

Minutes of First LSSARP Meeting

December 19, 1989

The first meeting of the Licensing Support System Advisory Review Panel (LSSARP or Panel) was held in open session in Reno, Nevada, on December 19, 1989. Enclosure 1 is a copy of the meeting agenda.

INTRODUCTION OF PARTICIPANTS

John Hoyle, Chairman of the LSSARP, called the meeting to order, introduced himself, and asked all those present to do the same. A list of attendees is included as Enclosure 2. Mr. Lloyd Donnelly, the Licensing Support System Administrator (LSSA) then introduced himself and his staff members explaining each person's background and unique qualifications for the LSSA office.

Mr. Hoyle noted that there were several coalitions representing various interests and asked that there be a major spokesman from each group.

STATUS OF DOE HLW REPOSITORY PROGRAM

Ms. Linda Deselle of the Office of Civilian Radioactive Waste Management at the Department of Energy made a presentation on the changes in the DOE/OCRWM Program. The briefing slides she used, as well as a "Report to Congress on Reassessment of the Civilian Radioactive Waste Management Program" and a September 18, 1984, memorandum on the "DOE/NRC Site-Specific Procedural Agreement for Geologic Repository Site Investigation and Characterization Program" are included as Enclosures 3, 4, and 5, respectively.

DISCUSSION OF MEMBERSHIP ON THE PANEL

Next, Mr. Hoyle began a discussion of how the Panel should work. He explained that membership on this panel closely paralleled the membership of the earlier negotiated rulemaking committee. He was asked about the absence of an environmental group on the Panel. Mr. Cameron, the Deputy LSSA, explained that the LSSA asked the environmental groups who were part of the earlier committee to participate, but their priorities are such that they do not wish to participate at this time. He has since invited the Natural Resources Defense Council to consider participating as a Panel member. If NRDC does not accept, the Panel will be asked for its views on representation by the environmental community.

A question was asked by Mr. Silberg, counsel for the Edison Electric Institute, regarding the Securities and Exchange

Commission's (SEC's) EDGAR system and the possibility of having SEC as a member on the Panel. Mr. Cameron responded that it was decided to limit membership to just two agencies other than NRC and DOE in order to keep the number down, but went on to say that there is no reason, if the Panel wants, why they could not ask the SEC to be on the Panel. Mr. Cameron then asked Mr. Boyd Alexander of the U.S. Patent Office if he could give the Panel a tour of the Patent Office system. Mr. Alexander agreed to do this and indicated that he will prepare some facts and figures for the Panel.

ROLE OF LSSARP AND STATUS OF LSS ACTIVITIES

Mr. Donnelly was then asked to discuss the role of the Panel and the status of LSS activities. Mr. Donnelly spoke about the interaction between the Panel and the LSSA and gave some highlights on where the LSSA stands and how the office is thinking at this time.

He explained that the LSSA office intends to implement the consensus advice of the LSSARP. The Panel is an official, formalized, important way to get input to the LSSA and he will look to the Panel for advice. He said he would like to receive a formal recommendation from the Panel on issues and will give a formal response on what the LSSA is or is not doing about each recommendation. If there is some reason the LSSA cannot do what the Panel recommends, he will give the Panel an explanation. He reminded the Panel that their recommendations will be evaluated from a cost benefit standpoint.

Mr. Donnelly was asked if he wanted to have minority opinions included in the majority opinions. He said that he does.

Mr. Donnelly went on to explain that the LSS has been scaled back from the system envisioned at the time the rule was promulgated due to the expected repository program schedule stretch out and the significant budget cuts sustained by DOE. What remains is a minimum effort which will nevertheless accomplish the desired objectives. It involves the procurement, testing, and preparation for operation of the first capture station in FY 91. This will provide the capacity to start loading documents in FY 92. The first capture station should be able to process about 750,000 pages a year. This will provide the stability for sustaining momentum over time, provide for capturing highest priority documents first, and provide the opportunity to learn the way to do it right on a smaller scale in preparation for going to a more complete system.

SIGNIFICANT LSS DEVELOPMENT ISSUES

Next, Mr. Chip Cameron, the Deputy LSSA, spoke about significant LSS development issues. Mr. Cameron explained that his discussion was designed to start members thinking about future Panel agendas. He indicated that there are two major blocks of issues: (1) the procurement and operation of the first capture station and (2) design of the other components of the LSS. The capture station issues involve: (1) document identification and preparation, and (2) capture station operation.

He first mentioned that the topical guidelines embodied in the LSS rulemaking were designed to define the universe of documents that would go into the LSS. They are broad and cover almost everything. Consistent with the recent direction from the NRC Commission, it is desirable to refine guidelines so it is easier to identify what should go into the LSS, while meeting the objectives of the LSS. Another issue is the technical data base access protocol. Section 2.1003(c) of the rule covers technical data under the term "graphic-oriented document material" that is not appropriate for full text entry. Section 2.1011(d)(10) states the Advisory Review Panel will negotiate a time frame for entry of this graphic-oriented material. We need to identify what is subject to this access protocol, when should this information go in, and what access will be provided to this information.

Mr. Cameron noted that another issue for Panel consideration is document preparation standards such as the format for the header, for the ASCII submissions, and the image submissions. What fields should be in the header besides the basic bibliographic data? Yet another issue in the document identification and preparation area is the compliance evaluation program. The LSSA must submit his first report on DOE's compliance to the Commission in June 1990. The issue is how to evaluate a participant's readiness to comply with the document preparation standards. Taking a constructive viewpoint, what types of things would participants need to begin to do to prepare for compliance sometime in the future? Other issues that will have to be faced sometime in the future include the fact that there are certain classes of information for which details need to be filled in, e.g., when do contractor documents have to be submitted to the LSS and can we provide more detail on what documents are excluded from the LSS by the rule.

One final set of LSSARP review responsibilities would be the SAIC design documents for the search system, the image system, and the remote work station telecommunications. After some discussion among Panel members, it was agreed that there would be a set time for the Panel to provide comments on these documents when their review is requested.

Mr. Silberg stated that this system is in essence a 10-year system, but at the end of 10 years we will have to start over because things are changing so fast. Are we locking ourselves into something for a system that won't be in use for a long time? Should we really be doing all this development work at this time? Mr. Bender of the LSSA staff responded that NRC supports DOE's strategy for an open architecture system. The technology may change, but the functional requirements of the LSS such as scanning, storing, searching and printing will remain the same. As the technology changes, the system will be upgraded to enhance performance of functional requirements. Further, there is no such thing as document obsolescence. Mr. Alexander said this is what they have done at the Patent Office--the open architecture system. Their system is designed to run until 2020 and they expect that every 5 to 8 years they will have to update the technology. He stated that a second generation workstation was already being added to the system without any need to alter the existing database. At the present time, there are about 400 public users of the Patent Office system.

Mr. Killar of the U.S. Council for Energy Awareness asked if we must have the most sophisticated state-of-the-art equipment at this time, or can we get by with something else for now. Mr. Graser of DOE's Office of Civilian Radioactive Waste Management responded that this is going to be an open competitive procurement where you don't know what the cost will be until you start the procurement. You do not specify what the equipment must be, only what it must do. The specification outlines a requirement. Then the vendors propose a configuration that can meet those requirements.

Mr. Killar asked if we still need to process 3,000 pages per day in the capture station, since the repository program has slipped. Mr. Donnelly explained that this loading level would fully use the capture station's production capacity.

Mr. Henkel of the Edison Electric Institute asked about providing full text search. Does it make sense to do this in the near future, or should we wait so that we don't have to update the search technology down the road? Mr. Altomare of the NRC stressed how important it is to him as a user to have access to the system as soon as possible. He asked if the station could be designed to give interim access to the documentation? He will be using the LSS for the technical review of the documents and needs it to be useable as early as it can be. Mr. Cameron suggested that eventually we might be able to use a mini computer for search of priority documents and let the various technical staffs use that information. Mr. Murphy commented that early use of the LSS would assist DOE in closing out some of the technical issues before the licensing proceeding begins. For this reason, access to the system by all parties at an early date would be most helpful. Mr. Killar

asked if DOE and NRC could put together some sort of a time frame for these issues. LSSA later provided the Panel with an outline of important issues, their priority, and a proposed schedule for resolution (See Enclosure 8).

LSS-RELATED RESEARCH PROGRAM AT UNLV

Next, Dr. Nartker of the University of Nevada at Las Vegas (UNLV) College of Engineering was invited from the audience to give the Panel a brief overview of the proposed LSS-related research program at UNLV. He said there are two very specific, very technologically intensive areas of software that are critical to the LSS: optical character recognition technology and document retrieval. UNLV proposes to establish a research center dedicated specifically to these two technologies and to host a conference every year specifically dedicated to new research in these two areas. Their current budget proposal for this is \$4.3 million over a 3-year period.

LSSARP ORGANIZATIONAL PROTOCOLS

Mr. Hoyle then brought up for discussion the purposes and workings of the Panel. The Panel was established by the Nuclear Regulatory Commission. The Commission has approved the Panel's charter which was drawn primarily from Section 2.1011(e) of the rule. At this time, the Panel is composed of seven voting members: the Nuclear Regulatory Commission; the Department of Energy; the State of Nevada; Local Government-Site; Local Government-Adjacent; the National Congress of American Indians; and the Nuclear Industry. Non-voting members of the Panel are: U.S. Patent and Trademark Office; and the National Archives and Records Administration.

An October 3, 1989, memorandum from Mr. Chilk, Secretary of the Commission, to Messrs. Parler and Donnelly stated that the Commission had approved the charter and the letter to the General Services Administration advising the GSA of the Panel. Mr. Hoyle noted the following statement in that memo: "The Commission does not construe this to include initiatives having to do with the adjudicatory procedures that will govern the conduct of the high-level waste proceeding or the subjects that will be litigated in that proceeding. While the Commission does not object to the Advisory Review Panel being asked to comment on initiatives that involve either of these matters it believes that it should be clear that the Advisory Review Panel is not charged with the lead responsibility for initiatives in these two areas, nor does the Commission intend to require the Panel's concurrence in any such initiatives that might be proposed by the staff before those initiatives can be submitted to the Commission. If the Advisory Review Panel wishes to comment on any such initiatives, comments should be submitted directly to the Commission for consideration."

Mr. Hoyle mentioned that any further agreements the Panel comes up with can be made an addendum to the charter or be written as bylaws. There was then some discussion of what consensus should mean. Mr. Hoyle explained that other advisory committees to the Commission, particularly the Advisory Committee on Reactor Safeguards, use a simple majority for quorum purposes and a two-thirds majority for significant decisions. Simple majority decisions cover less significant issues. Mr. Hoyle suggested that a majority decision by the LSSARP be one that is based on the agreement of 5 of the 7 members. However, for quorum purposes, 4 of the 7 members (a simple majority) would be sufficient to conduct business at a meeting. Mr. Hoyle said that although each member should be represented at all meetings of the committee, he would contact members not present and give them an opportunity to vote on all major decisions. The majority view will be reported to LSSA by letter with dissenting views clearly described. Reports will be similar to the letter reports of the ACRS. The members discussed the decisionmaking process briefly and expressed no objection to Mr. Hoyle's suggestion.

Mr. Hoyle stated that there are several coalitions represented among the seven members, and each coalition is entitled to one vote. The coalition will decide among itself what its vote will be. If a recess is needed to allow the coalition time for a caucus, that will be done.

Mr. Hoyle said that he intends to have a court reporter for future meetings and will have a transcript made. There was discussion on this subject. Several Panel members felt a transcript was unnecessary; others wanted it. Mr. Hoyle listed some of the Commission's advisory committees and explained that they all have transcripts. The Advisory Committee Act requires detailed minutes. This requirement would be met by having a transcript. It was decided that the Panel should look at the minutes of this meeting, see how quickly they are produced, how detailed they are, and make a decision about transcripts after that.

Mr. Hoyle indicated that he will look to Mr. Donnelly's office for the staff support the Panel needs since the Panel does not have a budget to hire staff or consultants. Mr. Donnelly reiterated that his staff will provide what assistance they can and that Marilee Rood would be working closely with Mr. Hoyle.

The next subject was future meeting agendas. Future meeting agendas will be determined by the Panel with suggestions from the LSSA when there are issues on which he needs advice. Panel members were encouraged to make proposals on their own. The Panel plans to meet four times a year.

Mr. Hoyle brought up the subject of working groups/subcommittees that would work between Panel meetings. The Federal Advisory Committee Act (FACA) and the Commission's regulations allow for the use of working groups/subcommittees. As long as the work of these groups is limited to the gathering of information or conducting research for the full committee or the drafting of proposed position papers for deliberation by the full committee, their meetings and activities would not be subject to the provisions of FACA. Reports of subcommittees should be given to Mr. Hoyle in sufficient time to be reproduced and sent to the total membership for consideration at the next scheduled Panel meeting.

DOCUMENT LOADING PRIORITIES

The next discussion session was led by Ms. Betsy Shelburne of the LSSA staff. She is responsible for document management issues for the LSSA. A copy of LSSA Issue Paper No. 1 entitled "Development of a Priority Document Production Schedule" and the slides used in her presentation are included as Enclosures 6 and 7. In line with NRC guidance, the LSSA plans to develop a formal Document Production Schedule to lay out the priorities for processing and submitting documents and loading the LSS. This schedule is required to provide direction to document producers so that the database, as it grows, will be most useful to searchers. The schedule will be developed in coordination with the LSSARP. Ms. Shelburne reviewed the background on this issue, including the fact that all previous data on the volume of existing and future materials is outdated and must be reworked. She laid out some of the parameters by which the universe of documents could be subdivided, acknowledging that there could be overlap as potential categories are being identified and defined.

Ms. Shelburne then reviewed a proposed process by which this schedule could evolve, including a plan that the LSSARP members provide recommendations in February 1990. At that point Mr. Murphy, State of Nevada, stated that he would not be ready that soon given the lack of knowledge about DOE's plans. Mr. Treby felt that subject priorities could be projected. Mr. Donnelly acknowledged the tight deadline, but stated that it was important to give direction to document producers, especially DOE, as soon as possible. Mr. Murphy said that no realistic recommendation could be developed until the revised DOE Mission Plan was released and could be reviewed.

Ms. Cerny, DOE Office of Civilian Radioactive Waste Management, then stated that it was unrealistic to plan for processing DOE documents by certain categories because of the unknown status of DOE's document backlog. She stated that DOE currently has plans to internally organize and systematically review their Program records for multiple purposes, including inclusion in the LSS. It

was then suggested that she provide the Panel with a proposal of what documents in what volume and time frame was realistic before the next meeting. She agreed, but stated that it would probably not be by subject. Ms. Shelburne asked if it would be just an update of the type of information in the earlier DOE Data Scope Analysis Report. Ms. Cerny said yes, that was basically all that was currently known. Mr. Altomare, NRC's Office of Nuclear Material Safety and Safeguards, stated that at the very minimum it was important that we get an up-to-date picture of what exists in the backlog and what the projected volume and makeup will be. Mr. Killar agreed and said we need a DOE briefing soon.

Mr. Donnelly and Ms. Shelburne reiterated their concerns that the database be built systematically in a way that it would be useful to the participants, e.g., contain a known complete subset of useful documents. Also, document preparation and submission by the participants to LSSA should be geared to the capture station production capacity. The LSSA needs to have a recommendation from the Panel. Assuming input information from DOE at the next meeting and based on expected release of the DOE Mission Plan in June of 1990, Mr. Donnelly requested that the Panel recommendations be developed for discussion and review at the September 1990 Panel meeting. Several participants pointed out that DOE and NRC had the great majority of the relevant documents and, therefore, the greatest effort and input into this issue. Mr. Altomare stated his preference that the highest priority documents should be those being currently generated as the database is loaded.

STATUS OF HEADER DESIGN

The next topic of discussion centered around the need to finalize the LSS header record requirements. The rules and procedures for indexing and submitting information about documents are required so that document submitters can begin preparing documents for submission to the first capture station. Ms. Shelburne acknowledged that a lot of work had previously been done on this issue, but that the header requirements needed to be finalized as soon as possible so that ongoing work within the participant's records management offices would not have to be redone or supplemented. She suggested that a small working group be formed early in the coming year to finalize these specifications. Mr. Graser agreed, stating that this effort was required as input to the capture station solicitation package. Mr. Hoyle suggested setting up a working group to work with Ms. Shelburne and then report to the Panel which in turn would provide a recommendation to the LSSA. He proposed a subcommittee of three; a DOE person, an industry person and Mr. Balcom representing the state of Nevada. Mr. Balcom would head the group. Mr. Hoyle requested that he be provided a copy of the prototype header as it now exists, as well as background on why certain information was selected, for

circulation to the Panel members and discussion at the next meeting. Mr. Hoyle asked that Ms. Cerny send this information to him and to Mr. Donnelly at the same time.

Ms. Cerny stated that the header being used by DOE is the one that was agreed to by the former LSS Negotiated Rulemaking Committee. Mr. Cameron, Mr. Murphy, and Mr. Treby stated that they were unaware that any header had been agreed to by the Committee. Mr. Donnelly informed her that the current header is not necessarily the one that will be ultimately used in the LSS. Ms. Cerny responded that DOE took the best information available from previous Committee activities and that became the basis for the prototype header.

FUTURE MEETINGS OF THE PANEL

Mr. Hoyle suggested that the Panel's next meeting be held in Washington, D. C., so that the Panel could visit the Patent Office, the National Archives, and perhaps hear a presentation by SEC on their EDGAR system. It was decided that the meeting will be held on March 20 and 21, 1990, in Washington, D.C. The June meeting will be held in Nevada and September's meeting in Washington, D.C.

Enclosure 8 is a LSSARP Planning Agenda which was provided to Panel members. Enclosures 9, 10, and 11 are copies of the Federal Register notice establishing the Panel and announcing the topics for the first meeting, the charter for the Panel, and a memorandum containing guidance from the Nuclear Regulatory Commission concerning Panel activities.

The meeting was adjourned about 4:50 pm.

Enclosures:

1. Meeting Agenda
2. Attendance List
3. L. Deselle Briefing Slides
4. DOE Report to Congress DOE-RW-0247
5. J. Bennett Memo dated 9/18/84
6. LSSA Issue Paper No. 1
7. B. Shelburne Briefing Slides
8. LSSARP Planning Agenda
9. 54 FR 50033
10. Charter dated 12/18/89
11. Memo from NRC Secretary dated 10/3/89

ENCLOSURE 1

AGENDA - LSS ADVISORY REVIEW PANEL MEETING
DECEMBER 19 AND 20, 1989

1. Agenda overview and introduction of participants
John Hoyle, Chairman, LSSARP
2. Status of HLW repository program
Linda Desell, DOE
3. Role of LSSARP and status of LSS activities
Lloyd Donnelly, LSSA
4. Significant LSS development issues
F.X. Cameron, LSSA
5. LSSARP organizational protocols
John Hoyle, Chairman, LSSARP
6. Document loading priorities
Elizabeth Shelburne, LSSA
7. Future agenda items (e.g., scope of topical guidelines,
technical data access protocol, standard formats for headers
and ASCII, procedures for capture station operation)

ENCLOSURE 2

Enclosure 2

Attendance List

LSS Advisory Review Panel Meeting, December 19, 1989

Panel Members

Nuclear Regulatory Commission

John C. Hoyle, Panel Chairman
Stuart A. Treby
Phillip Altomare

Department of Energy

Barbara Cerny
Linda Desell
Dan Graser

State of Nevada

Malachy Murphy
Kirk Balcom

Local Government - Site

Steve Bradhurst

Local Government - Adjacent

Dennis Bechtel
Lenard Smith
Mike Baughman
Liza Vibert
Peter Cummings

National Coalition of American Indians

Loretta V. Metoxen

Nuclear Industry

Jay Silberg
Christopher Henkel
Felix Killar

U.S. Patent and Trademark Office (Non-Voting Member)

Boyd Alexander

Others

Lloyd Donnelly, NRC/Licensing Support System Administrator

Chip Cameron, NRC/LSSA

Avi Bender, NRC/LSSA

Betsy Shelburne, NRC/LSSA

Marilee Rood, NRC/LSSA

William R. Wells, UNLV/College of Engineering

Tom Nartker, UNLV/College of Engineering

ENCLOSURE 3

CHANGES IN THE DOE/OCRWM PROGRAM

'ASSESSMENT OF THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT PROGRAM'

- o REPORT TO CONGRESS BY THE SECRETARY OF ENERGY, NOVEMBER 29, 1989
- o RESPONSE TO THE APPROPRIATIONS COMMITTEE REPORT
- o BASED ON A COMPREHENSIVE PROGRAM REVIEW COMPLETED BY THE SECRETARY
- o CONTAINS THREE-POINT PLAN FOR A RESTRUCTURED OCRWM PROGRAM



November 1989

U.S. Department of Energy
Office of Civilian Radioactive Waste Management



THREE POINTS OF THE PLAN

I. 0 MANAGEMENT STRUCTURE CHANGES

- NEW DIRECTOR
- DIRECT LINE REPORTING BY YMP
- INDEPENDENT MANAGEMENT REVIEW OF OCRWM ORGANIZATION
- CONSOLIDATION OF CONTRACTOR SUPPORT
- MANAGEMENT CONTROLS, i.e., TECHNICAL, COST, SCHEDULE BASELINES
- NUCLEAR WASTE NEGOTIATOR POSITION

II. 0 YUCCA MOUNTAIN CHANGES

- SITE ACCESS THROUGH LITIGATION AND THE NUCLEAR WASTE NEGOTIATOR TO OBTAIN PERMITS
- SITE SUITABILITY
 - SURFACE-BASED TESTING
 - NRC AND TRB SUGGESTIONS
- DEFERRAL OF REPOSITORY SITE SPECIFIC DESIGN

III. 0 MRS

- WORK WITH CONGRESS TO MODIFY LINKAGES
- CONTINUE STUDY OF MRS OPTIONS AND RECOMMENDATIONS OF MRS COMMISSION

OTHER KEY POINTS OF THE REPORT

- o STATEMENTS ON UNIQUENESS OF PROGRAM, REGULATORY COMPLIANCE, SCIENTIFIC INVESTIGATION, AND THE NUCLEAR ENERGY OPTION
- o REVISED DRAFT MISSION PLAN WILL BE ISSUED FOR COMMENTS BY JUNE 1990
- o PROGRAM SCHEDULE IS BEING BASELINED
- o TECHNICAL BASELINE IS UNDER REVISION
- o FINAL COST BASELINE BY SPRING, 1990
- o DISCUSSION OF:
 - SCHEDULE AND ASSUMPTIONS
 - SITE ACCESS/SUITABILITY
 - MRS ISSUES

ENCLOSURE 4



**Report to Congress on Reassessment
of the Civilian Radioactive
Waste Management Program**

November 1989

**U.S. Department of Energy
Office of Civilian Radioactive Waste Management**

**REASSESSMENT OF THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT
PROGRAM**

Report to the Congress by the Secretary of Energy

November 29, 1989

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EXECUTIVE SUMMARY

The success of the Civilian Radioactive Waste Management Program of the U.S. Department of Energy (DOE) is critical to U.S. ability to manage and dispose of nuclear waste safely--and to the reestablishment of confidence in the nuclear energy option in the United States. The program must conform with all applicable standards and, in fact, set the example for a national policy on the safe disposal of radioactive waste.

The Secretary of Energy has recently completed an extensive review of the Civilian Radioactive Waste Management Program and concluded that it cannot be effectively executed in its current form. In response to Congressional concerns about schedule slips, management structure, and contractor efforts in the program, this report describes the results of that review and outlines actions the Secretary has taken and will take in the near future to restructure the program in order to get it moving forward again.

An important underlying premise of these Secretarial actions is that the program and supporting activities have a sound scientific basis. The intent is to develop and follow a solid, integrated plan based on a realistic assessment of the current situation.

Several months ago, the Secretary directed that a comprehensive review of the schedule for repository-related activities be performed. For the first time since the passage of the Nuclear Waste Policy Act, the program has put together a schedule based on a realistic assessment of activity durations and past experience. This schedule shows a significant slip for the expected start of repository operations--from the year 2003 to approximately 2010. In developing the revised schedule, the DOE was mindful that certain activities, such as the issuance of environmental permits by the State of Nevada and the Nuclear Regulatory Commission review of the license application, are outside the DOE's control.

One new emphasis of the program's efforts will be on completing an integrated array of near-term milestones directed at the scientific investigation of the potential site at Yucca Mountain in Nevada. Since a licensed geologic repository is a first-of-a-kind undertaking, the later dates in the schedule should be viewed as reasonable targets that represent the current estimate of activity durations. The DOE, however, pledges its best efforts toward meeting the near-term and later milestones consistent with its goals of safety and scientific excellence.

To promote the DOE's ability to achieve such milestones and goals, the Secretary is announcing the initiation of a three-point action plan. This plan centers on a

restructuring of the Office of Civilian Radioactive Waste Management, initiatives to gain access to the Yucca Mountain site to continue the scientific investigations needed to evaluate the site's suitability for a repository, and an initiative for establishing integrated monitored retrievable storage (MRS) with a target for spent-fuel acceptance in 1998. The major elements of this plan are outlined below.

Management structure

1. Appointment of new Director: The Secretary has proposed a candidate for a new Director of the Office of Civilian Radioactive Waste Management to the White House for appointment by the President. The program has been managed by acting Directors for over two years. The new Director will have the freedom to propose program changes in addition to those discussed in this report.
2. Direct-line reporting: Direct-line reporting by the Manager of the Yucca Mountain Project to the Office of Civilian Waste Management at Headquarters has been established. This allows for a direct line of authority and accountability between the Headquarters and field elements of the program for the first time.
3. Independent management review: The Secretary has directed that an independent review be performed to assess the effectiveness of the program organizational structure and processes. The review will include an examination of management structure and systems. The results of this review will be incorporated into the program restructuring beginning in January 1990.
4. Contractor support: Several reviews have been initiated to examine the program's current use of contractors to streamline and, where possible, consolidate contracts. In some areas, the number of contractors has already been reduced. As a result of schedule adjustments, some contractor work will be deferred, while other work may be accelerated. Because of uncertainties resulting from the revised program focus, there is a need to reassess options for contractor support. This is expected to be completed in the next few months.
5. Management controls: Formal, more rigorous program and project management controls are being implemented to enhance those previously in place. This includes the development or revision of technical, schedule, and cost baselines subject to formal change-control procedures.

Nuclear Waste Negotiator: The Secretary is working in close cooperation with the White House to facilitate the appointment of the Nuclear Waste Negotiator as provided for in the Nuclear Waste Policy Amendments Act. The Negotiator could provide valuable assistance in promoting progress in the repository and MRS programs.

Yucca Mountain

1. **Site access:** An important prerequisite to new scientific investigations at Yucca Mountain is issuance of the required environmental permits by the State of Nevada. The DOE has attempted to work constructively and positively with the State over the past years, but the State government has been adamantly opposed to the program and has failed to provide environmental permits. While continuing efforts to resolve the current permitting impasse through direct negotiations, the DOE has requested the Department of Justice to initiate litigation to obtain the necessary permits.
2. **Site suitability:** The priority of the site-characterization activities at Yucca Mountain will be on scientific investigations of the suitability of the site. The DOE plans to take advantage of some early surface-based tests in advance of the ability to construct the exploratory shaft facility. The DOE continues to believe that an iterative scientific approach using both surface-based and underground tests, combined with continuing evaluation of the data as they relate to site suitability, is the efficient, cost-effective, and timely way to conduct the scientific investigations. The early emphasis on surface-based tests to examine the suitability of the site is responsive to suggestions from the State of Nevada and the Edison Electric Institute. The DOE is also carefully reviewing suggestions from the Nuclear Waste Technical Review Board and the Nuclear Regulatory Commission on the design of the exploratory-shaft facility prior to the beginning of major underground investigations. It should be noted that, if the site is found unsuitable at any time during characterization, the DOE will notify the State of Nevada and the Congress and will discontinue further scientific evaluation at Yucca Mountain.
3. **Deferral of major site-specific design activities:** Major activities related to the design of a repository at the Yucca Mountain site will be deferred until more information is available concerning the suitability of the site. This will conserve resources and allow the concentration of efforts on the scientific investigations.

Monitored retrievable storage

1. **Linkages to the repository:** The primary objective of the program is to develop a licensed geologic repository for the permanent disposal of spent fuel and high-level waste. The DOE has an obligation to accept spent fuel from the utilities in accordance with the Standard Contract for Disposal of Spent Nuclear Fuel/and or High-Level Radioactive Waste and the Nuclear Waste Policy Act as amended. However, a detailed examination of the repository schedule, allowing the time necessary for sound scientific investigation and design, shows that the DOE cannot

meet the anticipated schedule set forth in the Act for the disposal of waste in a repository by 1998; furthermore, the current linkages between the repository and the MRS program make it impossible for the DOE to accept waste at an MRS facility on a schedule that is independent from that of the repository. Therefore, the DOE plans to work with the Congress to modify the current linkages between the repository and the MRS facility and to embark on an aggressive program to develop an integrated MRS facility for spent fuel. The DOE believes that if the linkages are modified, it is likely that waste acceptance at an MRS facility could begin by 1998 or soon thereafter.

2. Options for monitored retrievable storage: The DOE is also continuing to study a variety of options to the Monitored Retrievable Storage facility to offer the utilities a predictable and reliable plan for waste acceptance. The recommendations of the MRS Review Commission are being considered fully in the development of these options.

1. INTRODUCTION

1.1 Secretary's review of the program

The Secretary of Energy has recently completed an extensive review of the Civilian Radioactive Waste Management Program and has concluded that the program cannot be effectively executed in its present form. From this review it was apparent that the causes of delays are twofold. First, there are delays that result from extending the durations of site-characterization and repository-development activities. These delays are attributable to (1) underestimation by the DOE of the impact of regulatory requirements for quality assurance and design control on a repository schedule that was unrealistically ambitious and (2) the misperception that the program is simply a construction project rather than a first-of-its-kind scientific investigation. Second, there are critical delays in the start of new scientific investigations at the Yucca Mountain candidate site--delays attributable, in part, to an unwillingness on the part of the State of Nevada to allow the scientific investigations that are necessary to determine the suitability of the Yucca Mountain site.

The Secretary recognizes that the program is technically and institutionally unprecedented. In order to obtain a license for the repository, the DOE will have to design and implement an iterative program of scientific investigations, engineered-barrier designs, and performance assessments that will permit a determination whether the repository system--both the natural features of the site and the engineered barriers--will meet the standards promulgated by the Environmental Protection Agency and the technical criteria issued by the Nuclear Regulatory Commission (NRC) to implement those standards. The Secretary also recognizes that the program is not simply a construction project, but a scientific endeavor of critical significance to the Nation's ability to safely manage and dispose of nuclear waste, and to the reestablishment of confidence in the nuclear energy option in the United States. It is also important that the program provide a model for other nations as they work to meet their energy needs and solve their radioactive-waste-disposal problems. Consequently, the Secretary is committed to ensuring that scientific investigations be the focal point of the program to ensure that the results are technically sound and uncoupled from a scheduling process that constrains the time required for gathering sufficient information.

1.2 The need for a restructured program

The new emphasis of the program will be on completing an integrated array of near-term milestones directed at the scientific investigation of the Yucca Mountain site to determine the suitability of this site for a repository.

As a result of his review and in response to Congressional concerns, the Secretary has initiated a management action plan that contains three major elements:

- Developing and implementing a new management structure.
- Gaining access to the Yucca Mountain candidate site and initiating comprehensive scientific investigations as the focus of site characterization.
- Developing options for ensuring the timely acceptance of spent fuel through the establishment of monitored retrievable storage (MRS).

The principal elements of this management action plan are outlined in this report. A detailed discussion of the plan as it will be implemented will be presented in a revised Mission Plan for the Civilian Radioactive Waste Management Program. A draft of this document will be issued for public review and comment by June 1990.

The Secretary considers that this action plan responds to the concerns of the Congress, will help regain public confidence, and will enable the Federal Government to meet its obligations to the Nation to safely dispose of spent fuel and high-level waste in accordance with the following general goals:

- Protecting public health and safety and the quality of the environment in the management and disposal of spent fuel and high-level waste.
- Developing an NRC-licensed geologic repository for the permanent disposal of spent fuel and high-level waste.
- Beginning the operation of the waste-management system as soon as practicable in order to be able to accept spent fuel and high-level waste for disposal at a significant rate during the early years of operation.
- Establishing public confidence that the management of radioactive waste is not an obstacle to the nuclear energy option.

2. MANAGEMENT

2.1 Introduction

To manage the program mandated by the Nuclear Waste Policy Act, the Congress established, within the DOE, the Office of Civilian Radioactive Waste Management (OCRWM), whose Director is to be appointed by the President, by and with the advice and consent of the Senate.

The program has unique characteristics that affect its management structure, including the following:

- Requirements to obtain licenses from the Nuclear Regulatory Commission and to maintain a quality-assurance program that is acceptable to the Commission.
- Requirements to interface with Congressionally mandated technical review boards, offices, and commissions.
- Geoscience and performance-assessment capabilities necessary to meet the EPA and NRC requirements for the repository.
- Institutional issues involved in dealing with the affected States, local governments, Indian Tribes, and the public.
- Maintaining contractual relationships with the utilities.
- Responsibilities associated with the investment and management of the Nuclear Waste Fund.

As discussed below, steps have already been taken to establish an improved management structure and procedures.

2.2 New OCRWM Director

The Director of the OCRWM is responsible for carrying out the functions assigned to the Secretary of Energy under the Nuclear Waste Policy Act, as amended. The OCRWM has been headed by acting directors for the past 2 years. The appointment of an OCRWM Director is necessary not only for the management and direction of the program but also to expedite the initiatives resulting from the Secretary's review of the program.

The Secretary has chosen a candidate for the OCRWM Director and has submitted his nomination to the White House. It is expected that the nomination will be submitted to the Senate for confirmation when the Congress reconvenes in January 1990.

2.3 Direct-line reporting

The DOE has recently established direct-line reporting from Operations Offices to Headquarters to facilitate the management and execution of certain major programs. Under the previous management structure, multiple lines of authority existed. Project-office managers and Operations Office managers received program policy guidance and technical direction from Headquarters program offices, such as the OCRWM; however, project managers reported administratively to their respective Operations Office managers, who reported to the Under Secretary. Direct reporting will bring together authority and responsibility and facilitate coordination and communication.

In accordance with this new management approach, a direct line of authority and responsibility has been instituted for the Yucca Mountain Project. As a result, the Yucca Mountain Project Office reports directly to the OCRWM for all programmatic and policy direction and is accountable for implementing that direction.

2.4 Independent management review

At the direction of the Secretary, an independent assessment of OCRWM management is under way. It is being conducted by a private corporation that is well known for its expertise in management consulting and is not directly or indirectly involved in the program. Considering the unique characteristics of the program, as outlined in the introduction to this report, this assessment is examining management structures, systems, and procedures, and its main purpose is to identify redundancies, gaps, and strengths. Once the review of existing systems and procedures has been completed, the DOE expects to receive recommendations on improvements to the existing arrangements and alternative structures or processes that would enhance the management of the program. Final recommendations will be available in January 1990.

2.5 Contractor support

Like many Federal agencies, the OCRWM relies on contractors to provide the services needed to carry out its technical functions. The functions that are performed by the OCRWM and the DOE Project Offices are the management functions that involve the exercise of discretionary authority, the development and implementation of policy, decisionmaking, and final value judgments regarding the development, execution, and evaluation of the program.

Examples of the services performed by OCRWM contractors are design and engineering; geologic, hydrologic, and geochemical investigations; the development and implementation of methods and techniques for assessing the safety and performance of the repository and other waste-management facilities; and facility construction, operation, maintenance, and testing. In addition, the OCRWM contracts for outside expertise, beyond that available within the organization itself, to support or improve program analysis, decisionmaking, management, and administration and to support or improve the operation of management systems. These various services are being provided by a variety of contractors, including the national laboratories.

Changes in the program, discussed in the next section, are expected to reduce near-term needs for contractor support in a variety of areas, such as the design of the exploratory-shaft facility needed for scientific investigations at Yucca Mountain, the designs of the repository and the waste package, and some field studies. In keeping with its general approach of adjusting contractor support to a level consistent with the schedule and available funding, the OCRWM initiated a review of its contracted work to identify the activities that could be deferred, canceled, or consolidated. The OCRWM is now analyzing the results to determine specific actions that could be taken to enhance cost effectiveness, integrate activities, and improve management oversight.

The contract review has prompted the following actions:

1. The number of contractors involved in performance assessment for the repository has been reduced from thirteen to eight.
2. A significant portion of the waste-package work previously assigned to the Chicago Operations Office has been transferred to, and consolidated with, waste-package work at the Yucca Mountain Project Office.
3. The geophysics and geohydrology research previously assigned to the Chicago Operations Office has been transferred to the Yucca Mountain Project Office.

Moreover, reductions in the funds appropriated by the Congress for fiscal year 1990 have already prompted reductions in the scope of contractor work in several other areas.

In an effort to enhance the integration of contractor activities and products, the OCRWM had planned to hire a management-and-operating (M&O) contractor. In 1988, after issuing a request for proposals and receiving three proposals, the DOE selected the M&O contractor, but one of the unsuccessful bidders subsequently filed suit and a permanent injunction was issued against awarding the contract to any firm other than the plaintiff. On October 23, 1989, the DOE filed a notice of appeal. Because of changing requirements and present needs, the DOE is reexamining the need for an M&O contractor.

2.6 Management-system improvements

The OCRWM is working to implement a number of improvements in management systems. The most important are changes in the Program Management System, the establishment of a quality-assurance program, and the establishment of configuration management and formal change control over the technical, cost, and schedule baselines.

2.6.1 Program Management System

The OCRWM has recently completed a number of improvements to the Program Management System, which consists of the baselines, management plans, policies, procedures, systems, and processes used in managing the program. The Program Management System Manual was revised to incorporate quality assurance into program activities, to effect necessary functional realignments, and to strengthen program direction and control functions. Near-term schedules have been developed for preparation or revision of the various plans and other documents that guide the management of various program functions.

2.6.2 Quality-assurance program

A quality-assurance program that meets the requirements of the Nuclear Regulatory Commission has been established. Much effort this year has been devoted to the preparation and issuance of quality-assurance procedures, the training of DOE

and contractor staff, and qualification audits performed to determine ability to implement the required procedures. As a result, more than 1,000 persons working for eight major program participants have received the required training and are now working under an NRC-accepted program. When the remaining qualification audits are completed in August 1990, a quality-assurance program that has been fully qualified and approved by the NRC will be in place.

2.6.3 Establishment of baselines

The technical, cost, and schedule baselines are being established to define the criteria and objectives against which program performance and progress can be measured, thus facilitating effective program control. All reporting and performance measurement will be ultimately tied to the baselines. When potential impacts on the baselines are detected, a corrective action process will be initiated to remove or mitigate the problem. Alternatively, if the problem cannot be removed, the baseline will be modified to the extent necessary. However, any changes in the baselines can be effected only through a formal change-control procedure that involves a systematic review by the appropriate level of management to ensure that all primary and secondary effects of proposed changes are identified and weighed in the decisionmaking process.

The technical baseline, which is currently under revision, includes the functional and technical requirements at the program level. These requirements are being put into final form for issuance over the next several months. This will lead to the development of specifications and designs for system elements and subsystems, evaluations of the specifications and designs against the requirements, and the refinement of the requirements.

The reference program schedule is being formally baselined. This represents the first formal modification of the program schedule baseline since mid-1987. In the spring of 1990, the OCRWM will finalize a cost baseline to accompany the schedule baseline.

2.7 Development of a realistic schedule

2.7.1 Background

The Nuclear Waste Policy Act of 1982 required the DOE to begin taking title to spent fuel and high-level waste after the start of repository operations, which were expected to begin no later than January 31, 1998. The DOE's original plan for waste management was to take title to the spent fuel at reactor sites and ship the fuel to a repository, where the waste would be prepared for disposal and then emplaced underground. However, in the Mission Plan issued in June 1985, the DOE described an improved-performance system that included (if authorized by the Congress) an MRS facility as an integral component. This facility was to receive spent fuel shipped from reactor sites, prepare it for emplacement in the repository, and ship it to the repository in dedicated trains. The facility was also to have a limited amount of storage capacity. The DOE identified a number of advantages for a system with an integral MRS facility and developed a preliminary schedule showing that an MRS facility could start accepting waste in 1996, 2 years ahead of the repository. A proposal to the Congress to construct an MRS facility was completed in 1985, but the DOE was prevented by litigation from submitting it until 1987.

In January 1987, the DOE proposed, in a Draft Mission Plan amendment, that the start of repository operations be delayed by 5 years, until 2003; this delay was later announced in the Mission Plan Amendment issued in June 1987. The reasons for the schedule extension included the delay incurred through consultation in the statutory siting process for the first repository (i.e., the nomination of five sites as suitable for characterization and the recommendation of three sites for characterization); the recognition from this experience that more time should be provided in the future for consultation and interaction with the States, affected Indian Tribes, and other parties; the recognition, resulting from the extensive technical preparation for the development of site-characterization plans, that the site-selection decision and the preparation of the license application to the Nuclear Regulatory Commission will require more information than previously planned; and the recognition that more time will be needed to gain access to the land needed for site characterization.

2.7.2 Schedule changes stemming from the Secretary's comprehensive review

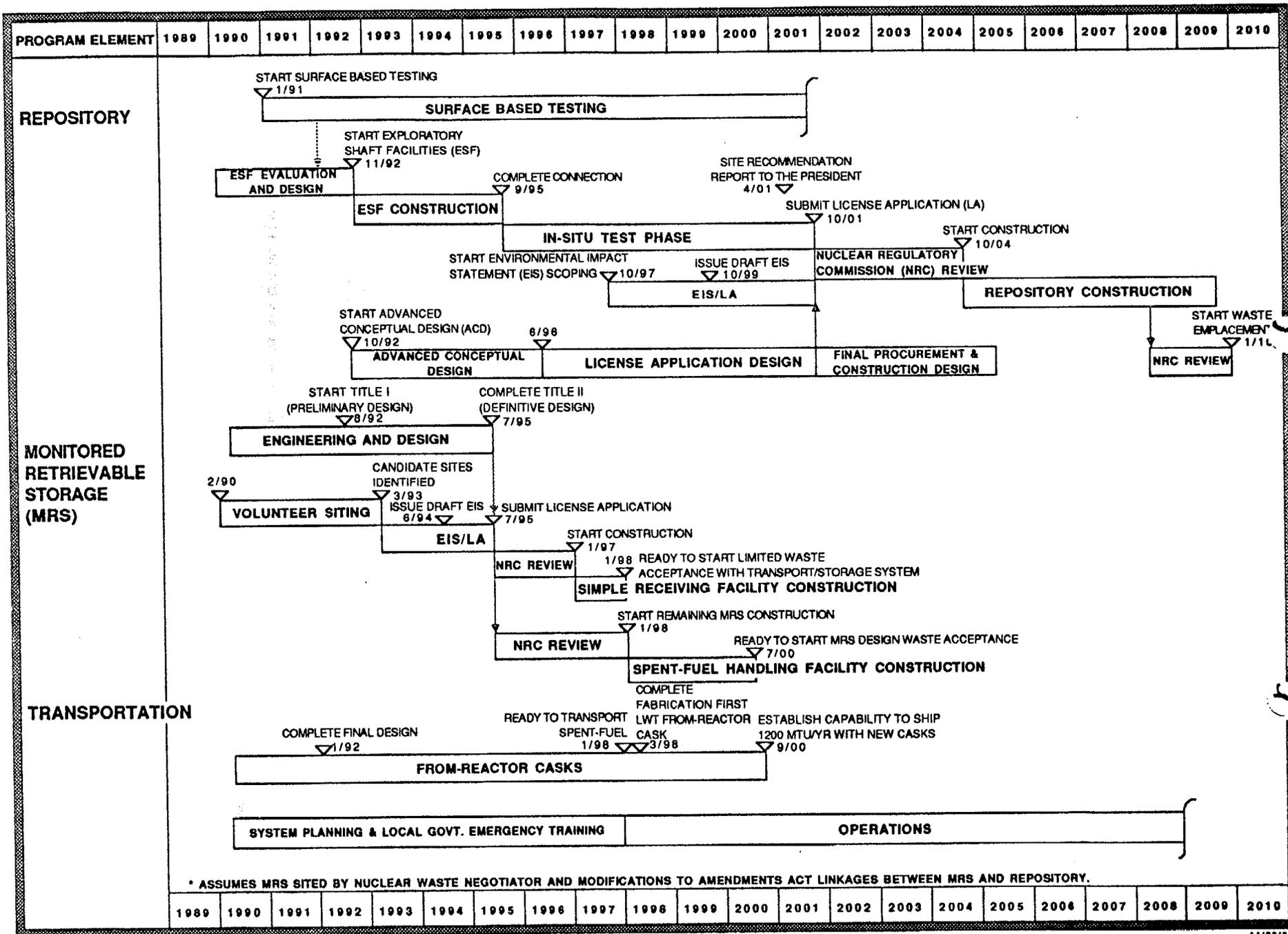
The Secretary's comprehensive program review has included a detailed reevaluation of the overall program schedule--that is, the schedule for the repository, the MRS facility, and the transportation program. This effort consisted of a detailed examination of the duration postulated for each specific activity with emphasis on critical-path, near-critical-path, and other major activities. The results of the schedule

reevaluation are summarized in Figure 1. A more detailed schedule showing significant milestones up to the submittal of the license application is shown in Attachment 1. The near-term decision milestones on which the overall schedule is based are shown in Attachment 2; these milestones are being baselined, and strict management controls are being instituted to ensure adherence to them.

Schedule for the repository. The program review has led to the development of a realistic schedule that is based on past experience and the detailed information developed for the site characterization plan--information that led to a better understanding of the activities to be conducted during site characterization and how long they are likely to take.

Assumptions. The milestones in the schedule have been defined as rigorously as possible on the basis of current plans and currently available information, but it must be recognized that certain activities are beyond the DOE's control and, conversely, that for certain major long-term milestones the DOE may be able to use alternative strategies designed to accelerate the program. In the case of milestones beyond the DOE's control, reasonable assumptions were used. One such assumption was the date for obtaining the permits necessary for new scientific investigations to begin. It was assumed that these new scientific investigations would begin in January 1991. This date is optimistic because it assumes success in the options the DOE has decided to pursue to gain access to the site (see Section 3).

New focus. For the repository, a cornerstone of the schedule is a new focus on the early evaluation of the suitability of the Yucca Mountain site as suggested by the Edison Electric Institute and the State of Nevada. Instead of beginning site characterization with a total-system approach directed at evaluating the performance of engineered barriers as well as the site and based to a large extent on underground testing, this evaluation will focus first on certain particular features of the site that can be investigated through surface-based testing. The revised schedule recognizes, however, that the duration of the scientific investigations, especially the investigations conducted in the exploratory shafts and the underground testing facility, will be considerably longer than previously expected. As a result, the date for submitting the repository license application to the Nuclear Regulatory Commission is now shown as October 2001, a delay of nearly 7 years from the previously scheduled submittal



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FIGURE 1. REFERENCE SCHEDULE FOR RESTRUCTURED PROGRAM *

of January 1995, and the start of repository operations is delayed from the year 2003 to 2010.

Initiatives for schedule improvement. While the schedule identifies a substantial delay, the DOE remains committed to seeking ways to improve the schedule while satisfying all technical and regulatory requirements. With this objective in mind, the DOE has initiated a study of alternative strategies for compliance with the NRC requirements in 10 CFR Part 60 for a license application. Each alternative licensing strategy will include the following elements: (1) an approach to determining site suitability, (2) a general plan for licensing, and (3) priorities for testing to support the site-suitability determination. As viable and promising new strategy initiatives emerge from this study, they will be incorporated into the official program plan through the formal change-control procedure.

During the prelicensing phase, the DOE will continue to consult with industry and pursue interactions with the Nuclear Regulatory Commission and the Environmental Protection Agency that are consistent with the regulatory responsibilities and mission of each agency. These interactions are designed to reduce the number of unresolved issues remaining at the time of licensing, which should enhance confidence that the license application can be reviewed in 3 years, as called for in the Nuclear Waste Policy Act. In particular, the DOE will either initiate or encourage the regulatory agencies to begin rulemaking on those issues whose resolution before the licensing phase would enhance the schedule for licensing. For example, the DOE will soon petition the Commission to establish in 10 CFR Part 60 a guideline for the maximum radiation doses that are permissible for accidents occurring during repository operations.

Regarding interactions with the Environmental Protection Agency, the DOE is reviewing the drafts of the revised standards in 40 CFR Part 191, in order to identify any concerns that could undermine DOE's ability to develop a repository or MRS facility. The objective of these interactions during the prelicensing phase is to seek ways of resolving contentious licensing issues before the submittal of the license application.

Schedule for the MRS facility. As indicated in Figure 1, the reference schedule for the MRS facility assumes that (1) a site will be obtained through the efforts of the Nuclear Waste Negotiator and (2) the statutory linkages specified in the Nuclear Waste Policy Amendments Act between the MRS facility and the repository (see Section 4) are modified. Under these assumptions, it is estimated that waste acceptance at an MRS site could begin, on a limited basis, as early as January 1998; a full-capability MRS facility (i.e., a facility that would store spent fuel as necessary and stage spent-fuel shipments to the repository for final disposal), as recommended in the

DOE's May 1989 statement to the MRS Review Commission, would be available in the year 2000.

If a site cannot be obtained through the Negotiator but is selected through a DOE-directed siting process and the current statutory linkages are modified, it is estimated that about 2 more years would be added, with the basic MRS facility starting operations in 2002. If the current statutory linkages to the repository are maintained, an additional delay of 5 years would result, with startup estimated at 2007 for the basic MRS facility. As discussed in Section 4, the DOE is pursuing an initiative that would modify these linkages and allow waste acceptance by 1998.

2.8 Nuclear Waste Negotiator

The Secretary is working in close cooperation with the White House to facilitate the appointment of the Nuclear Waste Negotiator as provided for in the Amendments Act. The Negotiator is expected to provide valuable assistance in siting the MRS facility and facilitating the repository program.

3. SCIENTIFIC INVESTIGATION OF YUCCA MOUNTAIN

The DOE is committed to developing a geologic repository for spent fuel and high-level waste through a scientifically based, technically sound, and cost-effective program, and the development of the repository remains the focus of the Civilian Radioactive Waste Management Program. The difficulties facing the repository program therefore received particular attention during the Secretary's comprehensive program review.

The Secretary's review focused on management readiness to proceed with scientific investigations at the Yucca Mountain candidate site, including the implementation of a quality-assurance program that has been reviewed and accepted by the Nuclear Regulatory Commission; the OCRWM's understanding of the magnitude of the effort to be undertaken; and the views of the State of Nevada. As discussed in Section 2.7, the review led to the development of a revised schedule, including near-term decision milestones, and significant changes in the focus of the near-term program.

3.1 Site access

An important factor in the near-term plans for scientific investigations at Yucca Mountain is the unwillingness of the State of Nevada to process the DOE's applications for environmental permits in a manner consistent with the State's legal obligations. For instance, the DOE applied for air-quality permits (needed for surface-disturbing activities) in January 1988 and submitted additional information requested by the State of Nevada in February 1988. Despite State regulations requiring action within 75 days, the Nevada Division of Environmental Protection has yet to issue the DOE an air-quality permit or to provide an official denial of the DOE's application. Moreover, on November 1, 1989, the State Attorney General issued an opinion that the State had disapproved the site within the meaning of Section 115 of the Nuclear Waste Policy Act and that State agencies considering environmental permits should disregard DOE's applications.

The DOE is committed to reestablishing confidence in the program. Success in this effort will depend, in particular, on the commencement of the scientific investigations necessary to determine the suitability of Yucca Mountain as the site for the nation's first repository. While cooperation and direct negotiation with the State of Nevada is the preferred approach to expediting scientific investigations, the DOE will pursue all available options to facilitate the timely determination of site suitability. Among them is the option of litigation.

In order to proceed with necessary characterization efforts, the Secretary has requested that the Department of Justice initiate litigation to declare Nevada's actions invalid.

When the Nuclear Waste Negotiator is appointed, the DOE is prepared to support initiatives developed by the Negotiator that could expedite issuance of the environmental permits necessary to gain access to the Yucca Mountain candidate site. The Negotiator is to seek to enter into negotiations on behalf of the United States with the Governor of any State in which a potential site is located or the governing body of any Indian Tribe on whose reservation a potential site is located.

3.2 Early evaluation of site suitability

As already mentioned in Section 2.7, in its near-term scientific investigations of the Yucca Mountain candidate site, the DOE has decided to focus on surface-based testing aimed specifically at evaluating whether the site has any features that would indicate that it is not suitable as a potential repository site. Therefore, as soon as the permits necessary for surface-based testing are issued, the DOE will begin onsite prototype dry drilling followed by drilling to collect scientific information on the unsaturated zone. The DOE will also collect information on zones of recent faulting, using trenching to better understand the potential for surface offsets in the vicinity of the waste-handling building and the potential for major earthquakes. Also planned are excavations aimed at better understanding the origin of the calcite-silica deposits that have been identified by some program critics as indicators of saturated conditions in the proposed repository horizon. All these scientific investigations will provide early information about the suitability of the site. This approach is in concert with a number of suggestions, particularly from the State of Nevada and the Edison Electric Institute, that scientific investigation activities focus on potentially adverse conditions and that efforts be made to evaluate key suitability issues early in the process.

Because of the emphasis on surface-based testing for specific conditions, the construction of exploratory shafts is delayed until 1992, as shown in Figure 1. This will allow the DOE to carefully reevaluate, in accordance with all applicable quality-assurance and NRC requirements, the locations chosen for the two exploratory shafts, the method chosen (drilling and blasting) for the construction of the shafts, the means of access (ramps or shafts) to the repository horizon, the need for additional exploratory drifts, and the design of the shafts and other components of the exploratory-shaft facility. Requests for the reevaluation of shaft location and design have come from the NRC staff, while the suggestions to reconsider the means of

access, the shaft-construction method, and the need for additional drifts came from the Nuclear Waste Technical Review Board.

The new focus on surface-based testing is not meant to suggest that underground testing at the proposed repository depth is now deemed less important. On the contrary, as shown in Figure 1, the Secretary's evaluation has led to an extension of the schedule for in-situ testing, in accordance with the commitment to conduct a scientifically based and technically sound program. The Secretary believes that conducting both surface-based and underground tests, combined with continuing evaluation of the data as they are obtained, will allow a cost-effective and timely assessment of the site.

Recognizing that the Yucca Mountain candidate site could be found unsuitable, the DOE will also support the Negotiator in efforts to identify alternative volunteer repository sites.

3.3 Deferral of major site-specific design activities

Because of the change in the plans for scientific investigations at the Yucca Mountain candidate site and the extension of the schedule, major activities related to the design of a repository at the Yucca Mountain site and the waste package are being deferred. They will be resumed when more information is available concerning the suitability of the site. This approach will conserve resources and allow the DOE to concentrate efforts on scientific investigations.

4. MONITORED RETRIEVABLE STORAGE

Other highly industrialized countries in which nuclear power plays a prominent role, such as Sweden, Germany, and France, are providing centralized interim storage facilities while pursuing repository-development programs. This has allowed these countries to provide near-term management for the spent fuel and to conduct their repository programs at a pace not dictated by unrealistic waste-acceptance objectives. The DOE believes that a similar approach should be considered in the United States.

4.1 Statutory provisions for an MRS facility

The Amendments Act authorizes the DOE to site, construct, and operate an MRS facility subject to the following conditions:

1. The Secretary may not select an MRS site until a repository site is recommended to the President.
2. Any NRC license for an MRS facility is to provide for the following:
 - a. The construction of the MRS facility cannot begin until the NRC has issued a license for the construction of the repository.
 - b. MRS construction (or waste acceptance) is prohibited if the construction of the repository ceases or if the repository license is revoked.
 - c. No more than 10,000 metric tons of heavy metal (MTHM) may be stored at the MRS facility until the repository begins receiving waste.
 - d. No more than 15,000 MTHM may be stored at the MRS site at any one time thereafter.

4.2 MRS Review Commission

The Amendments Act also created an independent MRS Review Commission that was to report to the Congress on the need for an MRS facility. In its report of November 1, 1989, the MRS Review Commission found that "cumulatively the advantages of an MRS would justify the building of an MRS if: (1) there were no linkages between the MRS and the repository; (2) the MRS could be constructed at an

early date; and (3) the opening of the repository were delayed considerably beyond its presently scheduled date of operation."

The MRS Review Commission recommended that the Congress authorize the construction of a Federal Emergency Storage facility with a capacity limit of 2,000 metric tons of uranium; authorize the construction of a User-Funded Interim Storage facility with a capacity limit of 5,000 metric tons of uranium; and reconsider the need for additional interim storage in the year 2000. Thus, the DOE and the MRS Review Commission agree as to the necessity for a facility that would provide storage before permanent geologic disposal, but they differ on the storage capacity required and the appropriate funding mechanism.

4.3 DOE's position on the MRS facility

The DOE testified to the MRS Commission on May 25, 1989, that it supports the development of an MRS facility as an integral part of the waste-management system because an integrated MRS facility is critical to achieving the goal of early and timely acceptance of spent fuel and because it would allow the DOE to better meet other strategic objectives, such as timely disposal, schedule confidence, and system flexibility. Though it considered a waste-management system with an MRS facility subject to the current statutory linkages superior to a system without an MRS facility, the DOE stated that a revision of the linkages and the statutory storage-capacity limit would allow the advantages of an MRS facility to be more fully realized. The DOE also expressed preference for an MRS facility sited through the efforts of the Negotiator, especially if these siting negotiations lead to modified linkages.

Schedule delays and the uncertainties inherent in the development of a geologic repository underscore the importance of an integrated MRS facility to the waste-management system. Such a facility could start operations as early as 1998 and is a key component in the DOE's strategy for building confidence in the program.

An integrated MRS facility would enhance confidence in the program for the following reasons: First, it can be developed rapidly because it will make maximum use of technologies that have been proved and because it has fewer licensing uncertainties than a geologic repository. Second, an MRS facility would demonstrate that the Federal Government is using all available means to ensure timely acceptance of spent fuel for disposal. Third, an MRS facility would also show that the Federal Government is able to safely accept, transport, and handle spent fuel early in the program. Fourth, an integrated MRS facility will allow an orderly transfer of spent fuel from reactor sites to the Federal waste-management system independent of the ability to emplace fuel in the repository.

4.4 DOE's initiatives for the MRS facility

The DOE believes that the need to build confidence in the program and its schedule requires that the current statutory linkages be modified to facilitate the staged development of an integral MRS facility. Accordingly, the DOE is pursuing the courses of action outlined below. The DOE believes that these actions are consistent with the conclusions reached by the MRS Review Commission as documented in their report.

Interactions with the Congress to revise linkages

The DOE will work with the Congress to modify current linkages and constraints on the MRS facility, thereby allowing the MRS facility to start operation significantly earlier than the repository and increasing the amount of spent fuel that can be temporarily stored at the MRS site. The Secretary believes that these modifications will build confidence in the program by allowing the MRS benefits to be realized earlier in the development of the waste-management system.

Support for the Negotiator

The Amendments Act prohibits the selection of an MRS site through a DOE-directed site-survey process until the repository site is formally selected. However, the Amendments Act allows for expedited siting to proceed via a Negotiator, who may negotiate a proposed agreement with a State or Indian Tribe that offers a technically qualified site on reasonable terms.

How rapidly a negotiated MRS facility can come on line and how much spent fuel it can store will depend on the negotiated agreement, which must be approved by Congress. In principle, a negotiated agreement represents an effective way of developing the facility and should allow the MRS advantages to be more fully realized. Moreover, a negotiated site would avoid the institutional issues associated with a DOE-directed siting process.

The Negotiator will receive the full cooperation and assistance of the DOE to respond quickly to offers from potential volunteers and to ensure that the program can be adapted, with minimum cost and delay, to the approval by the Congress of a negotiated site. Under the Amendments Act, financial assistance for assessing the feasibility of siting an MRS facility is available to a State or Indian Tribe that is a potential host.

DOE-directed siting program

The DOE would prefer that the MRS facility be located at a volunteer site under a proposal developed by the Negotiator and approved by the Congress. However,

because there is no assurance that the Negotiator will be successful and because of the importance of an integrated MRS facility to the waste-management system, the DOE must be prepared to proceed with MRS siting. The DOE will begin planning such a siting activity and be prepared for its implementation if necessary.

5. CONCLUSIONS

The Secretary has recently completed an extensive review of the program and has concluded that it cannot be effectively executed in its current form. However, it should be possible to develop a technically sound integrated waste-management system with a repository for permanent disposal if the DOE (1) continues to implement management improvements; (2) pursues an orderly program of scientific investigations that is not driven by unrealistic scheduling demands; and (3) establishes an MRS facility with more flexible linkages to the repository to allow early acceptance of spent fuel. The program will be restructured in accordance with this approach.

The DOE is confident that the actions taken and those proposed will ensure the development of an environmentally safe and efficient nuclear waste-disposal program. Working with the Congress and other interested parties, the program outlined herein will result in development of a radioactive-waste disposal system as envisioned in the law.

ACRONYMS AND ABBREVIATIONS USED IN ATTACHMENTS

BA	Biological assessment
BLM	Bureau of Land Management
DCP	Document change proposal
DEIS	Draft environmental impact statement
Doc.	Document
DOE	Department of Energy
DOJ	Department of Justice
EA	Environmental assessment
EIS	Environmental impact statement
ESAAB	Energy Systems Acquisition Advisory Board
ESF	Exploratory-shaft facility
FEIS	Final environmental impact statement
FWS	Fish and Wildlife Service
GC	General Counsel
HQ	Headquarters (DOE)
LA	License application
LAD	License-application design
LWT	Legal weight
MA	Office of Assistant Secretary for Management and Administration
MA-1	Assistant Secretary for Management and Administration
MOA	Memorandum of agreement
MRS	Monitored retrievable storage
MTU	Metric tons of uranium
NRC	Nuclear Regulatory Commission
NV	Nevada Operations Office, DOE
OCRWM	Office of Civilian Radioactive Waste Management
PCCB	Program Change Control Board
PDS	Project Decision Schedule
PECCB	Program Elements Change Control Board
PMS	Program Management System
Repos.	Repository
Rev.	Revision
ROD	Record of decision
RW-1	Director, Office of Civilian Radioactive Waste Management
SEC	Secretary of Energy
SBT	Surface-based testing
SEMP	Systems Engineering Management Plan
SFHB	Spent-fuel handling building
SRR	Site Recommendation Report

TRB
WMS
WP

Nuclear Waste Technical Review Board
Waste management system
Waste package

ENCLOSURE 5

memorandum

*COPIES
2/26/84
PDR
LPCR*

DATE September 18, 1984

REPLY TO
ATTN OF RW-23

SUBJECT DOE/NRC Site-Specific Procedural Agreement for Geologic
Repository Site Investigation and Characterization Program

TO

- | | |
|-----------------|---------------------|
| R. Stein, RW-23 | C. Vieth, NNWSI |
| C. Head, RW-23 | C. Baker, CRPO |
| S. Mann, CRPO | L. Casey, SRPO |
| J. Neff, SRPO | J. Mecca, BWIP |
| L. Olson, BWIP | J. Szymanski, NNWSI |

After a long and arduous negotiation and signing process, the DOE/NRC Site-Specific Procedural Agreement has been completed and is hereby issued for use. Appendix 7 is, of course, still under development and will be issued later. Thank you all for your help in completing this agreement.

J. W. Bennett
J. William Bennett
Acting Associate Director
Office of Geologic Repositories

Attachment:
Signed copy of DOE/NRC
Site-Specific Procedural Agreement

- cc:
- | | |
|--------------------|---------------|
| R.E. Browning, NRC | (w/o attach.) |
| R. Purple, RW-43 | (w/attach.) |
| J. Fiore, RW-22 | (w/attach.) |
| R. Balney, RW-22 | (w/attach.) |
| M. Frei, RW-23 | (w/attach.) |
| A. Jelasic, RW-24 | (w/attach.) |
| C. Cooley, RW-24 | (w/attach.) |
| E. Burton, RW-25 | (w/attach.) |
| B. Gale, RW-25 | (w/attach.) |
| G. Parker, RW-25 | (w/attach.) |

WM Record File 406.1.2

WM Project _____

Docket No. _____

PDR _____

LPCR _____

Distribution: REB/MSB HJM

(Return to WM. 623-SS)

84 SEP 26 AM 0:37
WM DOCKET CONTROL CENTER

**AGREEMENT BETWEEN THE DEPARTMENT OF ENERGY'S OFFICE OF GEOLOGIC REPOSITORIES
PROJECTS (BWIP, HMWSI, SRP, CRP) AND THE NUCLEAR REGULATORY COMMISSION'S
DIVISION OF WASTE MANAGEMENT DURING THE SITE INVESTIGATION AND
CHARACTERIZATION PROGRAMS AND PRIOR TO THE SUBMITTAL OF AN APPLICATION
FOR AUTHORIZATION TO CONSTRUCT A REPOSITORY**

This agreement implements, on a project-specific basis, the Procedural Agreement* made between the Commission (NRC) and the Department (DOE) and supersedes all previous project-specific agreement(s) between NRC (Division of Waste Management) and DOE (Office of Geologic Repositories) regarding information exchange and consultation for potential repository sites. This agreement implements Section 6 of the DOE/NRC Procedural Agreement which requires that project-specific agreements, tailored to the specific project and reflecting differences in sites and project organizations, be negotiated to implement the principles established in the Procedural Agreement. Because this project level agreement is drawn to implement the principles set forth in the Procedural Agreement, appendices detailing project-specific items as necessary are attached. These appendices will be updated, added to, or changed as required. Nothing in this agreement shall be construed either to modify the Procedural Agreement in any way or to confer rights on any party other than the parties to these agreements.

1. NRC On-Site Representatives (ORs)

At such time as the NRC ORs are stationed at each site, they are to be provided with office space that can be readily visited by members of the public and is near the DOE Project Offices and site activities (where Project Office and site activities are not convenient to one another, two separate offices will be provided). Where such office space can be provided in DOE facilities, DOE is to provide such space. Otherwise, the DOE is to provide space in its facilities near the Project Offices and site activities and the NRC is to provide space that can be visited by the public.

The NRC OR shall be afforded access to personnel, project records and facilities at the respective site, geologic repository operations area and adjacent areas, research facilities and other contractor and subcontractor areas. Access will be subject to applicable requirements for proper identification and compliance with applicable access control measures for security, radiological protection and personnel safety. Records as used above shall include all records that would be generally relevant to a potential licensing decision by the Commission. Included in this category are records kept by DOE and DOE contractors and subcontractors accessible to DOE.

Project-specific conditions are discussed in the appendices.

*"Procedural Agreement Between the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy Identifying Guiding Principles for Interface During Site Investigation and Site Characterization" herein referred to as the Procedural Agreement (FR 48:38701).

2. Meetings

2

A. Technical Meetings

Schedules agreed on, pursuant to Section 2.e of the Procedural Agreement, for future meetings covering approximately a three month period will be updated at least weekly and posted prominently in the local and headquarters public document rooms (PDRs) of both the NRC and the DOE. In addition, a toll-free telephone service will be operated by DOE headquarters to announce the meeting schedules. A description of this process for making the schedule of upcoming meetings publicly available will be provided by a DOE annual Federal Register Notice. Affected State/tribal representatives will be given the opportunity to participate at the technical meetings.

Dates for major technical meetings will be agreed to as far in advance as is practicable with a goal of four months in advance. Final agreement as to agenda and participants normally will both be reached a minimum of 10 working days prior to the scheduled date for the meeting and be posted in the PDRs. Deviations from the agreed to agenda are permitted upon agreement of NRC and the cognizant DOE Project Office. Although both agencies will use their best efforts to provide the indicated lead times, nothing in this section shall be construed as preventing the scheduling of technical meetings with shorter lead times by mutual agreement. The host agency has the responsibility for organizing and conducting technical meetings.

B. Management Meetings

As part of the discussion during management meetings held under Section 2.b of the Procedural Agreement, issues related to policy, budget, program scope, commitment of resources and program schedules may be included as appropriate. The host agency has the responsibility for organizing and conducting management meetings. The procedures established in Section 2.A above regarding dissemination of schedules and agendas for the technical meetings will also be used to disseminate schedules and agendas for the management meetings.

C. Meeting Reports

A meeting report containing a summary of important observations and issues discussed at meetings will be jointly prepared by DOE and NRC for the Technical and Management meetings discussed above, and signed or initialed by representatives of both agencies at the conclusion of each meeting. An opportunity will be provided for State/affected tribal representatives to add their comments and observations to and initial the meeting summary. A standard format, shown in Appendix 6, will be used in the preparation of meeting reports. The DOE will issue meeting reports within two weeks after the meeting. The DOE will also provide the meeting reports to the affected States and Indian Tribes and its PDRs. The NRC will distribute meeting reports to its PDRs.

3. Timely Release of Information

A. Report Inventory

Each agency will develop as soon as practicable and thereafter maintain and exchange an inventory of reports, plans, procedures, and technical positions (products) both completed and in process. This inventory will include descriptions of product scope and purpose as well as the scheduled dates for completion of draft and final products. The inventories will be updated and exchanged at least quarterly. This will allow each agency to request products from the other and thereby influence priorities for release.

B. Points of Contact

Respective points of contact for the individual DOE projects and the NRC are defined in the appendices. Either agency may change their points of contact unilaterally with prior notification to the other party. Other organizations within the NRC will work through these designated points of contact within the NRC's Division of Waste Management for interactions with the DOE's Office of Geologic Repositories Projects. Details of the information exchange will be determined by the individual project's requirements and defined in the appendices as appropriate.

Technical communications are intended solely for the exchange of information and ideas by NRC and DOE personnel involved in the various technical areas relating to site information programs for potential repository sites. Individuals participating in such communications have no authority to present official NRC or DOE positions or to make official policy statements on behalf of either NRC or DOE.

C. Site Investigation and Site Characterization Data for Potential Repository Sites

To keep the NRC on-site representative informed regarding what data will be forthcoming and when, DOE will notify the representative of the schedule of planned field and laboratory testing covering as long a period as practicable. The representative will also be notified of changes to the test schedule. The schedule and any notification of changes to the schedule will also be provided to the cognizant NRC Repository Projects Branch Section Leader (see Appendices 1-4).

The DOE will develop as soon as practicable and thereafter maintain a catalog of data. This catalog will include descriptions of the data, the time, place, and method of acquisition, and where it may be examined. This catalog will be updated and provided to NRC at least quarterly. Upon NRC request and at a location chosen by the DOE, the DOE will make data available to the NRC for examination. After the quality assurance checks specified in Section 3.a of the Procedural Agreement have been completed which will normally be within 45 days from data acquisition either in the laboratory or in the field, data will be provided to NRC in a hard-copy format upon request. Because

4

of the preliminary nature of these data, all such data placed in the PDR will carry the following caveat: "QA checks on data contained here have only been performed to determine that the data has been obtained and documented properly. The DOE cautions that any information is preliminary and subject to change as further analyses are performed or as an enlarged and perhaps more representative data base is accumulated. These data and interpretations should be used accordingly."

The NRC will also notify the DOE of its schedule (and those of its contractors) of planned field and laboratory testing conducted at or with samples from potential repository sites and will establish, maintain, update, and provide to the DOE an inventory of data as described in the preceding paragraph.

4. Site Specific Samples

Consistent with the procedures specified in Appendix 5, the DOE will provide the NRC with site-specific samples.

5. Terms of Agreement

The terms of this agreement will be reviewed annually and may be amended at any time by mutual consent, in writing.

6. Effective Date

This agreement shall enter into force on the latter date of signature by the parties.

Signature Blocks

DOE

NRC

J. W. Bennett 8-20-84
William Bennett
Acting Associate Director
Office of Geologic Repositories

R. E. Browning
Robert Browning
Director
Division of Waste Management
(NMSS/NRC)

J. O. Neff 9/7/84
Jeff O. Neff
SRPO Manager
DOE-CH

H. Miller
Hubert Miller
Chief
Repository Projects Branch
(NMSS/NRC)

O. Lee Olson
O. Lee Olson
BWIP Manager
DOE-RL

James Kennedy
James Kennedy
BWIP Section Leader

Donald L. Vieth
Donald L. Vieth
NNWSI Manager
DOE-NV

Seth Coplan
Seth Coplan
NNWSI Section Leader

Sally A. Mann
Sally A. Mann
CPO Manager
DOE-CH

John Linehan
John Linehan
Salt Project Section Leader

Appendix 1 - BWIP

1. Points of contact between NRC and DOE projects

a. Formal Communications

BWIP Project Manager to and from NRC BWIP Project Section Leader

<u>DOE</u>	<u>NRC</u>
Project Office Manager U.S. Department of Energy Richland Operations Office BWI Project Office P.O. Box 550 Richland, WA 99352	Section Leader BWIP Project Section Division of Waste Management U.S. Nuclear Regulatory Commission 7915 Eastern Avenue Silver Spring, MD 20910

b. Technical Communications

<u>Area</u>	<u>NRC</u>	<u>BWIP Staff/ Contractors</u>
Performance Assessment	Salt Project Section Leader or designee	R. T. Wilde
Repository Design	Mining, Geoenineering Facility Design Section Leader or designee	R. J. Gimera
Quality Assurance	BWIP Project Section Leader or designee	M. S. Karol
Geology	Geology/Geophysics Section Leader or designee	S. M. Price
Geochemistry	Geochemistry Section Leader or designee	P. F. Salter
Hydrogeology	Hydrology Section Leader or designee	G. S. Hunt
Waste Package	Materials Engineering Section Leader or designee	M. J. Smith
General	BWIP Project Section Leader or designee	J. Mecca

Appendix 2 - SRPO

1. Points of contact between NRC and DOE projects

a. Formal Communications

Salt Repository Project Office (SRPO) Manager to and from NRC Salt Project Section Leader

<u>DOE</u>	<u>NRC</u>
Manager Salt Repository Project Office U.S. Department of Energy 505 King Avenue Columbus, OH 43201	Section Leader Salt Project Section Division of Waste Management U.S. Nuclear Regulatory Commission 7915 Eastern Avenue Silver Spring, MD 20910

b. Technical Communications

<u>Area</u>	<u>NRC</u>	<u>SRPO Staff/ Contractors</u>
Quality Assurance	BWIP Project Section Leader or designee	TBD
Performance Assessment	Salt Project Section Leader or designee	TBD
Waste Package	Materials Engineering Section Leader or designee	TBD
Repository	Mining, Geoengineering Facility Design Section Leader or designee	TBD
Exploratory Shaft	Mining, Geoengineering Facility Design Section Leader or designee	TBD
Geology	Geology/Geophysics Section Leader or designee	TBD
Hydrology	Hydrology Section Leader or designee	TBD
Geochemistry	Geochemistry Section Leader or designee	TBD

Appendix 3 - NNWSI

1. Points of contact between NRC and DOE projects

a. Formal Communications

NNWSI Project Manager to and from NRC NTS Project Section Leader

<u>DOE</u>	<u>NRC</u>
Director, Waste Management Project Office DOE Nevada Operations Office P.O. Box 14100 Las Vegas, NV 89114	Section Leader NTS Project Section Division of Waste Management U.S. Nuclear Regulatory Commission 7915 Eastern Avenue Silver Spring, MD 20910

b. Technical Communications

<u>Area</u>	<u>NRC</u>	<u>NNWSI Staff/ Contractors</u>
Quality Assurance	BWIP Project Section Leader or designee	Michael Spaeth, SA
Performance Assessment	Salt Project Section Leader or designee	Thomas Hunter, SNL
Waste Package	Materials Engineering Section Leader or designee	Larry Ramspott, LLNL
Repository	Mining, Geoengineering Facility Design Section Leader or designee	Thomas Hunter, SNL
Exploratory Shaft	Mining, Geoengineering Facility Design Section Leader or designee	Donald Oakley, LANL
Geology	Geology/Geophysics Section Leader or designee	William Dudley, USGS
Hydrology	Hydrology Section Leader or designee	William Dudley, USGS
Geochemistry	Geochemistry Section Leader or designee	Donald Oakley, LANL

Appendix 4 - CPO

1. Points of contact between NRC and DOE projects

a. Formal Communications

<u>DOE</u>	<u>NRC</u>
Manager Crystalline Repository Project Office DOE Chicago Operations Office 9800 South Cass Avenue Argonne, IL 60439	Chief, Repository Projects Branch Division of Waste Management U.S. Nuclear Regulatory Commission 7915 Eastern Avenue Silver Spring, MD 20910

b. Technical Communications

TBD

2. Other Project-Specific Features

Consistent with the provisions of Section 1 of the Procedural Agreement, the NRC Onsite Representatives (OR) for the CPO will be stationed following area-phase field work. Thus, the provisions of this project specific agreement related to ORs are not applicable until the OR is on-site. It may be in both agencies' interests to arrange for an OR and hold technical meetings prior to completion of area-phase field work; this will be evaluated periodically.

Pending completion of the area-phase field work, the CPO will be exempt from the quarterly management meetings required under section 2.b of the Procedural Agreement. Until that time, management meetings will be held only as necessary.

Appendix 5

ACQUISITION OF SITE-SPECIFIC SAMPLES DURING SITE INVESTIGATION AND SITE CHARACTERIZATION BY NRC CONTRACTORS

Nuclear Regulatory Commission (NRC) contractors need, in some instances, site-specific samples of rock, minerals, and ground water or brine from sites being studied by the Department of Energy (DOE) as potential geologic repositories for high-level radioactive waste. The NRC contractors need such samples to carry out selected independent site-specific investigations and relevant research supporting the NRC's licensing responsibilities. The DOE will support these projects with site-specific samples to the extent practicable.

In order to facilitate satisfying NRC requests for site-specific samples with a minimum of inconvenience to all parties, the following points are agreed to:

1. Each DOE field project office will identify their designee to the respective NRC Project Section Leader and, where available, the NRC onsite representative (OR), for all communication concerning the procurement of site-specific samples by NRC contractors.
2. Written requests to the DOE for site-specific samples for NRC contractors will originate from the NRC Project Section Leader and will be transmitted by letter to the DOE field project office manager for that site in sufficient time for the DOE to review the request and, if approved, to prepare the sample. A copy will be provided to the OR when one is assigned for the site. The DOE field project office designee shall acknowledge receipt of all requests by letter.
3. The DOE retains the right to decline requests in cases where the requested samples are needed by the DOE to fulfill its site characterization responsibilities, when the requested samples are scarce or prohibitively expensive to collect, or when the request seriously impairs the DOE's schedule or program for site characterization. See also points 10 and 11 concerning management resolution of any problems on this point.
4. In order to assure that appropriate samples will be available prior to transmitting a written request, the NRC Project Section Leader, or designee, should consult with the DOE field project office designee for the particular site as to sample availability. Inquiries on sample availability can be answered on the basis of current site inventory records. If samples are not available, the DOE will arrange for their acquisition providing such requests are within the DOE plans for site investigation and site characterization. See point 6 below.
5. All written requests for samples shall include pertinent information such as the name of the laboratory, the designated laboratory contact, the timeframes within which samples are needed and testing will be performed and the date that any uncontaminated core samples that have not been destroyed by planned testing will be returned. An

example of a sample request form is attached. To the extent practicable, the request should be accompanied by documents that explain the purpose of the tests such as the NRC statement of work for the project, a written description or specification for the testing procedure to be used, any special sample collection, preservation, handling, or transportation requirements, and expected methods for interpretation of results. This will help ensure that the samples provided by the DOE are appropriate for the tests planned by the NRC contractor. The NRC-approved quality assurance program for the laboratory performing the investigation shall accompany all initial NRC requests for samples for that laboratory.

6. All requests for samples not already available, e.g., core from new boreholes, must sufficiently precede the NRC contractor's need so that samples can be collected within the DOE's site characterization program and at a reasonable convenience to DOE field project offices. The DOE will provide as much flexibility in scheduling sample collection and responding to requests as possible within current program schedules. Accordingly, for samples not already available or planned for under the DOE's plans, adequate advance notice will be needed to incorporate the request for new samples into the site investigation and characterization program. This advance notice must also allow for preparation and submittal to the State for an application for authorization, where required, to remove the sample from the State and for securing the necessary approval.
7. The DOE field project office designee will provide a sample description document with the sample(s) to assist the NRC contractor in ascertaining the compatibility of the sample with the specific test. The sample description document shall provide pertinent information on the sample, such as sample designation, data collected, date collected, description of sample, person collecting sample, depth collected, stratigraphic unit sampled, sampling techniques and conditions, initial measurements of properties at the time of sample collection, results of any subsequent tests or measurements, any methods of preservation or special handling, and proposed method of shipment to the NRC contractor. The NRC should identify any special methods and conditions for shipping samples.
8. The NRC contractor will normally return to the DOE facility that furnished the sample, through the NRC Project Section Leader, a reciprocal sample description document with pertinent information such as sample designation, a description of the sample as received, preparation or treatment of the sample prior to testing, initial readings prior to testing, any modifications to testing procedure or apparatus, testing results, quality control checks, significant observations during testing, interpretation of test results, and disposition of sample(s) after testing. Uncontaminated core samples that have not been destroyed by planned tests will be returned to the DOE as soon as practicable after use.

9. In implementing each of the above provisions, there should be a free exchange of information. Telephone communications to coordinate activities and discuss sampling schedules and testing are encouraged between the NRC or NRC contractors and designated DOE representatives. Requests for actions requiring significant expenditure of DOE or DOE contractor man-hours must be made in writing by the NRC Project Section Leader.
10. The DOE will pay reasonable costs associated with sample collection, preservation, handling, and transportation. The DOE field project office designee will identify any extraordinary costs which may require resolution on a case-by-case basis under point 11.
11. The DOE field project office designee will identify any requests which cannot be met, including the basis for such conclusions, to the DOE field project office and NRC Project Section Leader for resolution on a case-by-case basis at the next management meeting as specified under Section 2b of the Procedural Agreement.

SAMPLE REQUEST FORM

Please type or print

Date of Request _____

Requester: Name _____

Organization _____

Address _____

Telephone _____

Is Requestor a DOE Project Subcontractor? Yes _____ No _____

If yes: Contract Number _____

Expiration Date _____

If no: Funding Source _____

Contract Number _____

Expiration Date _____

Samples Requested

Core Sample(s)

Well ID _____

Depth Interval Requested _____

Soil Sample(s) Full Core _____ Half Core _____ Quarter Core _____ Other _____

Well ID _____

Sample Type: Shelby Tube _____ Drive _____ Pitcher _____ Bulk _____ Other _____

Depth Interval Requested _____

Quantity _____

Water Sample(s)

Well ID _____

Depth Interval Requested _____

Quantity _____

SAMPLE REQUEST FORM (CONTINUED)

Time Frame

Date Samples Needed _____

Time Required to Complete Testing/Analysis _____

Time Required to Publish Results _____

Format of Results _____

Objectives of Tests to be Performed _____

Test Method _____

Use/Need for Test Data/Information in Geologic Repository Program _____

Preparation, Packaging, Transportation Requested

Preparation Procedure _____

Packaging Procedure _____

Transportation Procedure _____

Sample to be Shipped to:

Name _____

Organization _____

Address _____

Telephone _____

Comments: Also, please attach any additional materials, such as test plans.

Appendix 6
STANDARD FORMAT
FOR MEETING REPORTS

DATE/LOCATION OF MEETING

ATTENDEES/ORGANIZATIONAL AFFILIATION

BACKGROUND/FACTS

1. What information was reviewed, exchanged, and discussed (Summary listing fashion)
2. What agenda of discussion was

OBSERVATIONS

1. NRC questions, suggestions, or comments on scope and direction of the DOE technical program. (Best attempt made to identify all important matters)
2. DOE observations
3. State/Tribal observations (an opportunity will be given to States/Tribes to made observations on the DOE technical program)

AGREEMENTS

OPEN ITEMS

1. Technical questions for further discussion
2. Specific responsibilities for information exchange and commitment on other business matters.

Appendix 7

AGREEMENT CONCERNING THE NRC ON-SITE REPRESENTATIVE (OR)
FOR THE REPOSITORY PROJECTS
IN THE SITE SUITABILITY AND PLANNING PHASE

- T B D -

APPENDIX 7

AGREEMENT CONCERNING THE NRC ON-SITE REPRESENTATIVE (OR) FOR THE REPOSITORY PROJECTS DURING SITE INVESTIGATION AND CHARACTERIZATION

The purpose and objective of the on-site representative (OR), as identified in item 1. of the Procedural Agreement*, is to serve as a point of prompt informational exchange and consultation and to preliminarily identify concerns about investigations relating to potential licensing issues.

This appendix is intended to supplement the base agreement and to detail the guidelines which will govern interaction between the NRC OR, including any NRC personnel assigned to the OR, and DOE contractor personnel (prime and sub) involved in the project. Any interactions between the OR and DOE, its contractors, or subcontractors identified in this appendix will not constitute "meetings" within the intent of item 2. of the Procedural Agreement and therefore will not require the preparation of written reports and will not be subject to State/Tribal and public notification and participation or scheduler requirements of item 2. of the Procedural Agreement. The interactions of the OR with DOE and its contractors and subcontractors are not intended to interfere with or replace other channels of NRC/DOE communications and procedures for information release identified in sections 2., 3.A, and 3.B. of the base agreement and sections 2., 3. and 7. of the Procedural Agreement.

The following points are agreed to:

1. The OR can attend any meetings on-site or off-site dealing with technical questions or issues related to work required as part of site characterization and site investigation (e.g., any items to be covered in Site Characterization Plans under the Nuclear Waste Policy Act) following notification of the cognizant DOE project representative responsible for the meeting as discussed below. Such notification shall be by memorandum, telephone or personal contact and will be given at least 24 hours in advance where DOE has provided adequate prior notification to the OR. The meetings may involve solely DOE or solely DOE's contractors (prime and sub) or any combination of DOE with their contractors.

*"Procedural Agreement between the U.S. Nuclear Regulatory Commission and the U.S. Department of Energy Identifying Guiding Principles for Interface During Site Investigation and Site Characterization" (48 FR 38701, 8/25/83) herein referred to as the Procedural Agreement.

If objections to the OR attendance are voiced for any reason, the reason should be specified. Such objections will be infrequent and will be exceptions to the rule. If the OR does not agree with the objection to his attendance, it will be raised to a higher management level for resolution. If resolution cannot be achieved, the OR will not attend the meeting in question.

2. The OR may communicate orally (in person or by phone) with the project participants (persons) employed by DOE, DOE's prime contractors or the prime's subcontractors, on-site or off-site providing that the following procedures are followed. If practicable, the OR shall arrange for all individual sessions with prime contractor and subcontractor staff by contacting first the DOE and DOE contractor personnel identified in Appendices 1, 2 and 3 of the base agreement, or if they cannot be contacted, the proper prime contractor section or department manager or proper DOE Team Leader. As a minimum, the OR will give timely notification of all such sessions to the above individuals. The OR will avoid discussions with personnel when it would appear to disrupt their normal duties and will schedule a discussion period at a mutually convenient time. The OR will keep DOE or cognizant DOE prime contractor supervisory personnel informed of near term (approximately 1 week) areas for intended review and the project participants who may be contacted. It is the option of DOE or the person contacted by the OR as to whether or not a supervisor or third party is to be present. No record of these discussions is required, however questions that are raised or other issues that arise as a result of the above interactions will be reported to the NRC Division of Waste Management and to the cognizant DOE project personnel by the OR as soon as practical.
3. DOE project office(s), DOE prime contractors and their subcontractors will provide the OR access to records which would be generally relevant to a potential licensing decision by the Commission as follows. Upon request by the OR, the DOE or the DOE contractor or subcontractor shall provide copies of any records of raw data provided that the quality assurance checks specified in section 3.a of the Procedural Agreement have been performed. Records which document the analysis, evaluation, or reduction of raw data or contain information deduced by reason will be made available to the OR, after the documentation has been peer reviewed by the prime contractor, and cleared and approved by DOE. Records shall be available for review, but not to copy or to receive a copy for retention, at any stage of completion.

4. Drafts of documents required by the Nuclear Waste Policy Act of 1982, such as the EA, and SCP, which have not been approved by DOE, will not be provided to the OR without DOE approval. Documents of this type may be made available by DOE, but not the DOE contractor. Any such documents made available are for the use of the OR and shall not be placed in any NRC public document room.
5. The OR does not have the authority to direct DOE, their contractors or subcontractors to perform any work. Any formal identification of questions or issues for investigation by DOE that could result in contractor or subcontractor work must be formally presented to DOE through the NRC Division of Waste Management in writing.
6. The OR will attend on-site meetings upon request by the DOE project office or prime contractor on-site whenever possible. The OR will provide any records which would normally be available under 10 CFR Part 2.790 of the Commission's regulations to project participants upon request to copy. If convenient, copies of such records will be provided by the OR.
7. The OR shall be afforded access to the site, research facilities, and other contractor and subcontractor areas to observe testing or other data gathering activities, in progress, as part of site characterization and site investigation subject to compliance with the applicable requirements for identification, and applicable access control measures for security, radiological protection and personnel safety, provided that such access shall not interfere with the activities being conducted by DOE or its contractors (see point 6 above) and that any discussions conducted during such access shall comply with point 2 above.

Such access shall be allowed as rapidly as it is for DOE or DOE contractor employees upon display of an appropriate access identification badge, or, if badging is not possible for national security reasons, upon prior notification to DOE or cognizant contractor supervisory personnel (by memorandum, telephone or personal contact). When an access identification badge is available to DOE or DOE's contractors and subcontractors on a routine basis, it shall be made available to the OR upon completion of the required security clearances and appropriate radiological and personnel safety training. DOE will ensure that any training required is provided to the OR.

8. The OR and DOE will make arrangements which allow for at least weekly information exchanges to discuss pending DOE plans and program status, and any problem areas requiring attention of either or both parties.
9. DOE and NRC will assure that all of its employees and contractors (prime and sub) involved in the repository projects observe applicable provisions of this appendix. This appendix will be distributed by DOE and NRC to all project specific prime contractors and subcontractors.

FOR DOE:

Ralph Stein

DATE: 6/14/85

FOR NRC:

RE Browning

DATE: 6/14/85

PROCEDURAL AGREEMENT BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION
AND THE U.S. DEPARTMENT OF ENERGY IDENTIFYING GUIDING PRINCIPLES FOR
INTERFACE DURING SITE INVESTIGATION AND SITE CHARACTERIZATION

This Procedural Agreement outlines procedures for consultation and exchange of information which the Commission (NRC) and the Department (DOE) will observe in connection with the characterization of sites for a geologic repository under the Nuclear Waste Policy Act of 1982. The purpose of these procedures is to assure that an information flow is maintained between the two agencies which will facilitate the accomplishment by each agency of its responsibilities relative to site investigation and characterization under the National Waste Policy Act (NWPA). The agreement is to assure that NRC receives adequate information on a timely basis to enable NRC to review, evaluate, and comment on those DOE activities of regulatory interest in accordance with DOE's project decision schedule and thereby facilitate early identification of potential licensing issues for timely staff resolution. The agreement is to assure that DOE has prompt access to NRC for discussions and explanations relative to the intent, meaning and purpose of NRC comments and evaluations on DOE activities and so that DOE can be aware, on a current basis, of the status of NRC actions relative to DOE activities.

This Procedural Agreement shall be subject to the provisions of any project decision schedule that may hereafter be established by DOE, and any regulations that may hereafter be adopted by NRC, pursuant to law. In particular, nothing herein shall be construed to limit the authority of the Commission to require the submission of information as part of a general plan for site characterization activities to be conducted at a candidate site or the submission of reports on the nature and extent of site characterization activities at a candidate site and the information developed from such activities.

1. NRC On-Site Representatives

As early as practicable, following area phase field work, NRC on-site representatives will be stationed at each site undergoing investigation principally to serve as a point of prompt informational exchange and consultation and to preliminarily identify concerns about such investigations relating to potential licensing issues.

2. Meetings

From the time this agreement is entered into, and for so long as site characterization activities are being planned or are in

progress, DOE and NRC will schedule and hold meetings periodically as provided in this section. A written report agreed to by both DOE and NRC will be prepared for each meeting including agreements reached.

- a. Technical meetings will be held between DOE and NRC-technical staff to: review and consult on interpretations of data; identify potential licensing issues; agree upon the sufficiency of available information and data; and agree upon methods and approaches for the acquisition of additional information and data as needed to facilitate NRC reviews and evaluations and for staff resolution of such potential licensing issues.
- b. Periodic management meetings will be held at the site-specific project level whenever necessary, but at least quarterly, to review the summary results of the technical meetings; to review the status of outstanding concerns and issues; discuss plans for resolution of outstanding items and issues; to update the schedule of technical meetings and other actions needed for staff resolution of open items regarding site characterization programs; and to consult on what generic guidance is advisable and necessary for NRC to prepare. Unresolved management issues will be promptly elevated to upper management for resolution.
- c. Early technical meetings will be scheduled to discuss written NRC comments on DOE documents such as Site Characterization Plans, DOE's semi-annual progress reports, and technical reports to foster a mutual understanding of comments and the information or activities needed for staff resolution of the comments.
- d. In formulating plans for activities which DOE will undertake to develop information needed for staff resolution of potential licensing issues, DOE will meet with NRC to provide an overview of the plans so that NRC can comment on their sufficiency. These discussions will be held sufficiently early so that any changes that NRC comments may entail can be duly considered by DOE in a manner not to delay DOE activities.
- e. Schedules of activities pertaining to technical meetings will be made publicly available. Potential host States and affected Indian tribes will be notified and invited to attend technical meetings covered in this section (Section 2, Meetings). The notification will be given on a timely basis by the DOE. These technical meetings will be open meetings with members of the public being permitted to attend as observers.

3. Timely Release of Information

- a. Data collected during site investigations will be made available to NRC on a current, continuing basis after the DOE (or DOE contractor) quality assurance checks that are inherent in determining that the data has been obtained and documented properly.
- b. DOE's analyses and evaluations of data will be made available to NRC in a timely manner.

4. Site Specific Samples

Consistent with mutually agreed on procedures, DOE will provide NRC with site specific samples to be used by NRC for independent analysis and evaluation.

5. Agency Use of Information

It is understood that information made available to either Agency under this agreement may be used at that Agency's option in carrying out its responsibilities.

6. Project Specific Agreements

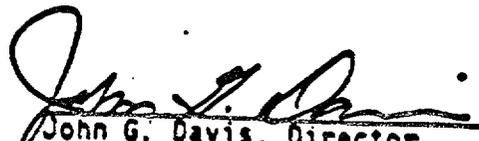
Project specific agreements to implement the above principles will be negotiated within 120 days of the time this agreement is entered into. These project specific agreements will be tailored to the specific projects to reflect the differences in sites and project organizations.

- 7. Nothing in this agreement shall be construed as limiting forms of informal consultation not mentioned in this agreement (for example, telephone conversation or exchanges of reports). These other consultations will be documented in a timely manner.



Robert L. Morgan, Project Director
Nuclear Waste Policy Act
Project Office
U.S. Department of Energy

Date: 6/27/83



John G. Davis, Director
Office of Nuclear Material
Safety and Safeguards
U.S. Nuclear Regulatory
Commission

Date: 6/17/83

ENCLOSURE 6

LSS ISSUE PAPER NO. 1

December 8, 1989

DEVELOPMENT OF A PRIORITY DOCUMENT PRODUCTION SCHEDULE

A DISCUSSION PAPER

PREPARED BY THE LSS ADMINISTRATOR
FOR REVIEW AND DISCUSSION AT
THE FIRST MEETING OF THE
LSS ADVISORY REVIEW PANEL

DECEMBER 19 - 20, 1989

RENO, NEVADA

**DISCUSSION PAPER ON PRIORITY DOCUMENT CATEGORIES
FOR LOADING THE HLW LICENSING SUPPORT SYSTEM (LSS)**

PURPOSE OF THIS PAPER

This paper was prepared to help focus the LSS Advisory Review Panel (LSSARP) on the need to prioritize the documents that will first be captured by the LSS. By prioritizing, the system will contain the most important material for technical review when the LSS is first available. This paper sets forth a framework for the development of a recommended document production schedule by the LSSARP.

OBJECTIVE: A "PRIORITIZED DOCUMENT PRODUCTION SCHEDULE"

The Commission recently issued the following program and policy guidance to the LSS Administrator:

"Even though the LSS rule broadly defines when access to the LSS should be made available, the LSS Administrator must develop a more definitive timetable for the NRC, DOE, and other LSS participants to follow in scheduling their LSS activities. This timetable must recognize that there is a large backlog of documents that has not yet been fully identified and prepared for entry into the LSS. The timely preparation of the entire backlog is important but, because of its size, priorities must be set so that the most important documents are processed first. These priorities must be based on when access to documents or categories of documents is needed: a) to perform a timely/effective technical review of repository information; b) to prepare for the hearing; and c) to facilitate other regulatory/licensing needs, such as rulemaking.

The LSS Administrator will coordinate the development of these priorities through the LSSARP and then publish a document production schedule that will, when implemented, satisfy the document access needs of all participants, considering DOE's schedule for the HLW repository application. DOE's LSS design and development schedule and each LSS participant's document identification, preparation activities should be aimed at meeting these document access needs. If at any time there are significant schedule incompatibilities that cannot be resolved by the LSS Administrator, the Commission is to be informed."

LSS DEVELOPMENT SCHEDULE AND DOCUMENT PROCESSING CAPACITIES

The following was the LSS development schedule when the LSS rule was published:

1. Operate six capture stations starting in 1991, with a total processing capacity of 4.5 million pages per year.
2. Provide LSS participant access in FY 1994 to approximately 15 million pages.

There have been significant changes in the LSS design and development schedule due to budget constraints and anticipated delays in the repository program. The current schedule is:

1. Procure and install one capture station by the end of FY 1991.
2. In early FY 1992, start processing about 750,000 pages per year. Highest priority documents would be loaded first.
3. There are currently no specific plans beyond FY 1991 for additional capture stations and a search and image retrieval capability. This will be evaluated during the development of the FY 1992 budget.

DEVELOPMENT OF PRIORITY CATEGORIES

Decision Making Framework

There are many ways, and combinations of ways, that documents can be prioritized. For example:

1. by date of document
2. by subject class, e.g. as defined in the Topical Guidelines
3. by document type, e.g. all transcripts, letters, published reports, memoranda, statements of work, trip reports, etc.
4. by authoring or sponsoring organization, e.g. DOE, NRC, State of Nevada, contractors and subcontractors to DOE, NRC and the State of Nevada, other Federal and Congressional entities, environmental groups, etc.

5. by association/relevance to a major repository document or phase in the repository program, e.g. the SCP, the environmental review
6. a combination of any of the above, e.g. by date and subject class

The LSSA proposes the following process for arriving at an "initial" prioritized list of document categories. Using the matrix presented below, the LSSARP members can identify document categories based on their relative importance to repository technical review activities in the 1992 - 1994 timeframe. Each member's proposal will be submitted to the LSS Administrator by February 15, 1990. The LSS Administrator will consolidate these proposals and develop a rough estimate of the page volume for each proposed category, working with the major document generating organizations. The results will be presented to the LSSARP at the second LSSARP meeting.

Prioritized Document Production Schedule Matrix

USEFULNESS	1992		1993		1994	
	Categories	est. # of pages	Categories	est. # of Pages	Categories	est. # of pages
High						
Medium						
Low						

Annual Capacity = 750K 750K 750K

Note: The processing capacity in 1993 and 1994 is dependent on the number of capture stations.

When the LSSARP members are defining their proposed document categories, the following guiding principles should be kept in mind. The LSSARP members may have additional thoughts in this

area which can be discussed at the December meeting. It is very important that the categories be properly defined. They should be defined as narrowly and as specifically as possible while still representing a useful body of information for search and retrieval purposes.

1. In as much as possible, LSSARP members should try to narrowly define each category by specific date, document type, authoring/sponsoring organization, subject area, etc. Defining the categories as narrowly as possible, will make it easier to make adjustments within the overall production limit of the first capture station. Conversely, LSSARP members should not define the proposed categories so narrowly or specifically that the LSS database is not useful.

2. Subject areas should be as specific as possible so that documents falling within a category can be easily identified. This will reduce the burden on the LSS participants collecting the documents and will increase confidence in the completeness and integrity of the database.

3. When considering the individual proposals of the LSSARP members, the LSS Administrator may not be able to accommodate all the expressed needs due to production limitations. When making choices among categories, preference will be given to categories that can be completely loaded. This will allow searchers to rely on the LSS as the sole information source for these categories of documents, eliminating the need to search elsewhere.

4. Once a document category has been given priority, newly generated documents in that category must be continually added to avoid new backlog and to keep the priority categories both current and complete. Therefore, the earliest priority categories must be carried over into the subsequent years on the production schedule.

After the "initial" schedule has been generally agreed upon at the second LSSARP meeting, the LSS Administrator will ask each participant to develop more refined page volume estimates for their documents that fall within the 1992 categories. The LSS Administrator will make any adjustments needed based on these refined estimates and publish the Prioritized Document Production Schedule. Major adjustments to this Schedule will be made through the LSSARP. Upon publication, there will be follow-on activities required:

Each LSS participant must start identifying and collecting these priority documents. Processing by participant organizations can begin after the Header Record layout and

the ASCII format specifications are established, currently targeted for the Summer or Fall 1990.

From the day that the capture process begins, all new documents being generated in the categories being processed should be submitted to the LSS and captured in a real-time mode ("reasonably contemporaneously with their creation").

Candidate Document Categories for Prioritization

The following document categories have been developed as a "strawman" for the LSSARP's consideration. They represent some of the program documents and technical areas that could be most relevant to the repository evaluation in the early-to-mid 1990's. These are only examples and the volume of relevant documents in these categories is unknown.

I. Characterization of the Yucca Mountain Site

A. Primary program documents:

1. The 1989 DOE SCP, the NRC SCA, the State of Nevada analysis, and all updates to these documents; and all documents referenced in these major program documents.
2. The DOE Study Plans and all referenced documents and procedures. The NRC review and acceptance documentation.

B. Basic documents and data (backlog and ongoing) related to technical aspects of the Yucca Mountain site including:

1. Results of site characterization activities done under NRC-approved DOE Study Plans.
2. LSS Headers describing the data packages available in the DOE Technical Data Management Record Centers.

II. Exploratory Shaft Facility Program

III. Surface-based Testing

Information related to the testing priorities identified by DOE pursuant to Section 3.2 of the DOE reassessment (November 29, 1989)

- IV. The DOE Waste Package and Materials Selection Program
- V. The DOE Waste Form program
Including any relevant documents from the Defense Waste solidification program.
- VI. Performance Assessment Materials
Including documents relevant to the models and codes being used, especially documents related to their scope, validity and defense.
- VII. The DOE Environmental Assessment on Yucca Mountain Site
Including the 1986 DOE EA, comments and referenced documents. All subsequent EA related information.
- VIII. The QA Program Documents
- IX. All applicable Laws, Regulations and Program Directives
Including relevant NRC proposed and final Rulemaking documents, their referenced documents and comments; all Congressional and Executive level correspondence and papers; and Agency directives.
- X. NRC Technical Positions
Including all referenced documents.
- XI. LSS Design and Development
Including documents of the DOE/IRM, LSS Administrator, contractors, and the LSSARP.

NOTE: This category is included to ensure that those involved in deciding the LSS functions, capabilities, and procedures are contributors to and users of the system.

PRIORITIZED DOCUMENT PRODUCTION SCHEDULE - LSS PARTICIPANT WORKSHEET

USEFULNESS	1992		1993		1994	
	Document Categories	Est. # of Pages	Document Categories	Est. # of Pages	Document Categories	Est. # of Pages
High						
Medium						
Low						

Annual Capacity = 750K

750K

750K

NOTE: Processing & loading capacity in the out years is dependent on # of capture stations.

ENCLOSURE 7



OFFICE OF THE
LSS ADMINISTRATOR

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

December 19, 1989

DEVELOPMENT OF A PRIORITY DOCUMENT PRODUCTION SCHEDULE

SLIDE PACKAGE

PREPARED BY THE LSS ADMINISTRATOR

FOR FIRST MEETING OF THE LSS ADVISORY REVIEW PANEL

DECEMBER 19 -20, 1989

RENO, NEVADA

COMMISSION PROGRAM AND POLICY GUIDANCE FOR THE OFFICE OF THE LSS ADMINISTRATOR

- THE LSS ADMINISTRATOR MUST DEVELOP A DEFINITIVE TIMETABLE FOR ACCESS TO THE LSS
 - * FOR PARTICIPANTS TO FOLLOW IN SCHEDULING THEIR LSS ACTIVITIES
 - * RECOGNIZING THE LARGE BACKLOG OF DOCUMENTS

- PRIORITIES MUST BE SET, BASED ON NEED TO:
 - PERFORM A TIMELY/EFFECTIVE TECHNICAL REVIEW
 - PREPARE FOR THE HEARING
 - FACILITATE OTHER NEEDS, SUCH AS RULEMAKING

- DEVELOPMENT OF PRIORITIES WILL BE COORDINATED THROUGH THE LSSARP

- LSS ADMINISTRATOR WILL PUBLISH A DOCUMENT PRODUCTION SCHEDULE
 - * TO SATISFY THE DOCUMENT ACCESS NEEDS OF ALL PARTICIPANTS
 - * CONSIDERING SCHEDULE FOR THE HLW REPOSITORY

- THE LSS DESIGN AND PARTICIPANT'S DOCUMENT PREPARATION ACTIVITIES SHOULD BE AIMED AT MEETING DOCUMENT ACCESS NEEDS OF PARTICIPANTS

- THE COMMISSION SHOULD BE INFORMED IF SIGNIFICANT SCHEDULE INCOMPATIBILITIES CANNOT BE RESOLVED

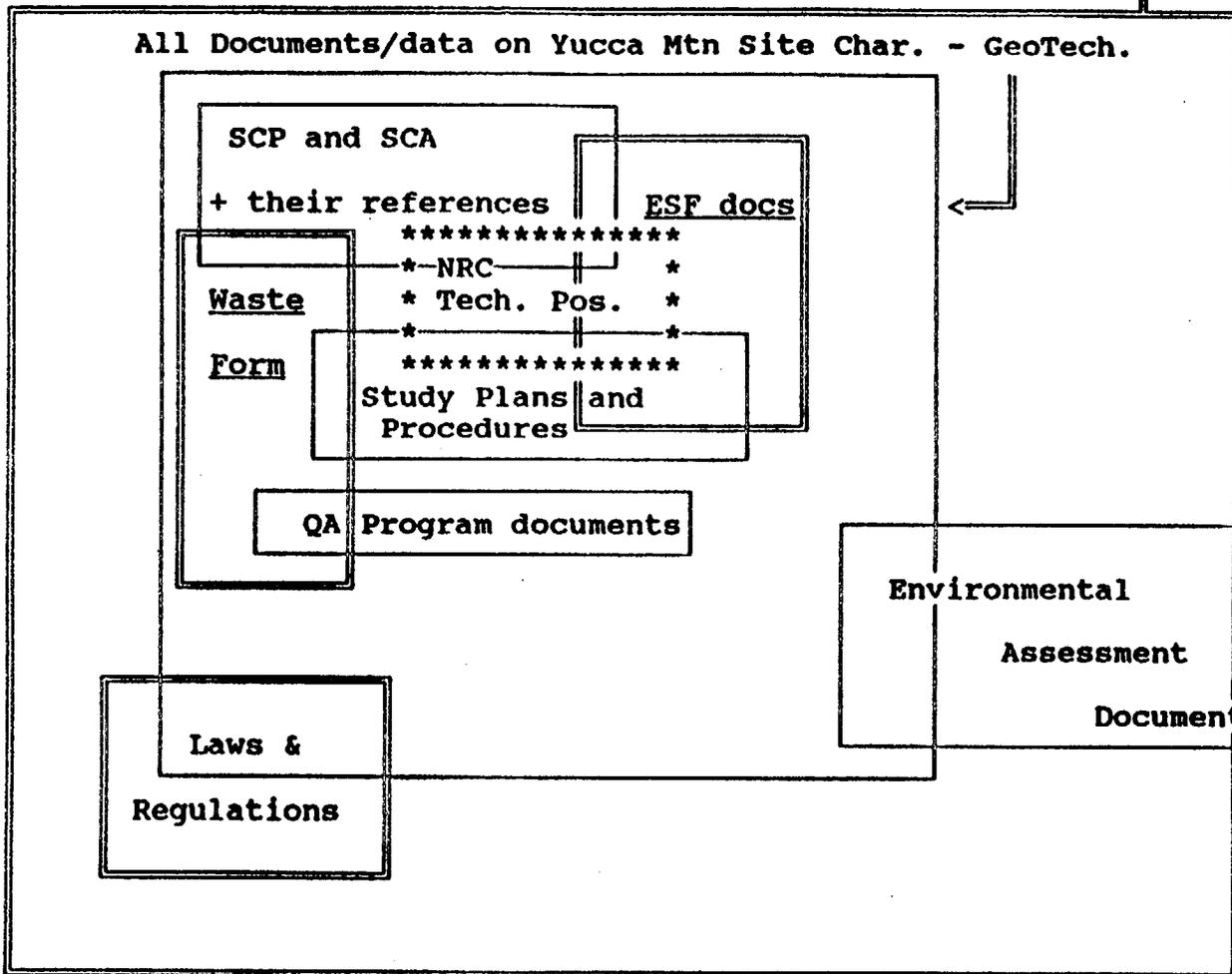
TABLE 8. PROJECTION OF THE SIZE OF THE LSS DATA BASE, 1990 - 2009

Year	LOW ESTIMATE		HIGH ESTIMATE	
	Pages Added During Year	Cumulative Pages At Year-End	Pages Added During Year	Cumulative Pages At Year-End
1990	830,000	9,304,000	1,100,000	11,885,000
1991	1,087,000	10,391,000	1,441,000	13,326,000
1992	1,428,000	11,819,000	1,892,000	15,218,000
1993	1,660,000	13,479,000	2,200,000	17,418,000
1994	2,009,000	15,488,000	2,662,000	20,080,000
1995	1,858,000	17,346,000	2,463,000	22,543,000
1996	1,635,000	18,981,000	2,167,000	24,710,000
1997	1,386,000	20,367,000	1,837,000	26,547,000
1998	1,037,000	21,404,000	1,374,000	27,921,000
1999	1,286,000	22,690,000	1,704,000	29,625,000
2000	1,170,000	23,860,000	1,550,000	31,175,000
2001	1,877,000	25,737,000	2,487,000	33,662,000
2002	1,236,000	26,973,000	1,638,000	35,300,000
2003	1,261,000	28,234,000	1,671,000	36,971,000
2004	1,327,000	29,561,000	1,759,000	38,730,000
2005	1,120,000	30,681,000	1,484,000	40,214,000
2006	415,000	31,096,000	550,000	40,764,000
2007	365,000	31,461,000	484,000	41,248,000
2008	365,000	31,826,000	484,000	41,732,000
2009	365,000	32,191,000	484,000	42,216,000

SOURCE: U.S. DOE, OCRWNM. Licensing Support System Conceptual Design Analysis. January 1989.

NOTE: Data compiled based on assumption of characterization of three sites.

EXISTING DOCUMENTS WITHIN THE TOPICAL GUIDELINES



 *
 * LSS Design, *
 * Development, *
 * Operation & *
 * Usage docs. *
 *

PARAMETERS FOR DELINEATION OF DOCUMENT CATEGORIES

- BY DATE OF DOCUMENT
- BY SUBJECT CLASS
- BY DOCUMENT TYPE
- BY AUTHORIZING OR SPONSORING ORGANIZATION
- BY ASSOCIATION OR RELEVANCE TO A MAJOR REPOSITORY DOCUMENT OR PHASE IN THE HLW PROGRAM
- A COMBINATION OF ANY OF THE ABOVE

PRIORITIZED DOCUMENT PRODUCTION SCHEDULE

DEVELOPMENT PROCESS

- **DISCUSS POTENTIAL CATEGORIES AT FIRST LSSARP MEETING**

- **EACH LSSARP MEMBER DEVELOPS RECOMMENDATIONS**
 - * **DUE TO LSS ADMINISTRATOR BY FEBRUARY 15, 1990**

- **LSS ADMINISTRATOR CONSOLIDATES LSSARP MEMBER RECOMMENDATIONS**
 - * **LSSA ELICITS PRELIMINARY VOLUME ESTIMATES FROM LSSARP MEMBER ORGANIZATIONS**

- **RESULTS PRESENTED AT ~~SECOND~~ LSSARP MEETING**

PRIORITIZED DOCUMENT PRODUCTION SCHEDULE

DEVELOPMENT PROCESS - continued

- **LSSARP PROPOSES "INITIAL" SCHEDULE**
 - * **INCLUDING DOCUMENT CATEGORIES, PARTICIPANT RESPONSIBILITIES, DATES**

- **EACH LSSARP MEMBER DETERMINES VOLUME ESTIMATES FOR THEIR DOCUMENTS IN THE 1992 CATEGORIES**

- **LSS ADMINISTRATOR MAKES ANY REQUIRED ADJUSTMENTS AND PUBLISHES THE PRIORITIZED DOCUMENT PRODUCTION SCHEDULE**
 - * **ANY MAJOR ADJUSTMENTS WILL BE MADE THROUGH THE LSSARP**

- **LSSARP PARTICIPANTS BEGIN IDENTIFYING, COLLECTING, AND PROCESSING DOCUMENTS**

GUIDING PRINCIPLES

IT IS VERY IMPORTANT THAT THE CATEGORIES BE PROPERLY DEFINED. THEY SHOULD BE DEFINED AS NARROWLY AND AS SPECIFICALLY AS POSSIBLE WHILE STILL REPRESENTING A USEFUL BODY OF INFORMATION FOR SEARCH AND RETRIEVAL PURPOSES.

- NARROW
 - BY DATE, DOCUMENT TYPE, ETC.
 - TO LIMIT SIZE OF COLLECTION

- SPECIFIC
 - FOR EASE OF IDENTIFICATION
 - TO REDUCE BURDEN ON THE LSS PARTICIPANTS IN COLLECTING THE DOCUMENTS
 - TO INCREASE CONFIDENCE IN COMPLETENESS AND INTEGRITY OF THE DATABASE

- USEFUL

- COMPLETE
 - IF CATEGORY, AS DEFINED, IS OF A SIZE THAT CAN BE COMPLETELY LOADED INITIALLY AND MAINTAINED AS NEW DOCUMENTS ARE CREATED, THEN LSS USERS CAN RELY ON THE LSS AS THE SOLE INFORMATION SOURCE, THUS ELIMINATING THE NEED TO SEARCH ELSEWHERE OR TO MAINTAIN OVERLAPPING COLLECTIONS.

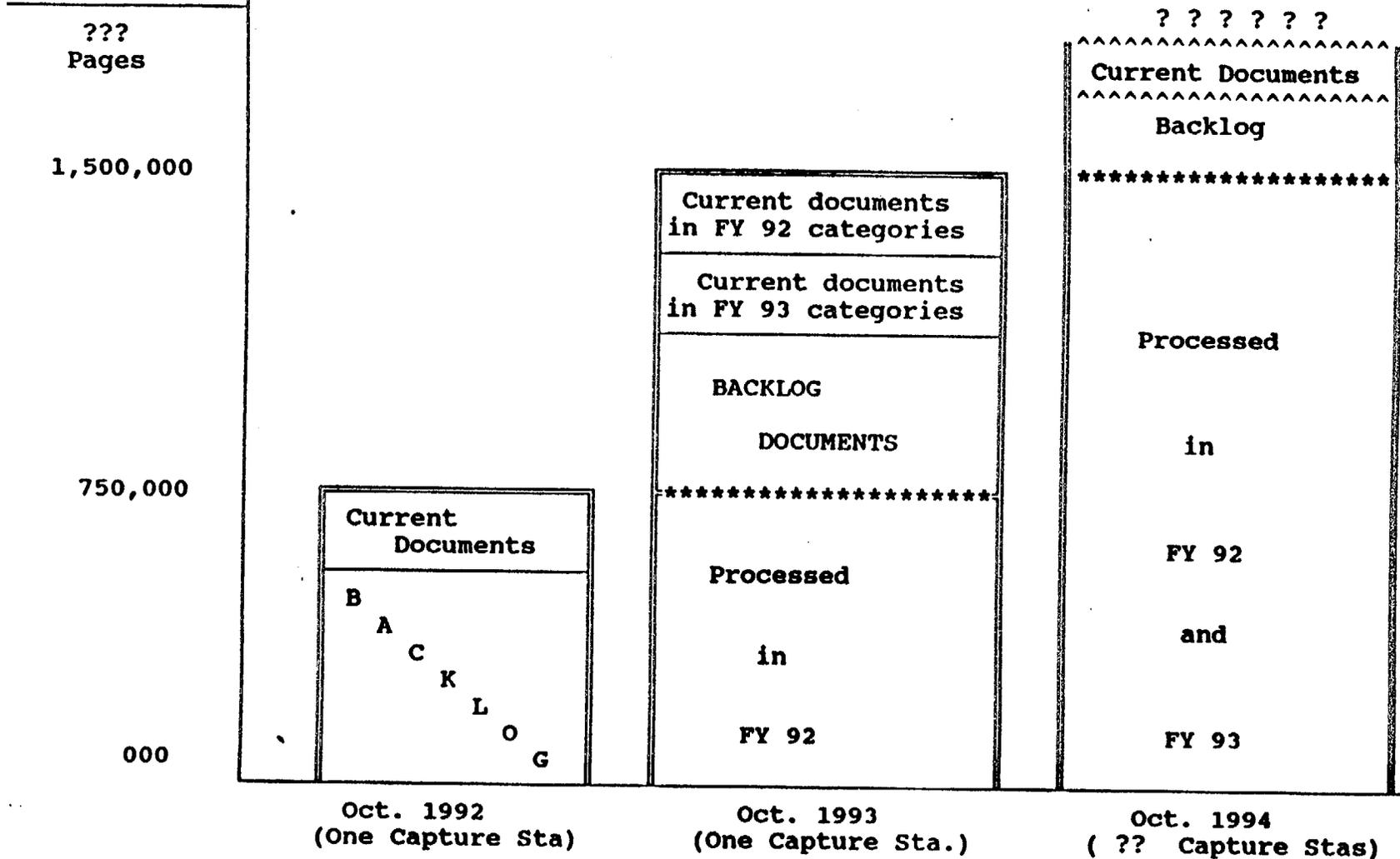
PRIORITIZED DOCUMENT PRODUCTION SCHEDULE - LSS PARTICIPANT WORKSHEET

USEFULNESS	1992		1993		1994	
	Document Categories	Est. # of Pages	Document Categories	Est. # of Pages	Document Categories	Est. # of Pages
High						
Medium						
Low						

Annual Capacity = 750K

NOTE: Processing & loading capacity in 1993 and 1994 is dependent on # of capture stations.

No. of Pages
in the LSS



Assumes that Capture Station processing starts in Oct. 1991 (FY 92) at a capacity of 3,000 pages per day

Document Categories

I. Characterization of the Yucca Mountain Site

A. The primary program documents including:

1. The 1989 DOE SCP, the NRC SCA, the State of Nevada analysis, and all updates to these documents; and all documents referenced in these major program documents.
2. The DOE Study Plans and all referenced documents and procedures. ~~The NRC review and acceptance documentation.~~

B. Basic documents and data (backlog and ongoing) related to technical aspects of the Yucca Mountain site including:

1. Results of site characterization activities done under NRC-approved DOE Study Plans.
2. LSS Headers describing the data packages available in the DOE Technical Data Management Facilities.

II. Exploratory Shaft Facility Program

III. The DOE Waste Package and Materials Selection Program

IV. The DOE Waste Form program

Including any relevant documents from the Defense Waste solidification program.

V. Performance Assessment Materials

Including documents relevant to the models and codes being used, especially documents related to their scope, validity and defense.

VI. The DOE Environmental Assessment on Yucca Mountain Site

Including the 1986 DOE EA, comments and referenced documents. All subsequent EA related information.

ENCLOSURE 8

LSS ADVISORY REVIEW PANEL - PLANNING AGENDA

LSSARP
Agenda

MARCH

- SAIC presentation on Capture Station Operation
- Patent Office/ Archives Tour & Presentation
- SEC Presentation
- NRC/DOE Document Management Status
- HEADER/ASCII/ IMAGE Standards

JUNE

- Presentation on Capture Station Procurement
- Search System Design Document
- Capture Station Procedures
- Topical Guidelines

SEPTEMBER

- Image System Design Document
- Technical Database Access Protocol Discussion Paper
- Presentation on plans for providing search capability and image distribution
- Compliance Evaluation Criteria
- Priority Documents Production Schedule

1991

JANUARY

- Work Station Communications Design Document
- Technical Database Access Protocol
- Document Handling Procedures
- Clarify special document requirements e.g. contractor documents, exclusions, etc.

1992

LSS/HLW
Milestones

MARCH

Capture Station RFP

APRIL

Search System Design Document

JUNE

Image System Design Document; Capture

SEPTEMBER

Workstations & Communications Design Document

OCTOBER

Capture Station Award

JANUARY

Surface Investigations Begin

MARCH

Capture Station Delivery

OCTOBER

Capture Station Installation

NOVEMBER

Exploratory Shaft

4 p.m.-5 p.m.: ACRS Practices and Procedures (Open)—The Committee will discuss proposed changes in ACRS practices and procedures regarding the ACRS Bylaws and the Memorandum of Understanding between the NRC staff and the Committee.

5 p.m.-5:30 p.m.: Selection/Appointment of ACRS Members/Officers—(Open/Closed)—The Committee will discuss the status of candidates proposed for appointment to the Committee and the qualifications of nominees for ACRS officers during Calendar Year 1990.

Portions of this session will be closed as necessary to discuss information the release of which would represent a clearly unwarranted invasion of personal privacy.

Friday, December 15, 1989

8:30 a.m.-10 a.m.: Containment Performance Improvement Program (Open)—The Committee will review and report on a proposed NRC program to evaluate the potential for containment improvements to deal with severe accidents at nuclear power plants. Representatives of the NRC staff will participate, as appropriate.

10:15 a.m.-12 noon: Coherence in the Regulatory Process (Open)—The Committee will meet with NRC's Acting Executive Director for Operations to discuss the ACRS report of November 24, 1989, Coherence in the Regulatory Process and related matters.

1:30 p.m.-2:30 p.m.: Fitness for Duty (Open)—The Committee will review and report on the proposed revision to 10 CFR part 55 to require compliance with NRC's fitness-for-duty programs and conforming modification to the Commission's enforcement policy.

2:45 p.m.-5:30 p.m.: Preparation of ACRS Reports to the NRC (Open)—The Committee will discuss proposed ACRS reports regarding items considered during this meeting.

Saturday, December 16, 1989

8:30 a.m.-12:30 p.m.: Preparation of ACRS Reports to the NRC (Open)—The Committee will discuss proposed ACRS reports to the NRC regarding items considered during this meeting.

Procedures for the conduct of and participation in ACRS meetings were published in the Federal Register on September 27, 1989 (54 FR 39594). In accordance with these procedures, oral written statements may be presented by members of the public, recordings 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 Committee, its consultants, and Staff. Persons desiring to make oral statements should notify the ACRS Executive Director as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements. Use of still, motion picture and television cameras during this meeting may be limited to selected portions of the meeting as determined by the Chairman. Information regarding the time to be set aside for this purpose may be obtained by a prepaid telephone call to the ACRS Executive Director, Mr. Raymond F. Fraley, prior to the meeting. In view of the possibility that the schedule for ACRS meetings may be adjusted by the Chairman as necessary to facilitate the conduct of the meeting, persons planning to attend should check with the ACRS Executive Director if such rescheduling would result in major inconvenience.

I have determined in accordance with subsection 10(d) Public Law 92-463 that it is necessary to close portions of this meeting as noted above to discuss safeguards and security information at nuclear plants (5 U.S.C. 552b(c)(3)) and information the release of which would represent a clearly unwarranted invasion of personal privacy (5 U.S.C. 552b(c)(6)).

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted can be obtained by a prepaid telephone call of the ACRS Executive Director, Mr. Raymond F. Fraley (telephone 301/492-8049), between 7:30 a.m. and 4:15 p.m.

Dated: November 8, 1989.

John C. Hoyle,
Advisory Committee Management Officer.
[FR Doc. 89-28276 Filed 12-1-89; 8:45 am]
BILLING CODE 7590-01-M

Licensing Support System Advisory Review Panel

Pursuant to the Federal Advisory Committee Act of October 6, 1972 (Pub. L. 94-463, 86 Stat. 770-776) the U.S. Nuclear Regulatory Commission (NRC) announces the establishment of the Licensing Support System Advisory Review Panel ("Panel"). The Commission has determined that the establishment of this Panel is necessary and in the public interest in order to obtain advice and recommendations on the design, development, and operation

of the Licensing Support System (LSS). The LSS is an electronic information management system containing information relevant to the Commission's high-level waste licensing proceeding.

The purpose of the Panel is to provide advice and recommendations on topics, issues, and activities related to the design, development, and operation of the LSS. Panel membership will be primarily drawn from those interests that will be affected by the use of the LSS, including the Department of Energy, the NRC, the State of Nevada, Tribal interests, affected units of local governments in Nevada, the nuclear industry, and environmental groups. These interests will provide a balanced representation of the different viewpoints, concerns, and needs related to the siting and licensing of the HLW repository, and the use of the LSS in that process. The Patent and Trademark Office and the National Archives, Federal agencies with expertise and experience in electronic information management systems, will also participate on the Panel. The Commission has appointed the NRC representative on the Panel, John C. Hoyle, as Chairman.

The first meeting of the Panel is scheduled for December 19 and 20, 1989 in Reno, Nevada at the Peppermill Hotel. The meeting will begin at 9 a.m. and conclude at 5 p.m. each day. The agenda for the first meeting will include a discussion of the status of LSS activities, establishment of the protocols for Panel activities, an overview of how the LSS capture stations will operate, and future agenda items. This meeting will be open to the public.

The establishment of the Panel will be effective upon the filing of its charter with the Commission and with the standing committees of Congress having legislative jurisdiction over the NRC.

For further information on the LSS Advisory Review Panel, including details related to its first meeting, contact Francis X. Cameron, Deputy LSS Administrator, U.S. Nuclear Regulatory Commission, Washington, DC 20555; Telephone: 301-492-4030.

Dated at Rockville, Maryland this 29th Day of November, 1989.

For the Nuclear Regulatory Commission,
John C. Hoyle,
Advisory Committee Management Officer.
[FR Doc. 89-28275 Filed 12-1-89; 8:45 am]
BILLING CODE 7590-01-M

ENCLOSURE 10

UNITED STATES NUCLEAR REGULATORY COMMISSION

CHARTER

LICENSING SUPPORT SYSTEM ADVISORY REVIEW PANEL

1. Establishment and Official Designation

The Nuclear Regulatory Commission (NRC) has amended the Commission's Rules of Practice in 10 CFR Part 2 to establish the basic procedures for the submission and management of records and documents relating to the licensing of a geologic repository for the disposal of high-level radioactive waste (HLW). The procedures include the use of an electronic information management system known as the Licensing Support System (LSS). Pursuant to 10 CFR 2.1011(e)(1), Subpart J, there is hereby established an advisory committee designated as the LSS Advisory Review Panel.

2. Objectives, Scope of Activity, and Duties

The LSS Advisory Review Panel shall provide advice to:

- a. the Department of Energy (DOE) on the fundamental issues of the design and development of the LSS.
- b. the LSS Administrator, NRC, on the operation and maintenance of the LSS.

The LSS Advisory Review Panel shall provide advice on:

- a. format standards for the submission of documentary material to the LSS such as ASCII files, bibliographic headers, and images;
- b. procedures and standards for the electronic transmission of filings, orders, and decisions during both the pre-licensing application phase and the high-level waste licensing proceeding;
- c. access protocols for raw data, field notes, and other items;
- d. protocols on digitizing equipment;
- e. a thesaurus and authority tables;
- f. reasonable requirements for headers, the control of duplication, retrieval, display, image delivery, query response, and "user friendly" design; and

- g. other relevant activities related to the design, operation and maintenance of the LSS and the format and procedures for LSS material as directed by the LSS Administrator.

The LSS Advisory Review Panel will also develop recommendations on establishing priorities for the loading of documentary material and will review and comment on proposals on whether particular categories of documentary material should be included in the Topical Guidelines.

After commencement of the high-level waste repository licensing proceeding, the primary focus of the LSS Advisory Review Panel will be on broad, long-term, technical issues relating to the design and maintenance of the LSS and continuing assessments as to how and whether the LSS is performing its intended function and serving users' needs.

3. Duration

The LSS Advisory Review Panel is expected to be needed on a continuing basis through the conclusion of the hearing on the license to replace waste at the repository.

4. Official to Whom the Committee Reports

The Panel reports to the LSS Administrator, NRC.

5. Agency Responsible for Providing Necessary Support

The Nuclear Regulatory Commission will provide the necessary support through the Office of the LSS Administrator.

6. Membership

Membership will initially include representatives from those organizations who participated on the NRC High-Level Waste Licensing Support System Advisory Committee. This includes representatives of the State of Nevada, the Department of Energy, the Nuclear Regulatory Commission, the affected units of local government in Nevada, the National Congress of American Indians, the coalition of national environmental groups and the coalition of industry groups. Selected Federal agencies with substantial experience in electronic information management systems may also be included on the Panel. Consistent with the Federal Advisory Committee Act, the LSS Administrator may appoint additional representatives, giving particular consideration to potential parties to the HLW licensing proceeding and those who later acquire actual party status. The NRC representative will serve as the Chairman of the Panel.

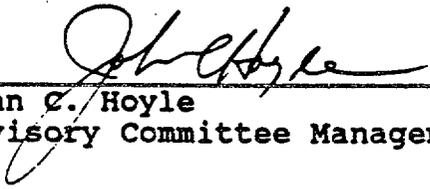
7. Estimated Number and Frequency of Meetings

The LSS Advisory Review Panel will meet approximately four to six times a year, or as necessary, and will be convened by the Chairman.

8. Estimated Annual Operating Costs

The estimated annual operating costs for the LSS Advisory Review Panel are \$10,000 and 1 person-year.

Filed with the Nuclear Regulatory Commission: December 18, 1989.



John C. Hoyle
Advisory Committee Management Officer

ENCLOSURE 11



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

October 3, 1989

OFFICE OF THE
SECRETARY

MEMORANDUM FOR: Lloyd J. Donnelly
LSS Administrator

William C. Parler
General Counsel

FROM: *W. Bate*
Samuel J. Chilk, Secretary

SUBJECT: SECY-89-278 - FORMATION OF THE LICENSING
SUPPORT SYSTEM (LSS) ADVISORY REVIEW PANEL

This is to advise you that the Commission (with all Commissioners agreeing) has approved the formation of the Licensing Support System Advisory Review Panel (LSSARP), the Charter and proposed letter as revised in the attached copies, and the appointment of Mr. John C. Hoyle as Chairman of the Committee.

Under 10 CFR 2.1011, the purpose of the LSS Advisory Review Panel is to advise the NRC and DOE on the design, implementation and maintenance of the LSS and on the format and procedures for processing LSS documentary materials. The Commission does not construe this to include initiatives having to do with the adjudicatory procedures that will govern the conduct of the high-level waste proceeding or the subjects that will be litigated in that proceeding. While the Commission does not object to the Advisory Review Panel being asked to comment on initiatives that involve either of these matters it believes that it should be clear that the Advisory Review Panel is not charged with the lead responsibility for initiatives in these two areas, nor does the Commission intend to require the Panel's concurrence in any such initiatives that might be proposed by the staff before those initiatives can be submitted to the Commission. If the Advisory Review Panel wishes to comment on any such initiatives, comments should be submitted directly to the Commission for consideration.