 MR. MURPHY: That's a different --

21 MS. CERNY: That's a different issue.

22 MR. TREBY: I guess, perhaps another issue might
23 be the decision that the NRC needs to make, relates to the -
24 - the safety -- the public health and safety aspects of the
25 repository, I guess, to the extent that there is an

1 endangered species in the area, that would be a subject that
2 would be covered strictly in the Environmental Impact
3 Statement.

4 MR. MURPHY: But that's not the decision that --
5 the NRC's decision as to whether or not to accept DOE's EIS
6 is not limited, not narrow.

7 MR. TREBY: Well, you asked for an example of
8 something that might be in the EIS that might not have to be
9 in the LSS. Counting --

10 MR. MURPHY: Are you saying the NRC's decision on
11 adopting the DOE EIS is going to be limited strictly to
12 radiological health and safety issues?

13 MR. TREBY: Yes. And to the extent that the
14 radiological health and safety issues are somehow changed by
15 -- from what's presented in the license application.

16 MR. SILBERG: You're saying that the NRC's
17 decision on adopting the DOE EIS will not look at
18 environmental issues, but only look at radiological health
19 and safety issues? I don't think that's what the 51 had
20 changed -- Part 51 says.

21 MS. DESELL: I think part of it has to go back to
22 CEQ's rules on adoption. I'm not familiar enough with them
23 to sit here and quote them to you right now, but they are
24 different than they are for the agency that actually creates
25 the document and that may be something we all need to look

1 at, is the rules for adoption versus the rules for actual
2 production of promulgation in the EIS. They are somewhat
3 different. The standards are not quite the same. We are
4 allowed to look at only parts of it, but how and where NRC
5 might draw that line, depends on how they approach their
6 documentation.

7 MR. SILBERG: Stuart, I'm all in favor of bounding
8 the scope of the LSS. I'd use up my quota if I told you so
9 for today, so I can't say anything more about that. But,
10 the question of putting environmental information into the
11 LSS I think is a significant enough policy question that I
12 would hate to have it decided as a matter of guidelines that
13 show up in a Reg Guide and then have it turn out that the
14 Commission may have guessed wrong. I don't know where I
15 would come out if I had to make the legal argument.

16 I think Linda's point is a good one. There may be
17 differences in what NRC looks at as an adopting agency, then
18 what DOE looks at. But, I don't know that I'd be willing to
19 wager the state of the LSS and its ability to meet all the
20 tests that it has to meet for the next 5 to 10 years on a
21 piece of regulatory guidance that isn't subject to being
22 challenged. I don't have any objection if the Commission
23 thinks that it's appropriate to limit the information that
24 goes into the LSS -- to the guidelines or other areas and
25 excludes certain environmental issues, certain

1 transportation issues, certain other issues; that's all well
2 and good and it's a supportable argument. But I would love
3 to see that reflected in a document, which if Mal doesn't
4 like it or disagrees with it, as a matter of law, or if we
5 don't like it and disagree with it, as a matter of law, or
6 DOE doesn't like it and disagrees with it, as a matter of
7 law --

8 MR. MURPHY: Or parties who aren't even at this
9 table.

10 MR. SILBERG: Right, can be challenged, tested,
11 adjudicated by a court, and then we'll know what the answer
12 is. I don't want to run the risk of having a system set up
13 and documents going into the system that 10 years from now
14 we discover, on the eve of the hearing, is inadequate. That
15 is unacceptable to the industry.

16 If we want to test that now, great. We can get a
17 decision, we have plenty of time to get a hard and fast
18 decision. Let's do it. But, let's not go down the road of
19 excluding a whole bunch of issues with Mal things are
20 important and if Melinda McCassen were here, would think
21 were important, and not have a chance to see whether you're
22 right or Mal is right, or Melinda or I.

23 If you want to do that, my recommendation is let's
24 prepare the case, let's put it up, let's make it a
25 rulemaking, put it out for comment, issue it and then people

1 can challenge it in Court and we'll have a dispositive
2 decision in plenty of time to start loading the system, but
3 don't do it by guidelines; you'll kill the project.

4 MR. TREBY: Well, I think we've done that though.
5 We had this rulemaking with regard to Part 51.

6 MR. SILBERG: But the guidelines --

7 MR. TREBY: Part 51.109C says "the presiding
8 officer will find that it is practicable to adopt any
9 Environmental Impact Statement prepared by the Secretary of
10 Energy in connection with a geological repository proposed
11 to be constructed under Title 1 of the Nuclear Waste Policy
12 Act of 1982, as amended, unless: (1) the action proposed to
13 be taken by the Commission differs from the action proposed
14 in the license application submitted by the Secretary of
15 energy, and the difference may significantly affect the
16 quality of the human environment, or (2) significant and
17 substantial new information or new considerations render
18 such Environmental Impact Statements inadequate."

19 It seems to me that that says --

20 MR. MURPHY: Stuart, where is that significant new
21 information or new considerations going to come from? They
22 are going to come from parties to the licensing proceedings,
23 presenting that new information to the panel and the
24 presiding officers. That's where the new and significant
25 information is going to come from.

1 MR. TREBY: Right, but that's not --

2 MR. MURPHY: Where are the parties to get access
3 to that new and significant information through the
4 licensing support system. That was ^{part of} we negotiated. That is
5 what we gave up certain things for on behalf of the state,
6 to get an automated data retrieval system, which facilitated
7 discovery of that information.

8 If that information is going to be taken away now
9 in the context of these kind of Reg Guide Revised Topical
10 Guidelines, you are, as Jay points out, putting at some risk
11 your ability to certify this system and accept it from DOE
12 5, 6 seven years down the road, because we aren't going to
13 buy it. We're not going to buy an LSS System that contains
14 no environmental information, and which then either
15 precludes us from or pushes us back into hard copy discovery
16 to allow us to make -- to attempt to make that showing to
17 the panel that there is indeed new and significant
18 information which should prohibit the Commission from
19 adopting the DOE EIS.

20 MR. TREBY: But the new and significant
21 information is not going to become available until after the
22 EIS is out. It's new and significant information other than
23 that which is in the EIS.

24 MR. MURPHY: That's your interpretation. That's
25 not necessarily the same interpretation that this Circuit

1 Court of Appeals for the District of Columbia will adopt.

2 MR. SILBERG: Well, it could be significant and
3 substantial new information or new considerations rendered
4 such Environmental Impact Statement inadequate.

5 MR. TREBY: It says --

6 MR. MURPHY: The new consideration can be a new
7 way of looking at data which was generated in 1986.

8 MR. SILBERG: Whether that's true or not, you have
9 a lot of information that's being generated all the time and
10 if this were on the safety side, that information would be
11 going into the LSS. People could use the LSS to find that
12 information. On the other hand, to determine what's new and
13 significant seems to me may involve, may not, but it may
14 involve a comparison to what's already in the EIS and what
15 that information is based on and you can't make that
16 comparison without access to the information.

17 I think, if you can make the argument, I think
18 that's great, but I'd like to see that argument made in a
19 better format, you know, in a more legally supportable
20 format than what we have here, and one that can be tested.
21 We may well support you, Stuart, but, you know, I would not
22 want to run the risk of having Mal show up on the Licensing
23 Board's doorstep in the year 2003 and say, uh-uh guys and
24 have the Licensing Board agree and then where are we?

25 Let's -- let's test it now, if you're really

1 confident that that's the right way to go.

2 MR. TREBY: Well fine. I think that, you know,
3 you're certainly welcome to make those suggestions to the
4 Commission, as I'm going to get to in a couple of minutes,
5 the next steps will include that the Topical Guidelines will
6 go out for public comment. You can certainly make those
7 comments at that time. Plus, you know, this Committee can
8 always make that suggestion or that comment now, as part of
9 providing advice to the Commission.

10 But, I think it's the NRC's staff's position that
11 environmental information is not necessary to go into the
12 LSS at this time; that at the time the LSS -- the DOE
13 Environmental Impact Statement is developed and put into the
14 record, it will -- well, at the time the DOE Environmental
15 Impact Statement is issued and made apart of its license
16 application, it will -- that document definitely will be an
17 appropriate document to come into the LSS, to the extent
18 that people are then going to be raising these other
19 information and raise an issue that the impact statement
20 should not be adopted, I guess that information could to
21 into the LSS.

22 MR. MURPHY: But, Stuart, that's a -- you know, we
23 don't need the Environmental Impact Statement in the EIS no
24 more than we need, and we've talked about this frequently in
25 the course of the negotiations, as you'll all recall. We

1 don't need the license application in the LSS, we don't need
2 the EIS in the LSS. We've got that -- we will have that
3 document in front of us in hard copy. Everyone involved in
4 this process will have his own or her own copy of the EIS.
5 We can mark it up and dog-ear it and do whatever we want to
6 with it without having to sit there and mesmerize ourselves
7 in front of this -- in front of the CRT to read it. That's
8 not necessary.

9 What the LSS is about is to allow us access to the
10 data and information generated through God knows how many
11 years of this program by the time it ever gets to that
12 stage, which -- which resulted in the Department reaching
13 the conclusions expressed in the EIS and expressing the
14 general environmental information.

15 To say that, well, you know, don't worry folks,
16 you will have the EIS in the LSS is absurd, that's
17 preposterous. Nobody needs that. You're going to spend
18 \$500 million or some other -- some outrageous figure to
19 produce an automated data retrieval system which is going to
20 give us the EIS?

21 MR. TREBY: It's going to give you access to all
22 the relative material that's relevant to the NRC making its
23 licensing decision.

24 MR. MURPHY: But you are telling me what is
25 relevant to my -- you are telling me 10 years in advance

1 what is going to be relevant to my worrying about the EIS
2 by -- by precluding the people from putting into the EIS the
3 kind of information which I will need to determine whether
4 or not the EIS should or should not be adopted to the NRC.

5 MR. SILBERG: I would like to propose that this
6 panel send a letter to the Commission which expresses the
7 concern that some members of the panel have that this
8 exclusion may be improper. That's not a concern of the
9 panel, that's a concern of some members of the panel. And
10 that if the staff believes that these kinds of exclusions
11 are perfect, that they should be thoroughly justified and
12 presented in a manner which exposes them to comment --
13 public comment and the possibility for judicial review of
14 the final Commission decision. I think I phrased that in a
15 way that doesn't prejudge the outcome of any of us as to
16 whether it's right or wrong, but I think reflects the
17 sentiment of all of us; that we cannot afford to have this
18 decision made and not become a final judicially tested
19 decision until somewhere down the road where it could really
20 adversely affect the conduct of licensing procedures.

21 MR. MURPHY: Is that a formal motion?

22 MR. SILBERG: I don't know if we have formal
23 motions.

24 MR. MURPHY: If it is, I second it.

25 MR. SMITH: Are you talking about transportation

1 issues in addition?

2 MR. SILBERG: Both. Both sets of issues.

3 MS. DESELL: I -- I disagree with you in respect
4 to the transportation issues. I think we should discuss
5 that. We've been concentrating on the EIS.

6 MR. MURPHY: Why take a chance?

7 MR. SILBERG: I'm not saying we're right or wrong
8 on transportation or whether they should be in or out. All
9 I'm saying is it's going to be a matter of contention. We
10 know that the private environmental groups -- Environmental
11 Defense Fund, particularly, is very concerned about
12 transportation. That's there main issue in defending --

13 MR. MURPHY: State of Nevada.

14 MR. SILBERG: -- and that it will certainly become
15 a matter of contention down the road. I probably agree with
16 you that -- you know, I've spent more time thinking about
17 this as an EIS matter. I'm not prepared to go into an
18 extended legal discussion now as to whether transportation
19 is or is not appropriate. But, let's test that out now,
20 when it's not on the critical path, and when we can get a
21 decision. Now -- it's the sensible time to do it. Let's
22 not push these issues off.

23 MS. DESELL: True, I'd agree with that.

24 MR. BECHTEL: I'd like to just add one thing. As
25 a representative for the Government, to get on the record

1 the fact that we feel transportation is very important and
2 it's the reason we're pretty much sitting at this table,
3 the reason we just negotiating listing of items. I think we
4 also feel that a lot of the socioeconomic questions should -
5 - would be useful to the Environmental Impact Statement and
6 would be useful to the NRC in making their decision and that
7 that also not be excluded as it appears it is on the Interim
8 Document here.

9 So, but I agree that this -- these issues should
10 be explored more fully, and not sit around and --

11 MR. SILBERG: I am in favor of limiting the scope
12 to the extent that it is legally permissible to do so. But,
13 I'm also very much in favor of making sure that that
14 decision is a legally correct decision and that we don't
15 have to argue about that case at a time when the proceeding
16 is ongoing or there has been a decision reached and that
17 becomes a major point of disagreement. We can resolve it
18 now, and if the NRC is right, that's terrific, if the NRC is
19 wrong, we haven't lost anything. But, at least we'll know
20 the answer.

21 CHAIRMAN HOYLE: Stu, do you have any further
22 comment on this proposal?

23 MR. TREBY: I guess I have no objection to the
24 proposal being made, you know, and sent to the Commission as
25 it appears to be the consensus, with the possible exception

1 of the staff, of all the other participants here.

2 CHAIRMAN HOYLE: Let me --

3 MR. TREBY: So, I think that that -- the
4 information should go. As I was going to get into -- the
5 next step is that -- this Advisory Review Panel make its
6 recommendation and that the -- then the Commission, the
7 staff will brief the Commission on those recommendations and
8 I assume that this is one of the recommendations.

9 The Commission will consider the recommendation
10 and direct staff action and then we'll complete the
11 publication cycle, that is, we'll send the topical
12 guidelines, which right now are just draft -- was just a
13 draft document to the ACNW to review and then it will be --
14 the topical guidelines will be noticed in the Federal
15 Register with a 60-day period for comment and then after the
16 public comments are considered, you know, the final Topical
17 Guidelines will go out.

18 I'll just go through those next steps to indicate
19 that it's entirely consistent for this group to bring back a
20 recommendation to the Commission indicating what Jay has
21 indicated.

22 CHAIRMAN HOYLE: Elgin?

23 MR. HOLSTEIN: Mr. Chairman, I apologize for being
24 late in rejoining the group. I, in fact, was on the phone
25 with some people in Nye County, talking about this very

1 issue. So, I want to emphasize, for the record that we
2 firmly believe that socioeconomic and transportation issues,
3 including those elements that would be excluded or otherwise
4 limited by this -- by this draft, are very much, in our
5 view, necessary and relevant part of the licensing support
6 system range of topics to be covered.

7 In fact, on the socioeconomic issues are
8 understanding of one of the key purposes behind the
9 Department of Energy's entire Socioeconomic Monitoring and
10 Mitigation Plan -- the most recent draft of which Nye County
11 submitted some extensive comments on, is specifically due to
12 DOE's intention to incorporate that -- those activities and
13 that work product into the EIS process.

14 Whether that ends up -- to whatever extent that
15 ends up being the case, it seems to me there's a fundamental
16 process issue here, which I apologize if others have already
17 previously touched on; but I -- but speaking on behalf of
18 Nye County, I'm very concerned about what strikes me as an
19 eleventh hour issue being raised here and that is coming in,
20 at this point in the process, that is to say, after the
21 negotiated rulemaking process has run its course and all of
22 the ups and downs that that process entails come in now on
23 something as fundamental as an objection that seems to be
24 based upon on argument that the scope of topics should be
25 limited by the 10 CFR Part 60 interpretation currently lent

1 to it in this document.

2 It seems to me that this is the kind of issue that
3 should surely have been raised and could have been raised as
4 part of that rulemaking making process. I cannot fathom why
5 it is that it comes up now. It's certainly not in the
6 foreseeable -- was not an unforeseeable issue.

7 So, in addition to ascertaining first whether or
8 not these issue should be in or shouldn't be in, I would add
9 a concern, on behalf of my county and perhaps others at the
10 table about the process we're embarking on, and perhaps
11 disrupting some previous understandings and agreements
12 inherent in the negotiated rulemaking process.

13 MR. SILBERG: Well, let me respond to that. I
14 think, as I recall, and my memory is not nearly as good as
15 others or as good as it used to be, that we really didn't go
16 through the outlines of the Topical Guidelines, because I
17 think there was an assumption that those were put in as
18 guidelines and that those might be changed by the Commission
19 later on.

20 As I recall, the debates at the Commission level,
21 on adopting the final rule, that was explicitly discussed.
22 I think Commissioner Curtis raised the whole question of
23 Transportation impacts, in particular, so I don't see the
24 problem as one of suddenly going back and changing the --
25 the agreement such as it was, or of somehow subverting the

1 purpose of the LSS, because I think there was always a
2 thought that those guidelines were -- were interim and I
3 don't think there was an agreement that that represented the
4 proper scope of any of the documents. I know we had some
5 concerns, particularly, that the detailed outline went much
6 too far in some respects. But, that was kind of put aside
7 because we recognized that that would be changed later on.

8 But, I agree with you. Your concerns are
9 certainly valid and that's one of the reasons why I think
10 it's important that we get a chance to really test what the
11 proper scope is and what ought to be in.

12 MR. MURPHY: I think Jay is correct. If I could
13 just expand on that a little bit.

14 The Topical Guidelines were produced in sort of
15 this way. We were arguing or discussing, in the course of
16 the negotiations, this whole notion relevancy, including
17 hearing over and over again, the NRC staff's position that
18 relevance was much more narrower, in their view, than it was
19 in the view of some other potential participants in this
20 proceeding and a subject in which I thought, at least
21 Stuart, the NRC had agreed to a compromise. I'm hearing
22 something different today.

23 But, so that -- we -- we and the Environmental
24 Defense fund -- we, the State of Nevada and the
25 Environmental Defense Fund and the Department of Energy,

1 volunteered to come up with categories and lists of
2 documents which we all thought should be included in the
3 LSS. We went home and did that -- Jim Davenport and I came
4 up with a list which I think is the first part of those
5 general topics you see in the interim guidelines and the
6 Department of Energy produced a list and Melinda McCassen
7 literally produced the outline of the Environmental
8 Assessment.

9 Rather than spend a whole lot of time in picking
10 nits over those lists during the negotiations, we literally
11 combined all three lists and, so that DOE's list is there in
12 total, Nevada's list is there in total, as is the
13 Environmental Defense Fund's, with everybody's understanding
14 that later on, at the conclusion of the negotiations,
15 through a Reg Guide or some other similar vehicle, they
16 would be refined. But refinement did not mean, at least to
17 this participant in the negotiations, that any consideration
18 of environmental issues would be wholesale expunged from the
19 LSS and from consideration by -- by the Licensing Board.

20 To that, we will certainly resist -- and as -- and
21 I can't agree more with Jay's thoughts, that if you're going
22 to do that, I don't think you should do it at all, and we
23 will certainly urge the Commission not to. But, if you're
24 going to do it, you should, by God, do it in a way which you
25 can settle once and for all, legally, long before this thing

1 ever gets to 6 months prior to licensing and there's a big
2 contest over whether or not it should be accepted.

3 I have a hunch, I have a feeling, unless Barbara
4 Cerny retires in the interim, that this is probably an
5 academic discussion, at any rate, because I can't imagine
6 DOE would be dumb enough not to put these documents in the
7 LSS in any case, because they're going to use that system to
8 draft their own EIS.

9 But, nevertheless, we are going to resist
10 contracting with the consideration of these significant
11 issues, or contracting our ability to have access to the
12 information necessary to bring to the Licensing Board
13 consideration of these issues, by keeping them out of the
14 LSS. That is an absolutely unwarranted -- I think, you
15 know, unwise and imprudent action for the Commission to take
16 at this time -- just begging for a challenge later on down
17 the road.

18 MR. SILBERG: You did a good job.

19 MR. TREBY: Well, I agree with the recollection of
20 both these gentlemen as to what went on to the negotiation.
21 The only thing I would add is that -- what has also happened
22 subsequent to the negotiated rulemaking, is that it has been
23 this rulemaking with regard to Part 51, which has provided
24 that the staff will -- the Commission will adopt to the
25 extent practicable DOE's EIS. That's an additional fact.

1 The staff believes that does warrant a change in the
2 information that goes into the LSS.

3 There was a discussion, when the Commission was
4 adopting the rule to the extent that the -- that the LSS
5 information was very broad, that the Commission thought it
6 prudent that it be kept broad with regard to things that
7 were relevant to the licensing decision that had to be made
8 by the Commission, to the extent that there's something
9 that's external to the decision that the Commission has to
10 make that that doesn't necessarily have to be in the LSS and
11 as part of the course considerations, should be deleted.

12 MR. MURPHY: Well, again, you know, I just want to
13 repeat. We have always approached this whole process on the
14 basis that the LSS would be a system which facilitated
15 discovery -- made discovery easier. For that reason, Nevada
16 went along with the system which would allow the Department
17 and the NRC some reasonably decent chance of disposing of
18 this problem within a 3 to 4 year licensing process.

19 If we do not have a system which facilitates
20 discovery, and discovery of any relevant information or
21 information which might lead to the discovery of relevant
22 information, then our suggestion will be that the nation's
23 rate payers save a whole lot of money, that we don't build
24 this system at all and that we revert to hard copy
25 discovery, when we will be able to get out hand on this very

1 information -- it's just going to take 7 or 8 years. That's
2 fine with us. Nevada has no interest in seeing this
3 licensing proceedings take three years. Our interest is in
4 seeing it take 30. We gave up that in order to get a system
5 which we thought would be useful to us -- we could use to
6 the advantage of the people of the State of Nevada. If we
7 can't use it to the advantage of the people in the State of
8 Nevada in the environmental area, then let's not spend the
9 money. Let's save Jay Silberg's clients that money and
10 let's go back to hard copy discovery.

11 MR. SILBERG: Can we -- John, how do you want to
12 proceed? I think there's consensus around the table, X NRC,
13 sending a letter.

14 MR. ^{Hoyle}HOLSTEIN: There is. I would like to see if I
15 can have an opportunity, over the evening, to draft
16 something. You'll be leaving tonight.

17 MR. SILBERG: Right.

18 CHAIRMAN HOYLE: But, for those who will be here
19 in the morning, I could show the text of the letter.

20 MR. SILBERG: You could put it on the fax.

21 MR. ^{Hoyle}HOLSTEIN: Fax it to you. That is, if I can
22 hear the tape player.

23 MR. TREBY: Well, putting aside environmental and
24 transportation information, is there any comment with regard
25 to the.

1 MR. SILBERG: I have one comment.

2 MS. DESELL: Yes, I've got some too.

3 MR. HOLSTEIN: Why don't we go through maybe this
4 package page by page. I have a couple of what I consider
5 relative nits. Some of them just questions.

6 MR. SILBERG: I'm glad to see you put an abstract
7 in this document so I can incorporate them into the header.
8 It's less than 200.

9 MR. TREBY: Anyone have any problems with the
10 abstracts or accounting?

11 MR. SILBERG: What you say on page 2 of the first
12 document, when you talked about levels of details in the
13 topical guideline. I assume that just means, you know, Rule
14 2, paragraph 1 and little (a), that's three levels of
15 detail, that's what that means?

16 MR. TREBY: Right.

17 MR. SILBERG: As I indicated earlier, it's our
18 expectation that we tried to keep them broad, we tried not
19 to get down to make it very prescriptive, because we don't
20 want to be excluding things. We wanted it to be broad.

21 MR. TREBY: Well, you want to exclude all relevant
22 environmental issues.

23 MR. SILBERG: That's true.

24 MR. TREBY: I don't have any other comments on the
25 introductory text.

1 MS. DESELL: I have a comment back on page 1.
2 Something of an editorial comment. Depending on where NRC
3 comes down in the end on the transportation issue and the
4 relevancy of the documents, there should be some statement
5 in that fourth paragraph there concerning transportation and
6 your position on it there, as you have a position on
7 environmental. It didn't seem to appear anywhere on the
8 actual topical guideline, your position on transportation.
9 It's in the documents at the back end that explained how you
10 disposed of the various issues listed in the previous set of
11 Topical guidelines, but I couldn't find any mention of your
12 position -- your actual position on transportation in the
13 text of this Topical Guideline itself.

14 MR. TREBY: Transportation is strictly an
15 environmental impact and --

16 MS. DESELL: Well, perhaps I had misunderstood you
17 were trying to take on transportation. I thought that
18 perhaps, not so much from an environmental standpoint, were
19 you trying to exclude the topic of transportation as -- with
20 respect to the certification of the casts themselves, since
21 that's under a separate set of rules, or perhaps the impacts
22 outside of the State of Nevada, since they are less related
23 to the environmental nexus of the EIS that is to be done for
24 the Part 60 license. That was how I interpreted hour
25 exclusion of the transportation materials.

1 Now, obviously Mal has a different interpretation
2 of it.

3 MR. MURPHY: No, I'm agreeing with you.

4 MS. DESELL: But, I can -- I can understand an
5 exclusion of that certification and the impacts that are not
6 close to the nexus of the actual Part 60 licensing. I can
7 understand that position. However, what I'm saying is, I
8 didn't find that position actually stated here in the
9 introduction as your position, with respect to the
10 environmental areas as stated, that's all.

11 MR. MURPHY: There are really three transportation
12 -- three classes or categories -- partitions of
13 transportation --

14 MS. DESELL: Careful how you use that word.

15 MR. MURPHY: The kind of cast safety, vehicle
16 safety sort of thing that you just mentioned, National
17 Transportation impacts -- what are the folks in Colorado
18 going to think about this, and state and local -- within the
19 boundaries of the State of Nevada -- through Lincoln County
20 and through Las Vegas. Those are three different
21 environmental or transportation impacts.

22 Nevada is seriously interested in cast and vehicle
23 safety and all those issues.

24 MS. DESELL: Yes. But you had the opportunity to
25 participate in that -- in the actual certification --

1 MR. MURPHY: Well, that's true -- that may be
2 true, but still it's an issue that's of interest to the
3 state. The transportation impact, once it passes the border
4 into the State of Nevada, is a very big concern to the State
5 of Nevada. But the impact in Nebraska and Kansas and
6 Colorado is really not our issue. We may be concerned about
7 it, but it's not an issue that we can argue. I wish Melinda
8 were here to do that.

9 MS. DESELL: Yes, because I would like to hear her
10 views with respect to that because I have a bit of a problem
11 with the nexus of the two with respect to Part 60 not being
12 the same.

13 MR. MURPHY: Yes. She -- didn't -- she has an
14 argument which she can present to that.

15 MS. DESELL: I'm sure she does. I could argue
16 both sides of it -- so --

17 MR. MURPHY: I just can't make her argument for
18 her.

19 MS. DESELL: That was the direction that NRC staff
20 was coming from, was to take the certification and the
21 National transportation issues and -- and remove them from
22 the LSS, but I didn't think that they intended to take away
23 the close-in Nexus issues, which would be in the EIS no
24 matter what -- because of the socioeconomic issues that --
25 they must be there underneath them. We can't exclude those.

1 So, they would be in there with the EIS anyway.

2 MR. MURPHY: That's right. I agree with you 100
3 percent, but I think stu just said that whether or not your
4 truck squashes a dessert tortoise on the road to Yucca
5 Mountain, is not going to play a role in the NRC's
6 considering whether or not they adopt the EIS.

7 MS. DESELL: It might not under -- as I say -- I'm
8 not close enough to the present CEQ interpretations on
9 adoption. Generally, adoption, as it was seven years ago,
10 when I worked on those -- those issues, was that you worked
11 at the EIS only -- you looked at it very narrowly, to see
12 whether or not issues that you were supposed to specifically
13 consider were addressed in the EIS and, if they were, you
14 could adopt that part of the EIS and you didn't have to
15 worry about the rest of it.

16 Now, a much broader interpretation may have been
17 given since that time. I mean, it may be buried in a morass
18 in the repository for a while and not as up on those
19 particular amoeba interpretation issues. I'd like the
20 opportunity to go back and take a look at some of that and
21 see how interpretations may or may not have changed in that
22 area.

23 In any case, it's a concern, I think, for all of
24 us. But, I thought that was kind of an editorial comment I
25 wanted to give you there. Consistency comment.

1 MR. MURPHY: Well, I think the suggestion that
2 John made though, that he try to draft a letter this evening
3 to get a consensus was a great idea. Jay will deputize --

4 [Laughter.]

5 MR. SILBERG: I think I'd prefer to see it myself.

6 MR. TREBY: Then I guess we start going into -- on
7 page 3, the Topical Guidelines themselves. Were there any
8 comments on page 3?

9 MR. MURPHY: You repeat the geological systems --
10 you've got regional geology twice under A and B. Is there
11 something missing there? Is that a --

12 MR. TREBY: I have a mistake.

13 MS. DESELL: Also chemical system appears twice,
14 once at the bottom of page 3 and again at the top of page 4.
15 I think that's a typo as well. It just appears number 3 got
16 repeated by your machine.

17 MR. SILBERG: When you say, in the general
18 information, you talked about things relevant to -- I'm a
19 little concerned about that's inconsistent with the language
20 in the rule. The LSS is supposed to have information that's
21 a little broader in relevancy. You use that phrase a couple
22 of times; there's a number 1-3 and 1-8 and 1-9 at least.

23 1-9, where you talk about information relevant to
24 NRC adoption and modification with EIS, is also broad
25 enough, it seems to me, to sweep in all the environmental

1 information which you say should be excluded.

2 MR. MURPHY: It is, if it's interpreted correctly.

3 MR. SILBERG: Because you could say any -- every
4 bit of environmental information that goes into the EIS --
5 whether it's generated subsequent to the EIS would be
6 "relevant."

7 MS. DESELL: Also, on page 3, -- 1-3 under
8 schedules, it points out something that I found is a problem
9 here in the document.

10 One of the things that I thought was important --
11 that everyone, I guess, worked hammer and tong on during the
12 negotiated rulemaking, was trying to determine what was the
13 difference between a draft, a preliminary draft, etcetera,
14 and then I see none of some of that reflected in here. It
15 looks like everything gets swept in here, where there are
16 certain exclusions in the actual rule itself that don't seem
17 to be reflected in the Topical Guidelines, even in a general
18 statement.

19 MR. MURPHY: It's in the -- in Appendix A.

20 MS. DESELL: Appendix A has them.

21 MR. SILBERG: I would think that these are all
22 subject to the specific provisions in the rule in terms of
23 drafts and technical data and all the other requirements
24 that we read about. These only really go to subject matter
25 and not to quality or state development or integration.

1 I have a question just in terms of your wording on
2 the word "regional." I know there was a question raised in
3 one of your documents on the original guidelines, where you
4 raise a question about general topic 3, where it said "all
5 documents related to physical attributes of base and range
6 providence," and you said, "gee, that could be everything,
7 west of the Mississippi." The phrase "regional" may be
8 subject to that same interpretation. I don't know whether
9 there's a more specific term that you want to use, unless
10 you want to include everything west of the Mississippi?

11 On page 4, item --

12 MR. TREBY: I guess my only answer to that is to
13 look at the content -- Format and Content Guide, 3-1, it
14 goes into detail as to what is meant by regional geology.

15 CHAIRMAN HOYLE: That was very sent out. I think
16 everybody got that one late.

17 MR. SILBERG: Well, I still haven't gotten the
18 LSS. I got it courtesy of Curtis.

19 On page 4, on item roman III, 1-K and similarly in
20 the other subitems under the operations area, we talk about
21 plans for the decommissioning system. I guess I wasn't
22 familiar without having seen the Form and Content Guide, I
23 didn't really know there was something called the
24 decommissioning system, I think. I thought that was
25 something you do to existing systems. That's just --

1 perhaps just a wording problem.

2 CHAIRMAN HOYLE: Stu, do you have any comment on
3 that one? It appears then we're about two at fault so --

4 MR. SILBERG: Yes. It's in each of the items,
5 under 1, 2, 3 --

6 MR. TREBY: Again, I think that that's just the
7 terminology that was used in the Format and Content Guide,
8 it's just been carried over into the Topical Guidelines.
9 The staff's intent is to issue three generic documents: one
10 is the Format and Content Guide; another would be a Standard
11 Review Plan, that is a document that gives the staff
12 guidance as to how it would review the application; and then
13 the Topical Guidelines.

14 The effort is being made to make all three
15 documents consistent.

16 MR. SILBERG: That's a good thing to do.

17 MR. MURPHY: Well, I don't -- it maybe a good
18 thing to do, but it isn't necessary. The discovery system
19 does not have to be very consistent with the format and
20 content of the license application document.

21 MS. DESELL: Trying to get the system loaded
22 properly and, you know, make everybody happy, yes.

23 MR. MURPHY: It can be consistent with it, but it
24 shouldn't stop there. It needs to go beyond that.

25 MS. DESELL: Well, if there's other relevant

1 material, of course, it should be included. But, having
2 them consistent would simply help us to make certain that we
3 did get all the relevant information in it.

4 MR. MURPHY: If you put everything in, then you'll
5 get all irrelevant --

6 MS. DESELL: Put everything in there though, every
7 time you go to do your research, you're going to wind up
8 with a million hits on your Board.

9 CHAIRMAN HOYLE: Anyone else have specific
10 comments?

11 MR. SILBERG: I have.

12 MS. DESELL: What page are we on?

13 CHAIRMAN HOYLE: Well, we had gone to page 4 and
14 at the top of 5.

15 MR. SILBERG: I do have some comments on the third
16 part of the document -- the disposition of the Interim
17 Topical Guideline.

18 CHAIRMAN HOYLE: Why don't you hold it for a
19 moment.

20 MS. DESELL: I have some comments on Appendix A,
21 if anybody has some there. One thing that concerned me was
22 number 4 -- I'm sorry.

23 MR. TREBY: Just hold a second. Do you have a
24 copy of Appendix A?

25 MR. BECHTEL: I have a question. What was meant

1 by Part 9 Emergency Plan?

2 MR. TREBY: There is a requirement in the
3 regulation that there be emergency planning.

4 MR. BECHTEL: So, it's an emergency response plan?

5 MR. SILBERG: Right.

6 MR. TREBY: Right. All type plans, just like
7 there are for any other facility.

8 MR. BECHTEL: I guess, I'd also, as a
9 representative of Clarke County, make a pitch for -- we are
10 extremely concerned about transportation. At least in our
11 county, and I'm sure the other effected counties might feel
12 the same, that this should be a relevant item for
13 consideration in this document and as well as the
14 socioeconomic concerns that were listed in the Appendix that
15 the negotiated document.

16 MR. SILBERG: Well that just goes to the basic
17 question, do we include or exclude environmental and
18 transportation issues?

19 MR. TREBY: Are we at Appendix A now?

20 CHAIRMAN HOYLE: I guess when I draft the letter
21 overnight -- Dennis, you're going to be here tomorrow,
22 aren't you?

23 MR. CUMMINGS: Correct.

24 You know, if there are some specific comments like
25 that that you want to make for the county, let's consider

1 putting them in to see if everyone is going to adopt them or
2 as a special comment by county.

3 MR. CUMMINGS: Well, my county will certainly --

4 MR. HOLSTEIN: So would Las Vegas.

5 MS. DESELL: All righty. Okay. In Appendix A, my
6 concern may perhaps stem from the fact that I wasn't present
7 during the negotiational rulemakings, but under Number 4
8 where it says "internal memoranda," I felt it might be more
9 clear, from what I understood was intended by the
10 rulemaking, to say "internal decision memoranda," as opposed
11 to "all internal memoranda."

12 MR. TREBY: My understanding is that all final
13 documents at least have headers, if it's an internal
14 memoranda and you want to claim a privilege or something,
15 you would indicate what the privilege is, but you have to
16 provide at least a header and identifying that there is such
17 a thing as an internal memoranda somewhere in DOE.

18 MR. MURPHY: Well, I think that's -- I don't even
19 know that it's that -- I would I interpret that to mean, as
20 it did in the -- in the Interim Guidelines, that it's
21 internal memoranda which are subject to inclusion in the LSS
22 under the substantive rule, and there is -- there -- the
23 rule does -- does cover what, you know, drafts that decision
24 -- I can't remember exactly what we --

25 MS. DESELL: I believe it had drafts that were not

1 concurrences and things like that.

2 MR. MURPHY: I assume that that internal memoranda
3 mean those internal memoranda which the rule says go into
4 the LSS.

5 MR. SILBERG: I think that's generally true of any
6 document.

7 MR. MURPHY: Right.

8 MS. DESELL: All right. I was just having a
9 problem with that because all I saw raising the spector in
10 front of me was a host of delegation memos and internal
11 memos telling people that --

12 MR. MURPHY: Well, I understand --

13 MS. DESELL: -- ultimate work schedules are now
14 cancelled and --

15 MR. SILBERG: Well in the same sense that
16 personnel records --

17 MS. DESELL: Right.

18 MR. SILBERG: -- would fall under these general
19 categories of types of documents --

20 MS. DESELL: Yes, but certain --

21 MR. SILBERG: -- but they're included -- they're
22 excluded by other provisions, as a rule.

23 MS. DESELL: Well that goes back to the general
24 concern I have that if these are to be used as guidelines,
25 then we need to have a little bit more of what's in the rule

1 in the guidelines showing what some of the exclusions are so
2 that someone does not, 4 or 5 years from now, okay, pick
3 something up and think this is the only document that they
4 have to look at and they don't go to part 2, subpart J and
5 they don't know what's supposed to be excluded, like
6 personnel files and they call up and they say, I want a copy
7 of so and so's 171.

8 MR. SILBERG: That's a very good point, and I
9 think the final Reg Guide, or the Direct Reg Guide, when it
10 comes out, will comment on it and put all of this in
11 context; but these are really subject matter descriptions
12 and don't, in any way, change the particular provisions that
13 are in the rule on privileged documents and excluded
14 categories and the like.

15 MS. DESELL: Yes -- I --

16 MR. TREBY: That's our object -- I think that
17 internal memoranda was previously in the list of category of
18 documents and we thought everyone understood what it meant
19 and we just included it again in Appendix A.

20 MR. MURPHY: I noticed, for example, that in the
21 previous -- in the original category of documents that we
22 put together or somebody did, we didn't -- we didn't cover,
23 as an example of a category, the technical data, or raw
24 data, as I like to call it, not even there. That doesn't --
25 that doesn't mean that it can't go -- doesn't go into the

1 LSS. We just forgot to put it in this list.

2 MS. CERNY: These are categories of documents,
3 it's not addressing the content, they're the categories.
4 So, the internal memoranda, that's no different than
5 external correspondence. You don't put all external
6 correspondence either -- only that external correspondence
7 which falls under the -- the topical guidelines.

8 MR. SILBERG: But the Reg Guide at least provides
9 some --

10 MS. CERNY: We ought to clarify that fact.

11 MS. DESELL: What I'm trying to use myself as an
12 example of is that, you know, Jay and Mal and Barbara were
13 present at the LSS rulemaking, and perhaps some others
14 around the table here. I'm coming here a few years later
15 and I read the rule and I read this and to me, if I'm going
16 to give my folks, who are working with the record, something
17 to look at, I'd like to be able to give them NRC's topical
18 guidelines, as one of the things to read, so that they can
19 understand what they're supposed to send to the LSS record
20 system and what they're not.

21 This is not, at present, the type of document -- I
22 would have to generate an internal document, maybe I would
23 generate an internal document anyway, but it would be nice
24 if this kind of a guideline were, shall we say, a little bit
25 more complete, in terms of what is supposed to go in, but

1 what is not supposed to be included as well under the rule.

2 I mean, clearly, what's here derives from what is
3 supposed to go in under the rule, but there are certain
4 things that are not supposed to go in and I think that needs
5 to be made clear too.

6 MR. SILBERG: I don't think Jim can do that all on
7 a page like Appendix A.

8 MS. DESELL: I'm not saying it can be done
9 necessarily here, but I think it could be woven into the
10 document.

11 MR. SILBERG: Yes, I agree.

12 MR. TREBY: I am sure there can be a general
13 statement made that, you know, the provisions of the rules -
14 -

15 MR. SILBERG: Well, you ought to -- I think this
16 is --

17 MS. DESELL: But that's not doing it.

18 MR. SILBERG: -- an informative document. You
19 ought to summarize in the Reg Guide what the various
20 exclusions are. There's one for privileged information,
21 there's one for personnel records, there's one for certain
22 types of internal documents. I think you can do a good job
23 in setting forth the scope of the LSS document submission
24 requirements, so that when people do pick this up, as Linda
25 said, they have a sense that it isn't just everything that's

1 listed on Appendix A.

2 MS. CERNY: Mal, if you would look under 8-G,
3 Topical Report's Data and Data Analyses.

4 MR. MURPHY: Because it was a Topical Report, I
5 just read it -- I don't -- I don't have a problem with it.

6 MS. CERNY: Oh, okay.

7 MR. MURPHY: I was just using it as an example of
8 -- of the fact that this list is not just a Bible.

9 MS. CERNY: Oh.

10 MR. MURPHY: I mean, because we forgot to include
11 raw data or technical data, I use that as an example by
12 saying, because we forgot to include it in this list,
13 doesn't mean that it's not going into the system.

14 MS. CERNY: Yes, but I think it's there.

15 MR. MURPHY: I think you may be right. But, you
16 know, you can skinny that list down. I mean, what do we
17 need the Notice of Disapproval in the LSS for? What do we
18 need the Congressional Q&A's for, really?

19 MR. SILBERG: If we have no other comments on that
20 attachment, I have some on enclosure 3.

21 In the first paragraph, there's a phrase that's
22 near and dear to my heart, which indicates that --

23 MR. TREBY: Now enclosure 3 would not be a
24 document that would go out as a Reg Guide, enclosure 3 was
25 intended to just be a -- an explanation as to how we went

1 from the interim to the topical guideline, for the purposes
2 of the Commission and also for this Advisory Panel.

3 MR. SILBERG: There is -- I think it still ought
4 to be accurate, though. There is a statement in the first
5 paragraph about halfway down that indicates that the Topical
6 Guidelines were recommended "by all parties to the
7 negotiated rulemaking." I don't know that that's accurate
8 to say, because at least one party to the negotiated
9 rulemaking voted no at the end. so, I think you could just
10 drop that phrase and it would be accurate enough for the
11 Government work.

12 MS. DESELL: Which Government?

13 MR. SILBERG: In the second paragraph, I think we
14 come up to an issue which I've alluded to before and Mal has
15 also and that is talking about information that is relevant
16 to the licensing proceeding, and I suspect you'd use that as
17 shorthand for the discovery standard, if relevant were
18 likely to lead to the discovery of relevant information.

19 MR. TREBY: You would like a full statement?

20 MR. SILBERG: I think it would just be more
21 accurate to use the complete statement.

22 Now, as well as the last sentence talks about
23 information that's outside the scope of information that
24 would be needed in the proceedings. Again, that's not, at
25 least arguably, not the correct standard of what ought to be

1 going into the LSS. Also, that same phrase gets used in the
2 first sentence of the third paragraph on page 1.

3 On page 3, in the response to paragraph 1 where we
4 talk about the EIS, this follows along from our discussion
5 before on excluding environmental information. I don't
6 think we need to talk about this in any additional great
7 detail, but just a question of how does one know which
8 information is or isn't needed to deal with the question of
9 what is relevant to the NRC's adoption? How do you know
10 ahead of time what's relevant to adoption by the NRC?

11 There are a couple of places --

12 MR. TREBY: Before we leave that, you know, we've
13 discussed this, I guess, a couple of times this afternoon.
14 But there are criteria set out in 51.109. You don't think
15 that that criteria is --

16 MR. SILBERG: You won't know ahead of time. Since
17 we're supposed to be putting data in ahead of time and the
18 NRC's decision on adoption isn't going to be made until
19 pretty late in the process.

20 In both -- in response to question 4 and the
21 response to question 7, which deals with alternate sites.
22 My recollection is that there was a concern that Nevada had
23 that documents related to alternate sites and alternative
24 technologies might have, within them, information that was
25 relevant to the technology for Yucca Mountain, and the Yucca

1 Mountain site, even though information in those documents
2 relative to other sites or other technologies wouldn't be
3 relative. This -- these responses would seem to exclude
4 that.

5 Finally, the response to question 11, category 11,
6 I just didn't understand what that meant.

7 MR. MURPHY: What was the last one?

8 MR. SILBERG: In the response to category 11, the
9 response just says "topic --

10 MR. MURPHY: Category 11?

11 MR. SILBERG: It's on page 6.

12 CHAIRMAN HOYLE: Question 11.

13 MR. SILBERG: Question 11, enclosure 3.

14 MR. TREBY: I think what the response is that --
15 is intended to mean that to the extent that -- to the extent
16 that it's discussing an alternative design as such, that it
17 would be included in the LSS.

18 MR. SILBERG: Just a comment. It doesn't make
19 grammatical sense. But you can straighten that up.

20 CHAIRMAN HOYLE: Okay.

21 Stu, do you have any other further comments on
22 Jay's comments?

23 MR. TREBY: Well, I guess I just would like to
24 clarify. I think that the document needs to be corrected,
25 even though it's not going to go any further than where it's

1 going now. But, its purpose was merely to talk to --

2 MR. SILBERG: This wouldn't go -- you wouldn't
3 include this as an explanatory document?

4 MR. TREBY: No. This is just to explain it to
5 you.

6 MR. SILBERG: Okay.

7 MR. TREBY: This group and to the Commission.

8 CHAIRMAN HOYLE: But, I think the clarifications
9 are all very well taken and I would appreciate you bringing
10 up to the extent they will help us and help others
11 understand what we're doing. They're very very helpful.

12 All right. Any other comments on the Appendix?
13 Stu, did you have anything else for us?

14 MR. TREBY: No, other than I'm glad to see that
15 the staff's efforts were a success here.

16 MS. DESELL: Pay strict attention to whatever you
17 say.

18 CHAIRMAN HOYLE: Well, I will go over the
19 transcript -- the tapes of the meeting here and try to
20 develop them and add a couple paragraphs for our letter, to
21 the NRC, and bring that in in the morning.

22 It's now 3:15. Do we have anyone who would like
23 to go on with the header discussion?

24 [No response.]

25 Before folks disappear, anything you wanted to --

1 MR. SILBERG: Well, I would like to do as much as
2 we can, since I will miss -- unfortunately cannot stay, as
3 of tonight.

4 CHAIRMAN HOYLE: Is Betsy there? Okay. I would
5 like Betsy to be around. We do have Kirk. Why don't we --
6 suggestion for a break -- 10 minutes.

7 [Recess.]

8 CHAIRMAN HOYLE: We're going to the header issue,
9 just mainly to set the subject up, talk about the copyee
10 requirement, which was one of the items we had left over but
11 abstracting we'll take in the morning and the technical
12 data, non-document activity we will handle in connection
13 with the Center's discussion of technical data tomorrow.

14 Let me ask Kirk please to remind us where we are
15 at least and then we'll try to do the copyee.

16 MR. BALCOM: Welcome to Headers 102.

17 [Laughter.]

18 MR. BALCOM: Let me take an opportunity to thank
19 this team, since I wasn't here last week -- I'd like to
20 thank Betsy and Don and Eileen is not here -- once again for
21 helping put this together. I just really enjoyed working
22 with the team.

23 There's two versions of the agenda. One has three
24 items under continuation of headers and one has five. The
25 most recent one, the one that's in our packet this morning

1 has three but actually there are -- I guess one has four.

2 The abstracting issue we're going to save until
3 tomorrow because SAIC wants to get a chance to look at it
4 and they would like to be here when we're going to talk
5 about it.

6 Basically, all we are going to do now is talk
7 about the copyee.

8 I guess I have to take the lead in that because I
9 was the one who put it in the first place and essentially
10 the idea of adding the copyee field to the headers really
11 gets down to my old experience with litigation support
12 systems where frequently in that kind of a setting if you
13 were trying to find everybody that had seen a document or
14 had -- or you thought should have seen the document, it was
15 very difficult to contact your people if for example you
16 wanted to get a list of people to depose or at least find
17 all the documents that person saw or should have seen.

18 In that experience what we did is separated the
19 author field from the addressee field from the copyee field
20 because copyees normally are on the face of the document
21 somewhere. Because of the way documents get captured at the
22 image which goes to OCR, it's converted into an OCR image,
23 those names actually might get lost.

24 It seems to me that I could make a case now for
25 people who are looking ahead to doing depositions and

1 wanting to know if a technical document had gotten to
2 certain people simply to make it easy for them by putting
3 the copyee, all the copyees, in a separate field,
4 normalizing the spelling of their names with some kind of
5 controlled vocabulary so you can easily collect all those
6 people off the system quickly, otherwise --

7 MR. MURPHY: Wait. Let's stop right there. What
8 do you mean, normalize the spelling of their names?

9 MR. SILBERG: Well, we're going to spell Murphy
10 with an -ie instead of a y.

11 [Laughter.]

12 MR. BALCOM: Actually, the author's names will be
13 so-called, what I will call normalized. In other words
14 there is a format control and a controlled vocabulary for
15 lots of names where you don't always include the entire
16 first name. You put Murphy, comma, first two initials.

17 MR. MURPHY: Anybody with a Ph.D. has to give up
18 his entire first name. From then on, you're just --

19 [Laughter.]

20 MR. BALCOM: Maybe "normalize" is not the right
21 word, but anyway make it standardized in some fashion so you
22 have some control over it -- not the spelling of the last
23 name but the format of that name of that name, names in
24 text. If you are looking for all the Joneses so you could
25 have Jones Mill Road in the middle of the text and think you

1 are looking for all Joneses. That doesn't particularly help
2 you find that individual that you want to find, so, you
3 know, there is some case to be made for collecting this
4 copyee information so you can do searches on authors,
5 addressees, and all the people who should have gotten, who
6 might have seen this document. That is basically what that
7 concept boils down to. Otherwise you'll find it very
8 difficult to retrieve those people's names on that list.

9 Now there is another issue associated with this
10 and this is because of the way NRC works in terms of the
11 distribution list. It's not simple to make a conversion from
12 all the people who were on the distribution list into a
13 copyee field nor is it necessarily wise.

14 I think what I'm doing is throwing this out and
15 seeing if it appeals to people short of going to a lot of
16 trouble to match distribution lists by date with lists of
17 people. Perhaps that's going too far, and maybe the concept
18 is simply to take, if it's clear on the face of the document
19 who the copyees are, let the LSSA go ahead and put them in
20 the copyee field.

21 MS. DESELL: Can I ask a question based on the
22 fact that I haven't been around long enough.

23 Why do we want a list of copyees off a set of
24 documents if the state of Nevada for example wishes to take
25 someone's deposition and ask them if they've read a

1 particular document, then they can ask them that during the
2 deposition.

3 Having a list of copyees that could well be for
4 example like in the SEP could be 300 - 400 - 500 people
5 long. In addition, following an initial distribution of
6 documents in any Government agency you have subsequent
7 requests, most of which are just telephonic. Somebody calls
8 in and says "My name is John Jones and this is my address
9 and I want a copy of your SEP."

10 So you go and you get one of the big brown
11 envelopes and you write down John Jones's address and shove
12 that SEP in and staple it up and send it out so that he gets
13 it without having to write a letter and so you don't have to
14 write a specific letter of response.

15 Now what is the purpose of knowing whether John
16 Jones is on it because he just simply wanted it -- you know,
17 Kirk explained to me why.

18 MR. MURPHY: Well, as Kirk says, it is a classic
19 inquiry in discovery and litigation. You want to know,
20 frequently you want to know what other person in the world
21 might have seen a particular document.

22 The classic circumstance where that information is
23 useful is you take the anti-trust case. You want to know
24 everybody who may have seen the memo which put the price fix
25 on and as I told Kirk at breakfast this morning, I don't

1 have any real strong feelings one way or the other about
2 that in these circumstances because of the very nature of
3 this process.

4 As he pointed out, the copyee is placed on a
5 document by the state of Nevada or the Department of Energy
6 may be useful. Copyees placed on the document by the NRC
7 are useless. All they do is put down office -- CCOGC, well,
8 what does that do?

9 MR. BALCOM: No, your experts basically are the
10 people who try and find every piece of information that you
11 touch or every study that they have written, for example,
12 five years of heart work -- this may necessarily be the case
13 and I --

14 MS. DESELL: We send information to people that
15 sometimes do not read it. Now for example a scientist
16 should be reading materials, but --

17 MR. MURPHY: Well, would the fact that he didn't
18 read it could conceivably be relevant?

19 MS. DESELL: Perhaps, but couldn't you ask him
20 that, even if -- I mean if that person is that important of
21 an expert you would probably find him under discovery in any
22 case and you would still be sitting here, saying did you
23 read such-and-such a document? If they can't remember
24 whether they did or not, they've got to go back and look at
25 their files, maybe or they can tell you, yes, I did or I saw

1 them.

2 MR. SILBERG: Well, you must know what documents
3 you want to ask him about.

4 MS. DESELL: Yes.

5 MR. BALCOM: What this does is help you find the
6 documents as well.

7 MR. SILBERG: One of the questions I have is how
8 big a deal is this in terms of cost to include this
9 information.

10 MR. MURPHY: My feeling about this is that it
11 could be useful information in a header but it is not
12 significant enough to warrant significant increased costs in
13 my mind.

14 If we are talking a few more nickels, hey, that's
15 great. If it entails a significant increase in the cost,
16 it's just not that important.

17 MR. BALCOM: The way this kind of cataloging would
18 be done -- are you highlighting authors and addressees and
19 then there's data entry by -- there would be manual data
20 entry by those -- well, actually the submitter will be
21 possibly sending an ASCII text version --

22 MS. MENNELLA: We type it all from the document.
23 Catalogers do the entry themselves, so they would be typing
24 it into the field. We have discussed having it in the ASCII
25 text, blocking it and copying it to the field but the

1 problem with that is the consistency of the format.

2 MR. MURPHY: Won't the document itself, the full
3 text image of the document, show that?

4 MS. MENNELLA: Right here, cc. As Kirk said --
5 you are looking throughout the whole universe of all the
6 documents. You are not zooming in on the particular area.

7 MR. MURPHY: But you can, if you have a document
8 that is significant to the unit technical report or memo
9 between scientists, one guy questioning the other guy's
10 methods or something like that and you want to see who else
11 may have seen that document you could call it up and say
12 show me the last page.

13 MS. MENNELLA: That's right.

14 MR. MURPHY: I think we need to define our terms
15 though. Are copyees just the CCs or even the BCCs? There's
16 also distribution lists and stuff like that.

17 MS. DESELL: Distribution lists is where I think
18 we would be running into megabucks in terms of trying to do
19 something like that. It might be fairly easy for someone,
20 relatively easy -- but at least with the identified CCs and
21 BCCs on letters and memoranda you have got a fair shot at
22 getting the names of the people who are at least intended to
23 see that memorandum or letter, but a distribution list for a
24 document on PEIS or the SCP --

25 MR. MURPHY: Those aren't the documents we're

1 talking about.

2 MS. DESELL: Those aren't the documents that
3 someone would be looking for in any case.

4 MR. TREBY: But even a little letter in the
5 Government can have a distribution list of 20 people or more
6 as well as these offices as you say.

7 MS. DESELL: With a xerox machine it can get much
8 farther distribution than that because someone who gets a
9 BCC off of the yellow, okay. We've issued a chron copy and
10 they make six copies and distribute it to everyone in their
11 branch, which is not unusual for me to do, yet there is no
12 real record kept of that. Usually those are for your
13 staff's information.

14 I think that becomes a very, very difficult thing
15 to implement for all of us. Any government, state, local
16 and federal, is going to have a problem when it comes in as
17 a participant in the system.

18 MR. BALCOM: I am not really making, I don't
19 really intend to make a case one way or the other. It's a
20 common technique as a help tool at a certain stage in
21 litigation mostly and it's really up to you to make the case
22 for it or against it.

23 If you don't feel that it really would enhance
24 your ability or that you would truly lose something later by
25 not doing it then, well, that's really up to you.

1 My experience has shown that there will come a
2 time when we'll have something like that. This is not
3 totally analogous though to other kinds of proceedings.
4 It's not going to revolve around deposition as much as it is
5 on technical issues.

6 So, you know, I really leave it to you, having
7 presented it, to see if you'll lose anything by not doing
8 it.

9 I think the cost really will be minimal because
10 you could simply say that certain kinds of documents,
11 distribution lists, large documents, SEPs, for example --

12 MS. DESELL: But Kirk, as Mal was saying, for
13 example, your scientific memo that you mentioned as an
14 example a few moments ago, before you go to try and find out
15 who's gotten that memo you find the memo first anyway. You
16 found that memo. Now you want to know who got it. For the
17 most part you can either look on the last page or on the
18 first page, the list of two's, or a distribution list that
19 might be attached, something like that.

20 That is where you are going to find most, you
21 know, 90 percent --

22 MR. MURPHY: Well, the list of two's is going to
23 be there anywhere. You are going to have the addressee in
24 the header.

25 MS. DESELL: You are going to have addressees or

1 you'll have something that says two and it will say
2 distribution and your last page will be a long list of
3 people that it got distributed to but you will have found
4 that memo first anyway and you'll have the distribution list
5 right attached to it.

6 If not, then I would expect the first thing will
7 hear is the telephone call that says, you know, hey, for
8 some reason you've dropped the distribution list off of
9 this. Can you send a fax?

10 MR. BALCOM: It's not the documents you have.
11 It's the documents you don't have.

12 MR. MURPHY: If it's important enough we'll take
13 the time to find out who else got it.

14 MS. DESELL: Right.

15 MR. MURPHY: If it isn't important enough, I
16 really can't see that we're spending any more money on the
17 copyee.

18 MS. DESELL: That's I think the problem, spending
19 the money on things that we don't need when we can ask a
20 simple question and get a very quick turn-around response.

21 MR. MURPHY: Is that okay with you?

22 MR. TREBY: But I think there is also another
23 distribution list. It's not only the ones that are attached
24 to it that say, you know, this is distributed to the
25 attached distribution list but most documents also have just

1 an internal distribution list. They are sent off to various
2 offices. They are sent off to files. They are sent off to
3 reading lists and things like that.

4 This endless distribution list I think is a waste
5 of money to put in the copyee. It's just as a matter of
6 routine these things are sent around.

7 MR. BALCOM: Actually the original proposal was to
8 include it in the addressee field, include copyees, is that
9 correct? Do you remember that? I think that we were going
10 to include the copies in the addressee's field.

11 MS. MENNELLA: Originally we had a recipient and
12 the copyees were identified.

13 MR. BALCOM: Right, but they were going to be
14 picked up so the data entry effort would have been anyway.

15 What I am hearing now is a consensus for dropping
16 the copyee altogether.

17 CHAIRMAN HOYLE: I don't hear anyone opposed to
18 that, so that's the consensus.

19 MR. BALCOM: That's it for me. We're going to do
20 abstracts tomorrow and the issue of non-technical documents,
21 we'll take up a presentation tomorrow.

22 MR. SILBERG: Since I won't be here, let me add my
23 two cents on that. I think I talked to some of the
24 participants off the record.

25 My own view is that I do not believe that LSSA

1 administrator or caption station operators or whomever ought
2 to be creating abstracts for any documents. I think that
3 the appropriate way to handle this is that abstracts that
4 are already created should be incorporated into the LSS in
5 the header field.

6 I also believe that any document that is prepared
7 by NRC or DOE or any other person that exceeds some length,
8 it's kind of an arbitrary length -- pick a number, 10 pages,
9 20 pages, 100 pages, ought to be required to have an
10 abstract. That abstract ought to be prepared by the author.

11 It's certainly easier for the author of the
12 document to prepare an abstract. It can't take very long,
13 whereas someone coming into that process after the document
14 is complete and who has never seen the document before will
15 probably take a much longer time to prepare an abstract and
16 that abstract is less likely to be accurate.

17 The disadvantage of doing that is that the
18 abstracts may not be consistently prepared, using the same
19 type of vocabulary, the same ground rules.

20 I think that is a risk that the system ought to be
21 willing to bear. No other document that's in the system is
22 going to be consistently performed. An author is going to
23 write documents in different ways and give them different
24 types of titles and address them differently.

25 That is just one of the risk that you go through

1 whenever you have discovery. People don't write
2 consistently when you have lots of people writing different
3 types of documents.

4 I don't think it is any great hardship for
5 significant documents to be accompanied by abstracts. If
6 that requires the DOE to add that into their contracts, so
7 be it. It can't be a big additional cost to anyone.

8 I think searching through abstracts is probably
9 going to increase the utility of the LSS system to anybody
10 who is going to use it. I think the studies that were
11 circulated with the abstracting report bear that out but I
12 don't think it's worth a significant cost to have a body of
13 catalogers sitting around writing abstracts. I simply don't
14 think that is a good use of the resources.

15 That would be how I would solve the problem.

16 CHAIRMAN HOYLE: You would come up with a page
17 number?

18 MR. SILBERG: Yes, some arbitrary page number to
19 define "significant size documents."

20 MS. CERNY: Jay, what would you do with documents
21 that don't have abstracts?

22 MR. SILBERG: I would not go back historically to
23 do it.

24 MS. CERNY: Or that don't have them -- because all
25 documents that will be in the system are not under the

1 control of all the parties so there will be documents coming
2 in that do not have abstracts. Now would you just not put
3 abstracts or would they be abstracted in your scenario?

4 MR. SILBERG: I would just not do that.

5 MS. CERNY: Well, then, you are going to skew --
6 it seems to me that if you are going to set up that
7 arbitrary page number rule, then if they don't have
8 abstracts you have to have them abstracted, otherwise you
9 are not going to have a consistent --

10 MR. SILBERG: Except everyone agrees that DOE and
11 NRC are going to create 90 percent of the documents and
12 Nevada is going to create a significant percent of the rest
13 of the documents. I am not sure whether we can impose this
14 on Nevada.

15 MR. MURPHY: I think their technical reports,
16 their formal scientific documents have abstracts now.

17 MR. SILBERG: I suspect most of the documents
18 other than stuff that comes in from the outside, which I
19 suspect will be a relatively small percentage is going to
20 have it anyway. I simply don't think it is worth setting up
21 a process for doing it for the rest.

22 MS. SHELBURNE: The only concern I have, Jay, is
23 two things. We're talking about the page count but we also
24 allude to contracts and reports and technical reports which
25 is to me more of a document type. If it is 24 pages and the

1 cutoff is 25 then you have to pick it up. Those kinds of
2 things where if there is some cutoff it seems to me that it
3 should be by document type and not page count.

4 The other area is if you are going to say we're
5 not going to backfit, we are only going to do it for certain
6 document types, the minute you select and have one of your
7 search criteria be limited to a word or phrase in an
8 abstract, you have cut off all of those other documents.

9 I am concerned about that -- you have cut off 75
10 percent --

11 MR. SILBERG: Except that's going to be a small
12 percentage of the documents in the system because of the
13 documents are going to be ones that come in in the future.

14 MS. MENNELLA: May I respond to that? If you do
15 that disclaimer with the abstract field you have to do it
16 with all other fields. For example, if there's no author.

17 MS. SHELBURNE: If there's no documents authored
18 by that person.

19 MS. MENNELLA: You are putting unnecessary value
20 on the abstracts that you are not putting on the other
21 fields.

22 MS. SHELBURNE: I still feel that, my feeling is
23 the documents don't have full text.

24 MR. SILBERG: Say that again.

25 MS. SHELBURNE: One of the things we are going to

1 be talking about tomorrow is technical data in documents for
2 which there is not searchable text.

3 MS. MENNELLA: That's the point. It isn't just
4 technical data.

5 MS. SHELBURNE: Documents that are not in
6 searchable full text may or may not be technical. An
7 abstract is required. Either someone selects the text,
8 searching, it would automatically go in the abstract. In
9 response to your question, people wouldn't have to think of
10 that but when you think about the small percentage of
11 documents, I am only concerned about at the very minimum
12 reminding people that they may be missing certain documents.

13 MR. MURPHY: Well, we might have a semantic hangup
14 with this, Betsy, because I agree with Jay.

15 MR. SILBERG: That's two.

16 [Laughter.]

17 MR. SILBERG: I even tend to go further. I don't
18 necessarily see that an abstract to a technical report is
19 going to add that much utility to the LSS. I kind of
20 approach it the way, and Jay will understand this, I kind of
21 approach abstracts or I will the way lawyer approach
22 headnotes of cases in our Supreme Court report, that any
23 lawyer that relies on the headnote to describe for him or
24 her what that case says is guilty of malpractice literally.
25 They've got cases which say this. You better read the case

1 to find out what the Court concluded and I would think that
2 a good scientist would want to read the geochemical report
3 to find out what that scientist concluded. I wouldn't go on
4 an abstract.

5 MS. SHELBURNE: You wouldn't even see this
6 document.

7 MR. MURPHY: This system that SAIC described to us
8 this morning is going to give us enough information to find
9 the documents. We are not going to need abstracts, I don't
10 think. That baby -- nothing is going to get lost.

11 [laughter.]

12 MR. MURPHY: And I don't know what an abstract
13 would add other than cost. I really don't and it's not a
14 cost that I can see is necessary.

15 Now when you get into what we used to call in the
16 negotiations if you recall raw data -- we now call it
17 technical data but it is non full-text searchable stuff, by
18 abstract do you there mean -- I would mean just a
19 description, you know. If we are talking about the package
20 that DOE and Nevada agreed that the packages should stay
21 together, you need a table of contents. You need something
22 in the LSS to tell you what the contents of what that
23 package of technical data is.

24 MR. SILBERG: Or the abstract or geological core.

25 MR. MURPHY: Yes, or whatever you want to call it.

1 MR. SILBERG: -- that comes from Site X, it's from
2 so many feet down --

3 MR. MURPHY: If that is what you mean by an
4 abstract, yes.

5 MS. SHELBURNE: I think those are required.

6 MR. MURPHY: You call that an abstract whereas an
7 abstract to a 150 page report on the geo-hydrology is
8 something else entirely.

9 MS. DESELL: One thing I would agree with Jay is
10 that if you have a technical document or report you should
11 have the author write the abstract whenever possible.

12 I know that the Environmental Protection Agency
13 used to try to write abstracts for EIS's prior to approval
14 so that they could put it into a searching system that they
15 had at one time. We found out that when they wrote the
16 abstracts in the end they were next to useless. It was the
17 person who was really the author who knew the issues best
18 that were within that document and was best able to condense
19 down to 200 words the real issues in that document and in
20 that case I think that Jay is very correct that the author
21 is the one who should be writing that 200 word abstract,
22 perhaps with a little bit of guidance from the system
23 operators as to what type of things should be in the
24 abstracts.

25 MR. MURPHY: Isn't that really a non-issue though,

1 Linda? I mean how many of these scientific papers already
2 contain an abstract?

3 MS. DESELL: Not too many but for those that do we
4 could standardize the formatting of them a little bit.

5 MR. MURPHY: But how much do you want to spend to
6 make them absolutely perfect?

7 MS. DESELL: No, I think for future documents it
8 wouldn't be that hard to implement some kind of instructions
9 that just make them consistent.

10 MR. HOLSTEIN: I want to remind the panel that we
11 had this exact debate at the last meeting.

12 MR. MURPHY: I know. If Jay hadn't opened this
13 up, I wouldn't --

14 MR. HOLSTEIN: Neither Jay nor Linda I don't think
15 was present at the last meeting. At that time we
16 representatives argued, a, that authors should not do the
17 abstracts, and b, that there were serious potential problems
18 with requiring contractors to include the writing of an
19 abstract in accordance with certain predefined
20 specifications in their contracts -- Felix Killar and I were
21 solidly on the other side, but it was a small discussion and
22 then it turned into a good solid 45 minutes about what we
23 could require contractors to do and what we couldn't.

24 For the record I will just say I am 100 percent
25 with Jay on those two concepts, having the authors do the

1 abstracts and having the contractors required to do it by
2 contract and lastly on the issue of document type as opposed
3 to page count being the way that you decide what's going to
4 get abstracted and what's not. I'm here to be persuaded
5 otherwise but for the moment it seems to me that page
6 numbers seems to make a little more sense as the way to go.

7 MR. HOLSTEIN: I don't have any problem with
8 Betsy's comment.

9 MS. SHELBURNE: Wait a minute --

10 MR. SILBERG: In terms of different page numbers
11 for different categories of documents.

12 MR. HOLSTEIN: No, I thought you were saying that
13 it shouldn't be done by the number of pages, it should be
14 done in accordance with the subject matter.

15 MS. SHELBURNE: When you require contractors to do
16 an abstract, I assume you are also going to require the NRC
17 staff to do --

18 MS. SCATOLLINI: That's not realistic. Does the
19 statement about DOE and NRC honestly believe that they are
20 going to get their legal and technical staffs to write
21 abstracts?

22 MR. MURPHY: Certainly not their legal staffs.

23 [Laughter.]

24 MR. MURPHY: Hey, I agree. I am the person
25 sitting here saying that I don't think this step should be

1 required at all.

2 MS. SCATOLLINI: The cost that is going to be
3 incurred if it is done by the NRC staff, the DOE staff or if
4 it is done by the contractor. The manpower -- it is very
5 expensive manpower. Is this a cost effective decision? That
6 is the issue.

7 MR. MURPHY: If no one is going to use this system
8 to search for documents then maybe we don't need the system
9 at all, but it seems to me that it takes a lot less effort
10 for the author to prepare an abstract.

11 If you spent six months doing a technical study,
12 it doesn't take another six months to write a 200 word
13 summary of what he's just done. It ought to take him about
14 10 or 15 minutes.

15 MR. HOLSTEIN: We just defined a document type:
16 one that it takes six months to write.

17 [Laughter.]

18 MR. SILBERG: I mean we haven't talked about
19 document types yet.

20 MR. MURPHY: I agree 100 percent with Jay on that.
21 If you are going to require an abstract of any documents, it
22 has to be done by the author.

23 MR. TREBY: I guess I would like to be heard on
24 this. I don't think we need abstracts. I agree with Mal.
25 Most of these documents are going to be full text

1 searchable. You don't need the abstract to find the
2 documents. You are going to find that you are going to hit
3 it when you do your full search. It's going to be a word or
4 something.

5 I think having the abstract in there may mislead
6 people in certain cases.

7 I guess what I would suggest is that there are
8 certain documents that have abstracts already. I just saw
9 one, the topical guideline. There is an abstract. If a
10 document has an abstract, you ought to keep the abstract in
11 the field there but I don't think we ought to create
12 abstracts for documents that don't have it.

13 With regard to those that do have abstracts, I
14 think that it ought to be searched separately, that it
15 should not be part of the general --

16 MR. MURPHY: Why? Why not? It's part of the
17 document.

18 MR. BALCOM: The way the system is set up now, you
19 could do it either way.

20 MS. CERNY: People are going to forget that they
21 don't have abstracts. That's what I worry about. If you
22 allow an abstract field to be searched and then you don't
23 insist on abstracts, it's no longer a valuable search tool
24 because you don't know what you are missing. You are better
25 off without it, I think.

1 You either have abstracts or you have abstracts
2 for certain categories of documents or you don't have
3 abstracts but you don't say, well, gee, I'll just put it in
4 and make it searchable if it happens to be there.

5 MR. TREBY: Well, you can always put a one in --

6 MR. MURPHY: Aren't we, aside from the question of
7 the so-called technical documents or the documents that are
8 not full text searchable, which we'll discuss tomorrow, and
9 which need some form of descriptive information, whether you
10 call it abstracts or whatever you want to call it, they need
11 something added to them to tell us what's in there.

12 Aside from that, you know, I just don't see the
13 benefit, the need for abstracts or what benefit they would
14 provide us. I really don't.

15 You know, the scientific reports are really the
16 only ones that we are talking. The technical reports, you
17 don't see abstracts on -- well, you do on some management
18 documents even -- you know.

19 MS. CERNY: Oh, sure. Absolutely.

20 MR. MURPHY: But, you know, the good technical
21 people, the good scientists who write good reports put
22 abstracts down. They have done it for lord knows how many
23 years. They are going to do it 10 years from now I don't
24 know that we need to make an issue out of it.

25 MS. CERNY: I think that's true. I also go back

1 to what the discussion was last time about how I think it's
2 going to be very difficult to get all the contractors that
3 we have to make that a contractual requirement.

4 MR. MURPHY: I'm not suggesting you do.

5 MS. CERNY: No, no, well, but I was just back to,
6 you know, Jay was saying but we ought to have the
7 contractors required contractually to do it. Well, yes, you
8 can require them contractually to do it but they aren't
9 always going to read the contract because this isn't
10 something that is standard and then it is going to be on the
11 DOE side to police this. I just don't think it is realistic
12 to expect that you are really going to succeed in that.

13 It is also going to be hard to write into all
14 these contracts, a major effort -- for what?

15 MR. MURPHY: There are lots of reasons not to use
16 abstracts --

17 MS. CERNY: No, really, I'm serious -- it's yet
18 one more thing to put in your contracts.

19 You know, everybody writes contracts, right, so
20 you would have to have everybody do it.

21 MR. SILBERG: Isn't there a standard DOE format
22 for reports that come in to DOE?

23 MS. CERNY: No, there's a standard reporting
24 requirement I mean that they have to report.

25 MR. MURPHY: It's 100 bucks that you go down to

1 Las Vegas and you'll find the project office somehow --
2 maybe not by contract but the project office somehow
3 requires if they are scientists to include an abstract in
4 their technical proposals.

5 MS. CERNY: I don't know.

6 MR. MURPHY: There is some requirement written
7 down somewhere that says you guys put in an abstract.

8 MS. CERNY: I don't know. It is so commonly done
9 if you are writing scientific papers that it, you know, may
10 not have to be -- but I'd hate to rely on that.

11 That is why I was asking the question initially to
12 Jay of if they come in then without abstracts are you going
13 to have the abstracted? Because if you don't do that you
14 can't rely on searching the field because they don't all
15 have abstracts.

16 MR. HOLSTEIN: I'd send them back and say write an
17 abstract.

18 MS. SCATOLLINI: If you do that you may not get
19 the document for another six months.

20 MS. SHELBURNE: We're talking about ongoing,
21 getting the document out. You don't want to send it back.
22 I'd like to hear what you think the benefits are, especially
23 if it is random and you select that field to research. You
24 are saying you are going to pick them up if they're
25 available. What do you feel the benefits are --

1 MR. SILBERG: Well, I thought the numbers that you
2 had in there on recall and rescission ratios when you
3 included the abstract were fairly persuasive.

4 MS. SHELBURNE: But it would be only for those
5 documents that have abstracts.

6 MR. SILBERG: Obviously, but that's true for any
7 search technique. There are, you know, some documents that
8 are going to fall through on any search technique. You may
9 not raise your question precisely right. If you just rely
10 on a single search technique you are probably not doing as
11 effective a job as you would if you relied on a variety of
12 search techniques.

13 I don't think this is the biggest issue in the
14 whole wide world.

15 MS. SHELBURNE: Well, it's an expensive issue and
16 from what I hear you saying it's dropping it back to the
17 author, which in terms of timing gets -- has to do with
18 holding up the document.

19 We are talking about real time and significant
20 technical support.

21 MR. SILBERG: Writing 200 more words after you
22 have spent X weeks, days, months writing a detailed
23 technical paper. It just doesn't seem like that is that big
24 a deal for someone to sit down and write a couple sentences.

25 MR. HENKEL: I think there's two issues here that

1 are getting mixed up.

2 One is, is an abstract necessary.

3 Second of all is who writes the abstract -- is the
4 author or is it an independent contractor?

5 We are getting those two questions mixed up and I
6 think they need to be addressed separately.

7 CHAIRMAN HOYLE: But I haven't heard anything new
8 on either one of them here.

9 [Laughter.]

10 CHAIRMAN HOYLE: We had said at the beginning we
11 were going to give SAIC time to look at Betsy's paper.

12 Maybe they will have some thoughts for us in the
13 morning.

14 MR. SILBERG: I just wanted to get my two words in
15 here. I succeeded.

16 CHAIRMAN HOYLE: So unless there is something new
17 to introduce on either of the topics, who should do it or
18 whether there should be any, let's come back in the morning
19 and start with that subject at nine o'clock and then go on
20 to technical data as soon as we can after that.

21 MS. CERNY: May I suggest we set a time limit on
22 abstracts because we're going to go around this same issue.

23 CHAIRMAN HOYLE: Well, how about a half hour
24 debate on abstracting tomorrow morning, 9:00 to 9:30.

25 MS. CERNY: That sounds wonderful.

1 CHAIRMAN HOYLE: And we'll take care of it.

2 I do want to remind everybody that there is a
3 paper on the subject that the LSS administrator's office
4 provided. If you don't have it or haven't seen it or
5 haven't heard about it now, let me get a copy in your hands
6 so that you can look at it overnight.

7 MR. MURPHY: It's in the blue folder.

8 CHAIRMAN HOYLE: It is in the blue folder.

9 Well, we could talk on tonight but I don't think
10 we are going anywhere and besides SAIC needs a chance to
11 look at it, so we'll stop today.

12 [Whereupon, at 4:20 p.m., the meeting was
13 adjourned, to reconvene the following day, Thursday, October
14 11, 1990, at 9:00 a.m.]

15

16

17

18

19

20

21

22

23

24

25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

in the matter of:

NAME OF PROCEEDING: LSS Advisory Panel Meeting

DOCKET NUMBER:

PLACE OF PROCEEDING: Reno, Nevada

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Roni Borlek

Official Reporter
Ann Riley & Associates, Ltd.

ORIGINAL

OFFICIAL TRANSCRIPT OF PROCEEDINGS

Agency: U.S. Nuclear Regulatory Commission

Title: LSS Advisory Review Panel Meeting

Docket No.

LOCATION: Reno, Nevada

DATE: Thursday, October 11, 1990

PAGES: 216 - 353

ANN RILEY & ASSOCIATES, LTD.

1612 K St. N.W., Suite 300

Washington, D.C. 20006

(202) 293-3950

9011130115

1
2 UNITED STATES OF AMERICA
3 NUCLEAR REGULATORY COMMISSION
4

5 - - - - -
6

7 LSS ADVISORY REVIEW PANEL MEETING
8
9

10 - - - - -
11

11 Quality Inn
12 3800 South Virginia Street
13 Zephyr Room
14 Reno, Nevada
15 Thursday, October 11, 1990
16

17 The above-entitled meeting convened at 9:00 a.m.,
18 pursuant to notice, John Hoyle, Chairman, presiding.
19
20
21
22
23
24
25

1 Appearances:

2 Marilee Rood, NRC-LSSA

3 ~~Peter Cummings, City of Las Vegas, Nevada~~

4 Kirk Balcon, State of Nevada

5 Malachi Murphy, State of Nevada

6 ~~Bill Houton, National Archives~~7 ~~Chris Henkel, EEI/Waste~~8 ~~Jay Silberg, Shaw Pittman (EEI/Waste)~~

9 John Hoyle, NRC (Chairman)

10 Stuart Treby, NRC/OGC

11 Elgie Holstein, Nye County, Nevada

12 Dennis Bechtel, Clark County, Nevada

13 Liza Vibert, D.A., Clark County

14 Corinne Macaluso, D.A., Clark County

15 Barbara Cerny, D.A., Clark County

16 Lenard Smith, Lincoln County, Nevada

17 Boyd L. Alexander, U.S. Patent & Trademark Office

18 ~~Linda Desell, DOE/OCRWM~~

19 Also Present:

20 ~~Edward A. Timmes, Jr., SAIG~~

21 Tom Nartker, UNLV-ISRI

22 ~~Kazem Taghva, UNLV-ISRI~~

23 Rawley Johnson, SWRI-CNWRA

24 Charles Acree, SWRI-CNWRA

25 ~~Avi Bender, Centel~~

1 Also Present: (continued)

2 Bruce Foster, SAIC

3 Lynn Scattolin, NRC-LSSA

4 Elizabeth Shelburne, NRC-LSSA

5 ~~Harry W. Swinston, State of Nevada~~

6 Chip Cameron, NRC-LSSA

7 Dana Mennella, SAIC

8 David Nippert, SAIC

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

P R O C E E D I N G S

[9:00 a.m.]

CHAIRMAN HOYLE: Thank you for bearing with a late start this morning. We've -- I've been working with the NRC staff on the letter that we decided that we would draft last night. I'm getting a xerox made of that letter now. I don't want to start off talking about that. I'm not ready, for one thing, but I do want you to know that we've been working on that.

Yesterday afternoon at the time we broke, we were talking about headers, and I want to continue with that discussion now with Kirk Balcom. After that discussion, we will go onto the handling of technical data. Kirk.

MR. BALCOM: I'm going to go ahead and not use the mike. I think I can talk loud enough. We left off yesterday with a request by SAIC to add two more fields to the header, and the header working group and I pow-wowed for a little while, and came up with what we think is a simple, hopefully easily-adoptable position.

One of the requests was simply for a field in the headers to note whether or not the material is coming in from a submitter as copyrighted material, and we suggest that that simply be a yes or a no kind of a field; one that we could add now which would certainly take care of the problem. It certainly makes a lot of sense to go ahead and

1 do it now even though we don't know the final disposition of
2 header material. But at least that will allow us to do
3 something once material comes in without a discussion -- you
4 know, what actually should happen to copyrighted material,
5 how it should be handled. So we suggest that we adopt that
6 field.

7 The other field was called "package I.D." What
8 that means is that we and the header working group and SAIC
9 in the course of their development of the system, we're
10 working with the concept of pointers; in other words, the
11 relationship between documents, the parent/child concept
12 being kind of a numerical system where you can point forward
13 or backward to various documents. But that's kind of a
14 relationship between two documents. It's not -- it doesn't
15 particularly help with the relationship between whole
16 packages of material, and when I say "packages," we mean
17 predominantly Q/A packages.

18 So SAIC's technical recommendation is that the
19 corner field will not suffice for that, so we need to add
20 another field, which will respond to the need to reassemble
21 the entire package of, let's say, of a QA submission,
22 intact, so that the reader, the user, will be able to re-
23 assemble the package. If you remember, a lot of these
24 materials are going to be dissembled for scanning, and
25 sometimes it doesn't -- sometimes it's difficult to re-

1 assemble them -- Let's put it this way, they can all be re-
2 assembled properly, but it may not be cost-effective to re-
3 assemble them. And, of course, we don't know exactly how
4 that's going to happen in the capture station.

5 So the header working group suggests that the
6 submitter -- we haven't worked out the protocols for
7 submission materials yet, but it will probably go something
8 like this: For materials which are in hard copy, it's an
9 entire Q/A package, would have some kind of a packing slip
10 or an invoice with it, which would come to the capture
11 center and say what's in it. And they would also mark -- it
12 would be the submitter's responsibility to mark the fact
13 that this is a package that needs to stay together for ease
14 of re-assembling on the LSS.

15 So we're suggesting that some kind of protocol be
16 worked out; that the submitter take a responsibility for
17 saying, "This is a QA package, and it needs to stay
18 together." That will be the -- the tipoff to the to
19 whoever's running the capture station; that they need then
20 to incorporate some system, a numerical system, and is yet
21 to be decided, which will actually be quite simple, which
22 will allow all those packages to be numbered in separate
23 fields so they can be re-assembled. So what we're
24 suggesting is that you adopt the concept, and that we add
25 another field called "package I.D.", and there needs to be

1 a discussion on that.

2 MS. CERNY: We're dealing with packages right now.
3 You may want to look at the way -- I don't know how NRC is
4 dealing with their packages, but what we're doing --
5 individual documents that will be part of packages are
6 collected. You know, we have our local record centers
7 speeding into a central records facility, one in Nevada and
8 one in Washington. And the local record center collect
9 documents that are, after a certain length of time, whether
10 the package is complete or not, so that -- because some
11 packages will take two years of your studies before they're
12 completely finished, and you don't want to hold them up for
13 that long. So they're sent on in pieces.

14 Individual -- and that's one way of handling
15 packages, and then they're -- they are part of the package,
16 and when the package is complete then, they are also -- they
17 are resubmitted as a package, so that the package is kept
18 together. Now what we're doing with -- for example, we have
19 a quality record center that just takes quality records.
20 And the individual documents that go into those are sent to
21 the record centers as individual documents, but also they're
22 kept in the quality record center until the package is
23 complete. And then they are resubmitted to the record
24 center as a package, and microfilmed together, and kept
25 together as a package again.

1 So you have each individual piece coming in as it
2 is prepared, so you don't wait until the end. So there are,
3 you know, a number of ways of doing this. And I think, you
4 know, when you start to talk about well, how do we actually
5 get our documents into packages.

6 MR. BALCOM: So you're making a suggestion for how
7 we should do that in the LSS: In terms of taking incomplete
8 submissions and keeping them until they're complete, or
9 submitting -- assigning an empty slot for that part of the
10 package that hasn't come in yet?

11 MS. CERNY: That's right, that's right.

12 MR. BALCOM: Part of the materials would be
13 available, but --

14 MS. CERNY: You're going to run into exactly the
15 same problem we're running into with the idea that you don't
16 want to keep a package until it's complete. You want to put
17 it in in pieces.

18 MS. SHELBURNE: But once we know --

19 MS. CERNY: Pardon? But you want a number --

20 MS. SHELBURNE: Once we know that it is
21 potentially going to be part of the package, it is assigned
22 a unique package number to it; subsequent documents coming
23 in will get the same number.

24 MS. CERNY: Exactly. You --

25 MS. SHELBURNE: As long as it's (inaudible) is

1 part of it.

2 (A chorus of laughter)

3 MS. CERNY: No, you need your package number,
4 absolutely, but I just was saying, once you have your
5 package number, it isn't enough to just say, "Well, we're
6 going to collect it as a package." You've really got to
7 worry about how the pieces come in.

8 MR. BALCOM: I assume now that will be part of the
9 protocol, the submission protocol, but we haven't touched
10 that. Any other discussion about package I.D. or any
11 opposition to adopt these matters as a field? Sounds like
12 we've got two new fields. How would you propose me to
13 respond in writing to that? Should we document this,
14 describe those fields, and submit them to you?

15 CHAIRMAN HOYLE: Yes, please.

16 MR. BALCOM: Okay. On to Abstracts 3. I guess we
17 have half an hour, and I'd like to take just a quick minute
18 to give you my viewpoint. My sense of abstracts here at
19 this table is that the real users who would benefit from
20 them probably are here. This is just an educated guess on
21 my part, because I really don't that for a fact.

22 I'm suggesting that probably the primary people
23 who would benefit from abstracts are going to be the
24 technical users, and I'm also going to guess that their
25 primary value is not in searching but in browsing. And that

1 we also -- We have a substantial, very, very significant way
2 of getting to materials. We have the good fortune of
3 designing a system that will have headers and full-text and
4 descriptors. And I think the descriptors will -- to the
5 extent the descriptors are well-done during cataloguing, but
6 that they will be the primary utility for certain kinds of
7 users to find documents. Those who don't use that, will use
8 either the headers or the full- text, so we have an
9 incredibly complete way of finding documents. And I'm not
10 making an argument one way or the other for abstract. I'm
11 just saying what I think -- what my opinion is about how
12 they'll be used.

13 I think probably utility to technical users will
14 be -- and perhaps for the lawyer and the regulatory people -
15 - is that given large sets of documents, you'll use an
16 abstract to quickly decide whether or not you want to read
17 the rest of this document. And there are probably other
18 ways -- There are, of course, other ways of looking at the
19 use of
20 abstracts, but that's my guess as to what their primary
21 value would be. So I guess now we have 27 minutes to talk
22 about abstracts.

23 Let's see, SAIC, we were waiting for SAIC to look
24 over the papers, I guess, and so I'm assuming SAIC has
25 something to say about that.

1 MS. MENNELLA: I, too, have to take pretty much
2 the same tact that you did. I'm not offering one way or
3 another for the abstracts, but to me the real issue is what
4 the purpose the abstract would serve to the user, either as
5 a search aid or as an aid as you mentioned, for determining
6 the relevance of a document.

7 I think the issue of who would write the abstract
8 or what the standards are, are secondary to determining
9 whether the abstract has a good purpose to the user. The
10 other thing I'd like to point out is that we've identified
11 three types of entries in the LSS. There are header only
12 entries which have no ASCII or images, and these are mostly
13 the non-document materials. Then we have header image only
14 documents. These are ones that do not have any ASCII but do
15 have an image. These are things like handwritten documents,
16 maps, tables, and anything that can be scanned but does not
17 easily convert to ASCII in the present day technology. And
18 then we have a header in which -- and ASCII documents, and
19 these are the majority of the documents.

20 In our experience, those technical documents do
21 have abstracts, or they have materials that can be used as
22 abstracts. For example, summaries, conclusions,
23 introductions, material like that which we have been
24 capturing and using as an abstract. We have checked with
25 NTIS and Healey's Technical Information Center, and they do

1 pretty much the same thing. They prepare very few abstracts
2 for their documents, feeling that they can get the
3 information from the document itself in some way or another.

4 We talked to them because we felt their
5 collection, with the exception of correspondence, their
6 collections are very similar to the collections that we'll
7 have for the LSS. Getting back to the three types of
8 entries, an abstract or some kind of material will have to
9 be prepared for the documents that do not have any ASCII at
10 all. And our estimate at this time is probably -- that will
11 be about ten percent of the documents that exist. And
12 looking at the collection in the 130,000 pages that we have
13 just finished processing, about 50 percent or more have had
14 some kind of material that we could use as an ASCII.

15 CHAIRMAN HOYLE: How many, 50 percent?

16 MS. MENNELLA: Yes.

17 MS. SHELBURNE: When you say "technical material,"
18 do you --

19 MS. MENNELLA: Those are things like technical
20 articles or technical reports. I guess maybe scientifically
21 that if you're including engineering material --

22 MS. SHELBURNE: Is that linked to or is that
23 definable by the current document type codes?

24 MS. MENNELLA: Yes. Everything -- that would be
25 in the report, you know -- also things that probably the

1 majority of the things that are in the publication of it.

2 (Discussion was held off the record.)

3 MS. MENNELLA: I just want to state from that
4 comment to clarify that the paper that we wrote was --
5 really only is a discussion involving that set materials,
6 which is the majority of the materials, which will be in
7 text searchable. It is a given there should be some
8 description abstract, summary of whatever text -- however,
9 that's defined in the technical data. But here, I think
10 we're hopefully limiting that discussion that set of
11 material for which there is surgical text, headers,
12 descriptors.

13 CHAIRMAN HOYLE: Boyd.

14 MR. ALEXANDER: This is just sort of in the area
15 for what it's worth, John -- We have abstracts in the patent
16 office -- currently we do, for all foreign patents. And the
17 reason why we have those now -- we didn't have them a few
18 years ago -- is that we rely on text search to do a
19 preliminary hit ratio to find patents that may be relevant
20 to the examining patent activity that's going on.

21 Before that, we had only the titles and just a
22 brief bibliography, some bibliography-type data for foreign
23 patents: the inventor, the inventor's name, the invention
24 itself, the country, things like that. And in doing a text
25 search, this was not enough for us to find relevant patents

1 for the kind of work we do. So we decided to try
2 abstracting all foreign patents in English to do a full-text
3 search on those, and just reserved the usage of that
4 database for us. We couldn't really use effectively foreign
5 patents -- at least our examiners couldn't -- just by the
6 basic header.

7 Now, we don't have quite the header information
8 you have, so maybe yours is more robust, but now there's a
9 requirement by international agreement that all patents in
10 Europe and in Japan and every place that we trade with,
11 we'll provide an abstract of that patent and that search.
12 And it's, as I said, it's just reversed the whole use of
13 foreign patents as a research base. So in that respect,
14 abstracts have helped us use our text-search system in
15 finding the kind of information we want to have.

16 MR. BALCOM: Boyd, can I comment on that?

17 MR. ALEXANDER: Yeah.

18 MR. BALCOM: Can I assume from that you do not
19 have the full text of the actual patent submission available
20 --

21 MR. ALEXANDER: Not in formed patents. Well, we
22 do in about 40 percent of the European patents but none of
23 the other countries -- and, of course, Australia and
24 Canadian patents we --

25 MR. BALCOM: So for you it's a substitute for the

1 full-text that's not available in terms of searches.

2 MR. ALEXANDER: Because that allows us to use that
3 and then that narrows it to determine -- then we can
4 translate it after that, but -- and it's not quite the same
5 problem I understand, but if you want to use the text-search
6 capability you are building, it does enhance that a little
7 bit if there's an abstract that you can then search where
8 there isn't a full-search document available. I'm assuming
9 that that's the case. In some cases you have full-texts in
10 some of your documents, and in others none is available, but
11 you might have to search for that.

12 MR. BALCOM: Well, we've had full-text in a very,
13 very large percentage of it.

14 MR. ALEXANDER: Okay. Well, if you had it
15 available, then it's not a help, but to those where you
16 don't have it, it's good.

17 MR. BALCOM: And I think also that we will have --
18 we're planning to have abstracts for everything that's not
19 available full-text. Is that correct?

20 MR. ALEXANDER: The second part of that is, is
21 that's for the search, and then as you said for browsing,
22 they can quite often browse that abstract without worrying
23 about getting it translated, and find that it's enough to
24 make a decision as to whether it should be translated.

25 The third point that we have found out is that the

1 quality varies. If the people who do the abstracting, let's
2 say, in Japan, are the examining -- patent examiner in Japan
3 -- the quality is very good. If they give it to a clerical
4 person or a, if you would call it a professional abstractor
5 there, the quality goes down, because they don't know the
6 technology. And knowing the technology is important in the
7 abstracting of those kind of documents, so the quality
8 varies all over the map. You do worry about that, but it is
9 still better than having nothing at all. But that's just
10 for what it's worth, John.

11 CHAIRMAN HOYLE: Yesterday we talked about whether
12 it could be broken up into classes of documents. Are there
13 any further thoughts on that topic? We talked about the
14 possibility of page number as using that as a cutoff. Does
15 that make any sense?

16 MR. TREBY: Well, I guess I'd like to suggest that
17 it doesn't for all the reasons we said yesterday.

18 MR. MURPHY: I agree with that.

19 MR. BALCOM: It does not, is that what you're
20 saying?

21 MR. TREBY: Does not.

22 MR. BALCOM: How about the classification into
23 classes, types of documents, or --

24 CHAIRMAN HOYLE: Can we rule out memoranda as a
25 class?

1 MR. BALCOM: I would think so. Do you mean under
2 -- well, memoranda is normally short.

3 CHAIRMAN HOYLE: Well, some of them are three or
4 four pages long, but they're still --

5 MR. HOLSTEIN: I think it might make more sense,
6 Mr. Chairman, if we --if the group decides that there is an
7 inclination to pursue abstracts further, while we can
8 certainly discuss these types of cutoffs, it may well be
9 that the staff would want to give us -- present to us some
10 options in greater detail for pros and cons of different
11 ways of segmenting this number of pages versus subject type
12 of document, etc. We can certainly take a crack at it today
13 but I'd like to, if I could, take three or four minutes and
14 respond to a number of points laid out in the staff's paper.
15 I spent some time last night talking to the staff about it
16 and reviewed the document again, and I'd really like to go
17 through a number of the elements in the paper for the
18 panel's consideration.

19 First, I felt that the cost assumptions in the
20 paper were lacking in some respects. First, I don't agree
21 that -- or I felt that the paper should have figured in an
22 assumption along the lines that we talked about yesterday in
23 which the authors would do the abstracts. The cost
24 considerations as they're laid out in the paper now suggest
25 -- assume only that there would be some independent party,

1 and as we've just heard, there is some question about the
2 quality of that type of work done by people other than the
3 authors. I realize there would be some sort of cost
4 associated with having the authors -- with having the
5 authors do it. The paper, however, ignores that as an
6 option in its cost assumption.

7 Second, the paper does not calculate the cost to
8 the users associated with having to do additional review of
9 documents, which once selected, may or may not be relevant,
10 which I think goes to the heart of one of the major problems
11 I had with the briefing paper; and that is, that it -- as it
12 centers most of the discussion around the debate which it
13 correctly identifies as being the principal debate derived
14 from the literature, as being one that tries to balance
15 recall versus precision capabilities. Later on in the
16 paper, however, on page five, they do mention in passing the
17 point that's been touched on briefly here this morning; and
18 that is, the benefit to users of the relevancy review.
19 Again, that's the point associated with determining whether
20 or not
21 -- how long it takes you to determine whether or not a
22 document, once selected, really is of value to you.

23 The -- Where I come out on this then is to suggest
24 that regardless whether or not the panel endorses the notion
25 of incorporating abstracts into the LSS as a designed

1 feature, that we have to in any event considering
2 recommending that abstracting be adopted as some sort of
3 formal format criterion for most, if not all, authors of
4 documents going into this system. Now, we have heard
5 arguments at the last meeting and at this meeting that that
6 would impose enormous additional costs on the authors of the
7 documents. We've also heard arguments that it would be next
8 to impossible to enforce it, next to impossible to
9 incorporate it into their contracts in the case of the
10 contractors.

11 I have real problems with those arguments without
12 going into great detail. We've just heard how the -- in the
13 case of the patents, international patent discussions,
14 they're moving in the direction of a standardized format.
15 We've also heard how a large percentage of documents already
16 have these abstracts. So at a minimum, if we did not
17 incorporate abstracts as a designed feature of the LSS
18 itself at a minimum, if we had a larger percentage of
19 documents containing abstracts by virtue of making that a
20 recommended, if not a required feature of the performance of
21 the authors, we could at least assure users of the system
22 the capability of being able, once so having selected the
23 document, to quickly review the abstract of that document in
24 the text itself.

25 That may represent a compromise as opposed to

1 continuing the debate about the cost and utility of
2 incorporating it as a designed feature itself.

3 CHAIRMAN HOYLE: Any comment on that?

4 MS. CERNY: Yeah. I -- You know, I've said this
5 -- time number three or four -- but really, the idea of
6 putting into every contractor's contract a requirement that
7 they must produce an abstract, I just really don't think is
8 workable. In the first place, there are many people who put
9 contracts in place to police that they do it. I mean, who
10 is going to do that, and then they would have to make sure
11 that their contractors, the people who are in charge of
12 these contracts, that their contractors really do comply
13 with them.

14 Well, who's going to be in charge of all the con-
15 tracts? I mean, we're going through something right now
16 with quality assurance to make sure that all contracts go
17 through a review so that they have the proper quality
18 assurance features in them. And that is really extremely
19 difficult to do. We have a whole organization that just
20 looks at all procurements and all contracts to make sure
21 that that happens, and you know, that's something that we as
22 a program have to do; it's basic to the program. But
23 something like this is just very quickly going to get out of
24 hand, and nobody is going to be in charge. And I just don't
25 think it's really workable in a large bureaucracy.

1 So, you know, I can't go along with that. I can't
2 agree to that, because I don't think it's going to work.
3 That being the case, I don't see if we don't want to put the
4 money into doing the abstracting, then I think we really are
5 back to Betsy's -- Betsy's paper -- the NRC's paper, and the
6 recommendation that if abstracts are there, we pick them up,
7 but we don't put them in a separate abstract appeal to
8 search on. We search on them as part of the full-text.
9 Otherwise, from an information science perspective, you have
10 a really skewed sample if you go / to do a search on the
11 abstracts.

12 So for both, you know, practical reasons and
13 information science reasons, when you put them together
14 that's the recommendation I'd make, that we follow Betsy's
15 recommendation in this paper.

16 CHAIRMAN HOYLE: Elgie, your proposal was also to
17 leave the abstract with the document, so you first get a hit
18 on the document, and then to find out whether you really
19 want that document, you call up its abstract .

20 MR. HOLSTEIN: Yes, although maybe I've
21 misunderstood the way it actually would occur if we did not
22 have abstracts incorporated as a designed feature in the LSS
23 itself, but that's what I had in mind. Maybe there's a
24 different approach. Essentially, I was trying to move to a
25 middle ground there. I have a problem, as I said, with the

1 way in which the debate has centered on this question of
2 whether or not abstracts age you in the selection process
3 when, as far as I'm concerned and others who were here
4 yesterday, that is not the primary value, particularly in a
5 full-text retrieval system, a full-text searchable system.

6 That's not the primary value of abstracts, so it
7 has struck me that to a large extent, the pro and con debate
8 has centered on an evaluation of issues that don't take into
9 consideration the primary benefit to users in this type of
10 system of abstracts. So I was trying to get around the cost
11 problem as well as the problem that Barbara's described, and
12 others have described, about what you do if you have some
13 documents that have it and some don't. This is something
14 that I'm very sympathetic to by saying, let's see if we
15 can't move the authors, contractors, whomever, somehow in
16 the direction of providing these abstracts as part of the
17 documents, so that once retrieved, even though you wouldn't
18 search on the basis of the abstracts, once retrieved you
19 could at least achieve the same goal of review -- ready
20 review ability, reducing the cost at the user's end in so
21 doing, by providing those abstracts.

22 I don't know enough about federal contracting to
23 know how erroneous this would really be. Barbara has taken
24 a strong position on that. I'm not sure that I have readily
25 -- that I readily see a parallel with the QA process, though

1 there may be one in part, because the QA process has
2 incorporated a lot of other cultural changes, if you will --

3 MS. CERNY: No. I'm talking strictly about
4 getting requirements into contracts and assuring that those
5 requirements are met. So everyone who writes a contract has
6 to go through a review of those contracts to assure that
7 it's in there, and then that they are, in fact, followed
8 when the deliverables come in. That's the only way you can
9 guarantee that this is going to happen.

10 Well, if we're going to make this such a
11 requirement that every deliverable has to have an abstract,
12 we're going to have to have somebody who does nothing but
13 look at contracts to make sure that it's written in there,
14 because after all, many, many people write contracts.
15 They're not going to know that this is a requirement. How
16 do you get them to know it? And then when they get their
17 deliverables in -- we have turnover of staff all the time
18 who write contracts -- how do you enforce this? It slips
19 away very easily. That's why there's a parallel. We have
20 no QA organization that does that.

21 MR. HOLSTEIN: Right. There is a big difference
22 though, and I would not --

23 MS. CERNY: What's the difference?

24 MR. HOLSTEIN: And I would not argue in favor of
25 the degree of policing that you have in the QA document to

1 process. I would be willing to simply rely upon an
2 exhortation, if not some stronger directive, on format
3 issues. Now, preparation of reports by all kinds of
4 contractors are commonly guided, at least to some extent, by
5 format requirements. I would never suggest that this would
6 be worth having a whole office within the LSS set up to make
7 sure that was done.

8 In the case of QA documents, however, that sort of
9 enforcement is necessary because of the extreme importance
10 of the quality assurance --

11 MS. CERNY: Sure.

12 MR. HOLSTEIN: -- to the licensing process itself.
13 So I don't think that sort of enforcement is necessary in
14 this case to move us from the 50 or 60 percent of documents
15 that currently have abstracts, to the 80 or 90 percent of
16 documents that I'd like to see have abstracts, understanding
17 that you wouldn't get 100 percent. But you might get 80 or
18 90 percent instead of 50 or 60 percent.

19 MS. CERNY: Not without policing you're not going
20 to, and people who write the contracts -- and even if you
21 had a big campaign to make sure that everybody who was
22 writing contracts now requires this and gets it into their
23 deliverables, a person leaves. And I maintain that within a
24 couple of years, the whole thing is going to have trickled
25 away, because there's going to be nobody left, basically,

1 who is policing this.

2 MR. HOLSTEIN: Of the 5 percentage of documents
3 that currently have -- of the high percentage of documents
4 that currently have abstracts within them, do those
5 abstracts appear, to your knowledge, as a result of the
6 author's own poetic license, their own editorial judgment,
7 or --

8 MR. BALCOM: Is this a high percentage?

9 CHAIRMAN HOYLE: Somebody comment. I think it's a
10 low -- actually, quite a low percentage.

11 MR. HOLSTEIN: I thought I heard -- I thought I
12 heard 50 percent, but maybe they were talking about --

13 MS. SCATTOLINI: No, it isn't 50 percent at all.
14 I would refer you to page seven of the paper, where there's
15 a table (inaudible) --

16 MR. HOLSTEIN: Could you speak up a little? I
17 can't quite hear you.

18 MS. SCATTOLINI: If you look at this table, 64
19 percent of the documents are correspondence. There are no
20 abstracts that I know of being created for correspondence
21 today. The same with legal documents, which comprise
22 another 13 percent of the collection. Other reports and
23 publications I believe we can say about 50 percent. Do you
24 think that's true, about 50 percent of the reports and
25 publications are abstracts?

1 MR. NIPPERT: No; higher.

2 MS. SCATTOLINI: A little higher on those.

3 MR. HOLSTEIN: Of the technical reports. That is
4 the figure that I thought I heard.

5 MS. SHELBURNE: You're limiting your discussion to
6 these technical reports.

7 MR. HOLSTEIN: What I'm really trying to do is
8 make the case that documents are prepared every day of the
9 week in accordance with format criteria that are established
10 by the people who are requiring those documents to be
11 produced. But Barbara doesn't agree with that.

12 MS. CERNY: That's not even true. There's a
13 deliverable that says -- that it's written there will be a
14 final report produced, and often that's all you have. There
15 aren't for every requirement. You'll produce a final report
16 on such a date. That's how these contracts are written.

17 MS. SCATTOLINI: Well, of course, a great many of
18 these documents were not being created under a contract.

19 MS. CERNY: Ours are.

20 MS. SCATTOLINI: All of them?

21 MS. CERNY: Most of them.

22 MS. SCATTOLINI: Not correspondence, but
23 correspondence isn't the issue, because abstracting
24 correspondence doesn't make much sense to -- I think anybody
25 -- we're talking about reports, and they're done almost

1 totally by contractors.

2 MS. CERNY: Well, if we're limiting the universal
3 reports, that's a different issue. If we're talking about
4 acquiring all offers, documents, that are being placed in
5 the LSS, to create an abstract, that is --

6 MR. BALCOM: I don't think that's ever been a
7 requirement.

8 MS. SCATTOLINI: Let's define what the universe of
9 our discussion is.

10 MR. HOLSTEIN: Is the principal objection to
11 providing abstracts one of, as you see it, enforcement, or
12 is the principal objection one of cost? Or is really both
13 equally?

14 MS. CERNY: Well, it's a question of cost, but the
15 enforcement issue, it depends on how -- if you decide you
16 want to do abstracts, how you want to do it. To me, it is
17 unenforceable to have the authors do it, which puts you into
18 having abstractors do it. And then, to me, it becomes an
19 issue of cost.

20 MS. SCATTOLINI: Well, I would like to clarify the
21 cost issue as well, and that is that this paper assumed that
22 a contractor was doing it, and -- a rate of \$66 per hour.
23 That makes him very high. But actually, my understanding is
24 that the NRC technical staff rate is \$86 per hour, so to
25 have the NRC technical staff do it, or a contractor's staff

1 being paid at a comparable rate, it's going to be as
2 expensive as, or more expensive than, costs here.

3 MR. HOLSTEIN: The protocols for submission to
4 which you were addressing yourself earlier, and I think you
5 gave us one example, some kind of packing slip saying what's
6 in hard copy documents -- I don't know how expensive those
7 protocols are being -- are ultimately going to be -- but how
8 are they going to be enforced?

9 MR. BALCOM: Well, there's a compliance
10 requirement in the rule for one thing, and I think it's the
11 consensus of everybody here that that will be a substantial,
12 you know, undertaking, and part of the agreement to bill the
13 LSS, and part of the capture station protocol.

14 MR. HOLSTEIN: Just so that I understand these
15 protocols: So the documents would not be accepted for
16 loading into the system if they did not conform with these
17 protocols. Is that right?

18 MR. BALCOM: Right.

19 MS. SHELBURNE: I'd just like to focus on
20 something that Elgie said in terms of if -- and we all
21 acknowledge they have lot of different benefits of abstracts
22 -- but Elgie has pointed out the one irrelevancy with
23 people. I think it would benefit. It's just a question of
24 the cost versus the benefit. I'd like to point to the
25 option of C.3 which we did recommend and does acknowledge --

1 it also acknowledges the other problem that not all
2 documents have it -- and C.3 is limited to technical
3 documents. So given that we could define a universe, and I
4 would like to try to tie it to a document type code scheme
5 so that searchers would have some feeling for that.

6 If the documents did have an abstract, or as John
7 has said, something like executive summaries or -- you know
8 a lot of times it doesn't say "abstract," but it can be
9 used. If that text can be grabbed, pulled out of her tubal
10 field, called abstract, in the header, without significant
11 standards of how it was done, but something that would allow
12 the benefits of the summary of the document for review,
13 unless they have created a hit list, that they're scanning
14 the headers to say, "Ah, yeah, that's on my topic, but it's
15 really not on that order." It's too deep or too shallow on
16 the topic.

17 I would like to point to C-3 to see if that could
18 be discussed and maybe with some modifications, and what I'm
19 hearing is Elgie's recommendation.

20 CHAIRMAN HOYLE: If you would -- C.3, the abstract
21 or the executive summary would be grabbed from the document,
22 and put in a separate field.

23 MS. SHELBURNE: It would be.

24 CHAIRMAN HOYLE: It would disappear from the
25 document. It would disappear from the full-text.

1 MS. SHELBURNE: No. It would still be in
2 fulltext. We're just going to copy it over.

3 CHAIRMAN HOYLE: You're copying it over.

4 MS. SHELBURNE: We're certainly not going to
5 destroy the full-text.

6 CHAIRMAN HOYLE: Yeah. But it says, "Put in
7 header but not allow this abstract field to be searched."
8 What does that mean?

9 MS. SHELBURNE: That means that you could not
10 limit -- you couldn't say, "I want all the documents with,
11 you know "X" terms," in the abstract. Because my concern
12 which is in bold print above C.3, which is the same options
13 effecting the searching, this would give the benefit of
14 relevancy review.

15 MS. SCATTOLINI: You would be able to browse it
16 and read it as a separate field, and it would correct -- and
17 bibliographies. It's just that you couldn't use it as a
18 search parameter. And the reason we're recommending you not
19 use it as a search parameter, is unless we can clearly
20 define exactly the collection of documents that are going to
21 be abstracted, the user would really have no idea what he is
22 searching. It would be a random collection of documents of
23 the database, so when he got this hit list, he wouldn't know
24 what it represented.

25 MR. BALCOM: So, do I understand that the abstract

1 would actually be there twice: once in the abstract field;
2 once in the body of the document. It would be searchable in
3 the body of the document as part of the full-text, not
4 searchable in the abstract. So you wouldn't lose
5 searchability.

6 MS. SHELBURNE: No. I mean, you can still get the
7 words and the phrases from the text search. You just
8 wouldn't officially be creating a universe of documents.

9 MR. HOLSTEIN: And you would meet what I see is
10 the need for enhancing relevancy review capabilities in the
11 system, and acknowledging that abstracts in this type of
12 system would not be necessary for the actual identification
13 of documents and retrieval of documents. I certainly --

14 MS. SCATTOLINI: That was our -- was to pick them
15 up if they exist, and put them in an abstract field for the
16 purpose of browsing, and begin to print out bibliographies.
17 I think the only other practical alternative is to say we
18 will abstract all of the certain document plans, such as
19 reports. And then we have a very practical issue of how do
20 we implement and enforce that, particularly, if you want to
21 require the author to do it, because if the authors, for a
22 variety of reasons don't do it, then the documents come to
23 the LSS. It's going to be a real key to the user of the
24 community, that these documents be loaded right away; that
25 they be available in a timely manner. And I'm concerned

1 about having to send those documents back to the authors who
2 may be DOE contractors, and trying to get them to do it.

3 MR. HOLSTEIN: I don't want to --

4 MS. SCATTOLINI: Then we're kind of placed in a
5 role where, if we get the document and it doesn't have an
6 abstract, we need to create it, because otherwise you're
7 going to have this random collection of documents that have
8 abstracts.

9 MR. HOLSTEIN: Okay. I'm going to -- our 30
10 minutes is probably up, if not almost up. I'm going to
11 yield to our -- to the experts here on this and withdraw my
12 urging that we somehow put the onus on the authors to
13 produce this. I would like to say, however, that I'm going
14 to be very interested to see how the protocols and the
15 enforcement of those protocols for submission will be
16 developed in light of the comments that enforcing anything
17 on any submitter to the system is extraordinarily difficult.
18 A and B requires some central station quality control
19 people.

20 MS. CERNY: You see, I don't --

21 MR. CAMERON: I don't think Barbara said that.

22 MS. CERNY: I didn't say that. No, not at all.

23 MR. CAMERON: She didn't say that enforcing any of
24 the requirements on the submitters is going to be difficult.
25 I'm going to be talking a little bit later on about our

1 compliance evaluation program, and I can explain a little
2 bit more about that. But I didn't want Barbara's comments
3 to be construed as saying that this enforcement would be
4 difficult. I think she's talking about something
5 specialized.

6 MS. CERNY: I'm talking about contract management,
7 which is really very different. As far as the submitter's
8 protocols go, we have an organization now that handles all
9 the records of the program. We put them in a system. It's
10 going to -- They're going to move from there to the LSS. I
11 don't see that as an issue, because that's under the control
12 of the people who do records management. That's their job.
13 That's quite different than telling everyone in the program
14 every time you write a contract, you have to write into the
15 contract. It's very different.

16 MS. SCATTOLINI: What Barbara is saying is that
17 she currently has a records manager contractor that would be
18 doing the descriptive cataloging on the field terms.

19 MS. CERNY: That's right.

20 MS. SCATTOLINI: And that contractor is directly
21 under her control.

22 MS. CERNY: That's right.

23 MS. SCATTOLINI: But if you say abstracts have to
24 be created by the authors, you're then opening up the
25 window. Why do they have to be --

1 MS. CERNY: I'm not concerned about the protocols
2 to the --

3 MR. BALCOM: I've got one thing, John; that is,
4 that Elgie be -- system design does include abstracts,
5 whether -- no matter what we decide here about abstracts.
6 This is all going to be included as part of the design;
7 there will be a separate field, and as a separate field,
8 you'll be able to manipulate for that field as it appears on
9 your display. So that's -- we should probably that here.
10 It's not being part of the discussion. Does Dave have time
11 for a comment, John, a quick one?

12 CHAIRMAN HOYLE: Okay, sure.

13 MR. NIPPERT: I guess as I hear this proposal, it
14 says we're going to have an abstract field that is not
15 searchable, but yet there's document types for which there
16 is no full-text for which we had to make the abstract be
17 unsearchable. Now, that to me is kind of a dichotomy. I
18 guess one of the solutions is if you don't want the abstract
19 field to be searchable for some type of document, make it
20 not searchable of all types of documents. And then these
21 documents which have no full-text, we take whatever the
22 abstract is -- or the summary of that document is going to
23 be -- and actually move it down into the full-text area, so
24 there's a piece of it in the full-text -- so if you want to
25 find if one was in the abstract, you're going to find it in

1 the full-text portion of the document database.

2 MS. SHELBURNE: And I think that has another
3 benefit, too; so that when people search full-text, they get
4 all documents, you know, whatever words or phrases, for all
5 documents, whether they have text or not, because they are
6 not arbitrarily excluding all documents that are on the
7 abstract. So I think that has -- I'll agree with this.

8 MR. BALCOM: But what I'm hearing is that we can't
9 settle this today. Do you think that's the bottom line?

10 CHAIRMAN HOYLE: The consensus seems to be going
11 in the direction of not doing, you know, any kind of bulk
12 abstracting --

13 MR. BALCOM: But I think we did settle it.

14 CHAIRMAN HOYLE: -- but going with C.3.

15 MS. CERNY: I think we can settle it.

16 MR. BALCOM: Well, I'm not sure I agree with not
17 searching the abstract field.

18 CHAIRMAN HOYLE: Okay.

19 MS. CERNY: Kirk, you can do --

20 MR. BALCOM: I mean, I'd be willing to --

21 MS. CERNY: Listen, you can always -- you can
22 always do a search on abstract and --

23 MS. SHELBURNE: In the same paragraph.

24 MS. CERNY: Yeah, in the same paragraph, and you
25 would be able to do it.

1 MR. BALCOM: Let me ask this -- this may resolve
2 it quickly. For the documents which don't -- image only
3 documents and non-technical documents, you would have to
4 make the abstract searchable -- or whatever you want to call
5 that field, if you call it a description -- but you're
6 saying from a design standpoint, Dave, we could --

7 MR. NIPPERT: Move that down and actually make a
8 full-text page as only the abstract of it.

9 MR. BALCOM: Even in a non -- even in a submission
10 that doesn't have any ASCII text with it, would appear
11 twice; once in the abstract field, so it would be a search -
12 - so, okay. That's the long way around the barn.

13 MR. NIPPERT: -- abstract is sometimes searchable
14 or not.

15 MS. SCATTOLINI: Well, the other alternative is
16 not to call that description of technical data an abstract.

17 MR. BALCOM: Yeah, call it a description.

18 MS. SCATTOLINI: Call it a description, and then
19 you don't have this problem of intermixing the two --

20 MR. BALCOM: Do we have yet another field maybe?

21 MS. SCATTOLINI: That would be pretty clean-cut.

22 MR. NIPPERT: Well, except on the display sight
23 now, when you say, "I want to see it." Does it show the
24 abstract or the description, whichever side of the headers
25 it got.

1 MR. BALCOM: Or we could put it in a title, "slash
2 description field," unless there's a length limitation on
3 that.

4 MR. NIPPERT: The titles in general are going to
5 be using a pretty short list -- When you start sticking in a
6 title (inaudible).

7 MR. BALCOM: Now, this is the kind of fascinating
8 stuff that the header working group --

9 (A chorus of laughter)

10 CHAIRMAN HOYLE: Is it important for us to resolve
11 everything having to do with abstracts today? Can that be
12 -- can we come back and summarize it at the next meeting,
13 and nail it down?

14 MR. BALCOM: I think you can come back next time.
15 I mean, there's a couple of things that are coming out of
16 this. I don't see a great demand clamoring for abstracts --
17 you know, for large amounts -- even with the technical
18 documents, there's a split it seems to me on the abstracts
19 and the technical documents which we have a lot of consensus
20 on that. From a design standpoint, I think it would be
21 useful for the working group of some of the design people to
22 get together again and do a go-around. What really makes
23 sense in terms of whatever you want to call the description
24 of the technical document or something that has an image
25 only or a core sample, or something like that, maybe

1 separate that out from the whole business of abstracting.

2 CHAIRMAN HOYLE: Elgie, would you want to be on
3 the working group that --

4 (A chorus of laughter)

5 MR. HOLSTEIN: A committee of one?

6 MR. BALCOM: The working representatives from
7 Nevada, from the Department of Energy, NRC, and from the
8 LSSA.

9 MR. HOLSTEIN: I'd be happy to, Mr. Chairman,
10 although I -- I think we have agreement on about 90 percent
11 of this. And, frankly, on the issues that the working group
12 is going to be struggling with, I don't have any -- I don't
13 have any real strong feelings. So unless I misunderstood
14 what remaining issues the working group is going to try to
15 come to closure on, it probably isn't necessary. So I'd
16 probably turn -- but thanks for the offer.

17 CHAIRMAN HOYLE: Okay. What's left --

18 MR. BALCOM: I think there's an absence of
19 consensus of whether the abstract --

20 MS. CERNY: I don't think so.

21 MR. BALCOM: Hum?

22 MS. CERNY: I don't think there's an absence of
23 consensus at all.

24 MR. BALCOM: Well, just for the option met --

25 MS. CERNY: Basically, C.3, and the question comes

1 then, which is really a design issue, is to how you search,
2 whether you move the abstract down into the text field, or
3 what you do with it. But that's a design issue, but does
4 anyone not agree to C.3?

5 MR. BALCOM: C.3 says no -- it says no abstract,
6 no additional --

7 MS. CERNY: No abstracting.

8 MR. BALCOM: Abstracting of technical documents by
9 the -- either by the author or by the LSSA.

10 MR. TREBY: No additional.

11 MS. CERNY: No additional.

12 MR. BALCOM: Other than what exists already.

13 MS. CERNY: And we pick that up, and it's search-
14 able as part of -- as part of the full-text field. And you
15 can always hoke it by doing abstract and word in the same
16 paragraph, if you really care. Then you can always search
17 on it. And then the question is just a design issue of then
18 how we set it up for these documents that don't have -- what
19 we were calling abstracts, what we do with them now.

20 MR. BALCOM: Do we just save about how many
21 million dollars?

22 MS. CERNY: Yeah.

23 CHAIRMAN HOYLE: I believe that C.3 doesn't really
24 speak to whether there should be additional or not. It just
25 says, "If there are abstracts, they will be grabbed, etc."

1 But then it becomes a design issue as to whether that field
2 should be searchable or not.

3 MR. TREBY: Well, I guess I disagree, because
4 Option C.1 would require abstracts prepared if one doesn't
5 already exist, and that's what we are -- I believe the
6 consensus is, that we don't need --

7 MS. CERNY: Right.

8 MR. TREBY: So there will be abstracts prepared in
9 the future by those authors who normally prepare abstracts.

10 MS. CERNY: Prepare abstracts. That's right.

11 MR. TREBY: But there's not going to be a
12 requirement that if, for some reason, a document is created
13 that does not have an abstract, that someone has to go and
14 create an abstract for it.

15 MS. CERNY: That's right.

16 CHAIRMAN HOYLE: Okay.

17 MS. CERNY: I think we --

18 CHAIRMAN HOYLE: Is there a consensus on that?

19 MS. CERNY: I think so.

20 CHAIRMAN HOYLE: All right.

21 MR. BALCOM: No strong dissents.

22 CHAIRMAN HOYLE: No strong dissents. All right,
23 where does that leave us then with header group recommenda-
24 tions?

25 MR. BALCOM: Well, the -- I think the other thing

1 you mean to cover -- at least was in the original agenda --
2 was editing of materials. And though I understand that
3 that's --that the recommendation has been to move a
4 discussion to another meeting.

5 CHAIRMAN HOYLE: To another meeting. I think the
6 issue of the role of LSSA in the capture of documents and
7 altering headers should be discussed as part of the role of
8 LSSA, and I would like that next time.

9 MR. BALCOM: Okay. And then the non-technical
10 document, we talked about moving any discussion of
11 additional fields to that -- to the discussion and after the
12 presentation by Rawlee and --

13 CHAIRMAN HOYLE: I would propose then to take a
14 short break, no more than 10 minutes, please. And then
15 we'll get on with the centers briefing.

16 (A brief recess was held.)

17 CHAIRMAN HOYLE: I'd like to get started again. I
18 wanted to do two things before I ask the center to go ahead
19 with their presentation. The first thing I'd like to do is
20 try to summarize quickly what I believe we reached consensus
21 on in the abstract area.

22 We have consensused that there will not be a
23 requirement for documents to have abstracts, and by
24 documents I'm talking about are the technical documents, and
25 those that are available in ASCII format. We're putting

1 aside the non-document types from this discussion. The
2 abstract, if it exists, will be put into a -- into a
3 separate category, and there might be some design issues in
4 there. But as far as our consensus is concerned, we will
5 utilize the abstracts if they exist. We will not require
6 abstracts to be written where they don't exist on this
7 limited type of data we're talking about.

8 Okay. The second thing is that I propose that we
9 try to work right all through, perhaps until about 1:00, and
10 break for lunch at that time, and maybe be finished with the
11 day's work. What we have left is the briefing by the center
12 and a discussion by Chip Cameron of the status of the
13 Compliance Evaluation Program, and priority document
14 production schedule. Chip assures me he only needs three
15 hours to do that, but was willing to do it in a little less
16 time. And I think growing out of his discussion will be
17 some items for a future agenda, which I'll talk about very
18 briefly. So I do think we can do all this by 1:00 if that's
19 okay with every-one. Let's try it. Chip.

20 MR. CAMERON: I just wanted to introduce the
21 people from the center. One of the things that the LSS
22 Administrator's Office that we thought was important to work
23 on was a subset of the information universe that's going to
24 be accessible through the licensing support system. And
25 that's what we called technical data, and we thought that it

1 needed some further clarification and amplification in terms
2 of implementation. So we hired the Center for Nuclear Waste
3 Regulatory Analysis to do this work for us. The center does
4 all the technical work for the Nuclear Regulatory
5 Commission, and they're going to be talking a little bit
6 more about what they do. But I thought that I would
7 introduce these folks. Rawlee Johnson, right here. Chuck
8 Acree; and Steve Young, right over here. So I'll just turn
9 it over to them.

10 MR. JOHNSON: Thank you, Chip. I'm going to
11 start, and I'll move fairly quickly through an outline of
12 what we're going to talk about here today, to give a
13 progress report on our work so far. The background on the
14 Center for Nuclear Waste, I'll give a brief overview of
15 that, and the project that we're working on, the access
16 protocols to technical data. Then Chuck will give a status
17 report on the visits that we've made to the primary
18 participants to date. And he'll share some observations
19 that we've come up with from those visits.

20 The NSS header fields for technical data will be
21 covered by Steve Young, and I'll close by moderating a
22 discussion on the issues that we've identified at this time.
23 The Center for Nuclear Waste and Regulatory Analysis was
24 established by the NRC to really be their technical adviser
25 in the High Level Waste Program. It's their first federally

1 funded research and development center, and we began
2 operation in 1987, and had five-year options on our
3 contract.

4 The center is a part of Southwest Research
5 Institute which is a not-for-profit research and development
6 in engineering and science. There's over 2,400 staff
7 members, and in Fiscal Year '90, around 200 million, \$190
8 million annual income. The 10 technical divisions at the
9 institute have probably over 200 computer scientists,
10 electronic engineers, various other disciplines, developing
11 complete computer hardware/software systems; serve NASA,
12 General Motors, General Electric, quite a bit of work for
13 the Air Force; in artificial intelligence, computer integrated
14 manufacturing, distributed database systems, and other areas
15 of information science, information systems.

16 The center itself in its program is involved in
17 really the engineering and systems engineering, and the
18 integration of the regulatory, the technical and
19 institutional issues and uncertainties that we're dealing
20 with in the High Level Waste Program, based on the
21 regulations. There's technical activities and research
22 programs in the area of --four program areas: geologic
23 siting, the engineering barrier system, the repository
24 design for construction and operations, and performance
25 assessment.

1 We also provide complete quality insurance program
2 and services to the NRC. We are developing management and
3 technical data systems to support all of those four major
4 programs, and they will interface to the NUDOCS system at
5 the NRC as some interim document reference system, and
6 ultimately, the LSS.

7 The center began to work on this access protocols
8 for technical data task in June of this year, and you may
9 recall receiving a letter from the LSSA identifying what --
10 where it said about to do in asking you to participate in
11 their visits and meetings. And actually, this work fulfills
12 the main thing of the LSS rule regarding access protocols
13 and the categories of documents dealing with technical data.

14 Our main text objectives are: one, to define the
15 technical data by category; two, to identify the organiza-
16 tion's generating technical data; three, to document
17 existing and planned procedures for providing access to the
18 technical data and to recommend a plan to ensure access
19 which includes the submission requirements and the
20 recommended header content. And finally, to identify the
21 impacts of the suggested plan to encourage early problems of
22 resolution.

23 So our approach so far has been to examine the
24 background references and talk and make these visits with
25 the primary participants, and we'll go ahead and get into a

1 status report on the initial work here. We've heard in our
2 discussions technical data referred to in many, many
3 different ways, different people that we've talked to. For
4 purposes of this task, we'd use the term technical data to
5 mean documentary material which cannot be entered into the
6 LSS in text searchable form. In other words, it's the LSS
7 material which can be found only with the help of a header.
8 And if we refer to it in terms of media rather than subject,
9 some are imageable, like graphics and tables and handwritten
10 notes, and some aren't, like tapes, disks, cassettes, and so
11 on.

12 Looking at the categories of documents in the
13 material as it's described, in the LSS Rule we find both
14 categories. You have your full-text that had -- or index
15 and image, and also have a header in category one. In
16 category two, you have graphic-oriented documentary material
17 that's imaged and has a header. In category three, you have
18 those documentary materials not suitable for entry that have
19 only a header. And then number four speaks to a package of
20 information, and you can find these cited in the sections of
21 the room.

22 Now, technical data is pervasive throughout all
23 four categories. In fact, a lot of the technical data is
24 really in category one, but for purposes of our work, we're
25 addressing category two, three, and four in dealing with the

1 access protocols, just as John mentioned at the start.

2 One other area in category four, the package
3 concept, is I think needs a little definition and
4 illustration. But when we speak of a data record package,
5 we're suggesting that there's a header that has certain data
6 fields completed, and it would have a -- we use the term
7 "table of contents" just as it states in the rule to
8 describe the contents of that package. Now, here in the
9 example, we have a Weather Data Dump Record for a weather
10 station. And we show the handwritten weather data that was
11 taken there just as you'd find it as an item in that package
12 as it's described in the table of contents. Does that make
13 that clear?

14 MR. ALEXANDER: Well, just a question, John. This
15 is very interesting, and we're going through it rather
16 quickly. Can I ask that these slides be made a part of the
17 record of the meeting?

18 CHAIRMAN HOYLE: You certainly may. And we intend
19 to get a copy.

20 MR. JOHNSON: Okay. I have a clean copy that --

21 MR. ALEXANDER: Thank you. I just want to -- so
22 we don't have to scramble right now.

23 MR. JOHNSON: And at this point, I'd like to turn
24 it over to Chuck Acree. Chuck is a former Director of
25 Information Systems with the CIA, and he's a consultant to

1 us at the center and is working on this project.

2 MR. ACREE: Don't open up the next slide yet. The
3 next slide gets kind of complicated. What we did was, the
4 first visit we made was to the Department of Energy's Yucca
5 Mountain Project Office in Las Vegas, Nevada, and they
6 provided us one-and-a-half days of briefings and a good six
7 or seven issues of materials to wade through after the
8 briefings. And we've, of course, done all that. And what
9 I'm going to now is try to present to you in a very few
10 minutes, given time constraints and also maybe interest
11 constraints, on what the Yucca Mountain Project Office is
12 doing with its technical data and how it's packaging that.
13 So it goes into a little bit more about this packaging
14 concept. It's necessary to do that because unless you
15 understand this, it's really hard to understand how the
16 packaging is done, and that's what's important.

17 Now, first off, Yucca Mountain Project Office is
18 the first place that we went into difficulty with the term
19 "technical data." The Yucca Mountain Project Office does
20 not technical data just the stuff that's non-text
21 searchable; in other words, the graphics and the tapes and
22 disks and those kind of things. No. They say technical
23 data is all data relating to the technical activities; in
24 other words, just about everything they do. And I'm going
25 to be using that definition when I talk about the Department

1 of Energy and what it's doing.

2 First of all, the -- you have -- let's just talk
3 about the components. There are nine local record centers.
4 I'm going to show you a graphic of this in a minute, so I
5 think it will, hopefully, put it in a little bit better
6 perspective. There are nine -- Can you hear me all right by
7 the way? I'm not using the mike. There are nine local
8 record centers, and they're collecting the data, but we're
9 talking about prime contractors here, including SAIC, The
10 Geologic Survey, SANDIA, Los Alamos. They all have local
11 record centers, and the technical data feeds into those
12 local record centers. Then the local record centers sent it
13 quarterly down to what's called the Central Records Facility
14 in Las Vegas, run by the project office, and they do that
15 within these packages that Rawlee mentioned to you.

16 What that combines, their raw data, so-to-speak,
17 with the analysis and the descriptions of how that data was
18 produced. It also includes numeric data from a thing
19 called, "The Site and Engineering" -- excuse me.

20 MS. CERNY: "Properties."

21 MR. ACREE: "Properties Database," and results
22 from computer modeling graphic display systems. So all this
23 goes into the package. Then the Central Records Facility
24 uses two information systems: one for its records, and one
25 to track the data all the way back to its origins. Again,

1 it forms the command to do that, at which time more data
2 comes in, and you fill out a new form.

3 MS. CERNY: Could I -- excuse me.

4 MR. ACREE: Yes.

5 MS. CERNY: If you don't mind.

6 MR. ACREE: Please.

7 MS. CERNY: Those two -- those two systems,
8 they're really one system.

9 MR. ACREE: Yes.

10 MS. CERNY: And they're not two separate systems.
11 The data tracking system remodified the record system, and
12 they are -- so they are tying together.

13 MR. ACREE: Barbara certainly is more expert than
14 I. They call it a supplemental system.

15 MS. CERNY: Right. But they're really --

16 MR. JOHNSON: The subsystem of the --

17 MS. CERNY: That's right. That's what it is.
18 It's a subsystem of the records system.

19 MR. ACREE: Then I want to point out, there are
20 three important documents that are produced quarterly. One
21 is a Technical Data Catalogue, which describes all the
22 technical data within the Central Records Facility; another
23 is a report on the SEPDB, this numeric base, which tells
24 what tapes are available to people should they wish to order
25 them; another is the Reference Information Base, RIB, which

1 is a summary description of analyzed technical data, the
2 current state of knowledge.

3 If you show them the second slide down, please,
4 the graphic. Yes. Okay. This puts a little bit -- This
5 shows the flow of the technical data. In other words,
6 you've got the -- you've got the acquisition activities and
7 the principal investigators. The raw data comes down to the
8 local records center. There are nine of these; prime
9 contractors each have one. Then, this acquired data goes
10 over to data reduction interpretation; in other words,
11 analysis. And with the help of the controlled databases,
12 these are the computer systems that model it and show it
13 graphically, and help this analytical activity. And that
14 all goes back here in the form of data record package
15 segments where they put it altogether. They use participant
16 here -- this is a, by the way, a Yucca Mountain Project
17 slide. It isn't mine, so I didn't change anything. But we
18 would call this the prime contractors, not a participant.
19 That's their term.

20 So we put this altogether and they, of course,
21 send this down quarterly to the Central Records Facility,
22 and they also send an index to all the data which updates
23 this computer system. Now there's also, as I mentioned, the
24 summary document over here in the green and purple -- This
25 is a synthesis of fully-interpreted technical data. It's

1 kind of high-level information where you put all the
2 technical data together, and it's a notebook. It isn't a
3 computer system. It's kept up-to-date page-by-page. They
4 may send a new page in for a new piece of the information.
5 So that is kept -- that's kept out at SANDIA. This is kept
6 out at SANDIA.

7 Then we have over here a data catalogue, which
8 keeps track of all the data that's held here. And it tells
9 where it's located or where it came from, time and date of
10 acquisition, and all kinds of description for them. That is
11 -- This information is on line with this Automated Data
12 Record System, and it's in hard copy form with the data
13 catalogue in accordance with the site's specific agreement
14 with the NRC. Are there any questions on that before I go
15 on?

16 MS. CERNY: Could I just ask --

17 MR. ACREE: Sure.

18 MS. CERNY: I mean, I don't know if you'll get
19 into this or not, but I think it's a, for this group, an
20 important concept -- that's the -- that is Nevada. That's
21 what they do. We have parallel. You can take a parallel,
22 Washington Headquarters, where I have a central records
23 facility. And feeding into it are what's produced at
24 headquarters: Chicago, Idaho Falls, or which any other
25 contractors that would be coming in to headquarters.

1 Then we have a wide-area network connecting Nevada
2 and Washington, so -- and in fact, I'm in the process of
3 rewriting the records system so that we check duplicates
4 across the network. And this is the foundation for the
5 information that will go into the LSS, and so we will be
6 doing it program-wide, so when we get to LSS access
7 protocols and procedures that we must follow, we will have
8 one department-wide system, though we have two locations.

9 Right now the records of the computer systems are
10 -- they're replicated. They're identical, but of course,
11 they're separate now until I integrate them all. And that's
12 happening within the next year, so we should be well set up
13 by the time you finish, you know, your work, to be able to
14 follow protocol's procedures of the LSS.

15 MR. ACREE: Okay. Thank you. I want to mention
16 one thing: They've been doing this now with this framework
17 -- they've had a framework for this nearly over the past
18 year, and then formalized their procedures at the beginning
19 of this year. There is a huge backlog of material of these
20 local record centers, and it hasn't all found its way down
21 here to the Central Facility Data. But they're working on
22 that. There's no -- They didn't give us a time and a date
23 yet when that will all be completed, but that will happen.
24 So we have that.

25 Now, let's go onto the next slide, Steve, to push

1 this on a little bit. That's right. That's the backlog.
2 Now, the technical data that's currently available there at
3 the project office, is available through a written request
4 to the project officer manager, who promises a timely
5 response. In other words, it's done centrally. You don't
6 go out to the local record centers and ask for information.
7 You go to the Central Records Center, and they will go out
8 and get the information for you much as a central librarian
9 would do.

10 Now, when LSS loading begins, it will be a rather
11 simple process, conceptually at least. The project office
12 will scan its packages to submit the images, and it will
13 create a header for each package from its existing computer
14 database headers. Okay.

15 After we talked with DOE a couple of weeks later
16 -- that was in August; this is getting into September now --
17 we went out and we talked with Mal Murphy, representing the
18 State of Nevada, and we talked about what Nevada does with
19 regard to technical data or non-text-searchable data. And
20 we came up really with this term "raw data," so we were at
21 that stage at that point. And we talked with Mal about raw
22 data. And the Nevada people and its contractors, primarily
23 the University of Nevada and the Nevada Bureau of Mines and
24 Geology, haven't produced any raw data. That's our
25 understanding, but they may do so in the future.

1 Now the Nevada people publish formal technical
2 reports containing graphic material, the kind of material
3 we're talking about. And that primarily analyses DOE
4 acquired raw data. It safeguards within associated packages
5 the handwritten backup data on which those reports were
6 based. Then when LSS loading begins, just like DOE, Nevada
7 will scan its reports and its associated backup packages,
8 submit the images, and create headers for them.

9 With regard to needs, Nevada considers that the
10 individual items of technical data, which are not text-
11 searchable, but are contained within a data record package,
12 don't require their own headers. In other words, the way
13 DOE is doing things, is all right as far as Nevada is
14 concerned. The header for the package as a whole is
15 sufficient. Furthermore, Nevada feels that technical --
16 maintains that technical which can't be scanned for entry
17 into the LSS -- this is the stuff that, like the tapes and
18 disks and things
19 -- will be identified in the LSS through a header. They
20 must be transferred from the current storage locations to an
21 LSSA Control Records Center several months before the
22 highlevel waste repository licensing proceedings begins, in
23 order to assure timely, centralized access for everyone.

24 MS. CERNY: Can I ask a question?

25 MR. ACREE: Sure.

1 MS. CERNY: This starts to get into -- When you're
2 talking about transferring computer tapes, archiving
3 computer tapes, are you going to come up with
4 recommendations for how that is to be done? After all,
5 after a certain period of time, operating system changes.
6 You can't even read it one month to the next. Hardware
7 platforms change. The people who generated it no longer
8 have them. I mean, to keep up a computer tape is really --
9 so that 10 years down the road you will still be able to
10 read it -- is not trivial. And the idea of transferring to
11 a central location assumes that something there is going to
12 be able to read it, and yet who at that central location is
13 going to have anything there?

14 MR. MURPHY: Well, let me explain for you -- if we
15 can revert back to the days of our negotiations over the
16 term, if you recall we used on negotiations: raw data. It
17 was our position -- and I think we all agreed to this, you
18 and Nevada and the NRC staff -- that on this small point;
19 that at that point, at some point in time, and probably at
20 the point in time where most logically at the point when the
21 LSS system is completed and loaded and certified by DOE to
22 the LSS administrator, and control of the system is
23 transferred to the LSS administrator, this data, these
24 packages, which are part of the LSS, must likewise be
25 transferred to the LSS administrator.

1 Now, this is a little bit misleading, and it's
2 partly my fault because of my discussion with Rawlee and
3 Chuck. I don't think that we necessarily insist that there
4 be a physical transfer in each case of a computer tape from
5 a building in Las Vegas to another building in Las Vegas.
6 That isn't essential to us. What is essential is that
7 custody and control over all LSS material, all LSS material,
8 including the non-searchable -- what I will still call raw
9 data -- at some point in time be turned over to the LSS
10 administrator. And, you know, for want of a better period
11 of time, I used in my discussion that six-month period
12 before the submission of a license application, where the
13 rule calls for the system to be turned over, certified and
14 turned over. But that's the point.

15 The point is that this is no different than any
16 other LSS administrator -- LSS information -- and it must be
17 placed in the custody of the LSS administrator. And if that
18 means that, as I said, if that means that on your Central
19 Record Center in Las Vegas, the guard on the door changes at
20 some point in time and the stuff stays right where it is,
21 but it's under -- it's under the LSS administrator's
22 custody, same room, rather than under Carl Giertz's custody
23 -- that's probably satisfactory. That's what I'm talking
24 about.

25 MR. ACREE: Well, --

1 MR. MURPHY: And it could be two or three central
2 locations. I don't think Nevada is going to insist on --

3 MS. CERNY: But you see the problem.

4 MR. MURPHY: Oh, I see the problem. I understand
5 the problem, but I thought we had worked all that out in the
6 negotiations.

7 MS. CERNY: Well, but that just raised the
8 question.

9 MR. ACREE: Barbara.

10 MS. CERNY: Yeah.

11 MR. ACREE: I think it's important on the computer
12 tapes that we always stay with the standard, you know, the
13 ASCII, and so on, as much as we can for the long term --

14 MS. CERNY: Yeah, but you know as well as I that
15 you can stay with ASCII -- you change operating systems.
16 You can't read some of this stuff. If you change hardware,
17 you can't even read it. I mean, it's --

18 MR. MURPHY: The header information will be raw
19 data package, because it's supposed to tell us --

20 MS. CERNY: Well, and the --

21 MR. MURPHY: -- give us all of the information
22 necessary to use it so --

23 MS. CERNY: Sure. But you're telling -- You talk
24 10 years down the road, nobody may have that piece of
25 hardware. You've got to have procedures in place and --

1 MR. MURPHY: Get it from Smithsonian.

2 MS. CERNY: Yes. Smithsonian has some tapes, and
3 the Vietnam war is I think the famous example: There were
4 two computers that could read it; they don't have any
5 anymore, and nobody could read the stuff. So that you have
6 to have procedures internally for how you're going to update
7 your tapes, and I'm not talking about just refreshing them
8 by rewriting them, but in fact, to assure that they are read
9 by whatever software and hardware that you bring in.

10 So that's the other part of this question I was
11 asking was: Are you going to have those kinds of
12 recommendations in this for participants who may not be
13 doing that?

14 MR. MURPHY: But remember this is a discovery
15 system. This system is to facilitate the discovery of
16 information. If Nevada wants to use, or the Environmental
17 Defense Fund or the Department of Energy wants to use, a
18 computer tape generated by the State of Nevada 10 year's
19 ago, it's incumbent upon us to be able to do that, not you.

20 MS. CERNY: Who? "Us" who?

21 MR. MURPHY: Nevada.

22 MS. CERNY: You mean you generated it, therefore -

23 -

24 MR. MURPHY: No. If you generated -- if the
25 Department of Energy generated a computer tape on weather

1 stations --

2 MS. CERNY: Uh-huh.

3 MR. MURPHY: -- 1984, and in 2004 the State of
4 Nevada in preparation for the licensing proceedings wants to
5 read that computer tape, we need to have the
6 hardware/software and technical expertise and be able to do
7 that. If we don't, that's our problem. Your problem is to
8 -- is to provide that tape to the LSS administrator, and the
9 LSS administrator's problem is to give us access to it. We
10 need to be able to use it. If we can't use it, that's our
11 problem. We haven't done our job.

12 MS. CERNY: But see, I just -- And that's why I'm
13 coming from the completely opposite perspective on this.
14 This is supposed to be a discovery system, and we are all
15 supposed to be using the information that's in it. So it is
16 incumbent upon the person who generates it to assure that it
17 will be read.

18 MR. CAMERON: Let me amplify on this.

19 MR. MURPHY: To assure that it's provided to the
20 system in a readable way.

21 MS. CERNY: No. They're different issues.

22 MR. CAMERON: You're crossing -- Yeah, but you're
23 crossing the boundary from the LSS to what, for example, the
24 NRC as the licensing authority wants to enforce on par-
25 ticipants in the licensing process in terms of how this

1 technical data should be produced. Mal is absolutely right
2 about the fact that it is a discovery system, and just like
3 we don't want to be at the LSS in the business of telling
4 participants that data has to be able to be manipulated in
5 such-and-such a manner, that's for the technical side of the
6 NRC, not for the LSS side. So that if these tapes -- it
7 is incumbent on the people who'd want to use these tapes to
8 figure out how they're going to be able to use them, just
9 like in typical discovery.

10 MS. CERNY: I really disagree with this. I really
11 do, because I think your --

12 MR. CAMERON: From the LSS standpoint, I think
13 that's the way it has to be.

14 MS. CERNY: You're not going to be able to read
15 the tapes. You're just not. You've got to have certain
16 standards of documentation. You have to have -- or you're
17 never going to be able to use the stuff.

18 MR. MURPHY: Well, what's that got to do with --

19 MS. SHELBURNE: Isn't that part of the package
20 though? Would that not be part of the package?

21 MS. CERNY: Not if you don't -- Not if there are
22 not specifications and procedures for how this has to be
23 done. People can give tapes. I've generated more garbage
24 tapes. I couldn't go back and read those things.

25 MR. JOHNSON: I think it's a matter of degree, and

1 I say, you know, inherent in some of the work, some
2 standards that, you know, would allow them to convert and
3 read most of what you -- like 500 and 400 diskettes were
4 popular, or still are used, but anyone can make that
5 conversion today, and you know, it's provided for in various
6 ways.

7 MR. BALCOM: What's more critical than the tape, I
8 think, is if there is an understanding that the raw data,
9 for example, isn't transferred into ASCII so it's non-usable
10 by a subsequent modeling system, but to preserve the format,
11 the formatting of the data and to describe the protocols for
12 the submission to a library somewhere that say, "Don't
13 change the information that you fed into your model but
14 leave it, and simply describe to us. We'll figure out how
15 to load it into our model." But there may be some
16 misunderstanding about converting it into ASCII which really
17 would destroy its utility and using it in a subsequent
18 modeling for a simulation system.

19 I think those are the things that, you know, we
20 need to sort out and describe in some of the protocols that
21 are to come. You need probably some technical help to do
22 that.

23 MS. CERNY: You know, I really think this is --
24 the technical data is going to be the key. It's going to be
25 the key to the whole crisis process.

1 MR. MURPHY: Of course it is.

2 MS. CERNY: Rather than all the documents that --

3 MR. MURPHY: It's going to be the whole -- it's
4 the key to the license application.

5 MS. CERNY: Exactly. And so we focus on the
6 documents, but really this is the heart of the issue. And I
7 think how you -- if you -- you should make it as simple --
8 You know, we spend all this time on: do we abstract, and
9 what header fields do we have, but the real issue is going
10 to be: can anybody read those data tapes? And that's a far
11 more difficult problem than the one we've just attacked.

12 MR. BALCOM: I would say -- I would take the
13 responsibility representing Nevada to be able to do that as
14 long as I had complete information as to the computer system
15 that you use to generate it, plus, its hardware platforming,
16 plus, what version of the software you use, what kind of
17 tape station you used, and so on; that I would think I could
18 figure out a way to read that tape. As long as you provide
19 that information and don't change it, convert it into some
20 other format before you send it to the library.

21 CHAIRMAN HOYLE: Okay. Let's go on.

22 MS. CERNY: Sorry, but --

23 MR. ACREE: Well, it's something we have to
24 address to answer the original question.

25 CHAIRMAN HOYLE: Yes.

1 MR. ACREE: Okay. The NRC Washington. By the
2 time we got to Washington and talked with Stu Treby and
3 others there, the term "technical data" had become very
4 problematic. So we talked in terms of non-text-searchable
5 material. We just confined ourselves to that, and we hope
6 to continue doing that. So, what the NRC is saying that,
7 yes, they do produce this. Currently they have a NUDOCS
8 Program, to make reference to its record holdings.

9 When the LSS becomes operational, the NRC will
10 submit its documents to the LSS through its existing
11 document control center. And more specifically, when
12 loading begins, they'll centrally submit their non-text-
13 searchable material to the LSSA for entry into the LSS in
14 accordance with procedures to be established by the LSSA.
15 Well, of course, that's us. That's what we're -- that's
16 what we about.

17 They'll create headers for the non-text-searchable
18 material, again, in accordance with LSSA guidance with which
19 we're in the process of formulating as suggested guidance.
20 Now, the location of non-text-searchable material, which is
21 also non-imageable -- and again, we're back to the tapes and
22 things -- must be identified in the header. And they would
23 provide a central NRC contact, much as the Yucca Mountain
24 Project Office has.

25 As far as needs are concerned, we discussed the

1 Yucca Mountain Project Office's use of data record packag-
2 ings, and they hadn't focused on that to-date, but they were
3 saying if the NRC is going to comment on that, they need
4 some more information which we were not, frankly, in a
5 position to provide yet. We've gone out there and heard the
6 briefings. We've read the materials, and we had determined
7 that we had to go back and take some hard looks at the data
8 record packages to see how they're constructed, how the
9 timing of all these is accomplished, if it's one or two
10 years, and how this is all going to work out -- the kind of
11 things Barbara was discussing a little while ago. But we
12 have to take a look at that again.

13 Anyway, NRC reserved judgment on that until we
14 find more out about those packages.

15 MR. MURPHY: The NRC, I might inject at this point
16 in time, specifically agreed with Barbara's team and
17 Nevada's team when we put together this compromise on raw
18 data, if you recall. Avi and Phil Altomare were there, back
19 in the corner of the room over at the Airport Plaza, and
20 agreed to this procedure. And for the NRC staff to now say
21 that they can't comment on this process is to me a little
22 bit disingenuous.

23 MR. TREBY: No. I think that what we were saying
24 is that Nevada and DOE got together to discuss the packages,
25 how they were going to be made up, and agreed that that

1 would be fine. And we agreed, too, about the packages.

2 MR. MURPHY: Stu, these words -- these words in
3 this rule were written by Barbara and Jerry, my team on
4 behalf of Nevada, and Phil and Avi. They were written --
5 this language was drafted in part by the NRC staff. The NRC
6 staff agreed to this part of the rule, and to now say they
7 can't comment on it; they can't agree to keeping a package
8 together --

9 (Phone rings, followed by a chorus of laughter)

10 MR. MURPHY: -- to now say that they cannot agree
11 on one of the essences of the rule; and that is, to keep the
12 package together and put a single header on a single
13 package, is to me disingenuous.

14 MR. TREBY: Just for the record, I think all we
15 were saying is that we'd like to have the package described
16 more fully, which apparently, Barbara has done it. I'm not
17 saying we disagree with the rule or anything. It was just
18 that when we were discussing this with the people from the
19 center, we were unable to describe exactly what this package
20 would consist of.

21 MR. ACREE: Well, I think it serves again to show
22 that the package is critical here in discussing technical
23 data, and what we're about is looking further into this, and
24 making sure it all works out well and in accordance with
25 everybody's understanding.

1 When we talked with Barbara Cerny in Washington --
2 really she's already said this, I think, to everyone, in
3 other words -- that the DOE doesn't expect to produce any
4 significant amount of non-text-searchable material -- again,
5 using that terminology -- from its Washington, D.C.
6 headquarters. And such material that it may have produced
7 in the past or might produce in the future, they again,
8 would enter it into the LSS through the DOE capture station.
9 And DOE doesn't anticipate any extraordinary access needs.
10 Do you want to add anything to that, Barbara?

11 MS. CERNY: No.

12 MR. ACREE: Okay; observations. Putting this
13 altogether, what have we learned so far? I emphasize we're
14 in a kind of a "data gathering mode" here. We're defining
15 problems not solutions at this point, and we're, of course,
16 discussing the problems with you.

17 The first part -- The first part of our task, as
18 Rawlee showed you, was to define technical data. And we've
19 found that, first of all, that the term "technical data" is
20 a poor one to use for what we're talking about: the non-
21 text-searchable material. There is no ambiguity in the rule
22 because it doesn't even mention technical data in this way.
23 But certain issues certainly must be resolved, which we've
24 been talking about, and we're going to talk about a little
25 bit further after I'm through. And we need clear implement-

1 ing procedures so that everybody knows what we're doing.

2 How much do we have to define technical data, or
3 the non-text-searchable material, as we're now calling it?
4 Well, some categorization is required in order to be sure
5 that none escapes proper LSS entry, and we don't find some
6 handwritten note that's important off in left field some-
7 place. And also, to enable LSS users to find what they need
8 through consistent entry/search terminology. That has to be
9 done.

10 The second part of our task was to define who's
11 producing technical data, again, a non-text-searchable
12 material. The primary producers, no surprise to anyone, are
13 the DOE and the NRC and their contractors. Nevada may or
14 may not produce it. We think they haven't found anybody
15 else that's producing it yet. If anyone knows of anybody
16 that's producing it, we'd love to hear about it.

17 MR. MURPHY: Yeah, let me just make that clear,
18 because we're having a problem with terminology here,
19 because the different parties use different terms. When I
20 say Nevada hasn't produced raw data, I mean that we have not
21 been permitted to either through funding constraints or
22 problematic constraints, we have -- our contractors have not
23 been permitted to go into the field to penetrate the surface
24 of the earth, to put down boreholes, to bring water out, and
25 you know, core samples, and things of that nature.

1 Well, I'm sure that it's all Barbara's fault. I'm
2 sure that there is some laboratory-type work, and you know,
3 a scientist would describe as "original product" or
4 something, that might fit DOE's definition of technical data
5 or NRC's definition. But when I say Nevada hasn't produced
6 raw data, I mean we have not produced any field-generated
7 data which is not -- which we have not gotten from some
8 other source, primarily DOE.

9 MR. ACREE: All right. Looking ahead to our
10 production of a plan to assure access to this material, we
11 think some changes may be necessary in the plans and
12 procedures and systems of the DOE and NRC, but it's far too
13 early to say that yet. But we're just as a kind of a
14 prewarning of the obvious, perhaps, and we, of course, aim
15 to keep that at a minimum. We don't like to disrupt
16 anything.

17 MR. HOLSTEIN: Chuck, this may be useful for
18 future reference, and that is that -- I'll just speak for
19 Nye County right now. Nye County is developing a pretty
20 sophisticated program of socioeconomic data gathering. Now,
21 depending on how this issue that we discussed yesterday when
22 the Draft Regulatory Guide comes out, we may, in fact, be
23 submitting a great deal of raw data.

24 We may, in fact, also be doing some of this data
25 collection work that DOE had previously planned to do

1 itself. That's currently being negotiated. Whether that's
2 the case or not, we may be conducting doing our own
3 analysis, because we have disagreed with some elements of
4 DOE's methodology.

5 So in that oversight capacity -- so it's possible
6 that depending on the outcome of those discussions, as well
7 as the outcome of the debate over this regulatory guide,
8 that Nye County, as well as other effective units of local
9 government, may be producers as well, as you're defining
10 them.

11 MR. MURPHY: Yeah, I should probably -- I think
12 that's a good point, Elgie. I should probably make that
13 point myself. As far as the State of Nevada is concerned,
14 when I say we haven't produced raw data, I mean we haven't
15 produced -- You know, I don't want to insult any
16 sociologists in the room. We haven't produced any hard
17 science raw data. I think we have generated independently
18 and original socioeconomic raw data. That's a good point.

19 MR. ACREE: Well, those are good clarifications.
20 I appreciate that help, because we'll have to deal with
21 that.

22 MR. MURPHY: As well as transportation as well. I
23 think that applies to --

24 MR. ACREE: Okay. Now, in access to raw data --
25 this is, again, looking ahead to our plan for access --

1 envision this as being reasonably straightforward. There
2 will be a bibliographic header; image data will be viewed
3 directly on the screen; the non-imaged data can be
4 requested, or it will be centrally located. And each data
5 record package will have several things: It will have a
6 descriptive bibliographic header, with an abstract, which
7 you -- which has been mentioned in the abstract discussion;
8 a viewable table of contents, not only viewable but text-
9 searchable. Most pages will be viewable as images, and
10 there will be a lot of text-searchable pages within these
11 packages.

12 Can you find that diagram again, Steve, maybe just
13 to emphasize those points. Let me mention while he's doing
14 that that we also have those three documents that I
15 mentioned of the Yucca Mountain Project was produced, and
16 the technical data of summary, the overall summary that's
17 updated and current information. We have the technical data
18 catalogue telling you how to get to the tapes, and we have
19 the listing of available digital data on tape -- excuse me,
20 the technical data catalogue, which tells you the data
21 that's available to CRF; then the SEPDB which tells you what
22 tapes are available.

23 All that will be available on line after all,
24 again, available for searching. Okay. Can we go back to
25 that one. Just to emphasize here kind of how it's laid up,

1 you have a header over here. You have a header leading to a
2 package, with a table of contents, searchable, viewable,
3 tells what's in the package. And we have pages that are
4 images, all of them, and we have also -- a lot of those will
5 be text-searchable, because it will be in readable form.
6 Yes.

7 MS. SHELBURNE: I just need some clarification
8 because of what we talked about this morning with Kirk and
9 this idea of data packages or records packages.

10 MR. ACREE: We're going to have to relate to that.

11 MS. SHELBURNE: Yeah. That has got to be sort of
12 cleared up. Basically, what you're saying those following
13 pieces of paper are just data sheets that's depicted there.
14 Could there not also be reports that individually stood
15 alone and could be indexed in text-searchable within a
16 package?

17 MS. CERNY: We do that, Betsy. Each individual
18 piece within a package is submitted.

19 MS. SHELBURNE: So the table of contents could
20 talk about --

21 MS. CERNY: Well, the table of contents, yea, it
22 will have a report listed. But there's some things that
23 aren't appropriate; for example, data sheets with data taken
24 in some borehole, the table of contents will say there are a
25 number of sheets, and that isn't separate.

1 MS. SHELBURNE: I just wanted to clear that up, is
2 the package contains more than just what may be imageable.
3 There may be individual documents.

4 MS. CERNY: Yes, absolutely.

5 MR. MURPHY: Let me ask a question, because I
6 sense that there's been some departure from what we agreed
7 to in this rule. I'm not sure that it's of a critical
8 nature or not, but are you saying now that DOE -- and I'm
9 talking specifically about, you know, the package I'm
10 referring to is that individual principal investigator's
11 pile of documents, whether it's in his three-ring binder
12 like I have here, or his file cabinet, or whatever -- are
13 you saying that that package is going to be separated and
14 the pages in it -- okay, we're still talking about keeping
15 the package together.

16 MS. CERNY: No. We're talking about keeping the
17 package together, or when the package is complete, it exists
18 just like that, as a data record package. The trouble is,
19 it can take two years, and so every -- quarterly, a piece is
20 submitted to the -- from the local record center to the
21 Central Records Facility as a part of that package.

22 Okay. The package keeps building, so it's kept
23 together as a package. When the package is closed out, it
24 is then indexed and microfilmed again as a package. So it's
25 always -- we always have it as a package. But, as Betsy was

1 saying, within that package we can also have a report. That
2 report will be separately available. You can just search
3 and get that report. You don't have to go into a package.

4 MR. MURPHY: The report which that package of that
5 raw data resulted in.

6 MS. CERNY: Right. It's part of the package, and
7 it's also separate, so you will have your full-text of that
8 report with the authors on the report. You can get it
9 either through the package. You can get it just searching
10 the system.

11 MR. CAMERON: That's a good point.

12 MR. ACREE: Are you saying, Barbara, that every --
13 everything though would be available with a separate heading
14 within the package?

15 MS. CERNY: No. That's what I'm saying that
16 everything is relevant. I mean, everything isn't
17 appropriate.

18 MR. ACREE: Some will be; some will not.

19 MS. CERNY: Some will be; some will not be.

20 That's why I'm saying you can have just data sheets, you
21 know, a stack of data sheets. And that they'll just be
22 within a package, because what are you going to do with
23 them?

24 MR. ACREE: Well, this is the kind of thing that
25 was troubling NRC when we talked about it was just this

1 point, and we, frankly, couldn't answer it because we have
2 to go back and look at some more of his packages, drag them
3 down from the shelves, and roll up our sleeves and actually
4 look through a few of these to see how they're put together.
5 Are they all in yet? Has it taken one or two years? --
6 that kind of thing.

7 MR. TREBY: And we also didn't know whether a
8 package was done by the -- just by the principal
9 investigator, or whether it was a particular -- like a
10 borehole, where you may have more than one investigator. We
11 didn't know what constituted a package.

12 MR. MURPHY: Well, from our thinking, the package
13 was the information that related to a study. I mean, it's
14 defined in the rule. What we talked about is defined in the
15 rule: relates to and supports, or whatever.

16 MS. CERNY: Yes.

17 MR. MURPHY: And do you remember when we started
18 this whole process, our instinctive reaction to the LSS,
19 Nevada's, was to demand that everything which was
20 searchable, full-text-searchable, be included in searchable
21 full-text. I mean, that was the fundamental underpinning of
22 the whole system; that we were going to have a searchable
23 full-text system. And everything that was written,
24 handwritten or typewritten or any other fashion, be put in
25 searchable full-text. And when we came to this kind of a

1 roadblock on raw data -- because we've always at least from
2 my individual perspective, as Barbara said -- I've always
3 recognized that this is the stuff which is going to
4 determine the license application, you know, the site
5 characterization plan.

6 If that thing never gets into the LSS, it's not
7 the end of the world. Who cares? But then I went to -- you
8 know, when I sensed that maybe there was something here that
9 I wasn't, you know, fully informed on -- and I went to the
10 State of Nevada scientists, to a representative sample of
11 folks from UNR and UNLV and Bureau of Mines and Mifflin and
12 Associates, and subcontractors that -- I don't know, I think
13 I may have talked to a guy in the University of Toronto.
14 And they all, every one of them, universally, to a person,
15 said, "Christ, don't take the package apart. Keep that
16 package together. We don't want to go searching all over
17 hell and high water for a piece of information here and a
18 piece of information there. " When we want to -- When
19 we're reviewing the adequacy of the conclusions of a
20 geotechnical report of any nature: tectonics or
21 geochemistry, or whatever, we want all of the information
22 the authors of that report produced, starting from, you
23 know, the borehole up through whatever, and supported that
24 together. We want to be able to go to someplace and look at
25 that in one package. "Don't take it apart," they all said.

1 "We never take ours apart. It's a dreadful sin, and we'd
2 never do it." So we said, "Okay, that's great. We'll agree
3 with DOE that these packages stay together."

4 MS. CERNY: But, you know, we're just putting this
5 in place.

6 MR. TREBY: I can recall that you, and I believe
7 Jim Davenport, actually went off to these sites, and you all
8 came back to negotiating --

9 MR. MURPHY: No. We all had a big meeting in Las
10 Vegas, remember? We didn't -- We proposed to go and visit
11 all these sites, and -- and the department for the one and
12 only time in the history of this project, came up with a
13 better idea than I had.

14 (Chorus of laughter)

15 MR. MURPHY: And they brought all -- They brought
16 all the, you know, scientists from all over the place
17 together in a room in Las Vegas. And we sat down, and they
18 showed us, "Here's my notebook. Here's what I have." You
19 know, "I'm a rock," whatever they call it, "and here's my
20 pages with thin slices, Scotch-taped to a paper." You can't
21 search that thin slice of rock. And our people all said,
22 "God, don't take that page out of the book. Leave it there.
23 Keep that package together."

24 MR. TREBY: I believe they honestly agree the
25 package ought to stay together, but it seems to -- it also

1 seemed to us when we were talking about it that -- and we
2 didn't recall how it had been resolved -- that you might be
3 duplicating things, because there might be a report --

4 MS. CERNY: Yes, we are.

5 MR. TREBY: -- indicated in that package which
6 these people would have sent to you, and so you would have a
7 report both in that package and somewhere else, in the
8 fulltext-searchable portion of this thing with a cover
9 letter that says, "Here is our report on our study of
10 boreholes."

11 MS. CERNY: That's in there, not to worry.

12 MR. TREBY: So that will be duplicated. It will
13 be in two places.

14 MS. CERNY: Yes.

15 MR. TREBY: It will be in this package, and it
16 will be separate.

17 MS. CERNY: You've got it.

18 MR. CAMERON: The duplication will only be -- The
19 report that's in the package will be somehow referenced in a
20 header or a table of contents. Okay. In terms of it being
21 in the system twice, will it be in the system twice, or will
22 it only be in the system once? You'll submit that document
23 to us through the normal document submission process.
24 Right?

25 MS. CERNY: That's right. And it will be in there

1 with its cover letter.

2 MR. CAMERON: And that will go in. It will be
3 ASCII in the system.

4 MS. CERNY: The whole thing. That's right.

5 MR. CAMERON: When you look at the table of
6 contents for the package, it will be listed there. But that
7 actual, physical package will have the report in it, but
8 there will not be two copies of that document that's in the
9 package entered into the system in ASCII. Right?

10 MS. CERNY: That's right.

11 MR. CAMERON: Because you have to do it that way.

12 MR. TREBY: There will be --

13 MR. CAMERON: It would be too confusing to try
14 to --

15 MS. CERNY: Yeah, but now --

16 CHAIRMAN HOYLE: There will be a hard copy in the
17 package and a table of contents.

18 MR. MURPHY: Well, there won't necessarily always
19 be. I mean, there's some of these packages that --

20 MS. CERNY: Okay. But if there is, but then
21 you'll have a pointer. But what we are doing now actually
22 with packages is microfilming the whole package even though
23 we have the microfilm of each individual document, because
24 we want the package together with continuous microfilm
25 numbers. That may be an issue for when we scan them, we put

1 them on optical disk two so they're not spread all over the
2 place. But that's a design issue, and we've chosen to
3 handle it one way with the microfilm, and that's something
4 that will have to be talked about -- you know, how we
5 actually do it when we scan it, and do we scan the whole
6 package when it comes. But that's later down the road.
7 This is not -- I'm sorry.

8 MR. ACREE: No. We appreciate the discussion.

9 MS. CERNY: I'm taking time from your
10 presentation.

11 MR. ACREE: I hate to add just one further
12 complication to this, but there are non-imageable items of
13 information that aren't tapes and disks. Among them are:
14 extra large maps, photos, or maps that are colored --
15 colorcoded so the color is important, and of course, the
16 image wouldn't capture that -- and they might be admitted
17 back here someplace. But then the issue becomes, well, do
18 you image that, let's say, the color photos, and what do you
19 do about the extra-large things? Do they get extra headers
20 -- separate headers, excuse me -- that kind of thing.
21 That's an issue which we're going to have to resolve also.

22

23 MR. MURPHY: Let me ask you a question here:

24 What's the difference between the abstract and the header
25 and the table of contents? What does the abstract say that

1 the table of contents doesn't give me up there?

2 MR. ACREE: Well, the abstract could, for
3 instance, be the table of contents.

4 MS. MURPHY: That's what I thought, yeah. Okay.

5 MR. BALCOM: I think it would -- In answer to that
6 now, I would suggest that the table of content doesn't
7 ordinarily totally describe what that item is in there. For
8 example, if it's a five-and-a-quarter inch diskette of lab
9 data from a analogue device, that a table of contents
10 wouldn't really tell you what the name of the program was or
11 who the -- the question was, and the level of detail I think
12 we're going to look for. And an abstract or a description
13 field is that level of data which may or may not be in the
14 table of contents.

15 MR. ACREE: Well, that's again, an issue we'll
16 have to look at. All right. Now, don't be frightened by
17 this. All this is is a list of the fields that you've been
18 discussing, and I didn't take out copying -- I mean, this
19 was done early. And what we're trying to show here -- this
20 is a lead-in to what Steve Young will be presenting. He's
21 going to be talking about several of these fields which are
22 particularly applicable to the non-text-searchable material.
23 Those are the ones marked with an "x" or marked here. These
24 are the kind of things that have been discussed, and I
25 should use a pointer.

1 For instance, we've been talking about access
2 codes and storage locations, and people -- names of content,
3 form of data. This means -- this is just suggesting
4 relationships. We haven't determined anything. We're not
5 suggesting anything. We're just kind of looking and looking
6 at these fields, and what they might contain in terms of
7 technical data.

8 Many of the fields that are particularly
9 applicable to technical data are also text-searchable.
10 You'll notice there's a relationship there between
11 something in a bit more important fields, and some of them
12 free form or uncontrolled, so we can put down whatever we
13 care to put down, so they're available to us for technical
14 data, and that's what Steve's going to be talking about.
15 Steve.

16 MR. BALCOM: Free form is like handwritten --

17 MR. ACREE: Uncontrolled, no controlled entry.

18 CHAIRMAN HOYLE: Excuse me a second. Elgie?

19 MR. HOLSTEIN: Before -- before Steve starts, I
20 unfortunately have to run and catch a plane. I wanted to
21 clarify my understanding of one particular issue.

22 What is your plan with regard to the letter that
23 was drafted yesterday on the issue of expressing the panel's
24 views on the draft reg. guide on topical guidelines.

25 CHAIRMAN HOYLE: My plan for the letter is as

1 follows: Jay Silberg gave me a handwritten draft of a
2 couple paragraphs yesterday afternoon which I noodled a bit.
3 Stu Treby has offered a comment or two. Dennis has
4 commented on that. And I have had that typed, with the
5 exception of Dennis' comments, which I have handwritten in,
6 and I would like to give all of you before you leave today
7 another typewritten version of that. I would ask you to
8 comment, say, back to me within the next ten days any
9 further comment you have on that. I will try to get a
10 second draft out to you, which will be a more complete
11 draft. It would have a little introductory language and
12 would have the NRC position stated in it. Since we're
13 going to be the only exception I think here. Send that back
14 out to you for approval by the membership before I send it
15 to NRC. I want to be sure everybody has seen the final
16 letter and agrees with it before I send anything to the
17 agency.

18 I would ask you to comment to me if you care to on
19 what level of the agency you think we ought to be writing to
20 -- to the Chairman, to the Executive Director for
21 Operations, or to the head of the Nuclear Material
22 Management Office, Bob Bernero who was the one that sent me
23 the guidelines to begin with and I sent them to you, so you
24 could comment on the level at which you think we should
25 write to the agency.

1 All right. So I can hand that out right now.

2 Well, go ahead.

3 MR. HOLSTEIN: I'd just ask if I could have a copy
4 because I'm going to have to dash for the airport. Thank
5 you.

6 CHAIRMAN HOYLE: Uh-huh.

7 MR. TREBY: If I could elaborate a little bit on
8 what some of the introductory material is, I think that
9 there has to be some discussion in this letter as to the
10 reasons why people are taking their positions as opposed to
11 just stating, "These are our positions" because this isn't
12 going to mean a whole lot to whoever they've sent it to, and
13 so what I anticipate the staff adding to it is the reason
14 why it recommended in its proposed topical guidelines the
15 exclusion of those things or underlying assumption in that,
16 the LSS should limit itself to information necessary to
17 reach a licensable decision based on 10 CFR, Part 60. In
18 fact, at Part 51, rulemaking has been done, maybe something
19 like that. But I think that -- and I would expect that some
20 of the rationale from the other parties would be that they
21 think such underlying assumptions are too narrow a few and
22 that the LSS should have a broader function than the staff
23 is suggesting or whatever reasons. I think the industry has
24 a reason that they believe that it shouldn't be left, you
25 know, to some date ten years from now to be resolved.

1 Anyway, I guess in sum my point is that I think
2 the letter needs to be flushed out a little bit to explain
3 some of the reasons for --

4 CHAIRMAN HOYLE: Yes, thanks. And if anyone wants
5 an additional position by their representative, be pleased
6 to include that as additional rationale for their position.

7
8 MR. HOLSTEIN: You mean to be forwarded --

9 CHAIRMAN HOYLE: To be included --

10 MR. HOLSTEIN: -- under their name?

11 CHAIRMAN HOYLE: -- in the letter or as an
12 attachment to the letter if you want to send me something to
13 be attached. Yes, sir.

14 MR. HOLSTEIN: Thank you.

15 CHAIRMAN HOYLE: Okay.

16 MR. MURPHY: And I would urge everybody here and
17 those who aren't here but we're going to communicate it to
18 them to get their views known on this issue at this stage,
19 rather than wait till it gets published for comment in the
20 Federal Register because it's too late then.

21 CHAIRMAN HOYLE: Yes. Because as I take it, the
22 bottom line --

23 MR. MURPHY: Head this baby off at the pass before
24 it gets to the pass, Stuart.

25 CHAIRMAN HOYLE: I take it the bottom line that

1 I'm hearing is that it shouldn't be just put out as a reg.
2 guide for public comment but that you want a more formal
3 step at this stage.

4 MR. MURPHY: Well, that's -- that's what Jay
5 Silberg wants and I agree with that as a matter of prudence.
6 What I want, what Nevada wants, is that the thing be
7 ashcanned, throw it away. It's a bad approach. Don't put
8 it out as a more formal attempt and let us litigate it.
9 Just forget it. It's wrong. It's legally unsupportable.
10 It's indefensible. That's Nevada's position.

11 CHAIRMAN HOYLE: And stay with the interim reg.
12 guide?

13 MR. MURPHY: Well, no. The interim -- the interim
14 topical guidelines need refinement. We all agree with that.
15 I mean, there's duplication in there. There's minutia.
16 There's -- you know, we put those together in a hurried
17 fashion and they need refinement. There's no question about
18 that. What we disagree with is this attempt to -- to
19 reargue Kelbert_Cliffs (phonetic) that the -- I mean, you
20 know, you lost that case, Stuart. It's been more than 14
21 days. The petition of reconsideration is untimely.

22 CHAIRMAN HOYLE: The extent to which you want to
23 add any emphasis along that line, please do so in the next
24 ten days.

25 All right. Fine. Please --

1 MR. JOHNSON: John, if you're ready to continue, I
2 was just going to point out Steve Young's background. He's
3 a geo-scientist in the Center and so he's a producer and
4 user of technical data and he acts as our liaison on this
5 work to other technical staff in -- that I mentioned in our
6 program elements, and he also has a pretty extensive
7 background in developing computer applications, so --

8 MR. YOUNG: So basically I have kind of a user's
9 perspective on this, primarily from the standpoint of
10 technical review which really brings me to discussing the
11 issue of technical data and what it means with respect to
12 the categories of documentary material that are actually in
13 the rule.

14 The rule makes allowances for basically four
15 relatively easily defined categories of documentary
16 material. It actually speaks about or makes references to a
17 lot of other categories of documentary material, but these
18 categories will contain the mass bulk of what is really
19 technical data. And it needs to be made fairly clear right
20 up front that of the major categories of documentary
21 material that are allowed for under the rule, all of those
22 categories contain what is actually technical data, what's
23 being generated as technical data.

24 And as Rawlee pointed out, there's an incredible
25 amount of technical data that's actually up here in this

1 category. We are primarily concerned at this stage with the
2 technical data that's in these categories down here, the
3 categories that won't be fully text indexed for search. So
4 what we've done is examined the use of this type of material
5 in the technical review process.

6 This is a listing and primarily it's just an
7 extraction of header fields out of the array of fields that
8 are already available and it's a list of header fields that
9 at this point we see as being a kind of an optimal array for
10 finding technical data within a systematic framework that
11 really is designed to find documentary material.

12 The bibliographic approach to document and
13 information handling isn't inherently ideal for technical
14 database management. Technical database management and
15 document and information system bibliographic systems really
16 aren't the same thing, but it turns out that it's not too
17 difficult to find technical data to discover that certain
18 types of technical data are available and where it's at,
19 what it consists of, and what's required to get at.

20 And so if we look at this list of the headers,
21 this list essentially will give you pretty full access or
22 allow you to find or discover the existence of practically
23 any kind of technical data, no matter what documentary
24 material category that it was in.

25 There's a couple of header -- potential header

1 fields up here that are mainly -- this one's mainly an idea.
2 This one I think we see as being pretty much a requirement.
3 There is -- in going through the exercise of looking at this
4 problem from the point of view of a user, what I really did
5 is try to examine what the -- what different ways or tacts
6 that you could take to enter the system and try to find
7 something, and it turns out that there are a lot of
8 opportunities to search for technical data or to search for
9 graphic-oriented material that's not text indexed by the
10 type of media that it was on. As a scientist or as an
11 engineer, it's not uncommon to want to find everything that
12 is on tape, for example, and you may be -- and this issue
13 that came up earlier between Barbara and Mal about the
14 readability of tapes, there oftentimes are instances where
15 an investigator may actually have some special capacity to
16 read a certain kind of tape. The guy may have a PDP-11,
17 which is an old VACS computer that will read seven track,
18 1650 BPI tapes and he says, "Well, gee, let me see
19 everything that's on that kind of tape, so it's probably not
20 unreasonable to expect that a media type category might --
21 might be a way that somebody might want to search for
22 technical data.

23 The document type list, and this may actually be
24 fixed -- I probably haven't seen an up to date listing of
25 document types -- but there needs to be a specific type code

1 for database catalogs, data catalogs, and basically data
2 listings which may be hard copy data dumps that are nothing
3 but just great long listings. Those things will exist in
4 some cases. There's certainly no requirement to make them,
5 but many people do make them for editing purposes and they
6 may be in packages. They may be in data -- data record
7 packages. They may be attached to certain technical
8 reports. The -- the category of documentary material which
9 currently is planned to be fully text indexed for search and
10 to have headers and whatnot, much of that material actually
11 is data listings, and you can kind of -- it wouldn't be
12 unreasonable in a lot of cases to expect people to be
13 actually looking for the listings that's in that material.

14 What I wanted to illustrate here is when you go to
15 search for technical data in its broadest sense, and this is
16 technical data that could be in any category but technical
17 data that certainly will be heavily represented in the
18 nontext searchable area, you first need to look at how you
19 categorize technical data. And historically technical
20 subject is by far the most common way to do it. You break
21 it down by the subject area, the subject matter, and you use
22 primarily descriptors to go after that.

23 But for the purposes of this particular project,
24 there are a number of ways that we currently look for
25 technical data. We normally look for it based on the

1 technical subject because we're interested perhaps at
2 faulting and groundwater travel time, petrophysical charac-
3 teristics of rocks, et cetera, so we go after it on that
4 basis.

5 It's not too unusual to go after it based on
6 document type either or based on who generated it.
7 Oftentimes you will want to look at a certain array of
8 laboratory -- lab technical reports. Say you wanted to --
9 you -- the -- a lot of the national laboratory
10 subcontractors for the DOE are actually fairly well
11 partitioned with respect to the type of work that they do
12 and, if you know what a certain lab has been working on
13 historically, you could ask
14 -- actually ask for everything from that -- from, say, Los
15 Alamos, for instance. If you're interested strictly in
16 geologic mapping, you could ask for everything that the USGS
17 did, as the USGS is the primary generator of geologic maps.
18 But document type is -- is a pretty popular way to break
19 down technical data.

20 Media type as well. These are pretty minor
21 compared to this. This is sort of new. I don't know to
22 what extent you guys talked about this with respect to the
23 topical guidelines yesterday, but it's not unusual for us to
24 go in and look for technical data based on the 10 CFR 60
25 requirement that that particular data addresses. This field

1 would be problematic in practice and it may be difficult for
2 even a principal investigator to categorize this material
3 based on its relationship to 10 CFR 60.

4 Here are those header fields pretty much broken
5 down into the -- into a set of primary examples of the kinds
6 of material or categories that fit in that. It's very easy
7 to search based on title and description. As everybody
8 knows, the abstract, whether that's a header field or not I
9 see, is -- it's problematic. It certainly isn't required.
10 I think I heard Betsy say it's sort of a cost benefit thing.
11 That's probably exactly the way to look at it.

12 MS. SHELBURNE: Well, let me clarify before you go
13 any further on that. The discussions that we had in which
14 we decided about abstracts was limited only to text
15 searching of documents.

16 MR. YOUNG: One thing that --

17 MS. SHELBURNE: Any discussion that you want to
18 have about summaries or abstracts, or table of contents
19 needs to be done based on the needs of this type of category
20 information.

21 MR. YOUNG: Yeah.

22 MS. SHELBURNE: Totally independent of what's done
23 for text searching.

24 MR. YOUNG: Right.

25 MS. SHELBURNE: Don't -- no distinction can be

1 made.

2 MR. YOUNG: The abstract -- there -- with respect
3 to data record packages, and it may be that for the purposes
4 of practical handling of the material that the vast majority
5 of the non-text searchable stuff actually goes into a
6 package. It probably would be a good idea to have some sort
7 of a field in the package header in addition to the title
8 field and I guess I understand that you do not want long
9 descriptions in this title/description field.

10 It probably wouldn't be a bad idea to have
11 something like an abstract or a summary field for the data
12 record packages to describe exactly what's -- what sort of
13 project that the material that's in there is associated
14 with. It may be material that's associated with a specific
15 study plan. It may be material associated with a project
16 that's not a formal study plan in the sense that the site
17 characterization plan outlines them, but it's a specific
18 project and you want to know what the purpose of the project
19 was, what the objectives were, who worked on it, where was
20 it done, et cetera, so it's probably not a bad idea to
21 consider a field like that for the data record packages.

22 The author and author organization, it's in -- and
23 submitter oftentimes you want to locate this material based
24 on who did it and where it came from and basically all of
25 these header fields I think are either already agreed on or

1 are being discussed, which there's not much new about that.

2 Subject descriptors and -- somebody -- Kirk, you
3 mentioned earlier on that you thought that subject
4 descriptors, which are primarily going to be technical
5 subject, will probably be the most powerful search vehicle.
6 Historically, that's certainly been true and probably will
7 be for this system as well, so a lot of attention probably
8 should be paid to the -- the source of technical subject
9 descriptors.

10 Sponsoring organization, identifiers, and comments
11 aren't absolutely necessary but certainly would be helpful.
12 Again, this issue of regulatory category comes up. We look
13 for material on this basis. I do not know to what extent
14 other organizations search for material based on what
15 section of 10 CFR 60 that it refers to, but 10 CFR 60
16 certainly has an enormous impact on the type of data that's
17 being taken, the way it's handled, the kind of analytical
18 processes and the analytical procedures that are being used,
19 and you could probably find just about any kind of technical
20 data you wanted based on what area of 10 CFR 60 that -- that
21 is directing that that material be actually accumulated or
22 measured or analyzed.

23 Pointers are not a bad idea to point to associated
24 materials or even back to a package that the same material
25 might be in.

1 It's not unreasonable to expect to be able to
2 search based on media type, so it's --

3 MR. NIPPERT: I've got a question on your media
4 type.

5 MR. YOUNG: Yeah?

6 MR. NIPPERT: It seems to me back in the earlier
7 packages that we showed, there was one package in which
8 you'd have a whole variety of media types.

9 MR. YOUNG: Yes.

10 MR. NIPPERT: I mean, media types would be down at
11 that table of contents level instead of that general header
12 because otherwise you're likely to have a whole variety in
13 there and it can be --

14 MR. YOUNG: It's -- there's -- some thought needs
15 to be put into that so that a person that is searching for
16 everything on diskette, everything on a three and a half or
17 a five and a quarter or everything on seven track or eight
18 track or nine track tapes, there needs to be some -- some
19 allowance for people to find out what's available on certain
20 media, especially the -- you know, the computer readable,
21 the digital stuff.

22 MR. ACREE: Can I say something? The Yucca
23 Mountain Project Office has a media field as well as the
24 document typed in and it helps further define these things.
25 Now, you may have -- you may or may not want to search on it

1 but it's handy there in the header, but that's the reason we
2 suggest it as a possible field.

3 MR. NIPPERT: Well, but again I think it depends
4 on how much you're going to unitize what's in a package.

5 CHAIRMAN HOYLE: One package may have everything
6 -- every media type in it.

7 MR. NIPPERT: I'm not arguing about its utility.
8 It's just the level at which it ought to be associated.

9 MR. JOHNSON: Yeah, I think -- I think -- yeah,
10 I've made a note of that and it has to be at a certain level
11 to match the particular item in the package.

12 MR. BALCOM: So that could be, as I see it, done
13 one of two ways. Probably the direction we're not going in
14 is to have a header for each item and the direction we are
15 going in is some more complete description than the table of
16 contents that wouldn't be easily searchable from a media
17 type field that would be kind of a compromise but a more
18 complete description. If -- you know, I don't know if we're
19 going to need to get into that more or not. The field --
20 the media field, by the way, was deleted by the header
21 working group a few months ago and it looks like -- it looks
22 like we
23 shouldn't have deleted that and it might have to go back in
24 although I don't see that it would be a tremendous help here
25 in finding a specific --

1 MR. YOUNG: I can give you a specific example. If
2 you were interested in, say, the well logs, the geophysical
3 logs from a specific borehole and you went to go locate
4 those, so you go look for those data by the borehole name --
5 UE25P-1, say "Show me all the geophysical logs that were
6 done in that borehole." You come across and all you come up
7 with is a whole set of processed tapes that are way beyond
8 first pass edits, but you know that the original field
9 recordings have to be somewhere but, for some reason, you
10 don't find them so you go back and say, "Well, look, I know
11 a little bit about how those things were recorded, so I'm
12 going to go back and I just want a list. Just dump me a
13 list of all the 1650 BPI eight-track tapes that you have and
14 I'll look through that list and see if the original field
15 recordings were actually in there."

16 It's -- it's a little bit a redundancy that just
17 by experience we found is helpful in the event that
18 something is missing that you know should be there that
19 perhaps hasn't gotten into the right category, the right
20 stream, something else.

21 MR. BALCOM: We're not making it the way it's
22 designed now that we're not making it real easy to narrow in
23 on a specific tape or we'll be, as I say, yes, there are
24 some tapes associated with this package and they should be
25 in such and such a place.

1 MR. YOUNG: It's -- some consideration should be
2 given to, you know, treatment of that material. I know that
3 it's very likely that there will be data on tape that is
4 associated with a specific project, all of the hard material
5 of which would be in a data record package. And these data
6 record packages physically are vertical file folders and
7 you're not going to dump a tape in there. That's going to
8 be sitting over on the shelf somewhere in somebody's tape
9 library.

10 Now, within that data record package, there
11 certainly can be an item, a pointer, a header, something,
12 even in the table of contents that says that there's 150
13 megabytes of geophysical log data, resistivity on tape and
14 here's the tape, a session number. For example -- I mean,
15 this is just an example. I don't know how to handle that
16 specifically. There's lots of ways to do it. But this
17 business of data on tape or data that is in somebody's
18 database management system on somebody's either work station
19 somewhere or perhaps the SEPDB is not a bad example to -- of
20 an example of a situation where you might want to point to a
21 certain batch of technical data, a certain batch of raw or
22 processed data that exists in a location that's on -- you
23 know, on a hard disk or on -- that's tape accessible through
24 somebody's computer data management system.

25 So it's -- it isn't an absolute requirement

1 because most people are going to hit everything they want
2 through --through those -- through those descriptors but it
3 cuts down on the detective work that's required to find
4 things that you may need or that might be useful.

5 And document type is a really useful way to find
6 things, especially if you know a little bit about the
7 project and how things are done within the project. It's
8 very easy to try to get away and look for technical reports,
9 for example, especially technical reports that were
10 generated by some author or some author organization since
11 it's pretty clear who's doing what work and what national
12 lab that it's being done in, et cetera, and most of the
13 people who are probably going to use this thing on a routine
14 basis are going to have some little bit of knowledge or --
15 either that or are going to discover information and
16 knowledge about where certain projects are being done.

17 Again, it just sort of helps to cut down on the
18 amount of technical detective legwork that you actually have
19 to do to find things.

20 So we think this is a pretty good array. It's not
21 an exhaustive -- it's sort of a -- it's more of a --
22 currently kind of an optimized set. This is the biggest --
23 this thing is -- the regulatory category as far as I can
24 tell isn't really anticipated by any of the -- by the header
25 framework that's set up and if -- other than the topical

1 guidelines, which are very -- have a lot of wording in there
2 that is very 10 CFR 60 like, I mean, a lot of the verbiage
3 that's in some of the topical guidelines is definitely
4 regulatory in nature. Some thought needs to be given to
5 this. I'm not sure --

6 MR. BALCOM: Steve, we have a category called
7 special class and I think it just might be possible that
8 that's -- this is the kind of --

9 MR. YOUNG: I'm not sure that you want to elevate
10 that to some sort of really large important, full-blown
11 header field. But there are a substantial --

12 MR. BALCOM: Well, I mean, no. I think we already
13 have a header field which would suffice for this.

14 MR. ACREE: What special class?

15 MR. BALCOM: Special class is simply a category
16 within which you can classify -- you can set up your own
17 classification scheme. It's kind of a blanket field for --

18 MR. YOUNG: In order for something like this
19 to --

20 MR. BALCOM: -- Dona may have. Since you used it
21 in the prototype, you might be able to say more about that
22 -- correct me if I'm wrong, too.

23 MS. MENNELLA: It was originally envisioned as a
24 P.O. -- given the fact that documents can be classified in
25 various ways, and we chose in one way, which is using title,

1 author, whatnot. There are other ways you can classify
2 documents and special class field was envisioned to capture
3 that. For example, all documents that are part of the SCP
4 administrative record or all documents that are part of the
5 reference to the SCP record. So -- also we have in there
6 things like excerpts or if it's a foreign language document,
7 if it's a header only document, sort of a catchall field but
8 it certainly would lend itself to something like this.

9 MR. YOUNG: Yeah, I would try to name it something
10 that points to this purpose. There certainly are a
11 substantial number of people who are capable of searching on
12 this basis and what's more, all the -- since -- there's a
13 tremendous amount of data that are being generated that are
14 targeted directly on these subject areas -- siting criteria,
15 design criterion, geologic repository operating area.

16 It wouldn't surprise me a bit if somebody would --
17 if particularly engineering people that aren't really
18 familiar with the geoscience literature would want to pull
19 up all the geoscience stuff that referred -- that has some
20 sort of bearing on the design of either the geologic aspects
21 of the design, the waste package design, so it's a category
22 that would be difficult to have properly filled out with
23 descriptors.

24 People that are well qualified to do this, it's --
25 like I said, it's even difficult for P.I.s to sit down and

1 say, "Well, this is ..." -- you know, there may be four,
2 five, or -- four or five of these categories that it's
3 really directed to or maybe just one or two. But it's -- it
4 would be a useful exercise to look into that.

5 MR. JOHNSON: Thank you, Steve. I guess to close
6 out our discussion with you, I'd like to identify the
7 issues that we'll continue to work on as we go through the
8 next steps in our project.

9 We've got three categories that we've put them in.
10 Header content is the first category. And how will
11 currently approved fields be used? These are the things
12 that Steve was just talking about.

13 What fields must be added, if any? Under that, we
14 would, you know, look at are the submitter/sponsor fields
15 sufficient for storage location of non-imaged material? Can
16 the document-type field incorporate media? Is the
17 regulatory category field appropriate, necessary? Is a
18 qualified data indication needed?

19 You know, it struck me this morning when we talked
20 about QA and QA record packages that you almost certainly
21 want to identify certain QA records that are in the LSS and,
22 whether that's done in a separate field or is part of a
23 table of codes you use in another field, I think it needs --
24 needs that kind of indication.

25 MR. MURPHY: You know, in a way that's almost a

1 legal conclusion in a licensing proceeding.

2 MR. JOHNSON: That's what?

3 MR. MURPHY: It's a legal conclusion whether or
4 not particular data is QA-qualified.

5 MR. JOHNSON: That's --

6 MR. MURPHY: So all that's going to tell you is
7 whether or not the submitter thinks it's QA-qualified.

8 MR. JOHNSON: Okay.

9 MR. MURPHY: And we still may -- there still could
10 conceivably be an argument over the licensing proceeding. I
11 think it would be helpful to know that.

12 MR. JOHNSON: Well, I'm looking at it as someone
13 wanting to retrieve certain records, simply what someone
14 thought were QA.

15 MR. MURPHY: Right. I think it would be helpful.

16 MR. ACREE: And, again, this is a field that the
17 Yucca Mountain Project Office does use in its record systems
18 and it seems like the majority of data --

19 MR. MURPHY: Yeah, but all I'm saying is that
20 because it's in a -- it says in the header this is good
21 stuff, this is QA-qualified data, isn't going to persuade me
22 or anybody else, but it would be a useful piece of
23 information I think.

24 MR. JOHNSON: Any -- any further comments on these
25 issues before we go on to the next? Okay.

1 Under data record packages, we've got issues
2 regarding the timing of submission. That needs to be
3 defined. How will the non-imageable portions be
4 individually stored? Steve talked some about that and
5 suggested that physical tapes and disks would be stored
6 separately from the package itself.

7 Table of contents must be sufficiently descriptive
8 and the question should it be text-searchable? We talked
9 about that and I think moved beyond some of the thinking as
10 a group here on -- on that issue when we discussed the
11 abstract. And, depending on where the table of contents or
12 some descriptive summary of these packages actually fits in
13 the header, I think some ideas have come together here.

14 The header must be thorough. We talked about
15 that.

16 Should the packages be made text-searchable
17 insofar as possible? And of course Barbara alluded to the
18 fact that DOE is essentially doing that, so -- any comments
19 on that before we go to the last set of issues?

20 Which we've grouped under non-imageable classes of
21 technical data. And these classes, the classes suggested
22 here are magnetic media, film, colored graphs and photos and
23 extra large maps. There may be some others that we don't
24 have in there right now, but those are the sorts of things
25 that would be on the shelf, so to speak, and not viewable in

1 the system.

2 MR. MURPHY: Well, the other two obvious classical
3 categories, which are handled separately, as I talked to you
4 guys about, are core samples and water samples.

5 MR. JOHNSON: Yeah, core samples which DOE prefers
6 to exclude, you know, submissible in the LSS context.
7 They're there and they prefer to have access to those, you
8 know, in their location.

9 MR. MURPHY: Well, access to those is going to be
10 through the sample management facility.

11 MR. JOHNSON: Right.

12 MR. ACREE: They're saying that samples aren't
13 data. The data is figured from the samples.

14 MR. MURPHY: That's bullshit. Of course they're
15 data. But they'll be handled -- I mean, presumably people
16 will have access to -- there's a whole separate cataloging
17 system. I mean, it's -- but that's not to say that
18 technically they aren't LSS data. You know, a core sample
19 which is part of the raw data that supports the report is
20 LSS information as far as we're concerned, but you're going
21 to go look at it and have access to it through the sample
22 management facility, not through an LSS facility.

23 MR. JOHNSON: Of course the information is in the
24 LSS in great quantity on test and measurements and analysis
25 of those core samples.

1 MR. MURPHY: Right. But if you want to go and --

2 MR. JOHNSON: The second area, the criteria in
3 this area of non-imageable classes of technical data I think
4 ultimately, you know, is the practicality of what we do
5 there as far as access protocols, the cost-effectiveness.
6 Those are the criteria I think that drive the decisions made
7 in this area.

8 Access protocols of course are needed and so
9 that's where we're headed, to develop those.

10 We appreciate your feedback and your discussion.
11 We'll go on about our business.

12 MR. MURPHY: Where do you go from here? What's
13 next?

14 MR. JOHNSON: Well, we're going to produce two
15 reports on the technical data definition and the
16 infrastructures, and that will reflect observations and the
17 current conditions of the main participants in their ability
18 to submit documents to the LSS and assess the -- you know,
19 where there may be potential problems or changes that need
20 to be addressed for a specific participant.

21 MR. CAMERON: Yeah, I think the Center has made
22 substantial progress on this issue in just the few months
23 that they've been working on it, but I would want to
24 emphasize to the panel that there are some reports that are
25 going to be coming in from the Center to our office on this

1 issue and that all of it is going to be sent to the panel
2 for review and comment before anything is final, and I'll go
3 through some of the schedule for that in the next few
4 minutes.

5 MR. JOHNSON: Thank you.

6 CHAIRMAN HOYLE: Okay. Thank you very much,
7 Rawlee and Chuck and Steve for your presentation.

8 The next item, Chip, is yours, status of
9 compliance evaluation program, status or priority document
10 production schedule, and anything else you want to say.

11 MR. CAMERON: Okay.

12 CHAIRMAN HOYLE: In 15 minutes. No, I don't want
13 to rush you.

14 MR. CAMERON: No, I'll just -- I'll be brief. I
15 have a handout for you that basically is a time line of
16 what's happening on other areas of the LSS project. And
17 this is the time for Murphy to read his newspaper. He knew
18 that it was convenient.

19 (Pause.)

20 MR. CAMERON: But I'll just quickly go through
21 this time line. The purposes of this are to show you the
22 relationship of other activities that are going on in the
23 LSS project, the relationship of those activities to the
24 schedule for design and development that Barbara talked
25 about yesterday. I think it will also help you to flag key

1 issues and to also do some planning for future ARP meetings
2 and activities, and it also sort of gives you a summary of
3 what our office is doing.

4 Now, I put the LSS design and development schedule
5 on the top line, and you can see going across the top that
6 in '90 we're going to have the SAIC design documents done.
7 In August of '91, I listed acquisition support documents.
8 This is -- these are documents that the FEDSIM contractor is
9 going to develop and some of those documents are, for
10 example, alternative analysis, functional specifications,
11 things that feed into the request for proposal for the LSS
12 pilot system.

13 In November of '91, there's going to be a request
14 for comment on the LSS procurement.

15 Then in April of '92, we have the request for
16 proposals. November, contractor award. And in 1993, in
17 August, the installation of equipment, DOE test and
18 acceptance.

19 We're also developing guidance and standards for
20 document identification, submission, and preparation. The
21 header is a good example of that and I think right now we
22 have March, '91 set as a final date or as a date for the
23 final header for the LSS.

24 I also put the technical data recommendations in
25 this category and right now we have September slated for the

1 final report to come in from the Center to us on technical
2 data, and we would like to issue that in March of '92. So
3 that time period between September of '91 and March of '92
4 would be a period that we would want to reserve for ARP
5 review, for example.

6 Also in this guidance and standards area, we're
7 going to be working on such things as what the standards
8 should be for the submission of ASCII to -- to the LSS
9 Administrator, what the standards would be for the
10 submission of hard copy images, and things like that.

11 There's also going to be some work done on
12 facility planning and development because we have to be sure
13 that the facility is ready at UNLV to accept the equipment
14 from the LSS contractor. And SAIC is working on a generic
15 facility design document. Lynn Scattolini of our staff is
16 working on a facility planning issues paper, and both of
17 these are going to be done in the next few months. And what
18 we'll be doing from then on is trying to develop a schedule
19 of different activities that need to be accomplished and
20 who's going to be responsible for accomplishing those
21 activities so that we can get down to the UNLV facility
22 being ready, which you'll see down in '93 under compliance
23 evaluation, but it should be up under facility planning and
24 development.

25 Another area that we're focusing on is access

1 planning and some of the issues here -- I mean, you've heard
2 some of the -- some of these issues come up in the context
3 of the SAIC presentation. But in terms of implementation of
4 access, the number of work stations that will be needed by
5 each party who will have access to the LSS, the number of
6 users that they're going to have, the assignment of access
7 passwords, telecommunication needs, all of these things need
8 to be addressed.

9 The next category of activity is a production
10 schedule and this basically is -- concerns the submission,
11 capture, and loading of documents into the LSS. What we
12 plan to do along these lines is to -- to let another
13 contract with the Center to take a look at this question of
14 priority document categories which we talked about at our
15 first meeting. The whole idea is try to provide the most
16 useful data for technical review to LSS participants when
17 the system is first loaded.

18 Now, originally we were going to try to put the
19 onus on the panel to come up with these document categories,
20 but we thought it would be better to have someone with
21 expertise in a technical side of the high level waste
22 management business take a look at the document categories
23 and come up with some priorities and then we would come back
24 to the ARP for review of those -- those categories.

25 One thing the Center is also going to be looking

1 at is when will useful data and information be available?
2 In other words, when -- some people argue that -- that you
3 don't need to have anything into the LSS until two or three
4 years after DOE gets onto the site. Other people say that,
5 "Well, there's some generic documents out there that can be
6 loaded into the system now that would be -- would be
7 useful." And as a threshold issue, what we want to have the
8 Center do on this contract is to take a look at -- at the
9 timing, the availability of useful data and then go on from
10 there and categorize those different documents into priority
11 categories.

12 The Commission has required us to go to them with
13 a cost benefit analysis of the document loading schedule for
14 the LSS, including this first pilot system, so what we plan
15 to do is to have a draft recommendation on priority loading
16 categories available from the Center in March of '91. We
17 would then come to the ARP to take a look at those
18 categories and then we would go to the Commission for
19 approval of a document loading schedule.

20 MR. MURPHY: That -- I was going to ask you that
21 question when I saw this -- this flow chart. Where does
22 that -- why is the Commission concerned about a cost benefit
23 analysis with respect to the loading? Where does that come
24 from?

25 MR. CAMERON: That concern comes from --

1 MR. MURPHY: And is that the Commission or a
2 member of the Commission?

3 MR. CAMERON: Well, it originated with a member of
4 the Commission, but it is a Commission viewpoint.

5 MR. MURPHY: Okay.

6 MR. CAMERON: And it was expressed in the usual
7 Commission manner, which is I think it was attached to a
8 staff requirements memorandum to us to go back to the
9 Commission and the concern was that we not get too far ahead
10 of the repository schedule, that -- that they take a careful
11 look at -- at how many documents are going to be loaded that
12 are site specific to see if this is cost beneficial. That's
13 the way we understand the direction.

14 But it is something that we're going to have to
15 do.

16 MR. MURPHY: I'm glad somebody understands it
17 because I --

18 MR. CAMERON: Well, what we are -- what we're
19 going to do is we -- we think that there should be priority
20 -- we think that the system should be loaded as soon as it's
21 feasible to do it. I mean, feasible from the standpoint of
22 the equipment has been debugged and we think that it is
23 useful to establish these priority categories and start
24 loading that data, and that's basically what we're going to
25 present to the Commission. And we're going to really

1 emphasize the benefit side of that in terms of this is
2 useful information for LSS participants.

3 I'm not sure what the cost side of it is going to
4 be at this point. I think that the words the Commission
5 used was not cost benefit but risk benefit, so I don't know
6 what the risk is, but we're going to have to address that
7 issue.

8 But, you know, from the viewpoint of our office,
9 if we can identify useful priority categories, that's where
10 our emphasis is going to lie.

11 MR. MURPHY: Well, are you saying that the
12 Commission wants to -- is the Commission somehow reserving
13 to itself the decision as to whether or not to begin loading
14 at all any documents because it's too far in advance of the
15 license application?

16 MR. CAMERON: I don't --

17 MR. MURPHY: I guess I don't understand what the
18 concern is.

19 MR. CAMERON: -- have a real good feel for -- for
20 whether the Commission would say that. I don't think that
21 the Commission --

22 MR. MURPHY: Well, they're --

23 MR. CAMERON: -- would say that.

24 MR. MURPHY: -- not proposing to get into the cost
25 benefit relationships between loading a certain category of

1 documents as the number one priority versus another category
2 of documents, are they?

3 MR. CAMERON: No, no. It's just really to -- it's
4 just really to go to the Commission with information on,
5 okay, the system is -- has been debugged. We're ready to
6 start loading documents or this will happen well before
7 that, but the idea would be is that we're ready to start
8 loading and, for your information, here is what we're going
9 to load and I don't think that the Commission is getting
10 that involved in, well, it shouldn't be this category. It
11 shouldn't be that category. It's more to -- to give them a
12 comfortable feeling of what we're going to be doing before
13 we embark on the project. And that I think is the -- the
14 sense of the Commission, at least most of the Commissioners
15 on this, so we don't anticipate that it's going to be a big
16 problem, but certainly it's going to be important for the
17 advisory panel to weigh in with an emphasis on an importance
18 of beginning to load these categories. I think that will be
19 influential with the Commission at that time.

20 MR. MURPHY: And also at what point in time do we
21 get to -- to have some input on prioritizing document
22 loading? That as a priority I think have changed since the
23 negotiation. Remember, we all submitted certain generalized
24 ideas about what priority voting, at least for backlogged
25 data, --

1 MR. CAMERON: Right. I think at that time you
2 were -- was going to be we'll do all contractor documents or
3 something like that.

4 MR. MURPHY: Right.

5 MR. CAMERON: But what -- what we're doing is
6 instead of having the panel sort of come up with priority
7 categories, we're going to have the Center as our contractor
8 do a report on priority categories and present that to the
9 panel for review so that you'll have a straw man document to
10 work on.

11 MR. MURPHY: Well, should we submit our views then
12 to the Center as to what the priority --

13 MR. CAMERON: What the Center will be doing, much
14 akin to what they have been doing with the technical data
15 project, is to go around and talk to the different
16 participants, get an idea from them what they think the
17 priorities are, and then they'll -- they'll integrate all of
18 those views along with, you know, their analysis of it and
19 present a document to us which we'll submit to the ARP for
20 review, so you will be contacted as individual members as to
21 your ideas on priority categories.

22 And, again, you know, there's a lot of ways to cut
23 the -- to cut the pie on that.

24 CHAIRMAN HOYLE: And you're looking to about March
25 of '91 as the time frame for that to be available to us as a

1 group?

2 MR. CAMERON: That's right.

3 CHAIRMAN HOYLE: Okay, so that's something we
4 could pick up on as -- as a next meeting item for the first
5 meeting in '91?

6 MR. CAMERON: No, I think that that would be
7 appropriate.

8 CHAIRMAN HOYLE: Yeah.

9 MR. CAMERON: And what we'll do is we'll try to
10 make sure that we coordinate our -- our contract, the
11 development of those categories, so that we can have that as
12 an agenda item for the first meeting of the panel in '91.

13 CHAIRMAN HOYLE: Okay. Let me just add. I concur
14 in what Chip said in responding to your questions about the
15 Commission's involvement at this stage. I believe it's just
16 a -- it's certainly a major milestone to begin loading the
17 system and I think that's a point at which the Commission
18 would like to be able to have another look at it and be
19 briefed on it and if any policy guidance is necessary, they
20 could give it at that time.

21 MR. CAMERON: That's right. And another category
22 on here is compliance evaluation program and here we're also
23 going to look for input from the panel.

24 As you know, the Administrator is responsible for
25 evaluating the compliance of the participants in terms of

1 the document identification, preparation, and submission
2 requirements in the rule. And, furthermore, to periodically
3 report on DOE's compliance with the rule and to ultimately
4 make a certification decision on whether DOE is in
5 substantial compliance with the document submission --
6 identification and submission requirements, that being
7 geared to whether they can file the license application
8 under the Commission's rules and 10 CFR, Part 2, Subpart J.

9 What we're doing is we have a contractor, LaVogt
10 Anderson and working in conjunction with Price Waterhouse,
11 working on developing a compliance evaluation strategy for
12 us. And in terms of a strategy, we're talking about how
13 should we approach the compliance evaluation process?

14 For example, we could have the participants submit
15 the procedures that they're going to use to implement the
16 LSS rule for review, to ensure that procedures are in place.
17 Therefore, giving one greater assurance that the
18 requirements would be -- would be met. We want to develop a
19 comprehensive guidance manual for all LSS participants on
20 what the document identification, preparation, and
21 submission requirements are so that they can look to one
22 place for -- for guidance on what they're supposed to do and
23 to amplify on some of the areas of the rule that may need
24 further amplification.

25 What would be the approach to actually going out

1 and evaluating compliance in terms of, for example, audits?
2 But we're developing as part of this contract that will
3 actually include the implementation of the compliance
4 evaluation, the first step is to come up with an overall
5 strategy and we want to have that ready for -- for panel
6 review and we're eventually going to go to the -- to the
7 Commission with it.

8 And I know that on this particular sheet, the way
9 we were thinking -- John and I were talking about what might
10 be a good date for the next panel meeting -- we were
11 thinking about -- about June and this shows that there would
12 be some
13 -- there would be Commission approval, therefore needing APP
14 review of this issue before June, and I think that what
15 we'll need to do, since it is so important, is to perhaps
16 move that back a little so that that would be something that
17 would be on the June agenda also.

18 CHAIRMAN HOYLE: Or meet earlier than June if you
19 think it would be --

20 MR. CAMERON: Or meet earlier than June. Exactly.

21 And the final category here is O & M planning, and
22 the key here is that we have to -- the LSS Administrator has
23 to operate and maintain the system. Now, we have DOE
24 designing and developing the system and the problems of
25 transitioning from DOE and DOE contractors to LSSA and LSSA

1 contractors is going to be extremely complicated and has to
2 be well thought out in advance, and we are working on that
3 now, and Lynn Scattolini from our office is -- that's her
4 area, is operation and maintenance and planning for that and
5 planning for the transition. And we're in the process of
6 looking for contractors now to -- that would help us do that
7 O & M planning. But one thing that Lynn is working on is an
8 O & M planning strategy and identifying some of the issues
9 that need to be addressed.

10 But basically what I wanted to do is to -- to give
11 you an idea of all these other layers that all have to come
12 together in 1993 so that we can successfully operate and
13 implement the system, and we are fully committed and -- and
14 welcome the panel's advice on any number of these issues and
15 so we want to make sure that you're -- you're cued in to the
16 whole process where we develop some of these products.

17 CHAIRMAN HOYLE: All right, Chip. Thank you very
18 much. I think we do want as much guidance as we can from
19 the Administrator's office as to what are those items that
20 are -- are coming due in the next three, four, five, six
21 months so that we spend our time productively on the items
22 that are most important to you from a time standpoint, so
23 let's pick out two or three or so and try to narrow down a
24 time frame for the next meeting. From a planning
25 standpoint, the next meeting would be in Washington area,

1 Bethesda or Rockville or wherever we can set it up. It
2 looks like the draft recommendation by the Center and from
3 the Administrator's office on priority loading categories
4 would be available in March. The paper on compliance
5 evaluation strategy would be available by March also, but
6 perhaps earlier.

7 Everything else looks like it's a little further
8 out. How about access issues?

9 MR. CAMERON: We are going to have a access issues
10 resolution plan --

11 CHAIRMAN HOYLE: Later this year?

12 MR. CAMERON: -- developed, and I think that it
13 would be worthwhile to -- to have the panel look at that.

14 MR. MURPHY: Access to the system or access to
15 data are we talking about?

16 MR. CAMERON: Access to the system. In other
17 words, the -- all the practical problems of what a
18 participant has to prepare for on access.

19 MR. BALCOM: Submission of documents as well or
20 no?

21 MR. CAMERON: No. Access means participants
22 getting into the system and, you know, the term -- such
23 things as number of work stations needed, number of users,
24 passwords, all these things, we'd like to start fleshing
25 out. This paper would be more -- the discussion on it would

1 be to make sure that we had all the issues identified and
2 that we were heading in the right direction, but I think
3 that that would be -- that would also be a useful -- useful
4 document.

5 And, Betsy, I do have the right date on the
6 technical data, right? That's not going to be done till --
7 till later on; right?

8 MS. SHELBURNE: Right.

9 MR. CAMERON: Okay.

10 MS. SHELBURNE: But there will be draft forms in
11 February, federal reports, but the final protocol plan is
12 not due until the end of the fiscal year.

13 MR. CAMERON: Okay, so it looks like, John, that
14 this access planning, the priority loading, the compliance
15 evaluation strategy would be three issues at least for now
16 that we could -- we could flag for that first meeting. And
17 besides updates on various things.

18 Very good point. We did say earlier on that we
19 would talk about the whole project management aspects.

20 CHAIRMAN HOYLE: Yes, we did.

21 MR. CAMERON: Okay. And including the work
22 breakdown structure that we're developing and insuring
23 consistency with DOE, so that would be another -- another
24 issue that we could address.

25 I think that from our point of view, one thing

1 that the panel should think about is -- and I'm sorry that
2 Barbara isn't here right now -- but the SAIC design
3 documents and the SAIC has made their design sessions open
4 to whoever wanted to participate and some people have taken
5 the opportunity to do that -- the SAIC design documents are
6 going to be the foundation for proceeding with these
7 functional specs that are going to be done in the August of
8 '91 time frame. So the panel should probably think about
9 how it wants to comment on the SAIC documents, and this is
10 not in the sense of going to SAIC and having them redo
11 anything because I think the contract is -- is closing up.

12 But in terms of proceeding onto the next step of
13 using this SAIC documents, there were a number of issues
14 that came up yesterday related to this. I think that it
15 would be useful for all of us that are involved in design
16 and development to get some feeling from the panel on -- on
17 various aspects of the design. For example, are there
18 issues when you go through there that they could be flagged
19 for further review because it might be able -- we might be
20 able to achieve the LSS functionalities in a more cost
21 effective manner, whatever. But I think that there's an
22 issue that needs to be addressed there.

23 CHAIRMAN HOYLE: I think Barbara volunteered to
24 send us all a copy of the -- the design package. I guess
25 Maybe it's a very sizeable document.

1 MS. MACALUSO: Yeah, I think she said that, too,
2 but it's due by the end of November to Barbara.

3 CHAIRMAN HOYLE: Okay. It will come to Barbara by
4 the end of November.

5 MS. MACALUSO: If I remember correctly, yeah.

6 MR. MURPHY: I thought she said she was going to
7 send us whatever she got last week.

8 MS. MACALUSO: The draft? Okay.

9 MR. MURPHY: I shouldn't put words in her mouth.
10 I thought that's what she said.

11 MS. MACALUSO: I don't remember for sure. I
12 thought she said the final -- okay.

13 MR. BALCOM: I think they're going to be available
14 sooner and final approval would be the end of November.

15 MR. MURPHY: Yeah, that's what I thought.

16 MS. MACALUSO: Okay.

17 CHAIRMAN HOYLE: All right. We would ask Barbara
18 then to send to each member of the panel a copy of that
19 document and --

20 MS. SCATTOLINI: Well, I don't know if the panel
21 members want to spend a lot of time reviewing the draft
22 document because it's being substantially revised by SAIC at
23 this point.

24 MR. MURPHY: Well, panel members should decide
25 that for themselves.

1 MS. SCATTOLINI: Well, that's a good point. I
2 guess what I'm trying to do is just give you a heads up that
3 the content of the document will be changing a great deal
4 between the draft and the final document which is due next
5 month.

6 MR. BALCOM: Between what's available now and
7 November 31st?

8 MS. SCATTOLINI: Well, what's available -- what's
9 available now is the document that you've reviewed in the
10 design reviewing index. Our comments are being incorporated
11 into the final deliverable, which is due next month.
12 Certainly, and you're right, Mal, I apologize. I didn't
13 mean to say that you couldn't have access to it. You've all
14 been invited to the design review meetings. It's just that
15 it took us a week to read it and I'm just giving you a heads
16 up that it is being substantially revised at this point.

17 MR. BALCOM: Chip, how would you propose that that
18 analysis take place? Did I hear that you're suggesting some
19 -- some group get-together and it may be somewhat different
20 than the group that is involved in the design, at a meeting
21 perhaps of more broad interest in cost issues or something
22 like that and --

23 MR. CAMERON: Well, I guess that that's sort of
24 for the panel to figure out how they want to structure that.
25 I can -- I can say that we would like to get the panel's

1 input on the design documents and, Dave, I believe you're
2 doing a -- you're looking at doing a cost benefit also,
3 another look at cost --

4 MR. NIPPERT: That's correct, yeah. We're
5 revising the design documents to address some issues that we
6 had in terms of design and we have a few open issues from
7 earlier that we'll come to closure on.

8 But some of the big things, we're actually going
9 to do a cost benefit study and look at the cost analysis, so
10 all of that's not going to be done until just about the end
11 of November.

12 MR. CAMERON: Yeah, I --

13 MR. NIPPERT: And I think you need to see both of
14 those together really.

15 MR. CAMERON: I think you're -- I think you're
16 right about that and I -- I think when that is done, if the
17 panel could decide how they want to -- to review those
18 documents, they may just want to focus on the cost benefit.
19 They may want to go in and take a detailed look at the
20 design documents. I realize that some panel members have
21 more of a capability to do a detailed analysis than others,
22 but there could be a working group of the panel, for
23 example, to take a look at all of those documents and report
24 back to the panel in the -- the June time frame again. I
25 mean, that's a possibility.

1 CHAIRMAN HOYLE: Is that timing sufficient for DOE
2 to keep moving on?

3 MR. CAMERON: Well, Dave, when do you think that
4 DOE would be able to release -- DOE accepts in November and
5 after that I suppose that --

6 MR. NIPPERT: It's just a question of, you know,
7 reproduction and distribution. Documents -- we're going to
8 turn them over -- it will be in notebooks with dividers.
9 There are substantial documents. There's the capture system
10 document which originally was completed almost 18 months
11 ago. There's some revisions that will be made in that to
12 reflect decisions that have been made in the capture or the
13 search and image system, document -- the search and the
14 image is in two volumes and then the communications
15 documents and those will be -- the cost benefit report I
16 guess is going to be on the order of a hundred page
17 document. And by the time we do all the alternatives in the
18 costs, --

19 MR. CAMERON: That's a critical -- you know,
20 that's a critical document because I think as we know during
21 the negotiated rulemaking, the industry was very concerned
22 about costs, and not to say that everybody -- I think
23 everybody was concerned about cost, but the industry's --
24 the results of their cost benefit equation came out
25 different from -- from the rest of us.

1 But Barbara was making some comments yesterday
2 about, well, the costs have greatly increased and didn't
3 really explain what the increase was due to, so I think that
4 the cost analysis is going to be a critical document to look
5 at, but it sounds like sometime early next year perhaps
6 these documents could be made available to the panel and the
7 panel could take a look at -- we would welcome any comment -
8 - any comments from the panel on any aspect of the system
9 but, in order to be most efficient, you may want to -- you
10 may want to take a particular focus on this set of
11 documents, or you may want to focus on one particular
12 document.

13 But it would be important for us to get some
14 feedback from the panel because this is going to be used as
15 the basis for the RFP that eventually goes out and we want
16 to make sure that everything we want in the LSS or
17 everything we need is in that RFP.

18 And, of course, you know, the questions are down
19 the road about what's the best strategy for developing the
20 functional specifications in the RFP to -- to achieve that,
21 to get the type of innovation and cost effective proposals
22 that Boyd was talking about yesterday.

23 So we need to -- in terms of issues coming up in
24 the future, you need to really make sure that you don't lose
25 that -- that design and development focus as well as this

1 compliance evaluation, access planning, et cetera, et
2 cetera.

3 CHAIRMAN HOYLE: All right. Well, Barbara said
4 that DOE would be accepting the SAIC documents in November
5 but the F&E SIM process is already beginning even this month,
6 and she's going to have an acquisition support contractor
7 beginning work in April. So I'm wondering whether we need
8 to look at the cost report that's going to come out earlier
9 than May or June time frame which I thought would be
10 appropriate for our next meeting.

11 MR. CAMERON: Well, the critical date, the date
12 that DOE was using for the development of the acquisition
13 support documents, was August of '91. Now, that was based
14 on installation of the system in January of '93. Barbara --
15 Barbara's schedule was using August and September of '93.

16 So I don't know. We haven't sat down and talked
17 with her since that schedule change has been made, but -- so
18 I don't know whether the August, '91 date for these
19 acquisition support documents gets pushed out further into
20 the future or not at this point, but even if you kept it at
21 August of '91, I think that there's -- there's time to start
22 getting the panel organized towards having something done in
23 the June time frame and I think that the way this schedule
24 is now, that that should be -- should be timely.

25 And I think -- Boyd, your comments on the schedule

1 in terms of, you know, adding some more time in I take it
2 would probably go across the board in the schedule, not just
3 pushing --

4 MR. ALEXANDER: That's right.

5 MR. CAMERON: -- the ultimate installation date
6 off but pushing everything back.

7 MR. ALEXANDER: It would seem that that would be
8 the case, Chip. I think that's the optimum schedule you
9 have now which may be difficult to achieve. So I think it
10 would be everything, my view.

11 MR. CAMERON: Okay. Oh, and that would mean that
12 there would be -- if the panel got something together in the
13 June time frame for discussion that that would be plenty of
14 time to be able to feed that into the FEDSIM contractor's
15 work on the development of the RFP.

16 CHAIRMAN HOYLE: Okay, so let me ask Mal. Mal, do
17 you want some of this draft material or, Kirk, do you
18 already have some of this?

19 MR. BALCOM: I already have it.

20 MR. MURPHY: Well, the design document stuff
21 should be sent to Kirk, not to me.

22 MS. SCATTOLINI: He has it.

23 MR. BALCOM: Yeah, I have that.

24 MR. MURPHY: Other -- other members of the panel
25 don't necessarily have -- Dennis' client needs to look at

1 it.

2 CHAIRMAN HOYLE: But are we saying we want to see
3 some of the draft material that's being now changed and will
4 become final in November or do you want to see the final
5 material when the additional cost material is available?

6 MR. BECHTEL: I think I would like to see the
7 draft and the redrafts that come out of it.

8 CHAIRMAN HOYLE: Okay. Okay. And then we will
9 give everybody the finals when they're available, too. By
10 seeing the drafts, I guess I must ask you to -- if you have
11 any comment on those, they should -- you should be
12 commenting as an individual and get your comments in to the
13 LSSA office I would think. Is that --

14 MR. CAMERON: Well, I don't -- I don't know what
15 -- what our input is going to be to the SAIC design
16 documents past this point other than what we gave when Betsy
17 and Lynn participated in the design sessions. I think that
18 having a draft document would be good advance preparation to
19 get familiar with what the final documents were going to --
20 were going to look like. I'm not trying to say, "Don't
21 comment on the draft," but I just am not -- you know, this
22 is a contract between DOE and SAIC. It is coming to a close
23 and I don't know whether comments from us or anybody else
24 are going to be able to be accounted for at this point.

25 But I would emphasize the fact that the SAIC

1 documents are a foundation, but it doesn't mean that panel
2 comments can't be accommodated in the future before the
3 request for proposal goes out.

4 And, David, I don't know if you can say, you know,
5 -- if it's kosher for you to say anything about what the
6 DOE/SAIC process is in terms of where you -- you are in
7 terms of responding to comments or anything like that now.

8 MR. NIPPERT: Well, we've maintain a list of
9 action on it and gone through each of the reviews and we'll
10 consider do we want to close all those out, I mean, that we
11 talked about basically and we want to resolve all those and
12 in terms of the final document, we will have a list of those
13 issues that have come up and their resolution in terms of
14 what we decided, but basically based on the four-day review
15 that we completed last week, there's a whole lot of other
16 documents that were also produced besides the design
17 documents. I don't think we've got time to add a whole
18 brand new list of items and put them in there. There's just
19 no way to do that within the time that's allowed.

20 MR. CAMERON: Yeah, I think -- I think that what
21 it's coming down to is to focus on the future use of those
22 documents in the preparation of the RFP.

23 CHAIRMAN HOYLE: All right. Well, I agree with
24 your comments then that we could use the draft documents as
25 a preparation for the final. We should have the final to us

1 perhaps in the January time frame or so, maybe earlier, but
2 then we would discuss that -- I would circulate that to
3 everyone and we would have that as a June meeting discussion
4 item.

5 Any comment that anyone would want to offer to us?

6 MR. CAMERON: Betsy, did you --

7 MS. SHELBURNE: Well, I just -- are we also
8 talking about having a March meeting?

9 CHAIRMAN HOYLE: That's what I'm trying to narrow
10 down here.

11 MS. SHELBURNE: I was just thinking in terms --

12 CHAIRMAN HOYLE: Does it sound like that's what we
13 need?

14 MS. SHELBURNE: I don't know because I was
15 thinking if there was a March one then one agenda item will
16 be after people have received the material around Christmas
17 time to look at it and then come to the March meeting
18 prepared to figure out what they feel can be done at the
19 June meeting, but I -- maybe I'm confused. Maybe we aren't
20 having a March meeting.

21 MR. CAMERON: Yeah, it's -- you know, that could
22 be one function of a March meeting. I know that travel
23 funds are -- are getting more limited for everybody and even
24 though most of us or a lot of us are going to be in D.C. for
25 the meeting, it would -- people would have to -- to travel.

1 But I think, John, you're going to definitely have to come
2 up with -- if you sent the documents -- you're going to have
3 to come up with a suggestion about how the panel would work
4 to review those documents. Essentially, the step that Betsy
5 is saying could be discussed at a March meeting. You
6 wouldn't necessarily have to do that at a March meeting
7 then. We could get the consensus of the panel now on how
8 that should work or you could come up with a suggestion.

9 CHAIRMAN HOYLE: I'm flat out of suggestions at
10 the moment. Would any of the panel members care to offer
11 one that we can talk about now?

12 (No response.)

13 CHAIRMAN HOYLE: The -- what is your view on a
14 March meeting in the Washington area?

15 MR. TREBY: I guess I don't see a whole lot of
16 items to be brought up, other than this one which would just
17 be preparatory to a June meeting, so --

18 CHAIRMAN HOYLE: We could probably have the access
19 issues resolution in --

20 MR. CAMERON: Yeah, there could be a couple
21 things. It's just a question of -- it's not like you could
22 have a March meeting -- you have to think about if you have
23 a March meeting, does that mean that there will be some
24 critical things coming up within the next couple months that
25 you would need to have another meeting to discuss, so you

1 sort of have to weigh the costs and benefits of that.

2 Whereas if you had one meeting in June, and I'm
3 not -- you know, whatever you guys want to do, you know, is
4 fine with our office, but there may be a whole list of
5 things to be accomplished at the June meeting so that -- at
6 a June meeting so that, you know, we could be assured that,
7 you know, there would be a full two days or a day and a half
8 of meeting time.

9 CHAIRMAN HOYLE: Well, it sounds like there
10 certainly would be. I think what I need to do is do a
11 little homework on the subject of the design documents and
12 call each of you on the phone and talk about whether we need
13 an interim meeting, perhaps one in the March time frame, so
14 let me defer on that. But I think we found -- we do know we
15 have a number of items on our plate to take up by June, and
16 if we could get a couple of those out of the way in March,
17 maybe we could do that, but I will contact each of you
18 separately on that.

19 MR. BALCOM: John, minor point on the header
20 guidance being finalized in March. It seems to me that the
21 presentation about the technical documents has opened header
22 design up just a little bit and it looks like we need to add
23 a field -- another field or two, and normally the process
24 for approving those additional ones is by the ARP. So it's
25 possible we could do something like that by phone. I mean,

1 we certainly wouldn't need a meeting to do it, but it seems
2 to me that the working group ought to meet again sometime in
3 the next two months and meet with a representative of
4 Southwest Center and make a proposal for a new field or two
5 or why we don't need any more and be done with it. It needs
6 to be done by March, but I don't see that it needs a
7 meeting.

8 CHAIRMAN HOYLE: Okay. Good.

9 MR. BALCOM: I think it could be done by phone.
10 It seems to me it could be done by phone.

11 CHAIRMAN HOYLE: It sounds like to me that it
12 could. By the working group, you mean?

13 MR. BALCOM: By the working group.

14 CHAIRMAN HOYLE: Okay. And then --

15 MR. BALCOM: And the working group will tell you
16 what our recommendations are and then -- but that has to be
17 in Chip's hands -- I mean, that has to be approved by the
18 ARP by March according to the schedule.

19 CHAIRMAN HOYLE: Okay. So I will take note of
20 that and do that by correspondence or included in a March
21 meeting if we have such.

22 Anything else about the future meeting? Okay.
23 Going back to then the draft letter to the -- to NRC, I'll
24 ask Marilee to circulate the draft that I gave Elgie before
25 he left and repeat what I said then, and that was that I

1 would ask you to comment to me within the next ten days, so
2 that would be by October the 22nd. I will try to turn
3 around another draft to get it back to you in the following
4 week which would be the week of October the 29th for
5 comment. It could be that we will need an additional round
6 of drafts after that. I'm not sure.

7 And finally I'll get it to the -- to the agency.
8 In commenting, I would like you to give me your thoughts on
9 whether -- at what level of the agency the letter should be
10 sent and as much rationale for your own position as you can
11 so that we can put some rationale in the letter. I think
12 whatever level we write to would appreciate the thinking of
13 the committee and not just its view or its recommendation.

14 MR. MURPHY: How soon do you want them?

15 CHAIRMAN HOYLE: I'd like that by the 22nd of the
16 month so that I can crank that into a real useful draft.

17 MR. BECHTEL: This is just two pages; right?

18 CHAIRMAN HOYLE: It's just two pages.

19 MR. BECHTEL: Okay. It says one and then three.

20 CHAIRMAN HOYLE: I --

21 MS. ROOD: There was another page but it was
22 dropped.

23 CHAIRMAN HOYLE: Dennis points out we gave you a
24 sheet that has no number and then a page three. The second
25 sheet is page two. If there's no further business of the --

1 okay.

2 Marilee reminds me if we could set a date for the
3 June meeting, we could zero in on a conference room
4 somewhere in the NRC area. Our meetings have generally
5 started on Wednesday and are a Wednesday/Thursday meeting.
6 Does anybody have a -- and it looks like we'll have enough
7 for two days, I do believe, so we're talking about June 5
8 and 6, 12 and 13, 19 and 20, or 26 and 27. I would I think
9 tend to go for the middle of the month. It reminds me that
10 maybe Lenard Smith has his Commissioner meetings early in
11 the month, I believe, so I would go for 12 and 13 or 19 and
12 20. Nobody has a preference?

13 MR. TREBY: I'll suggest the 12th and 13th.

14 MR. BECHTEL: That's good. That's good for us.

15 CHAIRMAN HOYLE: Okay. Let's try for that, 12th
16 and 13th.

17 Before anybody else gets away, I do want to thank
18 the LSSA office for its participation here with us, Chip and
19 Lynn and Betsy. I appreciate that very much. Oh, and
20 Marilee, an enormous help getting the maintenance man to
21 jump through the window, and I thank you all for your
22 participation and your help in keeping this moving along and
23 I'll look forward to your comments on the draft letter in
24 the next ten days.

25 Thank you very much.

1 (Whereupon, at 12:45 p.m., the hearing in the
2 above-entitled matter was adjourned.)
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

REPORTER'S CERTIFICATE

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission

in the matter of:

NAME OF PROCEEDING:

DOCKET NUMBER:

PLACE OF PROCEEDING:

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

Official Reporter
Ann Riley & Associates, Ltd.



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

INFORMATION PAPER
ON
ABSTRACTING
IN THE
LICENSING SUPPORT SYSTEM

Office of the Licensing Support System Administrator

September 12, 1990

9408300267

September 12, 1990

LSSA INFORMATION PAPER ON ABSTRACTING IN THE LICENSING SUPPORT SYSTEM

I. PURPOSE OF THIS PAPER:

At the upcoming October, 1990 meeting of the NRC Licensing Support System Advisory Review Panel (LSSARP), the members are scheduled to continue the discussion on their recommendation to the LSS Administrator (LSSA) on the content of the LSS Header. One open item was the extent to which documents in the LSS should be abstracted. The purpose of this paper is to lay out information about abstracting which the LSSA believes should be taken into consideration by the LSSARP members as they examine this issue.

II. BACKGROUND:

During the March 1990 meeting of the LSSARP, a Technical Working Group was formed to prepare a draft recommendation for the fields for the LSS Bibliographic Header and Full Header. The Working Group met several times and prepared a report to the full LSSARP. The report recommended that abstracts be required only for documents and non-documents that will not be available in searchable full-text (i.e., those with either header only or header and image only). The report further recommended that the abstract field be optional for documents that will be available in searchable full-text. The Technical Working Group determined that the LSSARP should discuss the issue as to which LSS document types or groupings should be abstracted.

During the June 7, 1990 meeting, the LSSARP members agreed that abstracts were required for materials that will not be available in searchable full-text. They then discussed at length the need for an abstract for LSS documents that will be stored in searchable full-text. These discussions centered around cost versus benefit considerations. Differing points were made about:

- the need for any abstract in the header, given availability of full text,
- the sizable cost of abstracting, and
- whether only selected sets of documents might need to be abstracted and, if so, which sets.

No firm recommendation evolved. To focus the issue and to provide more definitive information about the cost implications of alternative abstracting scenarios, the LSSA offered to prepare an issue paper for the members to consider prior to the next LSSARP meeting in October. Since the June LSSARP meeting, the LSSA staff has reviewed existing information science studies related to this issue and gathered industry data on the costs of abstracting. The following is the result of that investigation, including a discussion of abstracting options and some alternatives to abstracting.

III. ABSTRACTING -- WHAT IS IT?

A. TYPES OF ABSTRACTING

In the Library/Information Science discipline, three types of abstracts have evolved. All are based on the human review and summarization of the content of a document. In order of increasing depth and coverage, they are:

- ▶ ANNOTATIVE -- A short description of the document which briefly describes the subject, usually limited to a few lines in length. This type of abstracting can be done by the same staff doing the bibliographic or descriptive cataloging.
- ▶ INDICATIVE -- A longer description than the annotative abstract, giving a more detailed summary of the document scope and content. These abstracts are traditionally about 200 words in length. This type of abstracting is usually done by professional indexers/abstracters having subject matter background and/or experience. The documents are usually reviewed once both for the assignment of subject terms and for the development of the abstract.
- ▶ INFORMATIVE -- The most substantive type of abstracting which includes not only indicative information but also summarizes the findings, answers, or data in the document. Such abstracts often eliminate the need to obtain or read the entire document. The length varies based on depth of document content. As with the indicative abstract, this type of abstracting is also done by professional indexers/abstracters having subject matter background and/or experience.

However, unlike the Indicative Abstracts, this type of abstracting may or may not be done by the same staff that are subject indexing the documents. If not, then another staff resource is required.

It is obviously more expensive as one moves from annotative to informative abstracting because of the additional time and higher level of expertise involved in reviewing the document and composing the abstract. Section IV and Appendix A. contain more information on the cost of abstracting.

B. ABSTRACTING IN THE LSS ENVIRONMENT

Given that the LSS Title/Description field is intended to contain (a) the titles of formal publications or (b) a brief description of less formal or untitled documents, all LSS documents will have annotative-type abstracts. This makes the assumption that titles of publications are somewhat descriptive of content. Therefore, annotative abstracting is not considered from a benefit-costs perspective in this issue paper.

Also, in the opinion of the LSSA, the LSS should not attempt under any scenario to provide informative abstracts because (1) the costs are excessively high and (2) such treatment of LSS documents is unwarranted given the availability of the document text on-line. The LSS abstract would only be intended as a search aid, not as a surrogate for the document itself, which is often the case with systems providing informative abstracts.

Therefore, in discussing the pros and cons of abstracts in the LSS environment, this paper assumes that any abstracts would be of the indicative type.

C. BENEFITS OF INDICATIVE ABSTRACTS

The following is a list of the potential or reputed benefits of having an abstract field in a full-text database. Where applicable, we have included a summary of the information gained from relevant research studies. It should be noted that no specifically applicable research has been found that directly speaks to the benefits/costs of abstracts in a full-text database having keyterms and header data, such as will be the case with the LSS.

1. IMPROVED PRECISION -- The presence and use of abstracts may improve the precision of subject/content searches because it is assumed that if a word or phrase is in the abstract, then it is probably a primary topic of the document. This

precision is gained by limiting word/phrase searches to the abstract field, either initially or after retrieving a document set via search of full-text or other parameters.

There is a current on-going debate in the information science literature about the benefits and power of full-text database software as compared to traditional systems that have only bibliographic (fielded) data, subject indexing, and abstracting. Most of this debate centers around the balance of "recall" versus "precision" capabilities. The attached articles are representative of the discussions and data surrounding this debate (see Attachments #1 through #5).

It is known that in striving to achieve the greatest recall (retrieval of all relevant documents), the precision (retrieval of only relevant documents) of search results suffers. This axiom is applicable to all types of information systems, ranging from bibliographic only to full-text systems. However, the degradation of precision to assure greatest recall is magnified in large full-text systems, especially for collections on a narrow and/or homogeneous topic, such as the HLW LSS. This problem will be further exacerbated in the LSS environment of decision support and litigation support where knowledge of all relevant materials appears more to be essential.

In a 1986 article (Attachment #1), Gerald Salton summarizes the results of several related studies. Simplistically presented, the precision/recall performance of different access methods can be drawn from two of the studies. These data support the belief that searching the abstracts can significantly improve recall (as compared to searching the full-text alone without) a significant loss in precision.

	<u>Recall Ratios*</u>	<u>Precision Ratios*</u>
Searching the:		
a. Text of Abstract	0.78	0.63
b. Controlled Descriptors Subject Indexing	0.56	0.74
c. Full Document Text	0.20	0.75

* Recall Ratio is number of retrieved relevant documents as percentage of all of the relevant documents in the database.

Precision Ratio is the number of retrieved relevant documents as percentage of all retrieved documents

As indicated in line b. above, the recall ratios are better if one has controlled subject terms to search as well as the full-text, without any significant loss of precision. Subject indexing will be done in the LSS.

2. RELEVANCY REVIEW -- Abstracts provide a summary of the entire document. Therefore, browsing the abstracts of a retrieved set of documents can aid in determining the usefulness of the document and the context in which the subject is treated without having to roam around in the text.

Also, abstracts can be very helpful when reviewing document listings or bibliographies in hardcopy away from the LSS workstation. This would be the case when LSS search specialists or intermediaries, e.g. librarians, research assistants, and paralegals, are performing searches in response to "client" requests. In one study, the presence of an abstract reduced the number of "missed documents" -- documents judged as not relevant by a review of the titles only, but which were subsequently determined as relevant after a review of the abstracts (Attachment #6).

3. COST SAVINGS -- Abstracts can potentially reduce the need for printing hardcopy of documents if a review of the abstract is sufficient for the searcher to determine the relevancy of the document for his/her needs.
4. TIME SAVINGS -- Abstracts can reduce on-line time if, as above, review of the abstracts negates the need to browse/read the full-text.

D. LIMITATIONS:

1. Abstracts are only as good as the abstracter. They are subjective, whether it be the author's characterization of his/her work or the abstracter's interpretation of the author's work.
2. Abstracts do not improve recall of subject/content searches in a full-text database if the abstract does not contain different terminology from the text. Different terminology that could improve recall might be more generic, more specific, synonyms, or the translation of jargon.
3. Abstracting only certain document types/categories places a burden on the user to know when abstracting was done and when it was not. Otherwise, users could unknowingly formulate search strategies that would provide false results. For

example, if all documents in a collection are not abstracted, then searches limited to the abstract field will automatically exclude non-abstracted documents and thereby possibly exclude relevant materials from the resulting hitlist.

IV. COSTS OF ABSTRACTING

A. AVERAGE COST PER ABSTRACT

The LSSA collected abstracting cost and productivity information from six companies that perform abstracting services. The information provided by respondents varied in terms of assumptions, such as variations in the size of documents, the QC reviewers/supervision ratios, and scope of abstracting. It was therefore difficult to normalize the data. However, there was not such a disparity in the data that some useful figures could not be compiled. The assumptions used for this paper are listed in the Table below and Appendix A.

Data was also provided by SAIC, based on their experience in the LSS prototype cataloging efforts. Their data show abstracting times of about seven (7) minutes per document based on a sample of 47 documents, each averaging 48 pages. Unfortunately, the SAIC timing estimates did not include a quality control review. Also, it was uncertain whether these times consistently included the actual review and analysis of the document scope and content before the composition and keying of the abstract.

B. ESTIMATED COSTS IN THE LSS

The following table presents the estimated costs of abstracting LSS documents by document type. The figures on the number of documents are extrapolations from recent SAIC re-evaluations of the size of the LSS database (see Attachment #7). The estimated number of pages in this SAIC report was divided by nine (9) to develop an estimated number of documents. The figure of nine (9) pages per document was selected because this was the size of the average document in the DOE Nevada RIS collection, which will contribute the vast majority of documents to the LSS.

The distribution of the estimated number of documents by major document types is based on recent figures from the three major HLW document collection: DOE's RIS systems in Las Vegas and at DOE Headquarters and the NRC's NUDOCS system.

Even though the figures in the table below are just gross estimates and may differ from the actual volume/costs experienced in the future; these figures are based on the best available data. For the purposes of this paper, they do provide the LSSARP members with a significantly improved basis for decision making.

Table 1. ESTIMATED COSTS OF ABSTRACTING IN THE LSS
(Numbers of Documents & Dollars in thousands)

<u>Cumulative Document Counts and Costs by Specified Year</u>						
LSS DOCUMENT COLLECTION BY DOCUMENT TYPE	BY 1995		BY 2000		BY 2005	
	NO. OF DOCMNTS	EST. COSTS	NO. OF DOCMNTS	EST. COSTS	NO. OF DOCMNTS	EST. COSTS
TOTAL	1,278	\$33,179	2,296	\$59,595	3,759	\$97,581
CORRESPONDENCE (64%)						
3 doc/hour	818	\$17,996	1,469	\$32,318	2,406	\$52,932
PUBLICATIONS/ REPORTS (23%)						
2 doc/hour	294	\$9,700	528	\$17,427	864	\$28,512
LEGAL & OTHER DOCUMENTS (13%)						
2 doc/hour	166	\$5,483	299	\$9,850	489	\$16,137

Assumptions:

1. A fully loaded rate of \$66.00 per hour. This includes the costs of labor (abstracters, quality control reviewers, and supervisors), G&A, overhead, and fee. Abstracting work activities include reading documents, composing abstracts, keying in the abstracts, and performing quality control and supervision.
2. A production rate of two abstracts developed and reviewed per hour (\$66.00 divided by 2 = \$33/abstract) was used for the Publications/Reports and Legal/Other Document categories. This is the production figure used by the National Federation of Indexers and Abstracters for 200 word indicative abstracts. For correspondence with typically fewer pages than the other two categories, a production rate of three per hour was used (\$66.00 divided by 3 = \$22/abstract).
3. While it is acknowledged that a portion of the LSS documents, particularly formal publications, will have an abstract or summary within the body of the document, no cost reduction was factored into this table. This decision was based on responses of the surveyed abstracting companies. They were reluctant to reduce estimates even if documents contained abstracts, due to the time required to verify the quality of the existing abstract and to edit as required for consistency of coverage with other abstracts. This decision was also supported in the timing tests performed by SAIC in their prototype. Also, no adjustment was made to acknowledge that some documents, such as transmittal correspondence, would not warrant abstracting, given that an annotative summary would be contained in the Title/Description field.

V. ALTERNATIVES TO ABSTRACTING

Section III.C presented the potential benefits of having abstracts in the LSS. This section highlights some of the LSS features currently specified in the SAIC draft LSS Search and Image Design Document which will provide some of the same benefits of abstracting without the continuing costs of abstracting. These software features, if not part of the off-the-shelf database package, can be developed at a finite, one time cost. This section also discusses some other features that could increase precision and recall.

A. CURRENT DOE LSS DESIGN FEATURES

1. Header Field Analysis: After a searcher has developed a hitlist of documents based on his/her search statement, this optional feature, if invoked, would present to the user a computed table of the frequency of occurrences of values for any specified Controlled Vocabulary Header Field. This shows the distribution of Descriptors, Sponsoring Organizations, Author Organizations, etc. within their hitlist.

For example, given the best known search strategy, the user creates a hitlist of 230 documents on boreholes and volcanic rocks. The user then requests the Header Analysis feature, using the Descriptor field. The LSS system would then present a listing of all Descriptors used to describe the 230 and show the number of documents having each descriptor, in decreasing frequency order. The table would look something like:

This query found 230 units.
Header Analysis on Descriptor Field:

<u>Descriptors</u>	<u>Frequency</u>
Fractures	47
Fractures (Geologic)	43
Topopah Springs Member	39
Boreholes	36
Drill Cores	30
Stratigraphy	25
:	
:	
:	
Volcanic Rocks	11
Structural Geology	10
Strain (Geology)	4

The user could use this information about their hitlist to select parameters of greatest or least interest to refine the search statement and create a query with greater precision. For example,

the searcher might now want to broaden the search to include all documents on Topopah Springs Member while also excluding documents on Stratigraphy and Strain.

2. Ranking Retrieved Documents Based on Selected Term Frequency:

This LSS feature will allow the user to rank and display the documents in his/her hitlist in decreasing order according to density of selected ASCII-text words in the text. Density is defined as the number of times a relevant words or phrases appear in the document as a percentage of the total number of words in the document. For example, the words abstracts, abstracted, abstracting, and abstracters are repeated about 140 times in this 4,000 word paper. This represents 3.5% of all words in this paper. The percentage would be even greater if "stop" words (such as a, the, were, most, in, etc.) were excluded from the total word count.

This process will present the hitlist in an order which provides the most relevant documents first on the assumption that if the specified words are repeated frequently in the document, that is a major topic covered in the document.

B. POTENTIAL LSS DESIGN FEATURES

The following are search and retrieval software features that are not currently in the DOE design. These features may warrant further investigation, given the costs of abstracting, the concern of excessively large hitlists, and the problems of low recall and low precision in large text databases.

1.a. Automatic Abstracting -- There are current software packages that purport to scan existing text and present the contents into an abstract-like summary. Such a software feature could be used to add a summary to the LSS header record for presentation to searchers and reviewers of bibliographies to enhance their determination of the relevance of documents retrieved. This would potentially provide the benefits of: (a) reducing the orders for non-relevant documents or (b) finding relevant documents that might have judged non-relevant upon review of the bibliographic information only.

1.b. Optional Extensive Bibliography Format -- LSS users could have the option of ordering the "first" ASCII page of each document in their hitlist to be printed along with a header bibliographic listing. Such a feature would have the same benefits as Automatic Abstracting, described above.

2. Sophisticated Ranking Algorithms -- Over the past several years, the information science literature has contained many articles about research to improve text search results using a variety of statistical and lexical analysis methods. Basically, these are centered on the clustering of related or synonymous terms

and word patterns. Attachments #4 and #8 are examples of such techniques. The capabilities of such software enhancements to improve recall and precision will be carefully monitored. As features become proven, they could be incorporated into the LSS design over the life of the system.

VI. PROS & CONS OF DIFFERENT OPTIONS FOR ABSTRACTING:

A. ALL DOCUMENTS

- PROS: ▶ Consistency and simplicity
- CONS: ▶ Prohibitively Expensive
- ▶ Not warranted for traditional 'correspondence' given:
- ▶ use of Title/Description Field which will provide short annotative summary for relevancy review.
 - ▶ full-text search capability
 - ▶ multiple other access points in the header fields for content/subject searches of all documents, such as descriptors, identifier, project/special class fields etc.

B. ALL NON-CORRESPONDENCE-TYPE DOCUMENTS - "everything but .." Exclude letters, memos, telephone conversation reports...

B.1 Abstract all non-correspondence regardless of how long or short the document.

- PROS: ▶ Less expensive than Option VI.A.
- CONS: ▶ Somewhat wasteful given that some "short" documents do not warrant such treatment.

B.2 Abstract only non-correspondence over a certain page count.

- PROS: ▶ Less expensive than VI.B.1.

- Increased benefits of relevancy review and precision
- CONS:
- Selection of document size cutoff is arbitrary and subject to debate.
 - Searchers are very unlikely to keep this arbitrary rule in mind. Therefore, if they limit their searches to the Abstract Field for precision, then they could unknowingly exclude whole sets of documents and get erroneous search results.

C. ABSTRACT ONLY SPECIFIC DOCUMENT TYPES.

C.1 For All Documents Coded as Specified Document Types -- Pick up Abstracts/Summaries as available within documents or compose and add if not.

- PROS:
- Less Subjective or arbitrary in the selected universe than VI.B.2.
 - Much less expensive because of smaller universe of documents to be abstracted.
 - Most understandable alternative to most, if not all, searchers. Therefore least likely to be misused in searching.
- CONS:
- Still somewhat subjective in that the assignment of Document Type codes is somewhat subjective.
 - Inconsistent treatment of abstracts and therefore varying quality if abstracts drawn from the text are not strictly reviewed for consistency with LSS abstracting standards.

C.2 Only Store Abstracts in Headers for Documents which have author-generated Abstracts/Summaries available in the text which can be "grabbed" and put in header as searchable full-text.

- PROS:
- The least expensive alternative while still allowing searching of this text because submitter's preparation staff and/or LSSA staff do not have to compose and enter the abstract.

- The abstract listed in bibliographies will assist the reviewer in determining the potential relevance of documents retrieved.
- CONS:
- Universe of documents which contain abstracts for searching and for presentation is totally random. This does not appear to be a viable option because searchers could not use these randomly existing abstracts with any reliability for identifying relevant documents.
 - Subjective in determining if document contains text which could be used as an abstract.
 - Inconsistent treatment of abstracts and therefore varying quality if abstracts drawn from the text are not strictly reviewed for consistency.

C.3 Only Store Abstracts in Headers for Documents which have author-generated Abstracts/Summaries available in the text which can be "grabbed" and put in header but not allow this Abstract field to be searchable.

- PROS:
- The least expensive alternative. A minimal cost to transfer and store the pre-existing text in the header in a non-searchable field.
 - The abstract listed in bibliographies will assist the reviewer in determining the potential relevance of documents retrieved.
 - By not allowing searches to be limited to Abstract Field in this option, it prevents users from unknowingly eliminating potentially relevant sets of documents.
- CONS:
- This option presents a design issue to be solved because the abstracts in LSS header records that describe documents or data that are not stored in searchable full-text would have to be made searchable.

VII. CURRENT LSSA STAFF VIEW:

The LSSA staff believes strongly that manually prepared abstracts should not be created for inclusion in the Licensing Support System

in searchable text for those documents that are already stored in searchable full-text due to the substantial costs projected for abstracting in comparison to the benefits. Although there is the potential for low recall and precision ratios in large text databases, abstracting is not the only remedy. The other access points in the LSS header fields and the software features specified in the current LSS design will greatly enhance to searchers ability to create useful sets of documents. Also, the LSSA staff will continue to work with DOE in investigating additional software tools to increase performance and will recommend the development of such software if it is a cost-effective approach.

The LSSA staff does believe that the text of abstracts that already exist in documents should be captured in the Full LSS Header. This would be in a non-searchable field to be used for presentation and relevance review only, (Option C.3) above. This assumes the design issue can be solved related to the need to search abstracts for those documents/data not stored in searchable text.

SUMMARY OF INDUSTRY SURVEY OF ABSTRACTING COSTS

APPENDIX A

DIRECT HOURLY LABOR RATES	COMPANY A	COMPANY B	COMPANY C	COMPANY D	COMPANY E	COMPANY F	NFAIS
ABSTRACTERS	\$13.50 - 18.00	\$25.00	\$10.00 - 15.00	Unit Charge	nr	\$12.00	\$13.50
QUALITY CONTROL REVIEWERS	nr	\$25.00	nr	"	nr	nr	nr
SUPERVISORS	\$30.00	\$25.00	nr	"	nr	nr	nr
RATIO OF QC PERSONNEL TO ABSTRACTERS	1:2	1:5	nr	1:3	1:4	nr	1:4
RATIO OF SUPERVISORS TO ABSTRACTERS	1:20	1:15	nr	1:15	Same Person as QC	nr	nr
UNIT CHARGE PER ABSTRACT	nr	\$58.50	nr	\$33.29	\$16.77	nr	nr
TIME TO PRODUCE AN INDICATIVE ABSTRACT	20 Pages of doc. per hour	135 mins/ document	nr	49 mins/ 35 page document	37 mins/ 12.5 page document	nr	30 mins/ document

NOTES: nr = not reported

NFAIS = National Federation of Abstracters and Indexers

CALCULATIONS OF FULLY LOADED HOURLY RATEAverage Direct Hourly Rate:

Abstracters	=	\$15.75
QC Personnel	=	20.00
Supervisors	=	27.00

Ratio of QC Personnel to
Abstracters = 1:3.5

Ratio of Supervisors to
Abstracters = 1:15

<u>Abstractor's hourly rate</u>	\$15.75	
+ portion of QC rate	<u>5.71</u>	(\$20 hourly rate for QC personnel divided by 3.5)
	\$21.46	
+ portion of Sup.rate	<u>1.80</u>	(\$27 hourly rate for Supervisors divided by 15)
	\$23.26	
+ Overhead (120%)	<u>27.91</u>	
	\$51.17	
+ G & A (20%)	<u>10.23</u>	
	\$61.40	
+ Fee/profit (8%)	<u>4.91</u>	
	\$66.31	=== Fully loaded hourly rate for abstracting services.

ATTACHMENTS

- #1 Salton, Gerald. "Another Look at Automatic Text-Retrieval Systems." Communication of the ACM 29(7). 648-656. July 1986.
- #2 Blair, David C. and M.E. Maron. "An Evaluation of Retrieval Effectiveness for a Full-Text Document-Retrieval System." Communications of the ACM 28(3). 289-299. March 1985.
- #3 Tenopir, Carol. "Contributions of Value Added Fields and Full-Text Searching in Full-Text Databases." Proceedings of the National On-Line Meeting - 1985. Medford NJ: Learned Information, Inc., 1985. pp. 463-470.
- #4 Ro, Jung Soon. "An Evaluation of the Applicability of Ranking Algorithms to Improve the Effectiveness of Full-Text Retrieval. I. On the Effectiveness of Full-Text Retrieval." Journal of the American Society for Information Science. 39 (2), 73-78. 1988.
- #5 A. Jordan, John S. Letter to the Editor, Journal of the American Society for Information Science (JASIS) 40(3), 362-363. 1989
B. Lancaster, F.W. Letter to the Editor, JASIS 40(3), 362. 1989.
- #6 Saracevic, Tefko. "Comparative Effects of Titles, Abstracts, and Full Texts on Relevance Judgements." Proceedings of the American Society for Information Science. Vol. 6 Oct.1-4, 1969. pp. 293-299.
- #7 Science Applications International Corporation. Licensing Support System, Revised Data Scope Analysis. Draft. dated August 28, 1990.
- #8 Deerwater, Scott et. al. "Indexing by Latent Semantic Analysis" Journal of the American Society for Information Science 41(6): 391-407. 1990.

APPLICABILITY OF APPROVED HEADER FIELDS TO THE SUBMISSION AND RETRIEVAL OF TECHNICAL DATA

	Particularly Applicable	Text- Searchable	Free-Form (Uncontrolled Entry)
BY PARTICIPANT			
Accession Number	Access Code		
Submitter Center	Storage Location		
Submitter Page Count			
Title/Description	X	X	X
Author	Name of Contact		
Author Organization	X	X	
Addressee			
Addressee Organization		X	
Document Date			
Document/Report Number			
Document Condition			
Edition/Version		X	
Event Date, Code	X		
Protected Status			
Related Documents			X
Special Class		X	
Abstract/Summary	X	X	X
BY PARTICIPANT OR LSSA:			
Document Type	Form of Data	X	
Sponsoring Organization	X	X	
Copyee			
Copyee Organization		X	
Publication Data		X	
Descriptors (Thesaurus)	X	X	
OPTIONAL:			
Identifiers	X	X	X
Comments	X	X	X
BY LSSA:			
LSS Accession Number			
Number of Images			
Pointers	X		

LICENSING SUPPORT SYSTEM FUNCTIONAL DESIGN

PRESENTATION

TO

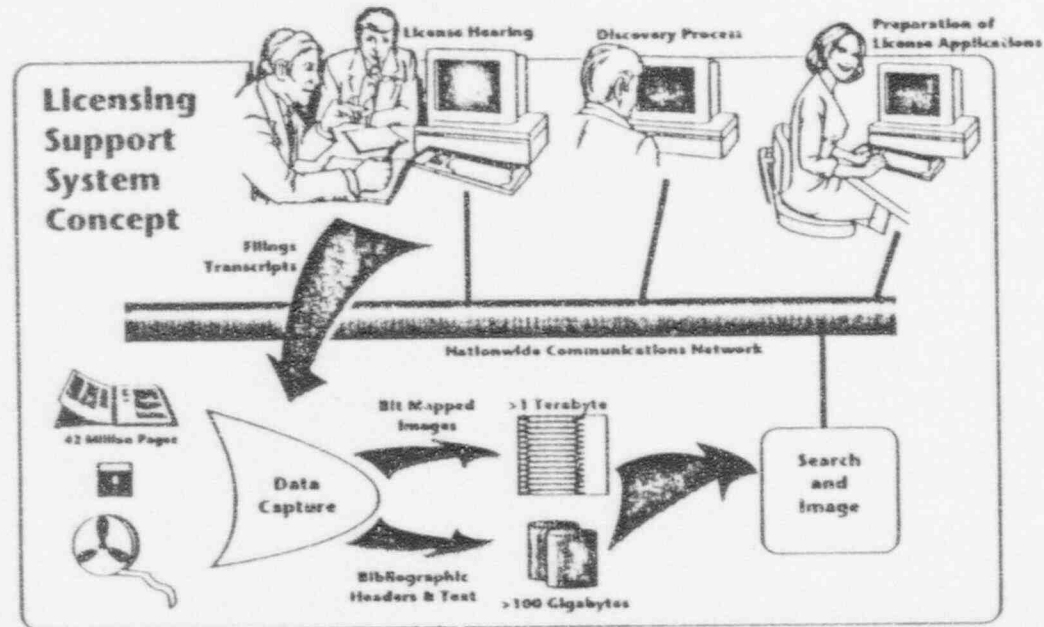
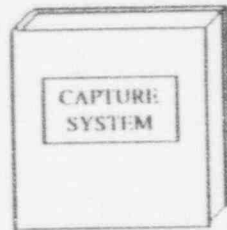
ADVISORY REVIEW PANEL

OCTOBER 10, 1990



Science Applications International Corporation

LSS CONCEPT



LSS DEVELOPMENT LIFE CYCLE

NEEDS ANALYSIS

- Preliminary Needs Analysis
- Preliminary Data Scope Analysis
- Conceptual Design Analysis
- Benefit-Cost Analysis
- Concept Feasibility Analysis

PROTOTYPE TEST BED

- Prototype Test Report

REQUIREMENTS DEFINITION

- System-Level Requirements Document

SYSTEM DESIGN

- Capture System
- Search & Image System
- Communication

IMPLEMENTATION

- Specification Document(s)
- Detailed Design
- Software
 - Purchased
 - Developed
- Hardware
- Integrated System

OPERATION

- Full System Operation

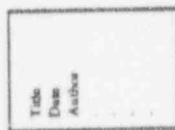


Science Applications International Corporation

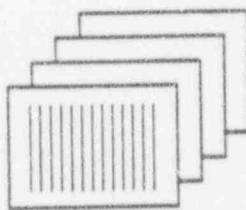
KEY CONCEPTS

UNIT

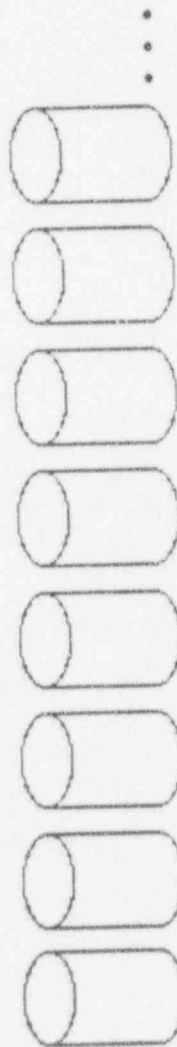
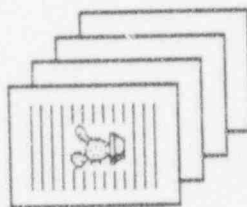
Header



ASCII Text



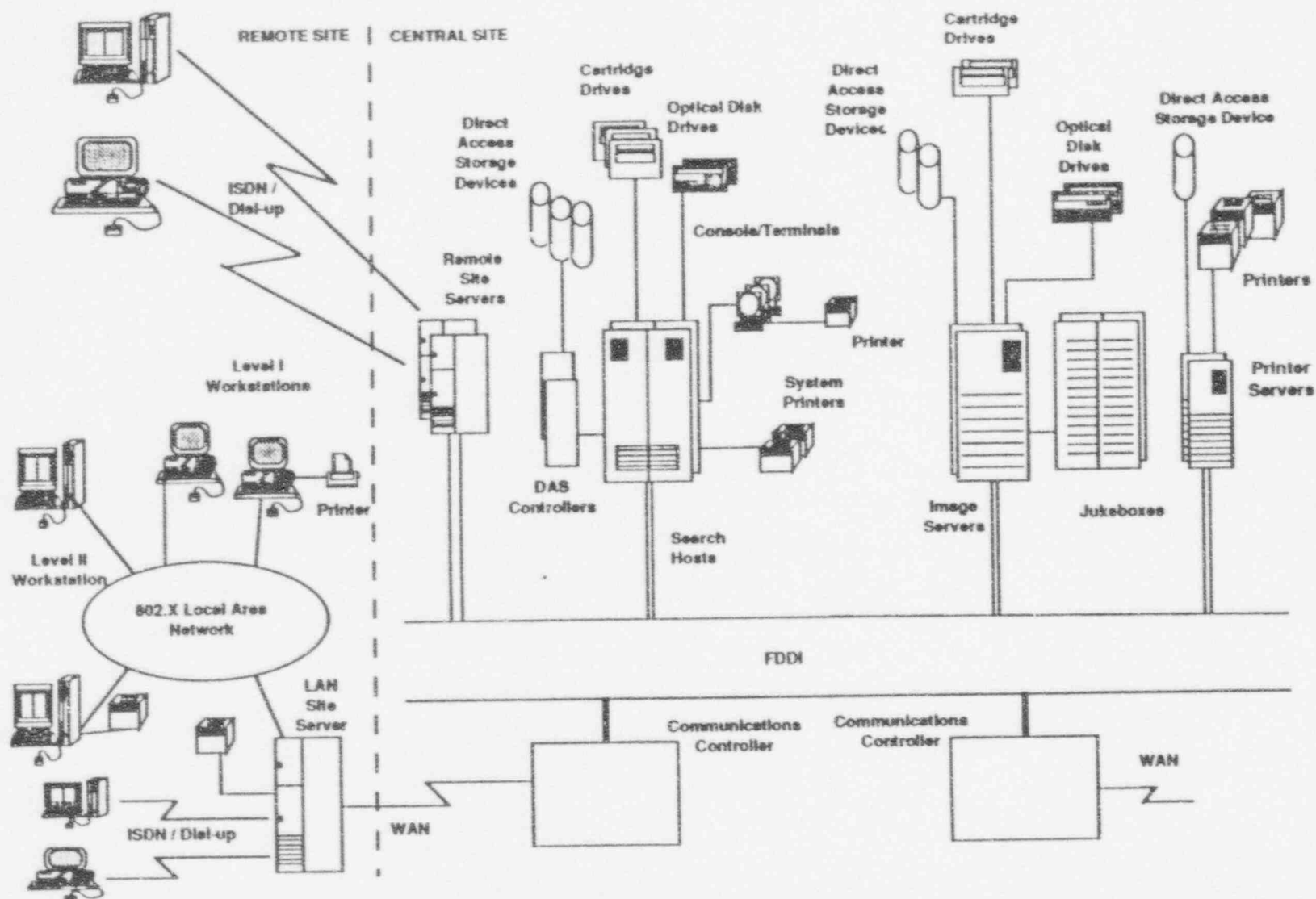
Images



PARTITIONS

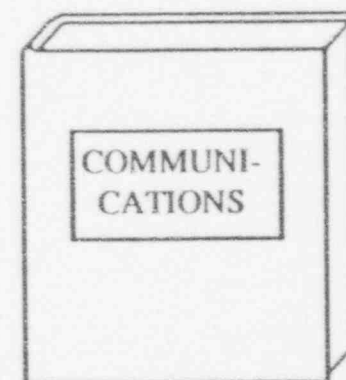
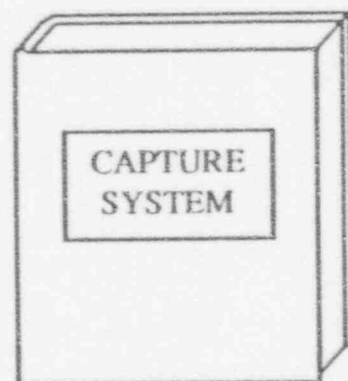
SAIC

Science Applications International Corporation



LSS SEARCH & IMAGE HARDWARE ARCHITECTURE

DESIGN DOCUMENT



SAIC

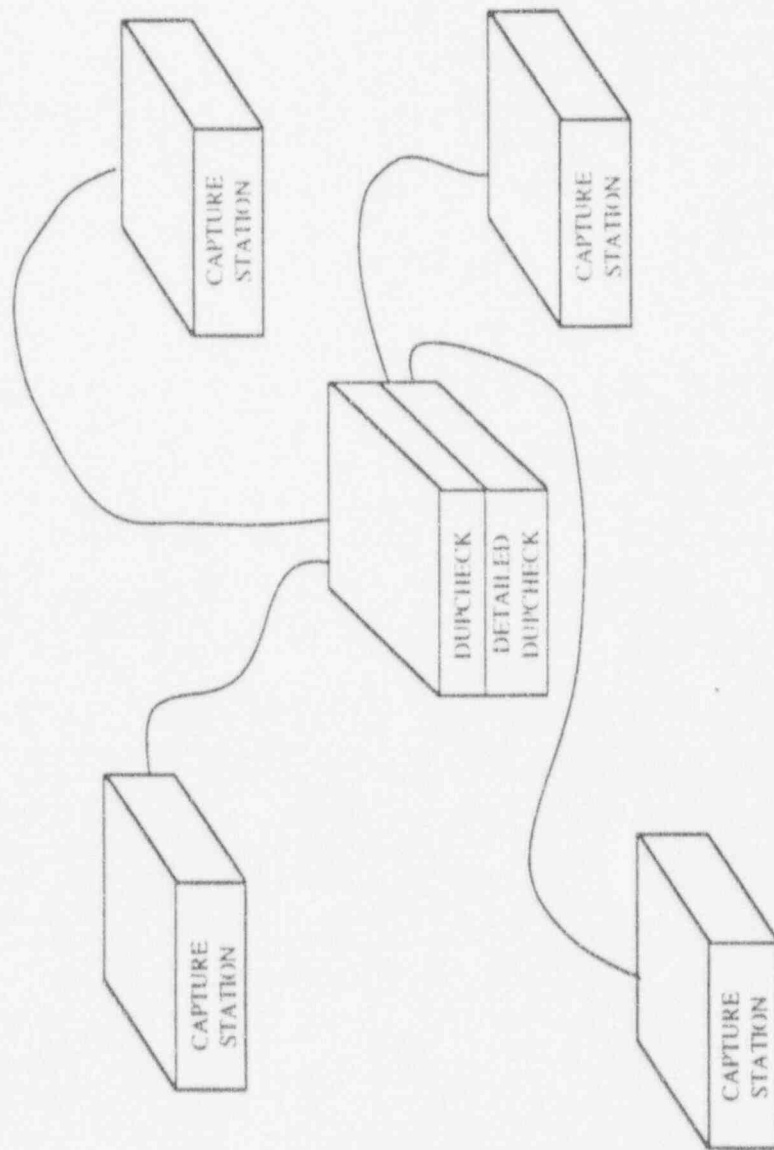
Science Applications International Corporation

LSS CAPTURE SYSTEM



Science Applications International Corporation

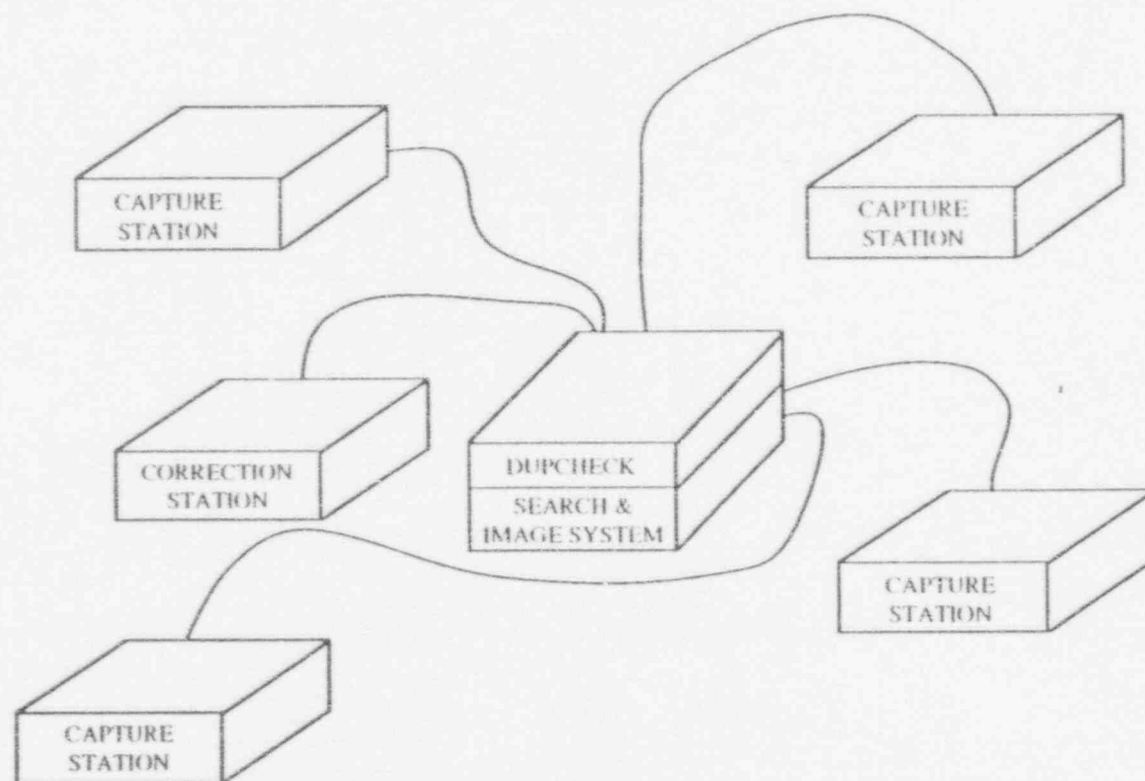
CAPTURE SYSTEM (Initial)



SAIC

Science Applications International Corporation

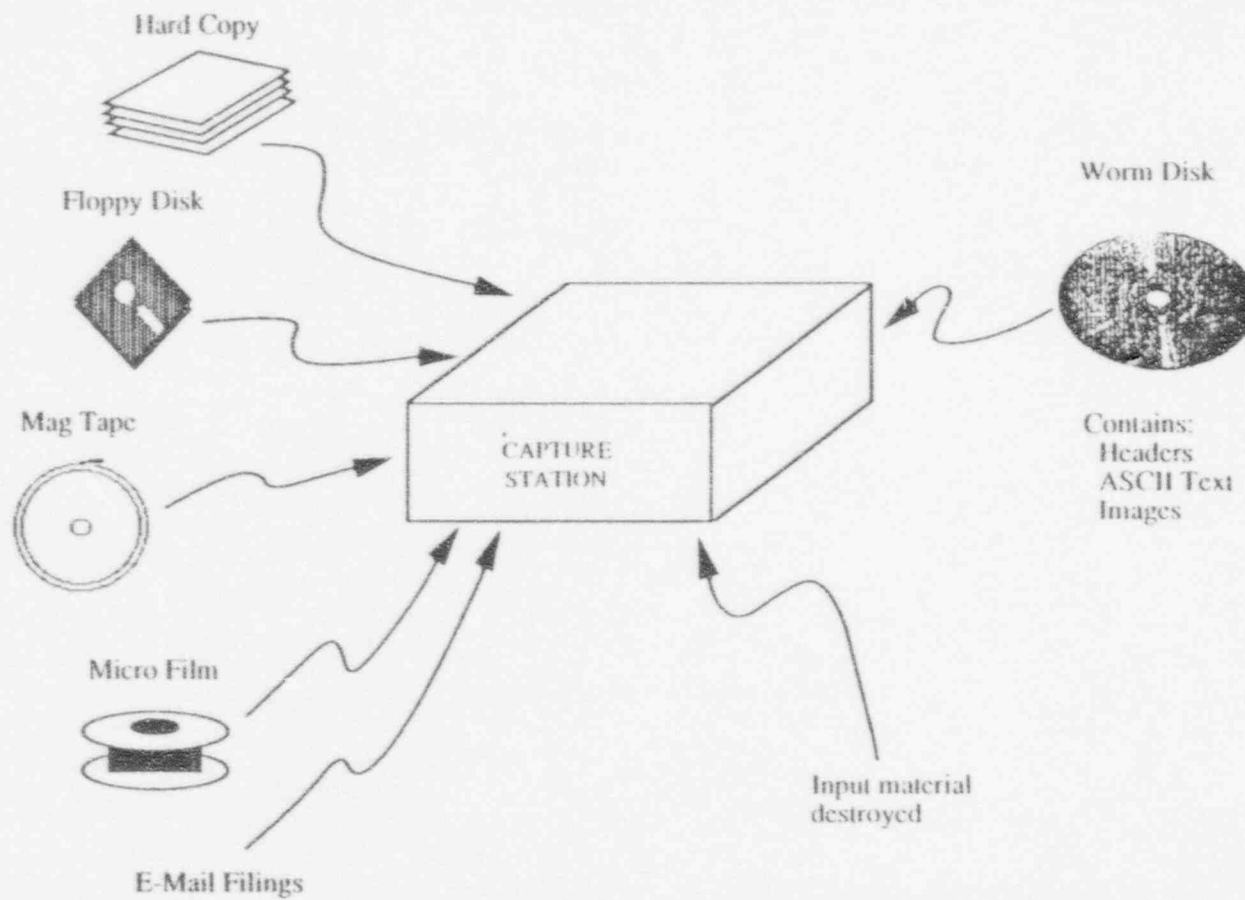
CAPTURE SYSTEM (After Search/Image System Operation)



SAIC

Science Applications International Corporation

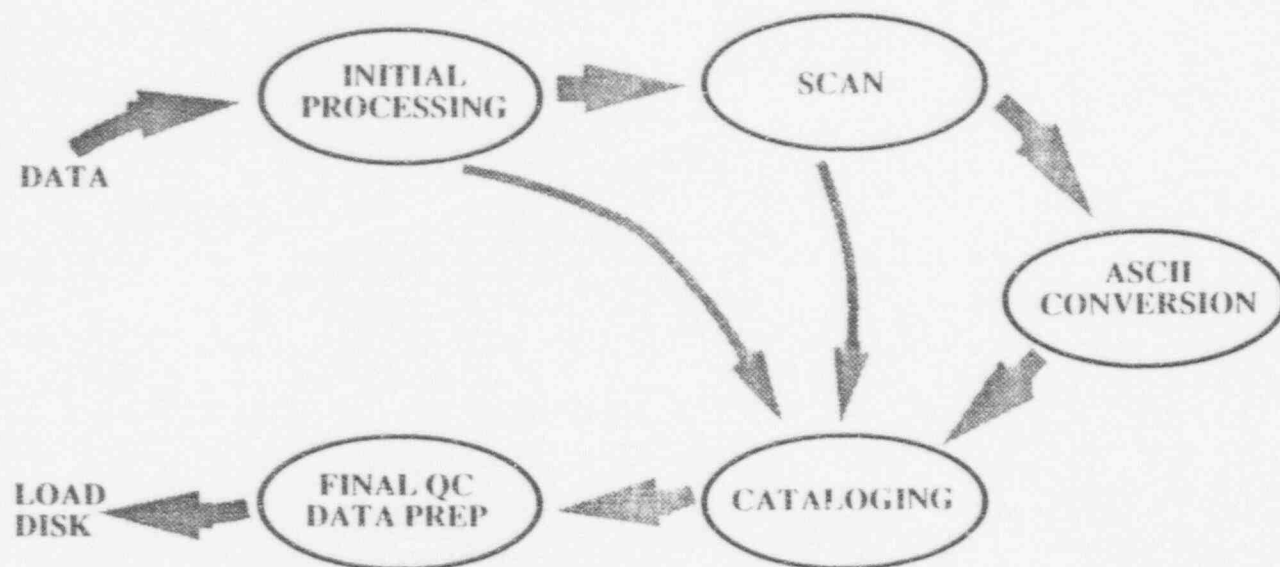
CAPTURE STATION



SAIC

Science Applications International Corporation

CAPTURE STATION PROCESSES



SAIC

Science Applications International Corporation

INITIAL PROCESSING

- Receive boxes, packages, envelopes, etc.
- Log into receiving database
- Check for readability/conformance
- Reject non-conforming material
- Microfilm print to paper
- Subdivide into "units"
- Assign accession number
- Apply barcode to each number
- Process E-Mail filings
- Verify/enter submitter header data
- Automated initial duplicate check
- Detailed dupcheck if warranted



Science Applications International Corporation

SCAN

- Electronic image from hard copy on page basis
- Pages tracked individually by barcodes
- Images compressed and stored
- Electronic images created for E-Mail filings



Science Applications International Corporation

ASCII CONVERSION

- Process decision based on image quality
 - OCR and edit
 - Rekey (large jobs subcontracted)
- Resultant quality 99.8% (2 errors per 1000 characters)
- LSS spell dictionaries maintained by LSSA
- Quality Control check



Science Applications International Corporation

CATALOGING

- Completes header fields
- Cataloging tools
 - Images printed to hard copy
 - Thesaurus
 - Controlled vocabularies
 - Previously completed headers
 - Indexed text and word counts
- Quality control check
- Thesaurus and controlled vocabularies under LSSA



Science Applications International Corporation

FINAL QC / DATA PREP

- Verify headers/image/ASCII text
- ASCII text pages correspond to image pages
- Organize data
- Write to load disks for transmittal to search & image system and archive



Science Applications International Corporation

PROCESS CONTROL

- Controls process flow
- Provides process archive record



Science Applications International Corporation

CORRECTION STATION

- Provides for correction to header/image/text before record is "locked"
- Uses archived load disk to create complete corrected record
- Creates new load disk



Science Applications International Corporation

LSS
SEARCH & IMAGE



Science Applications International Corporation

MAJOR DESIGN PARAMETERS

# USERS	472 Registered	260 On-Line Peak Load	
USER LOCATIONS	Washington DC Area <u>216</u>	Nevada <u>157</u>	Other <u>99</u>
DATA BASE SIZE	42 Million Pages	1.5 Million Documents	
HARD COPY DISTRIBUTION	Peak Demand	10 Million Pages a Year	
2 TYPES OF WORKSTATIONS			
Level I	No Image Capability		
Level II	Image Capability		

PRIMARY FUNCTIONS

QUERY BUILD

PRINT

SEARCH AIDS

DATABASE LOAD

RESULTS ANALYSIS

SYSTEMS
ADMINISTRATION

DISPLAY



Science Applications International Corporation

QUERY BUILD

WINDOWS & PICKLISTS

TYPE-IN



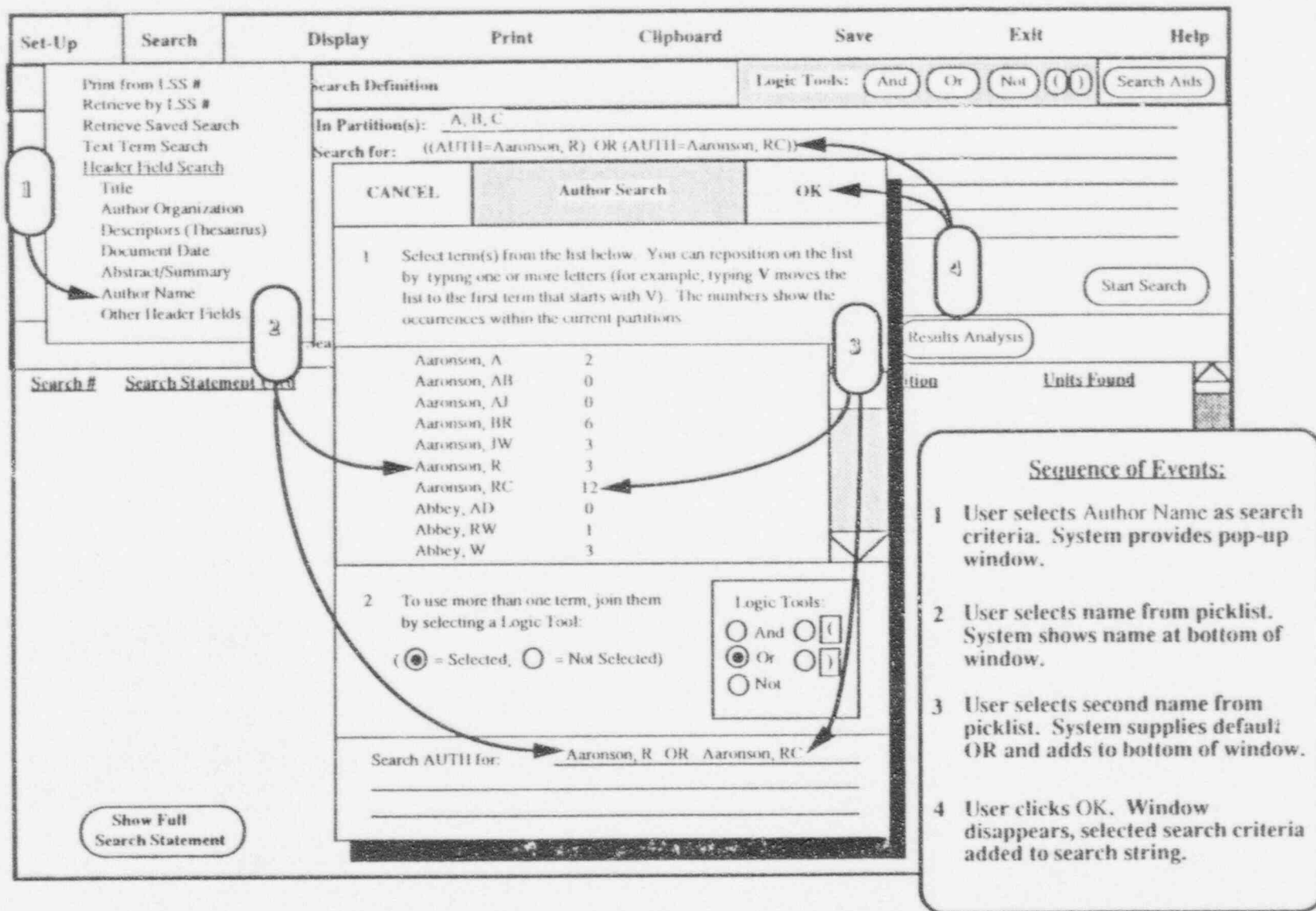
Science Applications International Corporation

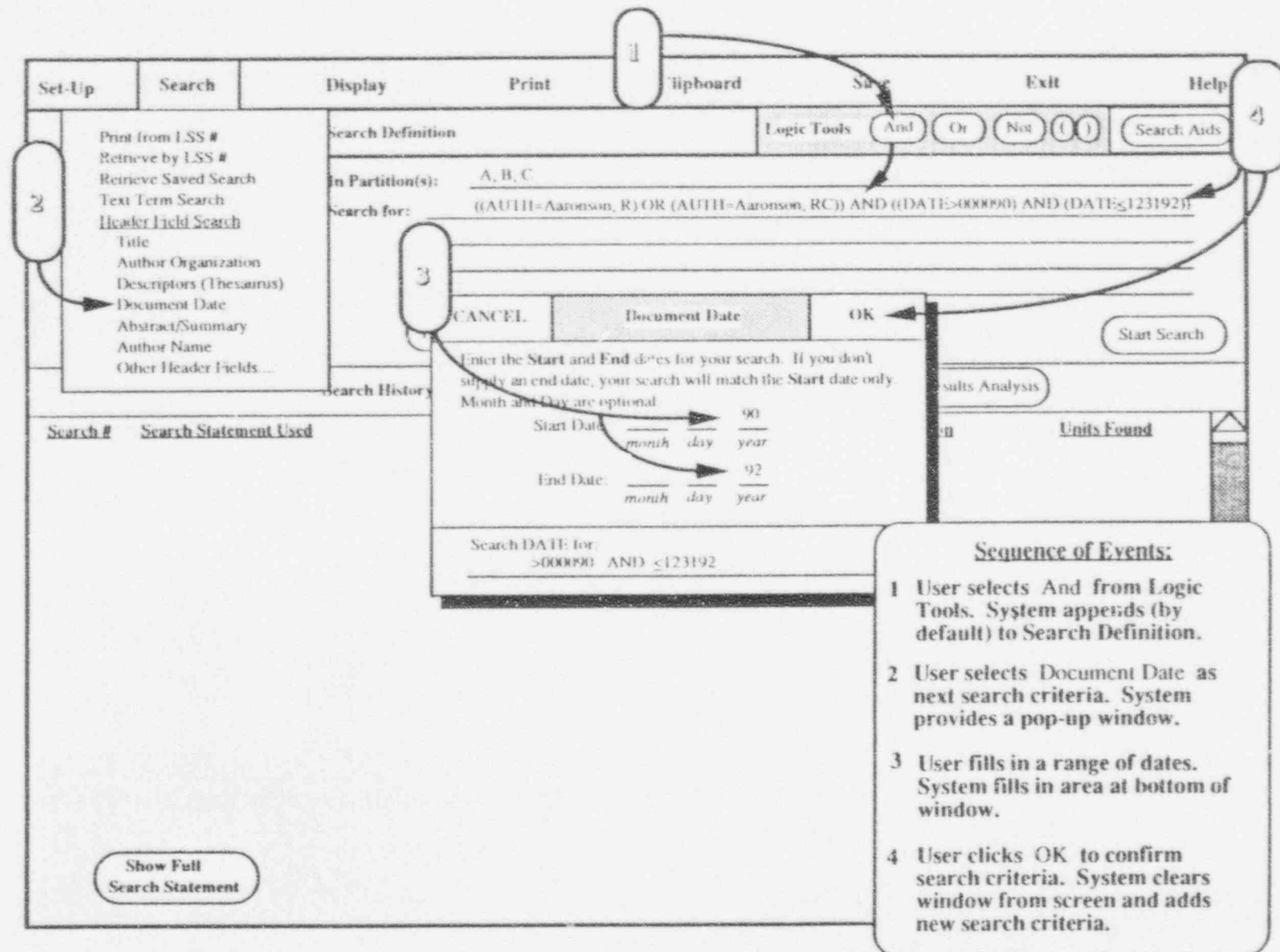
Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
Search Definition				<div>Logic Tools</div> <div>And Or Not ()</div> <div>Search Aids</div>			
In Partition(s): Search for:				<div>Erase Search Definition</div> <div>Start Search</div>			
Search History				Results Analysis			
Search #	Search Statement Used	Partition	Units Found				

Show Full Search Statement

Setup	Search	Display	Print	Clipboard	Save	Exit	Help
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Partitions</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Selection Preference</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Display Settings</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Result Set List Format</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Header Field Display</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Side By Side</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Tutorial</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Help</div> <div style="border-bottom: 1px solid black; padding-bottom: 5px;">Novice User Interface</div> </div> </div> </div>		<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Search Definition</div> <div>Logic Tools: And Or Not ()</div> <div>Search Aids</div> </div> <div style="border-top: 1px solid black; padding-top: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>In Partition(s): <u> D, E, I </u></div> <div>Search for: <u> </u></div> </div> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <div style="display: flex; justify-content: space-between; border-bottom: 1px solid black;"> CANCEL Partition Selection OK </div> <div style="padding: 5px;"> Partitions are by type of unit and by date. The current selections are shown below. To search other partitions, select one or more from each column. (<input checked="" type="radio"/> = Selected, <input type="radio"/> = Not Selected) </div> <div style="display: flex; justify-content: space-between;"> <div> <input type="radio"/> Partition A <input type="radio"/> Partition B <input type="radio"/> Partition C <input checked="" type="radio"/> Partition D <input checked="" type="radio"/> Partition E </div> <div> <input type="radio"/> Partition F <input type="radio"/> Partition G <input type="radio"/> Partition H <input checked="" type="radio"/> Partition I <input type="radio"/> Partition J </div> </div> </div> </div> </div>					
<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Search #</div> <div>Search Statement Used</div> </div> <div style="border-top: 1px solid black; height: 100px;"></div> </div>		<div style="border: 1px solid black; padding: 5px;"> <div style="display: flex; justify-content: space-between;"> <div>Results Analysis</div> <div>Units Found</div> </div> <div style="border-top: 1px solid black; height: 100px;"></div> </div>					

Show Full
Search Statement





SEARCH AIDS

THESAURUS

LIKE-UNIT SEARCH

WORD SEARCH WITHIN UNIT

NEAR SPELL

RETRIEVAL OF RELATED DOCUMENTS



Science Applications International Corporation

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
Search Definition In Partition(s): Search for: <u>PGAT + CENTER (NPS)</u> <input type="button" value="Erase Search Definition"/>		Logic Tools: <input type="button" value="And"/> <input type="button" value="Or"/> <input type="button" value="Not"/> <input type="button" value="()"/>		Thesaurus Alphabetical Hierarchic Listing Key Words In Context Listing Near Spell Descriptor Profile Search Text Search within Unit Related Documents		Search Aids	
Search History							
Search #	Search Statement Used	Partition	Units Found				
<div style="text-align: right;"> <input type="button" value="Show Full Search Statement"/> </div>							

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Page ____ of ____ Unit 3 of 88 in Results Set Search Aids

Title: NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste

DOCN 000002346
LSSN PT00138600
TITL NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste
DTYP Technical Report
DATE 19840500
Document/Report Number
1 CN DE-AC04-76D
2 RN SAND83-1166
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, JC
Author Name/Organization
1 Dennis, AW / SNL
2 O'Brien, PD / SNL
3 Mulkin, R / LATA
4 Frostenson, JC / LATA
Author Organizations
1 SNL
2 LATA
Sponsoring Agency
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Descriptor Profile Search
OK

These are the Descriptors from the current unit. You can delete one or more before starting a search. When the list is as you want it, click OK to begin the search.

- ☒ Transuranic Waste
- ☒ Radioactive Waste Processing
- ☒ Radioactive Waste Package
- ☒ Retrieval Of Waste
- ☒ Emplacement
- ☒ Spent Fuel
- ☒ Casks

Previous Occurrence
Next Occurrence

Previous Page
Page Forward/Backward by X
Go to Page
Next Page

Previous Unit
Next Unit

- Thesaurus

 - Alphabetical
 - Hierarchical Listing
 - Key Words In Context Listing
 - Near Spell
 - Descriptor Profile Search
 - Text Search within Unit
 - Related Documents

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Page ____ of ____ Unit 3 of 88 in Res

Title: NNWSI Repository
Emplacing, and

DOCN 00000234
ISSN PT0013860
TITL NNWSI R
Emplacing, and
DTYP Technical
DATE 19840500
Document/Report
1 CN DE-AC04
2 RN SAND83-
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, J
Author Name/Or
1 Dennis, AW /
2 O'Brien, PD /
3 Mulkin, R / L
4 Frostenson, J
Author Organiza
1 SNL
2 LATA
Sponsoring Agenc
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Text Search Within Unit
OK

1 Type the term(s) to search the full ASCII text of the current unit for.
You can include wild card/truncation characters:
 * matches anything to the end of the word - volcan* matches
 volcano, volcanic, volcanoes, etc.
 # matches one character only - fault# matches faults and faulty, but
 not fault or faulting.

2 Insert Logic and Proximity as you type, or select and insert them
 from the panels: (☒ = Selected, ☐ = Not Selected)

Logic Tools:

☐ And ☐ (

☒ Or ☐)

☐ Not

Proximity Tools:

☒ Next To

☐ Within 5 Words

☐ Same Sentence

☐ Same Paragraph

Search full ASCII text of this unit for:

Thesaurus

Alphabetical

Hierarchic Listing

Key Words In Context Listing

Near Spell

Descriptor Profile Search

▶ Text Search within Unit

Related Documents

Previous
Occurrence

Next
Occurrence

Previous
Page

Page Forward/
Backward by X

Go to
Page

Next
Page

Previous
Unit

Next
Unit

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
--------	--------	---------	-------	-----------	------	------	------

DISPLAY: Headers - All Page ____ of ____ Unit 3 of 88 in Res

Title: NNWSI Repository
Emplacing, and R

DOCN 00000234
LSSN PT0013860
TITL NNWSI Re
Emplacing, and
DTYP Technical
DATE 19840500
Document/Report
1 CN DE-AC04
2 RN SAND83-
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, JC
Author Name/Org
1 Dennis, AW /
2 O'Brien, PD /
3 Mulkin, R / L
4 Frostenson, JC
Author Organizat
1 SNL
2 LATA
Sponsoring Agenc
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.

CANCEL
Related Documents
OK

You can retrieve units related to your current unit in any of the ways listed below. Select one:

(☒ = Selected, ☐ = Not Selected)

- ☐ Units attached to the current unit
- ☐ Units to which the current unit is attached
- ☐ Units which correct this unit
- ☐ Units corrected by this unit
- ☐ Units which comment on this unit
- ☐ Units which this unit comments on
- ☐ Units to which this unit belongs
- ☐ Units which belong to this unit
- ☐ Units which are part of this package
- ☐ Earlier versions of this unit
- ☐ Later versions of this unit

Thesaurus

- Alphabetical
- Hierarchical Listing
- Key Words In Context Listing
- Near Spell
- Descriptor Profile Search
- Text Search within Unit
- Related Documents

Previous Occurrence

Next Occurrence

Previous Page

Page Forward/Backward by X

Go to Page

Next Page

Previous Unit

Next Unit

RESULTS ANALYSIS

ANALYZE HEADER FIELDS

COMPUTE RESULT SET RANK ORDER

SORT RESULT SET

MERGE RESULT SET



Science Applications International Corporation

HEADER FIELD TABLE

Example Descriptor Frequency Table

This query found 922 units.

Descriptor term occurrence in this result set are:

<u>DESCRIPTOR</u>	<u>FREQUENCY</u>
Fractures	47
Fractures (Geologic)	43
Topopah Springs Member	39
Boreholes	36
Drill Cores	30
Stratigraphy	25
Welded Tuff	24
Paintbrush Tuff	22
Faults	19
Seismic Effects	16
Crater Flat Tuff	15
Geophysical Surveys	12
Seismic Surveys	12
Volcanic Rocks	11
Structural Geology	10
Strain (Geologic)	4



Science Applications International Corporation

RESULT SET DISPLAY

This Query found 922 units.

This display is in WORD DENSITY order.

Selected words: NUCLEAR, WASTE, CONTAINMENT

1 of 922

TITL: Preliminary Interpretations of Geologic Results Obtained
from Boreholes UE25a-4, -5, -6, and -7, Yucca Mountain,
Nevada Test Site

DATE: 19800000

AUTH: Spengler, RW; Rosenblum, JG

AUOG: USGS; USGS

TITLE SORT

This Query found 922 units.

This display is SORTED on TITL

1 of 922

TITL: Aftershocks of the Benham Nuclear Explosion

DATE: 19691200

AUTH: Hamilton, RM; Healy, JH

AUOG: USGS; USGS

2 of 922

TITL: Analysis of Gaseous-Phase Stable and Radioactive Isotopes
in the Unsaturated Zone, Yucca Mountain, Nevada

DATE: 19850000

AUTH: Yano, IC; Haas, HH; Weeks, EP; Thorstenson, DC

AUOG: USGS; SMU; USGS; USGS



Science Applications International Corporation

DISPLAY

RESULT SETS

HEADERS

TEXT

IMAGES



Science Applications International Corporation

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
		<ul style="list-style-type: none"> Result Set List Headers - All Fields Headers - Selected Fields Full Text of Unit Image Side By Side Sort Order Format Change... 			Logic Tools <input type="button" value="And"/> <input type="button" value="Or"/> <input type="button" value="Not"/> <input type="button" value="()"/> <input type="button" value="Search Aids"/>		
<input type="button" value="Erase Search Definition"/>			<input type="button" value="Start Search"/>				
Search History						<input type="button" value="Results Analysis"/>	
Search #	Search Statement Used	Partition	Units Found				
1	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>0000990) AND (DATE≤123192))	A	23				
2	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>0000990) AND (DATE≤123192))	B	80				
3	((AUTH=Aaronson, R) OR (AUTH=Aaronson, RC)) AND ((DATE>0000990) AND (DATE≤123192))	C	43				
4		All	146				
<input type="button" value="Show Full Search Statement"/>							

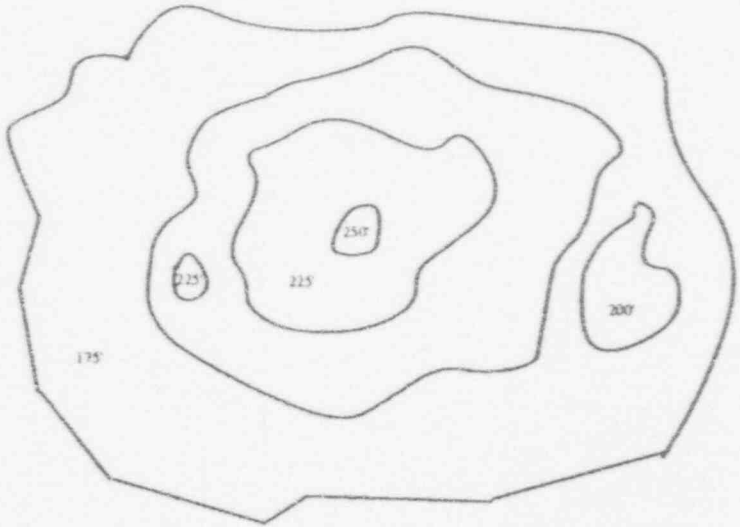
Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help																								
Search Definition					Logic Tools: And Or Not () Search Aids																										
In Partition(s):																															
<div style="border: 1px solid black; padding: 5px;"><div style="display: flex; justify-content: space-between; align-items: center;"><div><input type="checkbox"/> EXIT</div><div>Result Set List</div></div><div style="margin-top: 10px;"><p>* Unit 1 of 192 in Result Set 1</p><p>TITLE: Stratigraphic and Structural Relations of Volcanic Rocks in Drill Holes USW GU-3 and USW G-3, Yucca Mountain, Nye County, Nevada</p><p>DATE: 19840000</p><table style="width: 100%;"><tr><td style="width: 50%;">AUTH:</td><td style="width: 50%;">AUOG:</td></tr><tr><td>Scott, RB</td><td>USGS</td></tr><tr><td>Castellano, M</td><td>Fenix & Scisson</td></tr></table></div><div style="margin-top: 10px;"><p>* Unit 2 of 192 in Result Set 1</p><p>TITLE: Stratigraphic and Structural Characteristics Volcanic Rocks in Core Hole USW G-4, Yucca Mountain, Nye County, Nevada</p><p>DATE: 19840000</p><table style="width: 100%;"><tr><td style="width: 50%;">AUTH:</td><td style="width: 50%;">AUOG:</td></tr><tr><td>Spengler, RW</td><td>USGS</td></tr><tr><td>Chornack, MP</td><td>Fenix & Scisson</td></tr><tr><td>Muller, DC</td><td>USGS</td></tr><tr><td>Kibler, JE</td><td>USGS</td></tr></table></div><div style="border: 1px solid black; padding: 5px; margin-top: 10px;"><p>* Unit 3 of 192 in Result Set 1</p><p>TITLE: Stratigraphy and Structure of Volcanic Rocks in Drill Hole USW G-1, Yucca Mountain, Nye County, Nevada</p><p>DATE: 19810000</p><table style="width: 100%;"><tr><td style="width: 50%;">AUTH:</td><td style="width: 50%;">AUOG:</td></tr><tr><td>Spengler, RW</td><td>USGS</td></tr><tr><td>Byers, FM</td><td>USGS</td></tr><tr><td>Warner, JB</td><td>Fenix & Scisson</td></tr></table></div></div>								AUTH:	AUOG:	Scott, RB	USGS	Castellano, M	Fenix & Scisson	AUTH:	AUOG:	Spengler, RW	USGS	Chornack, MP	Fenix & Scisson	Muller, DC	USGS	Kibler, JE	USGS	AUTH:	AUOG:	Spengler, RW	USGS	Byers, FM	USGS	Warner, JB	Fenix & Scisson
AUTH:	AUOG:																														
Scott, RB	USGS																														
Castellano, M	Fenix & Scisson																														
AUTH:	AUOG:																														
Spengler, RW	USGS																														
Chornack, MP	Fenix & Scisson																														
Muller, DC	USGS																														
Kibler, JE	USGS																														
AUTH:	AUOG:																														
Spengler, RW	USGS																														
Byers, FM	USGS																														
Warner, JB	Fenix & Scisson																														
Show Full Search Statement																															

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
DISPLAY: Headers - All		Page ____ of ____	Unit <u>3</u> of <u>88</u> in Results Set _____		Search Aids		
<p>Title: NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste</p> <p>DOCN 000002346</p> <p>LSSN PT00138600</p> <p>TITL NNWSI Repository Operational Procedures for Receiving, Packaging, Emplacing, and Retrieving High-Level and Transuranic Waste</p> <p>DTYP Technical Reports</p> <p>DATE 19840500</p> <p>Document/Report Number</p> <p>1 CN DE-AC04-76DP00789</p> <p>2 RN SAND83-1166</p> <p>Author Name</p> <p>1 Dennis, AW</p> <p>2 O'Brien, PD</p> <p>3 Mulkin, R</p> <p>4 Frostenson, JC</p> <p>Author Name/Organization</p> <p>1 Dennis, AW / SNL</p> <p>2 O'Brien, PD / SNL</p> <p>3 Mulkin, R / LATA</p> <p>4 Frostenson, JC / LATA</p> <p>Author Organizations</p> <p>1 SNL</p> <p>2 LATA</p> <p>Sponsoring Agency</p> <p>1 DOE</p> <p>Project</p> <p>1 NNWSI</p> <p>Major Location</p> <p>1 Yucca Mountain</p> <p>PUBD Albuquerque NM: Sandia National Laboratories; 5/84.</p>							
Previous Occurrence		Next Occurrence		Previous Page		Page Forward/Backward by X	
Go to Page		Next Page		Previous Unit		Next Unit	

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
DISPLAY: Full Text of Unit		Page <u>2</u> of <u>40</u>	Unit <u>3</u> of <u>88</u> in Results Set <u>1</u>		Search Aids		
<p>Title: ASTM Operational Procedures for Determination of Qualities of Rock and Soil-Aggregate Specimens</p> <p>ASTM (American Society for Testing and Materials), 1966. True Specific Gravity of Refractory Material by Water Immersion, Standard Test Method, Reapproved 1976, ASTM C 135-66, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1971. Linear Thermal Expansion of Rigid Solids With a Vitreous Silica Dilatometer, Standard Test Method, ASTM E 228-71, Philadelphia, Penn.</p> <p>ASTM (American Standard Test Methods), 1978. Moisture Density Relations of Soils and Soil-Aggregate Mixtures Using 10-lb (4.54 kg) Rammer and 18-in. (457 mm) Drop, Standard Test Methods, ANSI/ASTM D 1557-78, pp. 270-276.</p> <p>ASTM (American Society for Testing and Materials), 1979a. True Specific Gravity of Refractory Materials by Gas Comparison Pycnometer, Standard Test Method, ASTM C 604-79, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1979b. Unconfined Compressive Strength of Intact Rock Core Specimens, Standard Test Method, ANSI/ASTM D 2938-79, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1980a. Triaxial Compressive Strength of Undrained Rock Core Specimens Without Pore Pressure Measurements, Standard Test Method, ASTM D 2664-80, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1980b. Elastic Moduli of Intact Rock Core Specimens in Uniaxial Compression, Standard Test Method, ANSI/ASTM D 3148-80, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1981a. Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth), ASTM D 2922-81, Philadelphia, Penn.</p> <p>ASTM (American Society for Testing and Materials), 1981b. Splitting Tensile Strength of Intact Rock Core Specimens, Standard Test Method, ASTM D 3967-81, Philadelphia, Penn.</p> <p>2R-1 002</p>							
Previous Occurrence		Next Occurrence	Previous Page	Page Forward/Backward by X	Go to Page	Next Page	Previous Unit
							Next Unit

Set-Up	Search	Display	Print	Clipboard	Save	Exit	Help
DISPLAY: Side-by-Side		Page ____ of ____	Unit <u>3</u> of <u>88</u> in Results Set _____		Search Aids		

DOCN 000002346
ISSN PT00138600
TITL NNWSI Repository Operational Procedures for
Receiving, Packaging, Emplacing, and Retrieving
High-Level and Transuranic Waste
DTYP Technical Reports
DATE 19840500
Document/Report Number
1 CN DE-AC04-76DP00789
2 RN SAND83-1166
Author Name
1 Dennis, AW
2 O'Brien, PD
3 Mulkin, R
4 Frostenson, JC
Author Name/Organization
1 Dennis, AW / SNL
2 O'Brien, PD / SNL
3 Mulkin, R / LATA
4 Frostenson, JC / LATA
Author Organizations
1 SNL
2 LATA
Sponsoring Agency
1 DOE
Project
1 NNWSI
Major Location
1 Yucca Mountain
PUBD Albuquerque NM: Sandia National Laboratories; 5/84.



Previous Occurrence	Next Occurrence	Previous Page	Page Forward/ Backward by X	Go to Page	Next Page	Previous Unit	Next Unit
------------------------	--------------------	------------------	--------------------------------	---------------	--------------	------------------	--------------



PRINT

LOCAL < 100 PAGES

REMOTE - PRINT, PACK, MAIL

SAIC

Science Applications International Corporation

DATABASE LOAD

HEADERS & TEXT

IMAGE

**15,000 PAGES PER WEEK AT
PEAK**

45 MILLION CHARACTERS

SAIC

Science Applications International Corporation

SYSTEM ADMINISTRATION

CAPTURE SYSTEM CONTROLLED VOCABULARIES MAINTENANCE

ANALYSIS & DISPLAY OF CAPTURE SYSTEM PRODUCTION REPORTS

OPERATIONAL CONFIGURATION MANAGEMENT TRACKING

USER PRIVILEGES & LIMITS TABLE MAINTENANCE

SYSTEM OPERATING PARAMETERS MAINTENANCE

DATA INTEGRITY CHECKING

DATA LOAD ADMINISTRATION

COMMUNICATION NETWORK MANAGEMENT



Science Applications International Corporation

HARDWARE ARCHITECTURE

WORKSTATIONS

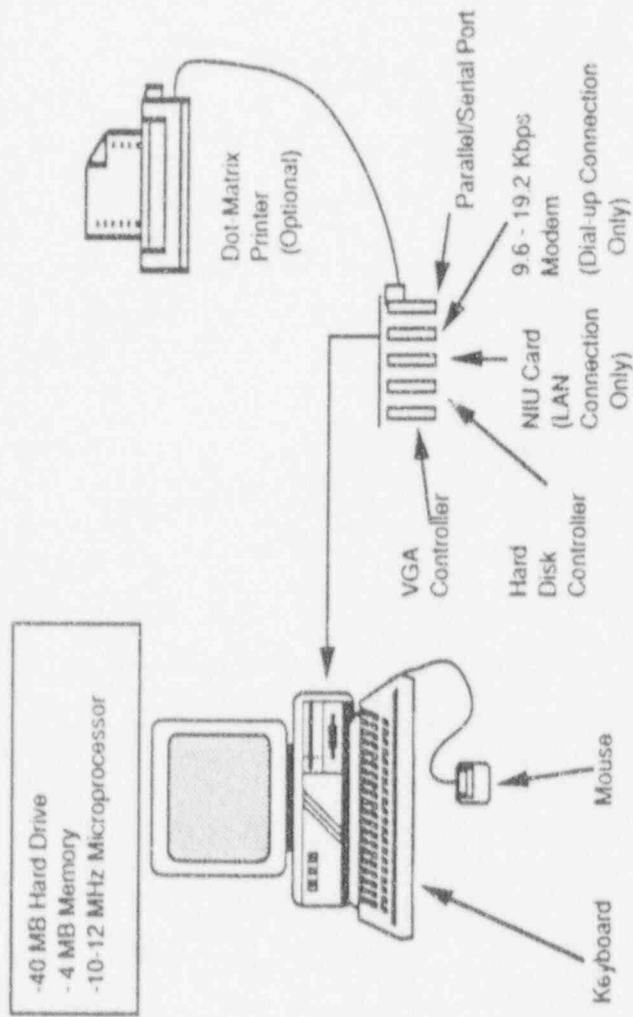
SEARCH

IMAGE



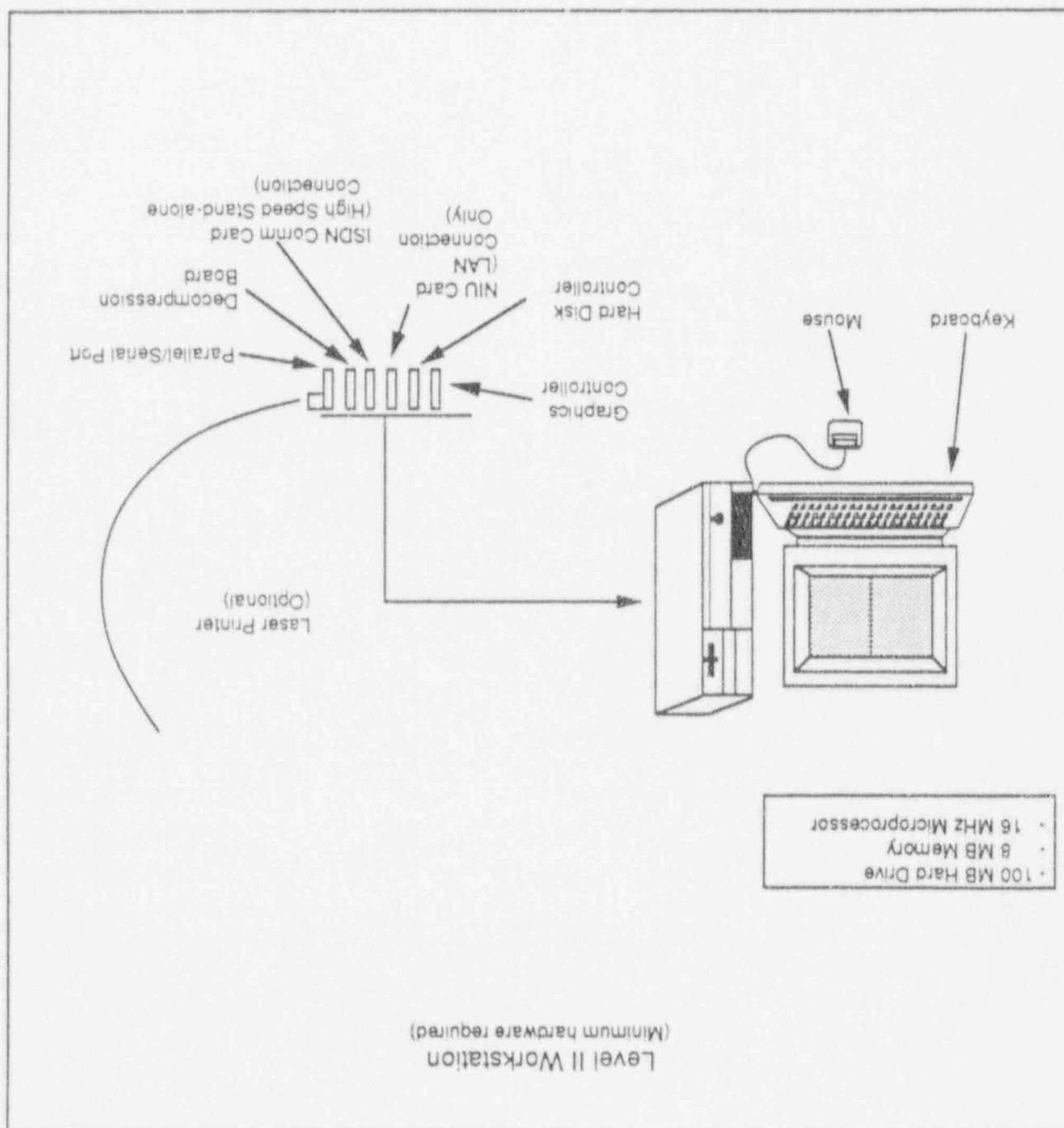
Science Applications International Corporation

Level-I Workstation
(Minimum Hardware Required)



LEVEL I WORKSTATION

LEVEL II WORKSTATION



LSS COMMUNICATIONS SYSTEM



Science Applications International Corporation



Science Applications International Corporation

TOPICS

- **COMMUNICATIONS DESIGN PROCESS OVERVIEW**
- **COMMUNICATIONS NETWORK ARCHITECTURE**
 - **NETWORK TOPOLOGY**
 - **MAJOR EQUIPMENT COMPONENTS**



Science Applications International Corporation

LSS COMMUNICATIONS DESIGN

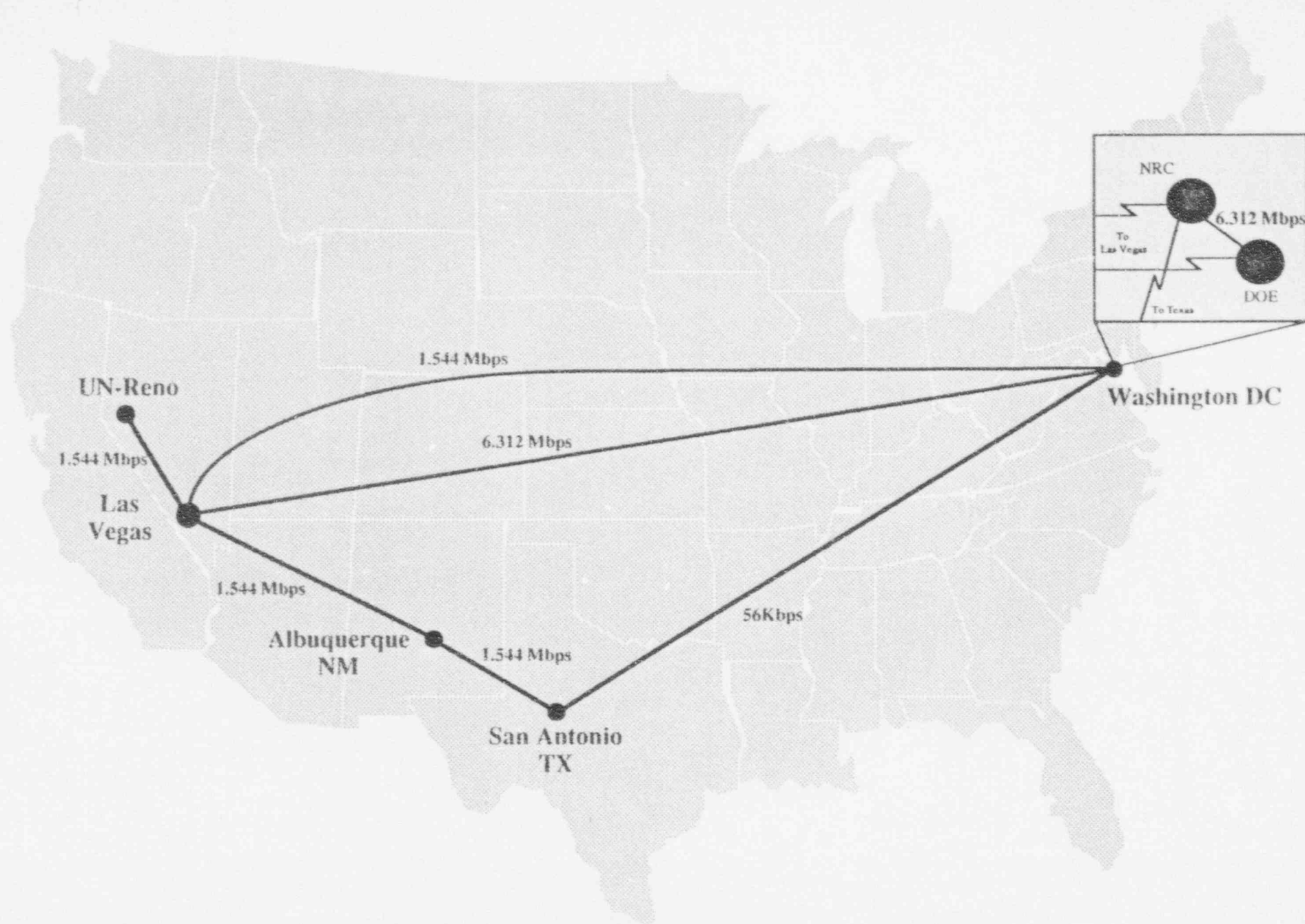
- **BASED UPON ANALYSIS OF EXPECTED GEOGRAPHIC DISTRIBUTION OF LSS USERS**
- **UTILIZED NETWORK MODELING TOOL TO OPTIMIZE COMMUNICATION CIRCUIT LOADING AND BANDWIDTH**
 - **5 Sec avg comm. response time**
- **GOSIP-COMPLIANT ARCHITECTURE**
- **EQUIPMENT AND SERVICES SPECIFIED AVAILABLE IN THE 1995 TIMEFRAME**
- **PROVIDE LOCAL IMPLEMENTATION ALTERNATIVES**

LSS USER AND WORKSTATION DISTRIBUTION

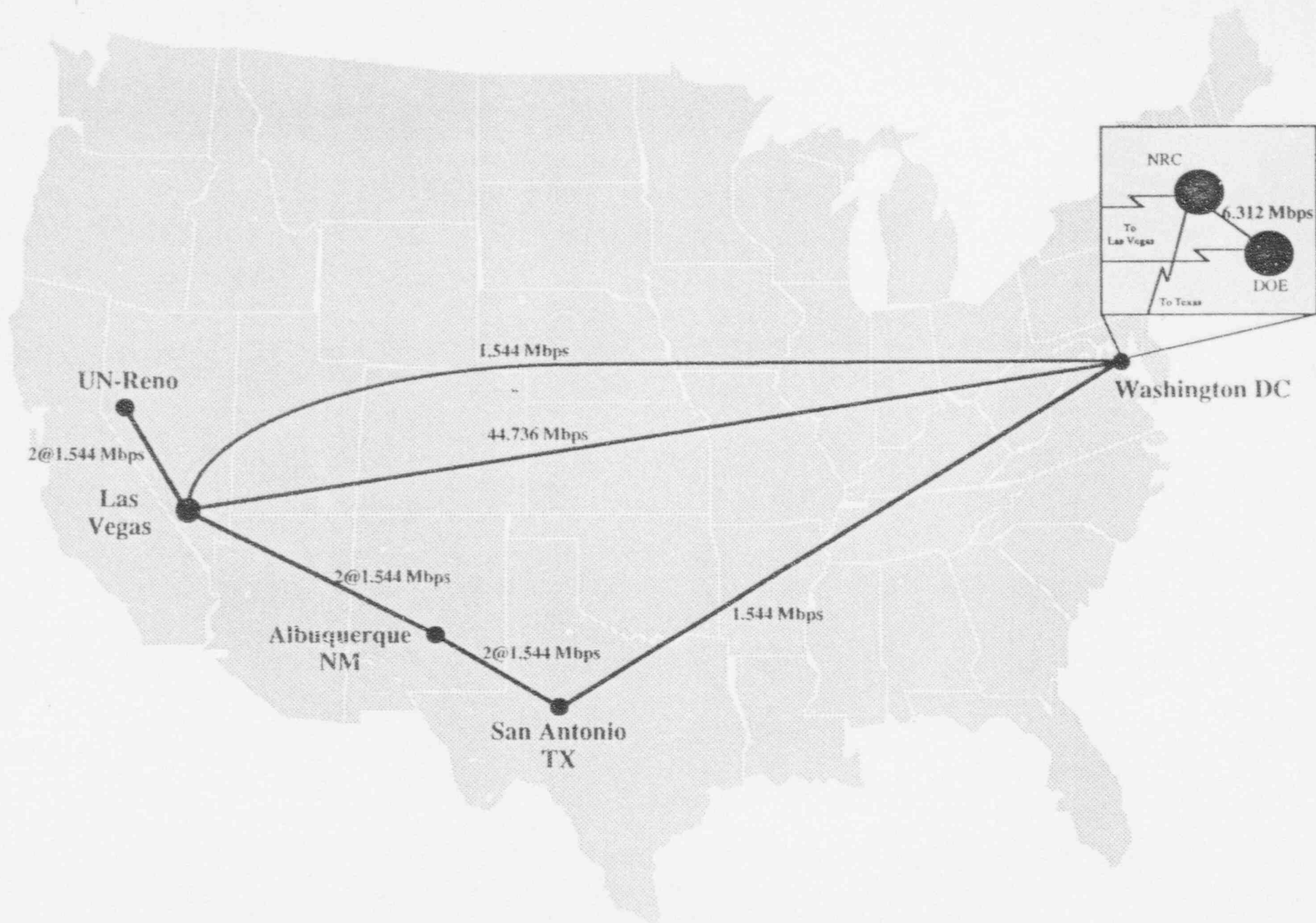
Location	Number	Pre-Licensing Phase Type I	Post-Licensing Phase Type I	Workstations Type II	Workstations Type I	Workstations Type II	Workstations Type I	Workstations Type II
Greater Washington DC Area	103	16	35	0	52	3	27	3
NRC, White Flint, Maryland	3	3	0	0	3	5	2	3
NRC, White Flint, MD PDR	3	3	0	0	3	3	3	3
Lincoln County PDR	3	3	0	0	3	3	3	3
University of Nevada-Reno PDR	3	3	0	0	3	3	3	3
Nye County: PDR	3	3	0	0	3	3	3	3
University of Nevada-Las Vegas PDR	3	3	0	0	3	3	3	3
NRC Field Office, Las Vegas	1	1	0	0	1	1	1	1
Yucca Mtn. DOE PDR at Meadow Mall	3	3	0	0	3	3	3	3
Yucca Mtn Project Office: DOE	2	2	0	0	2	6	1	1
Yucca Mtn Project Office: SAIC	12	2	4	0	6	23	1	1
DOE M&O Contractors Las Vegas	46	7	16	0	1	1	1	1
LSS External Interveners: Reno 1	1	0	1	0	1	1	1	1
LSS External Interveners: Reno 2	1	0	1	0	1	1	1	1
LSS External Interveners: Carson City 1	1	0	1	0	1	1	1	1
LSS External Interveners: Carson City 2	1	0	1	0	1	1	1	1
LSS External Interveners: Las Vegas 1	1	0	1	0	1	1	1	1
LSS External Interveners: Las Vegas 2	1	0	1	0	1	1	1	1
Nevada	56	9	19	0	28	3	5	3
DOE-OCWRM Las Vegas	3	3	0	0	3	3	5	3
Las Vegas: DOE NVOO PDR	10	2	3	0	10	23	1	1
Las Vegas: DOE NTS	3	3	0	0	3	3	5	3
Carson City: State of Nevada	3	0	1	0	3	2	2	3
Carson City: NRC PDR	3	3	0	0	3	3	3	3
Lincoln County PDR	3	3	0	0	3	3	3	3
University of Nevada-Reno PDR	3	3	0	0	3	3	3	3
Nye County: PDR	3	3	0	0	3	3	3	3
University of Nevada-Las Vegas PDR	3	3	0	0	3	3	3	3
NRC Field Office, Las Vegas	1	1	0	0	1	1	1	1
Yucca Mtn. DOE PDR at Meadow Mall	3	3	0	0	3	3	3	3
Yucca Mtn Project Office: DOE	2	2	0	0	2	6	1	1
Yucca Mtn Project Office: SAIC	12	2	4	0	6	23	1	1
DOE M&O Contractors Las Vegas	46	7	16	0	1	1	1	1
LSS External Interveners: Reno 1	1	0	1	0	1	1	1	1
LSS External Interveners: Reno 2	1	0	1	0	1	1	1	1
LSS External Interveners: Carson City 1	1	0	1	0	1	1	1	1
LSS External Interveners: Carson City 2	1	0	1	0	1	1	1	1
LSS External Interveners: Las Vegas 1	1	0	1	0	1	1	1	1
LSS External Interveners: Las Vegas 2	1	0	1	0	1	1	1	1
Texas	42	7	14	0	21	1	1	1
San Antonio: SW Research Institute	1	1	0	0	1	1	1	1
Arlington: NRC Region Office	1	1	0	0	1	1	1	1
Other	1	1	0	0	1	1	1	1
King of Prussia, PA: NRC Region Office	1	1	0	0	1	1	1	1
Atlanta, GA: NRC Region Office	1	1	0	0	1	1	1	1
Qian Elynn, IL: NRC Region Office	1	1	0	0	1	1	1	1
Wainut Creek, CA: NRC Region Office	1	1	0	0	1	1	1	1
NRC Field Office, Denver, CO PDR	1	1	0	0	1	1	1	1
U.S. Geological Survey, Denver	1	0	1	0	1	1	1	1
Los Alamos National Lab, New Mexico	20	3	7	0	10	1	1	1
Sandia National Lab, Albuquerque, NM	15	2	5	0	8	5	5	5
Lawrence Livermore National Lab, CA	10	2	3	0	5	5	5	5
Idaho Falls, Idaho	1	0	1	0	1	1	1	1
Chicago, Illinois	1	0	1	0	1	1	1	1
Olympia, Washington	1	0	1	0	1	1	1	1
Columbus, Ohio	1	0	1	0	1	1	1	1
Hanford/Richland, Washington	1	0	1	0	1	1	1	1
SUBTOTAL	472	101	159	0	260	1	1	1

LS, USER AND WORKSTATION DISTRIBUTION

Location	Number of Users	Pre-Licensing Phase		Post-Licensing Phase	
		Type I Workstations	Type II Workstations	Type I Workstations	Type II Workstations
Greater Washington DC Area					
NRC, White Flint, Maryland	103	16	35	0	52
NRC, White Flint, MD PDR	3	3	0	0	3
DOE-Forrestal	53	8	18	0	27
DOE-Forrestal PDR	3	3	0	0	3
M&O contractors in DC area	46	7	16	0	23
SW Research Ext, Arlington, Va	6	1	2	0	3
LSS External Interveners: DC	1	0	1	0	1
LSS External Interveners: N. Virginia	1	0	1	0	1
Nevada					
DOE-OCWRM Las Vegas	56	9	19	0	28
Las Vegas: DOE NVOO PDR	3	3	0	0	3
Las Vegas: DOE NTS	10	2	3	0	5
Carson City: State of Nevada	3	0	1	0	2
Carson City: NRC PDR	3	3	0	0	3
Lincoln County PDR	3	3	0	0	3
University of Nevada-Reno PDR	3	3	0	0	3
Nye County: PDR	3	3	0	0	3
University of Nevada-Las Vegas PDR	3	3	0	0	3
NRC Field Office, Las Vegas	1	1	0	0	1
Yucca Mtn: DOE PDR at Meadow Mall	3	3	0	0	3
Yucca Mtn Project Office: DOE	2	0	1	0	1
Yucca Mtn Project Office: SAIC	12	2	4	0	6
DOE M&O Contractors Las Vegas	46	7	16	0	23
LSS External Interveners: Reno 1	1	0	1	0	1
LSS External Interveners: Reno 2	1	0	1	0	1
LSS External Interveners: Carson City 1	1	0	1	0	1
LSS External Interveners: Carson City 2	1	0	1	0	1
LSS External Interveners: Las Vegas 1	1	0	1	0	1
LSS External Interveners: Las Vegas 2	1	0	1	0	1
Texas					
San Antonio: SW Research Institute	42	7	14	0	21
Arlington: NRC Region Office	1	1	0	0	1
Other					
King of Prussia, PA: NRC Region Office	1	1	0	0	1
Atlanta, GA: NRC Region Office	1	1	0	0	1
Glen Ellyn, IL: NRC Region Office	1	1	0	0	1
Walnut Creek, CA: NRC Region Office	1	1	0	0	1
NRC Field Office, Denver, CO PDR	1	1	0	0	1
U.S Geological Survey, Denver	1	0	1	0	1
Los Alamos National Lab, New Mexico	20	3	7	0	10
Sandia National Lab, Albuquerque, NM	15	2	5	0	8
Lawrence Livermore National Lab, CA	10	2	3	0	5
Idaho Falls, Idaho	1	0	1	0	1
Chicago, Illinois	1	0	1	0	1
Olympia, Washington	1	0	1	0	1
Columbus, Ohio	1	0	1	0	1
Hanford/Richland, Washington	1	0	1	0	1
SUBTOTAL	472	101	159	0	260



**FIGURE 5-3 LSS BACKBONE NETWORK CONNECTIVITY
FOR THE PRE-LICENSING PHASE**



**FIGURE 5-4 LSS BACKBONE NETWORK CONNECTIVITY
FOR THE POST LICENSING PHASE**

MAJOR COMPONENTS

USER TYPE

COMPONENTS

SINGLE WORKSTATION

MODEM, ISDN TERMINAL
ADAPTER

MULTIPLE WORKSTATIONS

LAN/WAN BRIDGE/BROUTER,
MUX, MODEM, CSU/DSU

BACKBONE NETWORK

ROUTER, FDDI, BRIDGE,
ISDN

OVERVIEW

- I. EXISTING INTERIM TOPICAL GUIDELINES
- II. DEVELOPMENT OF DRAFT REGULATORY GUIDE--TOPICAL GUIDELINES
- III. REVISION TO THE INTERIM TOPICAL GUIDELINES
- IV. TOPICS INCLUDED IN THE DRAFT REGULATORY GUIDE
- V. NEXT STEPS



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

WM 1 1991

MEMORANDUM FOR: John C. Hoyle, Chairman
Licensing Support System Advisory
Review Panel

FROM: Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

SUBJECT: TOPICAL GUIDELINES FOR THE LICENSING SUPPORT SYSTEM

The purpose of this memorandum is to transmit the proposed revision of the interim topical guidelines for the Licensing Support System (LSS) to the LSS Advisory Review Panel (LSSARP) for consideration at the October 1990 LSSARP meeting. Enclosure 1 is the "Draft Regulatory Guide Topical Guidelines for the Licensing Support System" (Draft Regulatory Guide) which was prepared by the Nuclear Regulatory Commission (NRC) staff and the Office of the General Counsel (OGC). Enclosure 2 is a copy of the interim topical guidelines. Enclosure 3 is a document which describes the disposition of the three lists which comprised the interim topical guidelines. The Commission has reviewed the Draft Regulatory Guide and has given the staff permission to forward it to the LSSARP.

Please address any questions on the enclosed material to Mark Delligatti, the project manager for the revision of the LSS topical guidelines, at extension 20430.

A handwritten signature in cursive script, reading "Robert M. Bernero", is positioned above the typed name and title.

Robert M. Bernero, Director
Office of Nuclear Material Safety
and Safeguards

Enclosures: As stated

cc: RBrowning, HLWM STreby, OGC
LDonnelly, LSSA FCameron, LSSA
MSilberberg, RES JLinehan, HLPD

9007200322

ENCLOSURE 1

DRAFT REGULATORY GUIDE
TOPICAL GUIDELINES FOR THE LICENSING SUPPORT SYSTEM

ABSTRACT

This Regulatory Guide sets forth the topical guidelines for the Licensing Support System established in the Rules of Practice in 10 CFR Part 2, Subpart J for the adjudicatory proceeding on the application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to 10 CFR Part 60.

INTRODUCTION

Subpart J of 10 CFR Part 2 (10 CFR 2.1000 to 2.1023) sets forth procedures for an adjudicatory proceeding on the application for a license to receive and possess high-level nuclear waste at a geologic repository under 10 CFR Part 60. Pursuant to these regulations, the Licensing Support System (LSS), an electronic information management system, is being designed and implemented to provide for the entry of and access to potentially relevant licensing information.

The topical guidelines define the scope of documentary material which should be included in the LSS. Interim topical guidelines, drafted by the High-Level Waste Licensing Support System Advisory Review Panel were adopted by the U.S. Nuclear Regulatory Commission (NRC) with the statement that the topical guidelines would later be revised and set forth as a regulatory guide by NRC staff (see 54 Fed. Reg. 14925 (1989)). The interim topical guidelines were partially modeled after the Environmental Assessments prepared in connection with the U.S. Department of Energy (DOE's) site selection process.

Document is defined in 10 CFR 2.1001 as "...any written, printed, recorded, magnetic, graphic matter, or other documentary material, regardless of form or characteristic." 10 CFR 2.1001 also defines documentary material as "...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 for a geologic repository. The scope of documentary material shall be guided by the topical guidelines in the applicable NRC regulatory guide." The form which this material might take is included in Appendix A, a non-exhaustive list of types of documents which may be included in the LSS.

This regulatory guide has been prepared using the interim topical guidelines in addition to the "Draft Format and Content Guide for the License Application for the High-Level Waste Repository" (FCRG), which sets forth the information that the NRC staff suggests should be submitted in the license application. Pursuant to section 114(f)(4) of the Nuclear Waste Policy Act of 1982 as amended, (42 U.S.C. 10134(f)(4)), the Commission is required "to the extent practicable," to adopt the environmental impact statement (EIS) prepared by DOE. The Commission's regulations have been amended to be in accord with this statutory provisions. See 10 CFR 51.26(c). Therefore, the environmental issues in the topical guidelines will be limited to those documents relevant to the Commission's adoption or modification of the DOE EIS.

1. Purpose of the Regulatory Guide

The purpose of this regulatory guide is to provide a list of the topics for which LSS participants should submit documentary materials for entry into the LSS under 10 CFR § 2.1003. The topical guidelines are designed to be broad enough to encompass all potential licensing issues. This regulatory guide will also be used by the Pre-License Application Licensing Board for evaluating petitions for access to the LSS during the pre-license application period under 10 CFR 2.1008.

This regulatory guide will not be used as the detailed topical index for documentary evidence contained in the LSS. Neither will it serve to determine the scope of contentions that may be offered in the application proceeding under 10 CFR 2.1014.

2. Use of the Regulatory Guide

To the extent practicable, the regulatory guide follows a repository systems-based format that conforms to the approach to be followed in other generic NRC licensing guidance documents for the high-level waste repository program.

Because the topical guidelines have been kept broad and at a fairly high level of detail, the user should consider each topic to be inclusive rather than exclusive. For instance, 10 CFR Part 60 Subpart J requires a performance confirmation program for the various components of the repository system. However, performance confirmation is not a topic in this regulatory guide. Rather, information which is pertinent to performance confirmation for any particular component of the repository system would be considered to fall under the particular topic which designates that particular system (performance confirmation relevant to geologic processes would be considered topical information under the appropriate heading for the Natural System). The topical guidelines are presented at between one and three levels of detail. Each guideline should be considered all inclusive with regard to all documents germane to that topic for the site. For example, much of the information which shall support the licensing proceedings will be based upon the use of methodologies, computer codes and models. It is appropriate for such information to be included in the LSS. As stated above, the ECRG sets forth the information that the NRC staff suggests should be submitted in the license application. The ECRG should be considered as another source of guidance regarding the types of information that could be included in the LSS.

TOPICAL GUIDELINES
FOR INCLUSION OF DOCUMENTS
IN THE LICENSING SUPPORT SYSTEM

I. General Information

1. General Facility Description
2. Basis for Licensing Authority
3. Schedules Relevant to the NRC/DOE Repository Programs
4. Any Publicly Available Information on Certification of Safeguards
5. Any Publicly Available Information on the Physical Security Plan
6. Site Characterization
7. License Specifications (those variables, conditions, or other items which DOE determines to be probable subjects of license specifications)
8. Information Relevant to NRC Findings Regarding Compliance with Statutes Other than: The Atomic Energy Act, as amended; the Energy Reorganization Act; and the Nuclear Waste Policy Act, as amended for example, e.g., The Endangered Species Act of 1973.
9. Information Relevant to NRC Adoption or Modification of the DOE Environmental Impact Statement

II. The Natural Systems of the Geologic Setting

1. Geologic System
 - a. Regional Geology
 - b. Regional Geology
 - c. Site Geology
 - d. Future Variations in Geologic Processes
2. Hydrologic System
 - a. Surface Water Hydrology
 - b. Regional Hydrogeology
 - c. Site Hydrogeology
3. Geochemical System
 - a. Regional Geochemistry
 - b. Site Geochemistry

3. Geochemical System
 - a. Regional Geochemistry
 - b. Site Geochemistry
4. Climatological and Meteorological Systems
 - a. Present Climate and Meteorology
 - b. Paleoclimatology
 - c. Future Climatic Variation
5. Integrated Natural System Response to the Maximum Design Thermal Loading
6. Processes and Events
(anticipated and unanticipated, potentially disruptive)
7. Effectiveness of Natural Barriers Against the Release of Radioactive Material to the Environment (Information relevant to the performance objective of 10 CFR 60.113)

III. Geologic Repository Operations Area (GROA): Physical Facilities

1. Surface Facilities
 - a. Waste Handling System/Building(s)/Equipment (Including Hot Cell)
 - b. On-Site Radioactive Waste Management System
 - c. Fire and Explosion Protection System(s)
 - d. Emergency Systems
 - e. Communication Systems
 - f. Utility Systems
 - g. Instrumentation and Control Systems
 - h. On-Site Transportation System
 - i. Ventilation System(s)
 - j. Operations Support System(s)
 - k. Plans for the Decommissioning System
 - l. Other Surface Systems
2. Shafts/Ramps
 - a. Waste Shaft/Ramp
 - b. Muck Shaft/Ramp
 - c. Ventilation Intake Shaft(s)
 - d. Ventilation Exhaust Shaft(s)
 - e. Men and Materials Shafts
 - f. Plans for the Decommissioning System
 - g. Other Shaft/Ramp Systems
3. Underground Facility
 - a. Excavation and Ground Support Systems
 - b. Muck Handling System
 - c. Ventilation System
 - d. Waste Emplacement System
 - e. Waste Retrieval System

- f. Emergency System(s)
 - g. Communication System
 - h. Operations Support System
 - i. Plans for the Decommissioning System
 - j. Other Underground Systems
- 4. Interface of Structures, Systems, and Components
 - 5. Retrievalability of Waste
 - 6. Effectiveness of the GROA Against the Release of Radioactive Materials to the Environment (Information relevant to the performance objective of 10 CFR 60.111)

IV. Engineered Barrier Systems

- 1. Waste Package
- 2. Waste Form
- 3. Underground Facility
- 4. Engineered Barrier System Waste Package Emplacement Environment
- 5. Engineered Barrier System Alternate Design Features
- 6. Effectiveness of Engineered Barriers Against the Release of Radioactive Material to the Environment (Information relevant to the performance objective of 10 CFR 60.113).

V. Overall System Performance Assessment

- 1. Basic Approach
- 2. System Description
 - a. Conceptual Models
 - b. Processes and Events (Potentially Disruptive)
 - c. Processes and Events (Undisturbed Performance)
- 3. Cumulative Release of Radioactive Materials
 - a. Screening of Processes and Events
 - b. Scenario Development and Screening
 - c. Consequence Analyses: Estimates of Cumulative Releases
 - d. Probability Estimates
 - e. Model and Code Validation
- 4. Undisturbed Performance
 - a. Individual Protection Requirements
 - b. Groundwater Protection Requirements
 - c. Model and Code Validation

VI. Conduct of Repository Operations

1. Maintenance
2. Organization
3. Personnel
4. Records/Reports
5. Training Programs
6. Schedules
7. Identification of Operating Controls and Limits
8. Preservation of Records
9. Site Markers

VII. Land Ownership and Control

1. Plans for Restricting Controlled Area Access
 - a. Identification of Controlled Area
 - b. Identification of Existing Legal Interests
 - c. Identification of Legal Interests To Be Obtained
 - d. Water Rights
2. Plans for Regulating Land Use Outside the Controlled Area
 - a. Identification of Adjacent Areas of Concern
 - b. Identification of Existing Legal Interests
 - c. Identification of Legal Interests To Be Obtained
3. Plans for Regulating Land Use at the GRCA
4. Other Types of Legal Interests

VIII. Quality Assurance (QA) Records

1. QA Records for Site Characterization
2. QA Records for Design and Construction
3. QA Records including records covering Operations, Permanent Closure, Decontamination and Decommissioning
4. QA Records for all relevant research activities

IX. Emergency Planning

X. Radiation Protection

1. Ensuring that Radiation Exposures are As Low As Reasonably Achievable (ALARA)
2. Radiation Sources
3. Radiation Protection Design Features
4. Estimated Onsite Dose Assessment
5. Health Physics Program
6. Estimated Offsite Dose Assessment

XI. Any Alternatives Considered (e.g., design interpretations, models)

APPENDIX A
EXAMPLES OF CATEGORIES OF DOCUMENTS
TO BE INCLUDED IN THE LICENSING SUPPORT SYSTEM

1. Technical Reports and Analyses by all participants (including those developed by contractors)
2. Quality Assurance Records
3. External Correspondence
4. Internal Memoranda
5. Meeting Minutes/Transcripts
6. Draft Documents on which a nonconcurrence has been registered
7. Congressional Questions and Answers (Q's and A's)
8. Other Documents (for a. through i. include data bases and references):
 - a. Draft and Final Environmental Assessment for the Site Characterized
 - b. Site Characterization Plan
 - c. Site Characterization Study Plans
 - d. Site Characterization Progress Reports
 - e. Issue Resolution Reports
 - f. License Application
 - g. Topical Reports, Data, and Data Analyses
 - h. The DOE Environmental Impact Statement
 - i. Recommendation Report to the President of the United States (Notice of Disapproval, if submitted)
 - j. Any Publicly Available Information on Rulemakings
 - k. Public and Agency Comments on Documents
 - l. Response to Comments
 - m. NRC Technical Positions
 - n. NRC Regulatory Guides
 - o. The DOE Project Decision Schedules
 - p. DOE Program Management Documents

ENCLOSURE 2

Day	Regulation (10 CFR)	Action
648		2nd Prehearing Conference Order rules on amended submissions, sets any further discovery schedule and sets schedule for proffered testimony and hearing.
658	2.1015(b)	Appeals from 2nd Prehearing Conference Order, all briefs.
668	2.1015(b)	Briefs in opposition to appeals.
684		All order ruling on appeals from 2nd Prehearing Conference Order.
700	2.749 (set by LB)	Final motions for summary disposition.
720	2.749	Response to final motions for summary disposition.
730	Supp. info	Discovery complete.
740		LB order on final motions for summary disposition.
750	2.1015(b)	Appeals from final summary disposition order, all briefs.
760	2.1015(b)	Evidentiary hearing begins. Briefs in opposition to appeals from final summary disposition orders.
790		All order on appeals from final summary disposition orders.
850		Evidentiary hearing ends.
860	2.754(a)(1)	Applicant's proposed findings.
890	2.754(a)(2)	Other parties' (except NRC staff's) proposed findings.
900	2.754(a)(2)	NRC staff's proposed findings.
905	2.754(a)(2)	Applicant's reply to proposed findings.
995	2.760	Initial decision.
1005	2.762(a), 2.762(b), 2.1015(c)	Stay motions to All Notices of Appeals.
1015	2.762(d)	Response to stay motions.
1035	2.762(b)	All ruling on stay motions. Applicant's briefs.
1045	2.762(a)	Stay motions to Commission.
1045	2.762(d)	Response to stay motions.
1065	2.762(c)	Applicant's brief.
1075	2.762(c)	NRC staff brief.
1095	2.1023 Supp. info	Completion of NWSS and Commission supervisory review. Commission ruling on any stay motions. Issuance of construction authorization. NWPA 3-year period ended.
1105	2.763	One argument on appeals.
1185		Appeals Board decision.
1190	2.1015(a), 2.766(b)(1)	Petitions for Commission review.
1190	2.766(b)(2)	Response to petitions.
1250		Commission decision.

Topical Guidelines

The following topical guidelines are to be used for identifying the documentary material that should be submitted by LSS participants for entry into the LSS under section 2.1003. The topical guidelines will also be used by the Pre-License Application Licensing Board for evaluating petitions for access to the

LSS during the pre-license application phase under § 2.1006.

I. Categories of Documents

- Technical reports and analyses including those developed by contractors
- QA/QC records including qualification and training records
- External correspondence
- Internal memoranda
- Meeting minutes, including DOE/NRC meetings, Commission meetings
- Drafts (i.e., those submitted for decision beyond the first level of management or similar criterion)
- Congressional Q's & A's
- "Regulatory" documents related to HLW site selection and licensing, such as:
 - Draft and final environmental assessments
 - Site characterization plans
 - Site characterization study plans
 - Site characterization progress reports
 - Issue resolution reports
 - Rulemakings
 - Public and agency comments on documents
 - Response to public comments
 - Environmental Impact Statement, Comment Response Document, and related references
 - License Application (LA), LA data base, and related references
 - Topical reports, data, and data analysis
 - Recommendation Report to President
 - Notice of Disapproval, if submitted

II. General Topics

1. Any document pertaining to the location and potential of valuable natural resources, hydrology, geophysics, tectonics (including volcanism), geomorphology, seismic activity, atomic energy defense activities, proximity to water supplies, proximity to populations, the effect upon the rights of users of water, proximity to components of the National Park System, the National Wildlife Refuge System, the National Wildlife and Scenic River System, the National Wilderness Preservation System, or National Forest Lands, proximity to sites where high-level radioactive waste and spent nuclear fuel is generated or temporarily stored, spent fuel and nuclear waste transportation, safety factors involved in moving spent fuel or nuclear waste to a repository, the cost and impact of transporting spent fuel and nuclear waste to a repository site, the advantages of regional distribution in siting of repositories, and various

geologic media in which sites for repositories may be located.

2. Any document related to repository design, siting, construction, or operation, or the transportation of spent nuclear fuel and high-level nuclear waste, not categorized as an "excluded document", generated by or in the possession of any contractor of the Department of Energy, the Nuclear Regulatory Commission, or any other party to the HLW licensing proceeding.

3. All documents related to the physical attributes of the Basin and Range Province of the continental United States.

4. Any document listing and/or considering any site or location other than Yucca Mountain as a possible location for a high level nuclear waste repository, or any alternative technology to deep geologic disposal.

5. Any document analyzing the effect of the development of a repository at Yucca Mountain on the rights of users of water in the Amargosa ground-water basin in Nevada.

6. Any document analyzing the health and safety implications to the people and environment of the transportation of spent fuel between locations where spent fuel is generated or stored and Yucca Mountain, Nevada, or any other site nominated for repository characterization on May 28, 1988, including, but not limited to:

- a. Any analysis of possible human error in the manufacture of spent fuel casks;
- b. Any analysis of the actual population density along all of any specific projected routes of travel;
- c. Any analysis of releases from any actual radioactive material transportation incidents;
- d. Any analysis of the emergency response time in any actual radioactive materials transportation incident;
- e. Any actual accident data on any specific projected routes of travel;
- f. Any calculations or projections on the probabilities of accidents on any specific projected routes of travel;
- g. Any data on the physical properties or containment capabilities of spent fuel casks which have been used or which are projected to be used at any hypothetical or actual projected repository;
- h. Any analysis of modeling of the containment capabilities of spent fuel casks under a stress scenario;
- i. Any analysis or comparison of spent fuel casks projected to be used against the spent fuel cask certification standards of the Nuclear Regulatory Commission;

j. Any analysis of the containment capabilities of spent fuel casks containing spent fuel which has been burned up over an extended period.

k. Any document analyzing or comparing Yucca Mountain, Nevada, with any other site to the same geohydrologic setting.

l. Any document relating to potential interference or incompatibility between a Yucca Mountain, Nevada, high-level nuclear waste repository and atomic energy activities at the Nevada Test Site and Nellis Airforce base.

9. Any document related to the land status, use or ownership of Yucca Mountain, Nevada.

10. Any document considering or analyzing the attributes or detriments of any engineered barrier upon the radionuclide isolation capability of Yucca Mountain, Nevada, or any other site considered.

11. Any document evaluating the effect of extended fuel burn-up on Yucca Mountain, Nevada's adequacy as a repository site for disposal of spent fuel or upon the design of any such theoretical repository.

12. Any document analyzing or investigating the potential for discharge or radionuclides into the Death Valley National Monument.

13. Any document analyzing the recharge of the underlying saturated zone or the hydroconductivity of the saturated zone at Yucca Mountain.

14. Any document containing any data or analysis of volcanism in the geologic setting of which Yucca Mountain is a part.

15. Any document containing any data or analysis of tectonic events at Yucca Mountain, or pertaining to the tectonic framework of the Yucca Mountain area or any document containing any data or analysis of faults with or without surface expression in the area of Yucca Mountain.

16. Any document containing instructions or other limitations on the scope of work to be performed by Department of Energy personnel or contractor's personnel.

17. Any document pertaining to prevention or control of human intrusion at the Yucca Mountain site.

III. Specific Topics

1. The Site

A. Location, General Appearance and Terrain, and Present Use

B. Geologic Conditions

1. Stratigraphy and volcanic history of the Yucca Mountain area

a. Caldera evolution and genesis of ash flows

b. Timber Mountain Tuff

c. Paintbrush Tuff

d. Tuffaceous beds of Calico Hills

e. Crater Flat Tuff

f. Older tuffs

g. Sedimentary units

h. Basalts

2. Structure

a. Seismicity

4. Energy and mineral resources

a. Energy resources

b. Metals

c. Nonmetals

5. Paleontology

6. Mineralogy

7. Cosmoecology

8. Tectonics

a. Faulting

b. Stress

c. Uplift/subsidence

d. Volcanism

C. Hydrologic Conditions

1. Surface water

2. Ground water

a. Ground water movement

b. Ground water quality

3. Present and projected water use in the area

4. Groundwater resources

5. Climatology

6. Meteorology

D. Geochemistry

1. Rock chemistry of the overlying and underlying host units

2. Water chemistry of unsaturated or saturated zones

3. Alteration

4. Retardation and transport

E. Environmental Setting

1. Land use

a. Federal use

b. Agricultural

c. Grazing land

d. Cropland

e. Mining

f. Recreation

2. Private and commercial development

2. Terrestrial and aquatic ecosystems

a. Terrestrial vegetation

i. Larrea-Ambrosia

ii. Larrea-Ephedra or Larrea-Lycium

iii. Coleoptera

iv. Mixed transition

v. Grassland-burn site

b. Terrestrial wildlife

i. Mammals

6. Birds

iii. Reptiles

c. Special-interest species

d. Aquatic ecosystems

3. Air quality and weather conditions: Air quality

4. Noise

5. Aesthetic resources

6. Archaeological, cultural, and historical resources

7. Radiological background

a. Monitoring programs

b. Dose assessment

F. Transportation

1. Highway infrastructure and current use

2. Railroad infrastructure and current use

G. Socioeconomic Conditions

1. Economic conditions

a. Nye County

b. Clark County

c. Lincoln County

d. Methodology

2. Population density and distribution

a. Populations of the State of Nevada

b. Population of Nye County

c. Population of Clark County

d. Population of Lincoln County

3. Community services

a. Housing

b. Education

c. Water supply

d. Waste-water treatment

e. Solid waste

f. Energy studies

g. Public safety services

h. Medical and social services

i. Library facilities

j. Parks and recreation

4. Social conditions

a. Existing social organization and structure

b. Rural social organization and social structure

i. Social organization and structure in urban Clark County

b. Culture and lifestyle

i. Rural culture

ii. Urban culture

c. Community attributes

d. Attitudes and perceptions toward the repository

5. Fiscal and governmental structure

2. Expected Effects of the Site Characterization Activities

A. Site Characterization Activities

1. Field studies

a. Exploratory drilling

b. Geophysical surveys

c. Geologic mapping

d. Standard operating practices for reclamation of areas disturbed by field studies

e. trenching

2. Exploratory shaft facility

a. Surface facilities

b. Exploratory shaft and underground workings

c. Secondary egress shaft

d. Exploratory shaft testing program

e. Final disposition

f. Standard operating practices that would minimize potential environmental damage

3. Other studies

a. Geodetic surveys

b. Horizontal core drilling

c. Studies of past hydrologic conditions

d. Studies of tectonics, seismicity, and volcanism

e. Studies of seismicity induced by weapons testing

f. Field experiments in C-Tunnel facilities

g. Laboratory studies

h. Waste package design, testing, and analysis

B. Expected Effects of Site Characterization

1. Expected effects on the environment

a. Geology, hydrology, land use and surface soils

i. Geology

ii. Hydrology

iii. Land use

iv. Surface soils

b. Ecosystems

c. Air quality

d. Noise

e. Aesthetics

1. Archaeological, cultural, and historical resources
2. Socioeconomic and transportation conditions
 - a. Economic conditions
 1. Employment
 - ii. Materials
 - b. Population density and distribution
 - c. Community services
 - d. Social conditions
 - e. Fiscal and governmental structure
 - f. Transportation
 3. Worker safety
 4. Irreversible and irremediable commitment of resources
- C. Alternative Site Characterization Activities
 3. Regional and Local Effects of Locating a Repository at the Site
 - A. The Repository
 1. Construction
 - a. The surface facilities
 - b. Access to the subsurface
 - c. The subsurface facilities
 - d. Other construction
 - i. Access route
 - ii. Railroad
 - iii. Mined rock handling and storage facilities
 - iv. Shafts and other facilities
 - e. Utilities
 2. Operations
 - a. Emplacement phase
 - i. Waste receipt
 - ii. Waste emplacement
 - b. Caretaker phase
 3. Retrievability
 4. Decommissioning and closure
 5. Schedule and labor force
 6. Material and resource requirements
 - B. Expected Effects on the Physical Environment
 1. Geologic impacts
 2. Hydrologic impacts
 3. Land use
 4. Ecosystems
 5. Air quality
 - a. Ambient air-quality regulations
 - b. Construction
 - c. Operations
 - d. Decommissioning and closure
 6. Noise
 - a. Construction
 - b. Operations
 - c. Decommissioning and closure
 7. Aesthetic resources
 8. Archaeological, cultural, and historical resources
 9. Radiological effects
 - a. Construction
 - b. Operation
 - i. Worker exposure during normal operation
 - ii. Public exposure during normal operation
 - iii. Accidental exposure during operation
 - C. Expected Effects of Transportation Activities
 3. Transportation of people and materials
 - a. Highway impacts
 - i. Construction
 - ii. Operations
 - iii. Decommissioning
 - b. Railroad impacts
 2. Transportation of nuclear wastes
 - a. Shipment and routing nuclear waste shipments
 - i. National shipment and routing
 - ii. Regional shipment and routing
 - b. Radiological impacts
 - i. National impacts
 - ii. Regional impacts
 - iii. Maximally exposed individual impacts
 - c. Nonradiological impacts
 - i. National impacts
 - ii. Regional impacts
 - d. Risk summary
 - i. National risk summary
 - ii. Regional risk summary
 - e. Costs of nuclear waste transportation
 - f. Emergency response
 - D. Expected Effects on Socioeconomic Conditions
 1. Economic conditions
 - a. Labor
 - b. Materials and resources
 - c. Cost
 - d. Income
 - e. Land use
 - f. Tourism
 2. Population density and distribution
 3. Community services
 - a. Housing
 - b. Education
 - c. Water supply
 - d. Waste-water treatment
 - e. Public safety services
 - f. Medical services
 - g. Transportation
 4. Social conditions
 - a. Social structure and social organization
 - i. Standard effects on social structure and social organization
 - ii. Special effects on social structure and social organization
 - b. Culture and lifestyle
 - c. Attitudes and perceptions
 5. Fiscal conditions and government structure
 4. Suitability of the Yucca Mountain Site for Site Characterization and for Development as a Repository
 - A. Suitability of the Yucca Mountain Site for Development as a Repository: Evaluation Against the Guidelines That Do Not Require Site Characterization
 1. Technical guidelines
 - a. Postclosure site ownership and control
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the postclosure site ownership and control guidelines
 - b. Population density and distribution
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the population density and distribution guideline
 - c. Preclosure site ownership and control
 - i. Data relevant to the evaluation
 - ii. Favorable condition
 - iii. Potentially adverse condition
 - iv. Evaluation and conclusion for the qualifying condition on the preclosure site ownership and control guideline
 - d. Meteorology
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the meteorology guideline
 - e. Offsite installations and operations
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying conditions
 - v. Evaluation and conclusion for the qualifying condition on the offsite installations operations guideline
 - f. Environmental quality
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the environmental quality guidelines
 - g. Socioeconomic impacts
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the socioeconomic guideline
 - b. Transportation
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the transportation guideline
 2. Preclosure System
 - a. Preclosure system: radiological safety
 - i. Data relevant to the evaluation
 - ii. Evaluation of the Yucca Mountain site
 - iii. Conclusion for the qualifying condition on the preclosure system guideline radiological safety
 - b. Preclosure system: environment, socioeconomic, and transportation
 - i. Data relevant to the evaluation
 - ii. Evaluation of the Yucca Mountain site
 - iii. Conclusion for the qualifying condition on the preclosure system guideline environment, socioeconomic, and transportation
 3. Postclosure technical
 - a. Geohydrology
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Disqualifying condition
 - v. Evaluation and conclusion for the qualifying condition on the postclosure geohydrology guideline
 - b. Geochemistry
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying condition on the postclosure geochemistry guideline
 - v. Plans for site characterization
 - c. Rock characteristics
 - i. Data relevant to the evaluation
 - ii. Favorable conditions
 - iii. Potentially adverse conditions
 - iv. Evaluation and conclusion for the qualifying conditions on the postclosure rock characteristics guideline
 - d. Climatic changes
 - i. Data relevant to the evaluation
 - ii. Favorable conditions

1. Potentially adverse conditions
2. Evaluation and conclusion for the closure
3. Disqualifying conditions
4. Conclusion

5. Data relevant to the evaluation

6. Favorable conditions

7. Potentially adverse conditions

8. Disqualifying conditions

9. Conclusion

10. Data relevant to the evaluation

11. Favorable conditions

12. Potentially adverse conditions

13. Disqualifying conditions

14. Evaluation and conclusion for the qualifying condition on the postclosure and decontamination guideline

15. Tectonics

16. Data relevant to the evaluation

17. Favorable condition

18. Potentially adverse condition

19. Disqualifying condition

20. Evaluation and conclusion for the qualifying condition on the postclosure tectonics guideline

21. Human interference natural resources and site ownership and control

22. Data relevant to the evaluation

23. Favorable conditions

24. Potentially adverse conditions

25. Disqualifying conditions

26. Evaluation and conclusion for the qualifying condition on the postclosure human interference and natural resources technical guideline

27. Postclosure system

28. Evaluation of the Yucca Mountain Site
29. Quantitative analysis
30. Qualitative analysis

31. Summary and conclusion for the qualifying condition on the postclosure system guideline

32. Preclosure technical

33. Surface characteristics

34. Data relevant to the evaluation

35. Favorable conditions

36. Potentially adverse conditions

37. Evaluation and conclusion for the qualifying condition on the postclosure surface characteristics guideline

38. Rock characteristics

39. Data relevant to the evaluation

40. Favorable conditions

41. Potentially adverse conditions

42. Disqualifying conditions

43. Evaluation and conclusion for the qualifying condition on the postclosure rock characteristics guideline

44. Hydrology

45. Data relevant to the evaluation

46. Favorable conditions

47. Potentially adverse condition

48. Disqualifying condition

49. Evaluation and conclusion for the qualifying condition on the postclosure hydrology guideline

50. Tectonics

51. Data relevant to the evaluation

52. Favorable condition

53. Potentially adverse conditions

54. Disqualifying condition

55. Evaluation and conclusion for the qualifying condition on the postclosure tectonics guideline

56. Ease and cost of siting, construction, operation, and closure

57. Data relevant to the evaluation

58. Evaluation

59. Conclusions for the qualifying condition on the ease and cost of siting, construction, operation, and closure guideline

60. Conclusions regarding suitability of the Yucca Mountain Site for the characterization

61. Performance Analyses

62. Preclosure radiological safety assessments

63. Preclosure radiation protection standards

64. Methods for preclosure radiological assessment

65. Radiological assessment of construction activities

66. Radiological assessment of normal operations

67. Radiological assessment of accidental releases

68. Preliminary analysis of postclosure performance

69. Subsystem description

70. Engineered barrier subsystem

71. The natural barrier subsystem

72. Preliminary performance analyses of the major components of the system

73. The waste package lifetime

74. Release rate from the engineered barrier subsystem

75. Preliminary system performance description and analysis

76. Comparisons with regulatory performance objectives

77. Preliminary evaluation of disruptive events disruptive natural processes

78. Conclusions

79. Transportation

80. Regulations Related to Safeguards

81. Safeguards

82. Conclusion

83. Packaging

84. Packaging design, testing, and analysis

85. Types of packaging

86. Spent fuel

87. Casks for defense high-level waste and West Valley high-level waste

88. Casks for use from an NRC to the repository

89. Possible future developments

90. Mode-specific regulations

91. Overweight truck casks

92. Rod consolidation

93. Advanced handling concepts

94. Combination storage/shipping casks

95. Potential Hazards of Transportation

96. Potential consequences to an individual exposed to a maximum extent

97. Normal transport

98. Accidents

99. Potential consequences to a large population and area very severe transportation accidents

100. Risk assessment

101. Outline of method for estimating population risks

102. Computational models and methods for population risks

103. Changes to the analytical models and methods for population risks

104. Transportation scenarios evaluated for risk analysis

105. Assumptions about wastes

106. Operational considerations for use in risk analysis

107. Values for factors needed to calculate population risks

108. Results of population risk analyses

109. Uncertainties

110. Risks associated with defective cask construction, lack of quality assurance, inadequate maintenance and human error

111. Cost Analysis

112. Outline needed

113. Assumptions

114. Models

115. Cost estimates

116. Limitations of results

117. Barge Transport to Repositories

118. Effect of a Monitored Retrievable Storage Facility on Transportation Estimates

119. Effect of At-Reactors Rod Consolidation on Transportation Estimates

120. Criteria for Applying Transportation Guideline

121. DOE Responsibilities for Transportation Safety

122. Precertification

123. Emergency response

124. Insurance coverage for transportation accidents

125. Modal Mix

126. Train shipments

127. Ordinary

128. Dedicated train

129. Truck shipments

130. Legal weight

131. Overweight

Environmental Impact Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for this final rule.

Paperwork Reduction Act Statement

This rule does not contain information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.).

Regulatory Analysis

The DOE analysis of the costs and benefits of the LSS (U.S. Department of Energy, "Licensing Support System Benefit-Cost Analysis" (July, 1988) and companion DOE reports ("Preliminary Needs Analysis," "Preliminary Data Scope Analysis," and "Conceptual Design Analysis") are available for inspection in the NRC Public Document Room, 2120 L Street NW., Washington, DC. Single copies may be obtained from Francis X. Cameron, Office of General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC, 20555; Telephone: (301) 462-4823.

Regulatory Flexibility Analysis

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)),

ENCLOSURE 3

DISPOSITION OF THE INTERIM TOPICAL GUIDELINES

On April 14, 1989, the final rule amending the Nuclear Regulatory Commission's (NRC's) Rules of Practice in 10 CFR Part 2 for the adjudicatory proceeding on the application for a license to receive and possess high-level radioactive waste (HLW) at a geologic repository operations area, pursuant to 10 CFR Part 60, was published in the Federal Register [54FR14925 (1989)] under the title: "Submission and Management of Records and Documents Related to the Licensing of a Geologic Repository for the Disposal of High-Level Radioactive Waste." Topical guidelines identifying the information that should be submitted by the Licensing Support System (LSS) participants for entry into the LSS were recommended by all parties to the negotiated rulemaking. All of the recommendations were published as interim topical guidelines in the supplementary information on the rule, with the understanding that the list might be modified by the NRC after the rulemaking was completed. Subsequently, the NRC directed the staff to review, clarify, and modify the topical guidelines with the results being published as a regulatory guide. This document discusses the results of the NRC staff's review, clarification, and modification of the interim topical guidelines.

Three lists were included in the interim topical guidelines. The first list, "Categories of Documents" was retained (with some additions) and is Appendix A to the proposed "Draft Regulatory Guide Topical Guidelines for the Licensing Support System" (the draft regulatory guide). The second list was comprised of 17 general topics. The staff's disposition of each of these general topics is discussed later in this document. In summary, it is the staff's position that all information relevant to the licensing proceeding, which was requested in the second list, has been included in the draft regulatory guide. The third list was comprised of specific topics. It covers a broad range of material, including some that is well outside the scope of information that would be needed in the proceedings to license the HLW repository.

The information in the third list, which is outside the scope of what would be needed in the proceedings to license the HLW repository, generally deals with transportation and environmental issues. Requests for information on transportation of waste from reactor or temporary storage sites to the repository is clearly beyond the scope of the licensing requirements in 10 CFR Part 60. The Nuclear Waste Policy Act (NWPA) clearly states, in Sections 9 and 137, that it does not affect the regulation of transportation of spent nuclear fuel or high-level radioactive waste. The list of specific topics also includes requests for information on a range of environmental concerns which the staff assumes will have been resolved during the development and adoption by the U.S. Department of Energy (DOE) of the Environmental Impact Statement

(EIS) which must accompany an application to possess HLW at the repository. Therefore environmental information required to be included in the LSS has been limited to that information needed for NRC's adoption or modification of the DOE EIS.

The remaining information from the third list fell into two areas: information directly related to the repository systems defined in 10 CFR Part 60 (i.e.; the natural, geologic repository operations area, and engineered barrier systems) and other topics described in 10 CFR Part 60 for which information is required in order for DOE to submit a complete license application (e.g., quality assurance, repository operations, etc.). Since the staff had recently completed a proposed "Draft Format and Content Regulatory Guide for the License Application for the High-Level Waste Repository" (FCRG), it was decided to develop the topical guidelines such that they would parallel the approach taken in this document. Therefore, the draft regulatory guide follows, as closely as practicable, the repository systems-based approach used in the FCRG. In cases where topical information crosses system boundaries in the FCRG, it has been redefined as a specific topic in the draft regulatory guide (e.g., Radiation Protection).

It should be noted that the FCRG contains an appendix that depicts the relationship of the 10 CFR Part 60 regulatory requirements to sections of the FCRG. Thus, the staff believed that patterning the topical guidelines after the FCRG would help ensure that the topical guidelines would be complete with regard to the information required for the HLW repository license application process.

In developing the topical guidelines included in the draft regulatory guide, the staff attempted to provide a list of the topics for which LSS participants should submit documentary materials for entry into the LSS under 10 CFR 2.1003. As revised, the topical guidelines are designed to be broad enough to encompass all potential licensing issues. Most of the guidelines include several subheadings. In these cases, the higher level guideline is meant to cover any more detailed item that falls under it. The topical guidelines will not be used as the detailed topical index for locating documents within the LSS. This function will be served by the document header, whose fields are being developed by the LSS Administrator, with guidance from the LSS Advisory Review Panel. If such a document is developed, it will be developed separately by the LSS Administrator. The topical guidelines have been kept broad. Each guideline is all-inclusive, with regard to all documents germane to that topic, for the site.

As discussed above, a list of 17 general topics was included in the interim topical guidelines. Listed below are the 17 general topics and the staff's response (R) to each one.

1. Any document pertaining to the location and potential of valuable natural resources, hydrology, geophysics, tectonics (including volcanism), geomorphology, seismic activity atomic energy defense activities, proximity to water supplies, proximity to populations, the effect upon the rights of users of water, proximity to components of the National Park System, the National Wildlife Refuge Systems, and the National Wildlife and Scenic River System, the National Wilderness Preservation System or National Forest Land, proximity to sites where high-level radioactive waste and spent nuclear fuel is generated or temporarily stored, spent fuel and nuclear waste transportation, safety factors involved in moving spent fuel or nuclear waste to repository, the cost and impact of transporting spent fuel and nuclear waste to a repository site, the advantages of regional distribution in siting of repositories, and various geologic media in which sites for repositories may be located.

- R. It is NRC's position that the LSS should be limited to information relevant to licensing of the HLW repository. Information relevant to: natural resources, hydrology, geophysics, tectonics, volcanism, geomorphology, and seismic activity are covered under Topic II. Natural Systems of the Geologic Setting. The relevance of the rest of the information described in this general topic would seem to be primarily to development and consideration of DOE's EIS. As stated on page one of the draft regulatory guide:

Pursuant to section 114(f)(4) of the Nuclear Waste Policy Act of 1982 as amended, (42 U.S.C. 10134(f)(4)), the Commission is required "to the extent practicable," to adopt the environmental impact statement (EIS) prepared by the Department of Energy (DOE). The Commission's regulations have been amended to be in accord with this statutory provision. See 10 CFR § 51.26(c). Therefore, the environmental issues in the topical guidelines will be limited to those documents relevant to the Commission's adoption or modification of the DOE EIS.

2. Any document related to repository design, siting, construction, or operation, or the transportation of spent nuclear fuel and high-level nuclear waste not categorized as an "excluded document," generated by or in the possession of any contractor of the Department of Energy, the Nuclear Regulatory Commission, or any other party to the HLW licensing proceeding.
- R. This general topic, with the exception of requirements for information on transportation which are beyond the scope of the LSS, is simply a requirement for all relevant information not considered to be excluded documents. Sections 9 and 137 of the NWPA state that it (the NWPA) does not affect regulation of transportation of spent nuclear fuel or high-level radioactive waste. Since the inclusion of all relevant information is a requirement for participation in the LSS and the licensing proceedings, this seems to be an unnecessary or redundant topic.

3. All documents related to the physical attributes of the Basin and Range Province of the continental United States.
- R. The Basin and Range Province basically encompasses the entire western part of the United States. 10 CFR Part 60 defines the geologic setting at a more appropriate level for repository licensing. The draft regulatory guide is based on the information requirements of 10 CFR Part 60. The topic which speaks to the Geologic Setting is Topic II. Natural Systems of the Geologic Setting.
4. Any document listing and/or considering any site or location other than Yucca Mountain as possible location for a high level nuclear waste repository, or any alternative technology to deep geologic disposal.
- R. The LSS will be used in the licensing proceedings for the site being proposed in DOE's license application. The topical guidelines have been written to be as generic as 10 CFR Part 60 is. Any relevance other sites might have had was removed by the amendments to the NWPA. The NRC staff could not see the relevance of information about alternative technology to deep geologic disposal to the HLW licensing process as defined in 10 CFR Part 60.
5. Any document analyzing the effect of the development of a repository at Yucca Mountain on the rights of users of water in the Amargosa groundwater basin in Nevada.
- R. The topic of water rights is included in the draft regulatory guide. Topic VII is Land Ownership and Control. Under this heading is subtopic 1d, Plans for Restricting Access to the Controlled Area-Water Rights. To the extent that questions of radionuclide transport would be appropriate for discussion in the license application, they would be covered in Topic II. Natural Systems of the Geologic Setting (II.2 Hydrologic System) and X. Radiation Protection (X.6 Estimated Offsite Dose Assessment). The draft regulatory guide makes it clear that each topic is to be considered all inclusive in terms of information required for the HLW licensing process. In addition, it is assumed that environmental issues relevant to the Amargosa groundwater basin will have been considered in the development of DOE's EIS.

6. Any document analyzing the health and safety implications to the people and environment of the transportation of spent fuel between locations where spent fuel is generated or stored and Yucca Mountain, Nevada, or any other site nominated for repository characterization on May 28, 1986, including, but not limited to:
- a. Any analysis of possible human error in the manufacture of spent fuel casks;
 - b. Any analysis of the actual population density along all of any specific projected routes of travel;
 - c. Any analysis of releases from any actual radioactive material transportation incidents;
 - d. Any analysis of the emergency response time in any actual radioactive materials transportation incident;
 - e. Any actual accident data on any specific projected routes of travel;
 - f. Any calculations or projections on the probabilities of accidents on any specific projected routes of travel;
 - g. Any data on the physical properties or containment capabilities of spent fuel are projected to be used at any any hypothetical or actual projected repository;
 - h. Any analysis of modeling of the containment capabilities of spent fuel casks under a stress scenario;
 - i. Any analysis or comparison of spent fuel casks projected to be used against the spent fuel cask certification standards of the Nuclear Regulatory Commission;
 - j. Any analysis of the containment capabilities of spent fuel casks containing spent fuel which has been burned up over an extended period.
- R. Transportation is beyond the scope of the licensing process for the HLW repository, as defined by 10 CFR Part 60 and the NWPA. Therefore, this topic has not been included in the draft regulatory guide.
7. Any document analyzing or comparing Yucca Mountain, Nevada, with any other site in the same geohydrologic setting.
- R. This topic was excluded because under the NWPA, as amended, no other site is to be considered concurrently.
8. Any document relating to potential interference or incompatibility between a Yucca Mountain, Nevada, high-level nuclear waste repository

and atomic energy activities at the Nevada Test Site and Nellis Air force base.

- R. It is the view of the NRC staff that this is primarily an issue which would be addressed in DOE's EIS. However, information about activities at Nellis Air Force Base or the Nevada Test Site which could affect the safety or performance of the repository would fall under several of the topics in the draft regulatory guide (e.g., II. Natural Systems of the Geologic Setting, III. Geologic Repository Operations Area, IV. Engineered Barrier Systems, VI. Conduct of Repository Operations, etc.).
- 9. Any document related to the land status, use or ownership of Yucca Mountain, Nevada.
- R. This is covered under Topic VIII. Land Ownership and Control.
- 10. Any document considering or analyzing the attributes or detriments of any engineered barrier upon the radionuclide isolation capability of Yucca Mountain, Nevada, or any other site considered.
- R. This would be covered under Topic IV. Engineered Barrier Systems for the site proposed in the application.
- 11. Any document evaluating the effect of extended fuel burn-up on Yucca Mountain, Nevada's adequacy as a repository site for disposal of spent fuel or upon the design of any such theoretical repository.
- R. Topic XI. is Any Alternatives Considered (e.g., design interpretations, models)
- 12. Any document analyzing or investigating the potential for discharge of radionuclides into the Death Valley National Monument.
- R. This topic would be addressed in DOE's EIS.
- 13. Any document analyzing the recharge of the underlying saturated zone or the hydroconductivity of the unsaturated zone at Yucca Mountain.
- R. This is covered under Topic II., Natural Systems of the Geologic Setting (II.2 Hydrologic System).
- 14. Any document containing any data or analysis of volcanism in the geologic setting of which Yucca Mountain is a part.
- R. This is covered in Topic II., Natural Systems of the Geologic Setting, (II.1 Geologic System).

15. Any document containing any data or analysis of tectonic events at Yucca Mountain, or pertaining to the tectonic framework of the Yucca Mountain area or any document containing any data or analysis of faults within or without surface expression in the area of Yucca Mountain.
- R. This is covered in Topic II., Natural Systems of the Geologic Setting, (II.1 Geologic System).
16. Any document containing instructions or other limitations on the scope of work to be performed by Department of Energy personnel or contractor's personnel.
- R. Appendix A to the draft regulatory guide contains a list of examples of categories of documents to be included in the LSS. Among the categories which apply here are: external correspondence, internal memoranda, and DOE program management documents. Specific documents would fall under various topical headings within the guide depending on subject matter.
17. Any document pertaining to prevention or control of human intrusion at the Yucca Mountain site.
- R. Depending on the focus of the document, it would fall under Topic I. General Information (I.5 Any Publicly Available Information on the Physical Security Plan); VI. Conduct of Repository Operations (VI.9 Site Markers); or VII Land Ownership and Control (passim).