

Radioactive Waste Management System



Project Decision Schedule

March 1986

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

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Office of Civilian Radioactive Waste Management
Washington, DC 20585

RADIOACTIVE WASTE MANAGEMENT SYSTEM

PROJECT DECISION SCHEDULE

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RADIOACTIVE WASTE MANAGEMENT SYSTEM

PROJECT DECISION SCHEDULE

ABSTRACT

The Nuclear Waste Policy Act of 1982 (NWPA, Pub. L. 97-425) requires that the Secretary of Energy prepare, in cooperation with affected Federal agencies, a Project Decision Schedule that portrays the optimum way to attain the operation of geologic repositories. The Project Decision Schedule portrays the major milestones of the Radioactive Waste Management System. It also depicts the set of activities for which Federal agencies have responsibility and the deadlines for taking the required action that are associated with the activities.

The NWPA also requires that Federal agencies having determined that they: 1) cannot comply with a deadline for taking a required action; or 2) fail to comply with a deadline contained in the Project Decision Schedule; submit a comprehensive report to the Secretary of Energy and Congress to explain their failure or expected failure. The Secretary, in turn, is required to submit to Congress a response to the agency's report.

1. PROJECT DECISION SCHEDULE - SCOPE AND APPLICABILITY

The Nuclear Waste Policy Act of 1982 (NWPAA, Pub. L. 97-425), in Section 114(e) (the full text of Section 114(e) is found in Appendix B), requires the Secretary of Energy (the Secretary) to prepare, in cooperation with all affected Federal agencies, a Project Decision Schedule that is to portray the optimum way to attain the operation of a geologic repository by January 1998. The Project Decision Schedule provides for the following:

- 1) Portrayal of the optimum schedule for the attainment of operation of the geologic repository involved;
- 2) Identification of, on an agency-by-agency basis, the key activities, deadlines, and planning objectives for Federal agency actions;
- 3) A notification mechanism to alert the Secretary and Congress as to potential or actual delays in the program that may be caused by the failure of an agency to meet a deadline by the time established by the Project Decision Schedule. The report to be submitted shall contain the following:
 - o An explanation for the failure or expected failure of a Federal agency to meet a deadline;
 - o The reason(s) why an agreement could not be reached with the Secretary regarding a modification to the Project Decision Schedule;

- o The estimated time for completion of the action(s) required;
- o The effect that this failure will have on its other deadlines and planning objectives in the Project Decision Schedule; and,
- o Any recommendations or changes in either operations, organization, or statutory authority that would mitigate the delay(s).

The Secretary is then required to submit to Congress, within 30 days of receipt of such report by the agency, a response which shall include the reasons why the Project Decision Schedule could not be amended; and,

- 4) Updating on either a periodic or on as needed basis.

1.1 Other NWSA Authorities Related to the Project Decision Schedule

The NWSA also provides, in Section 120, for expedited consideration of ancillary requirements (e.g., granting of rights-of-way, issuance of permits, leases, etc.) related to site characterization, construction, or operation of a repository as authorized by the NWSA. Section 120 requires any Federal agency, with the exception of the Nuclear Regulatory Commission (NRC), having jurisdiction over the issuance of any type of authorization, as noted above, to expedite its issuance and to give it priority consideration over other similar applications not related to the siting, construction, or operation of a repository.

The full text of Section 120 is found in Appendix C.

1.2 Federal Agency Reporting Requirements

The deadlines and planning objectives for activities related to the following components of the Radioactive Waste Management System are depicted in the Project Decision Schedule:

1. First Geologic Repository;
2. Second Geologic Repository; and,
3. Transportation System.
4. Monitored Retrievable Storage

These activities are subject to the reporting requirements contained in Section 114(e)(2) of the NWPA. Should Congress approve the construction of a Monitored Retrievable Storage (MRS) Facility as described in the proposal to be submitted to Congress, deadlines and planning objectives for activities related to MRS will also be subject to the reporting requirements contained in Section 114(e)(2) of the NWPA.

The schedules depicted in the Project Decision Schedule were initially derived from the reference schedules associated with the "Authorized" plan contained in the Mission Plan¹ and extend through the planned initiation

¹The Mission Plan for the Civilian Radioactive Waste Management Program (Mission Plan). (DOE/RW 0005, June 1985). This document provides a comprehensive discussion of the Office of Civilian Radioactive Waste management program strategy, a detailed discussion of program plans, and reference schedules for the development of geologic repositories, the transportation system, and a Monitored Retrievable Storage facility.

of repository operation for the first geologic repository in January 1998, and the issuance of the construction authorization for the second geologic repository in May 2002.

The Department recognizes that the Radioactive Waste Management Program is complex and is of such extended duration that it is possible that revision to the schedule and associated milestones will be necessary from time to time. The Department also recognizes that the degree of precision related to milestones scheduled to occur in the out-years will be lower than that for near-term milestones. Similarly, the Department recognizes that the ability of Federal agencies to determine their specific ability to comply with the out-year milestones is correspondingly not as precise. Consequently, the Department has identified as "deadlines," and thus subject to the reporting requirements of Section 114(e)(2), only those critical milestones that are scheduled to occur within the next three fiscal years following issuance of the Project Decision Schedule, or any revision thereto.

The Department considers, therefore, that milestones that are scheduled to be completed more than three fiscal years after the most recent issuance of the Project Decision Schedule to be "planning objectives" rather than "deadlines" and are not, therefore, subject to Federal Agency reporting as required by Section 114(e)(2) of the NWPA. By making this distinction, the Department has limited the number of milestones that might require formal resolution through interagency coordination and reporting to Congress to those that are within the normal program and budget planning cycles of the affected Federal agencies.

As noted previously, Section 114(e)(2) imposes a reporting requirement on the affected Federal agencies. Specifically, any Federal agency that determines that it cannot comply with any deadline in the Project Decision Schedule, or fails to so comply, is required by the NWPA to submit a report to the Secretary and Congress explaining the reason for such actual or potential failure. However, before such a report is submitted, Section 114(e)(2) of the NWPA infers that the affected agency and the Department will have attempted to resolve the potential failure to comply with a deadline contained in the Project Decision Schedule. The Department believes that the activities for which Federal agencies have responsibility for taking action and the deadlines for such actions are explicit and provide adequate notice as to when Federal agency actions are required. The Department would, therefore, anticipate receiving notice at an early date as to their potential failure to comply so that discussions leading to resolution or mitigation of the effects of the failure to take the required action can be initiated. Such discussions may lead to corrective actions that can be taken that may obviate the need for the formal report required by Section 114(e)(2).

The Department would also expect that affected Federal agencies would, on an annual basis, review the Project Decision Schedule with specific attention to the milestones associated with the "planning objectives." Should this review indicate a potential difficulty in complying with such a milestone, early notification to the Department may lead the Department or the affected Federal agency to take positive actions to mitigate the effect that this potential failure to take the required action would have on the Radioactive Waste Management System schedule.

Those activities that are scheduled to occur within the three fiscal years following issuance of the Project Decision Schedule, and any revision thereto, and also are noted by an asterisk are considered to be "deadlines" and are subject to the reporting requirements contained in Section 114(e)(2) of the NHPA as discussed above. "Planning objectives" that are, at this time, scheduled to be completed at some time beyond the three year fiscal year window are not subject to the reporting requirements provided for in Section 114(e)(2) may still have an asterisk associated with them. This asterisk denotes the Department's belief that these activities are critical and, when they do fall within the three year reporting window, they are subject to the NHPA's reporting requirements.

The Project Decision Schedule, as is discussed in Section 3, will be updated on an annual basis to reflect the current schedule for the Radioactive Waste Management System and to include the identification of the deadlines that are subject to reporting one additional year.

1.3 Department of Energy Reporting Requirements

1.3.1 Departmental Reporting Required by Section 114(e)

The Secretary, after receiving a report from an affected Federal agency that has determined either that it cannot comply or has failed to comply with a deadline for taking action as specified in the Project Decision Schedule, is required to file a response to that report with Congress. Such response is to contain the reasons why the Project Decision Schedule could not be amended to accommodate the requirements of the Federal agency involved.

1.3.2 Other Departmental Reporting Requirements

The Department, while not required by Section 114(e)(2) to report to Congress in the same manner as the affected agencies, has its reporting responsibilities specified elsewhere in the NWPA.

The Civilian Radioactive Waste Management Program is required, for example, to prepare and submit to Congress a Mission Plan, an Annual Report on the activities and expenditures of the Radioactive Waste Management Program, and an Annual Fee Adequacy Report. The Department also is required to apprise Congress regarding the status and proposed plans of the program through a number of reports such as the Test and Evaluation Facility (TEF) Report, Monitored Retrievable Storage (MRS) Proposal, Federal Interim Storage Fee Study, and the Alternative Means for Financing and Managing Radioactive Waste Facilities Report (AMFM Panel Report).

There is continuing interaction with Congress through the appropriation process and through the Department's transmittal to Congress of major program documents not mentioned above such as the Siting Guidelines, Draft Environmental Assessments (EAs) for the First Geologic Repository sites, and the Draft Area Recommendation Report for the Crystalline Repository Program. Other major program documents, as they are developed, will be transmitted to Congress for their information. The Department will, through the Annual Report, report to Congress any significant changes in the schedule, and the reasons therefore, that could adversely affect critical, legislated milestones. The Department is also planning to submit the Project Decision Schedule and any revisions thereto to the appropriate Congressional committees.

1.4 Limitation of Applicability

1.4.1 General

The Project Decision Schedule will only display schedules associated with the "Authorized" plan as discussed in the Mission Plan. The Mission Plan recognizes the potential for the application of an "Improved Performance" plan and a number of contingency plans. Should any of these become the "Authorized" plan, the Project Decision Schedule will be so revised as provided for in Section 3 to reflect the change.

1.4.2 Monitored Retrievable Storage and Second Geologic Repository Program

At this time, the Department does not have Congressional approval to proceed beyond the development and submission to Congress of a proposal for Monitored Retrievable Storage, including an Environmental Assessment and Program Plan. These documents will not be submitted to Congress until such time that resolution of a law suit filed by the State of Tennessee against the Department is reached. Similarly, the Department does not have authority to construct a Second Geologic Repository. The Department is required, however, to carry out all functions related to the siting of a Second Geologic Repository up to the point of actual construction. The request for Congressional authorization to construct the Second Geologic Repository is scheduled to be submitted in December 1999 with receipt of Construction Authorization from NRC not scheduled until May 2002. Therefore, the schedules for activities associated with the Second Geologic Repository Program are carried only up to the receipt of construction authorization from NRC in May

2002. No schedules are shown for the MRS Program. Should Congress authorize further activity in either of the program areas, the Project Decision Schedule will be revised, in cooperation with the affected Federal agencies, to include schedules of MRS and Second Geologic Repository activities requiring Federal agency action.

1.4.3 Other Radioactive Waste Management Programs Not Considered in the Project Decision Schedule

In addition to the aforementioned aspects of the MRS and Second Geologic Repository Program, the Project Decision Schedule does not address a number of other activities provided for by the NWPA. Not included in the Project Decision Schedule are the research and development program, the Federal Interim Storage Program, the development of a Test and Evaluation Facility, and international activities. Although all of these activities are components of the Civilian Radioactive Waste Management Program, they are not included in the Project Decision Schedule because they do not, at this time, directly support the attainment of repository operations.

1.5 States and Affected Indian Tribes

Section 114(e) of the NWPA focuses only on Federal agency interactions. Accordingly, the Project Decision Schedule only incorporates schedules that specifically relate to Federal agency involvement in the Civilian Radioactive Waste Management Program.

2. PROJECT DECISION SCHEDULE - SCHEDULE DEVELOPMENT

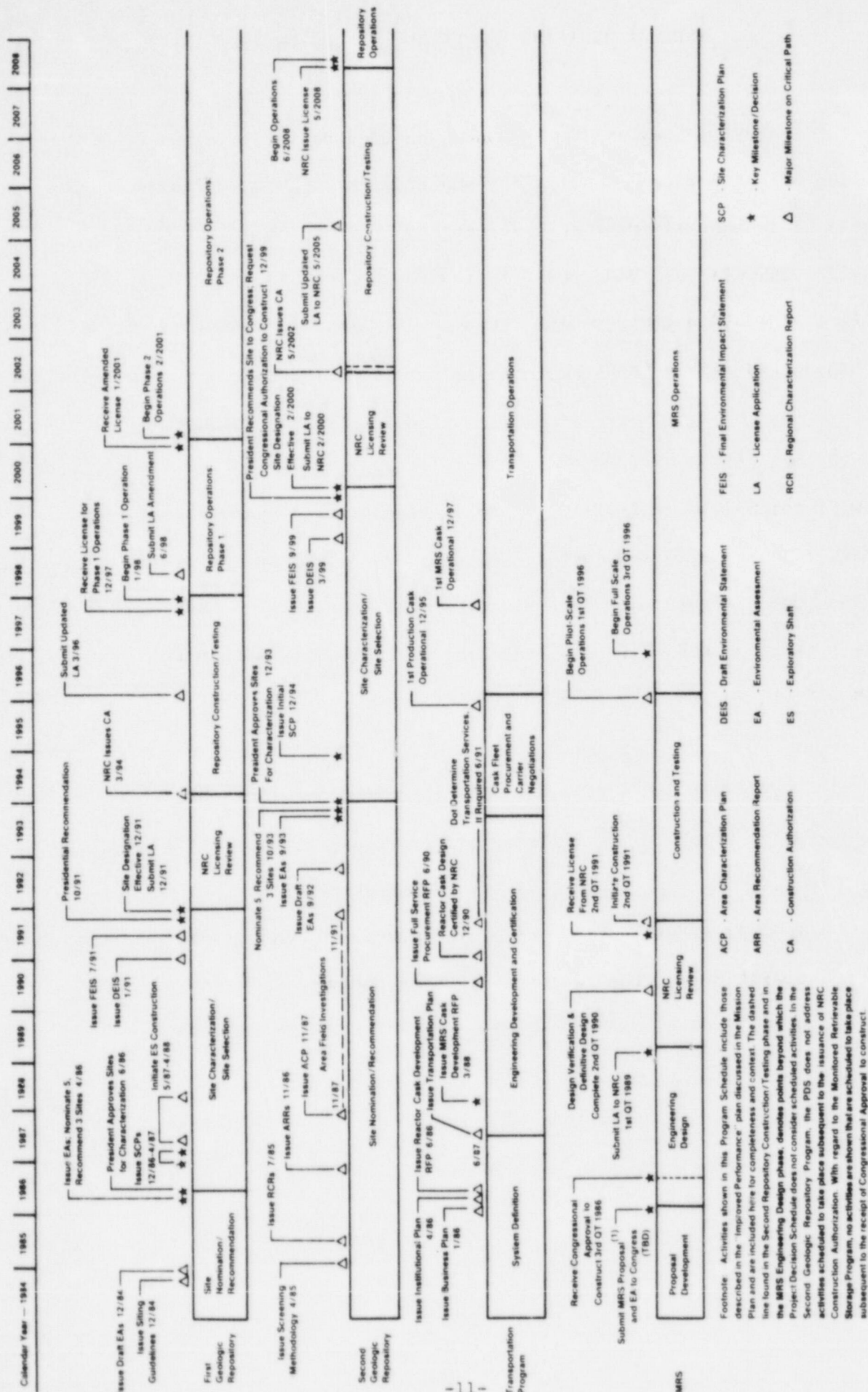
The Federal agency activities and schedules depicted in the Project Decision Schedule were initially derived from the reference schedules as identified in the Mission Plan. The schedules depicted in the Project Decision Schedule have been updated from those shown in the Mission Plan. Figure 1 displays a program-wide schedule for the development and operation of the Radioactive Waste Management System.

The Department is developing a Program Reference Schedule Baseline (PRSB) Document which integrates all Program-level schedule-related activities through an integrated approach to network development and scheduling. This approach has been used in developing the updated schedules that appear in the Project Decision Schedule. The PRSB will also be utilized in revising the Project Decision Schedule as described in section 3.

The Department considered a number of elements during the course of the development of the program schedules. Specifically, the Department:

- o Recognized its commitment to the January 1998 requirement to initiate operations of the Radioactive Waste Management System and the acceptance of spent nuclear fuel and high-level radioactive waste;
- o Examined the steps that lead to the beginning of repository operations, organizing these into major phases;

FIGURE 1
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT PROGRAM SCHEDULE



(1) MRS proposal submission to Congress is being held in abeyance pending resolution of a law suit.

- o Developed logic networks for each phase to identify sequential relationships of major activities and their interrelationships;
- o Developed estimates of time durations for each phase and the critical activities within each phase;
- o Considered and analyzed alternative cases, as discussed in the Mission Plan, that could potentially accelerate or delay activities, the schedule, and/or the date of initiation of operations; and,
- o Selected a schedule which is consistent with the Department's strategy to ensure the quality and sufficiency of information used to support program decisions while still adhering to the statutory requirement to begin accepting waste for disposal by January 31, 1998.

2.1 Planned Schedule Analysis

The Department will make use of an integrated logic and schedule network, as described in the PRSB, to assist the program in the implementation of the requirements of the NWPA. The program-wide activity and schedule network that is based on the logic network will assist the Department to:

- 1) determine activity durations;
- 2) identify the activities that are on the critical path of the program;
- 3) define programmatic interfaces; and,

- 4) allow for revisions to be made in the schedule network that will permit the Department to analyze the schedule impacts of changes in the status of the program and/or the use of alternative cases or contingency plans.

The integrated logic network is shown in Figure 2.

3. PROJECT DECISION SCHEDULE-REVISION

3.1 General

In accordance with the provisions contained in Section 114(e) of the NWPA, the Department has developed the Project Decision Schedule in cooperation with affected Federal agencies. Any revision of the Project Decision Schedule will be undertaken in cooperation with the Federal agencies.

3.2 Revision of the Project Decision Schedule

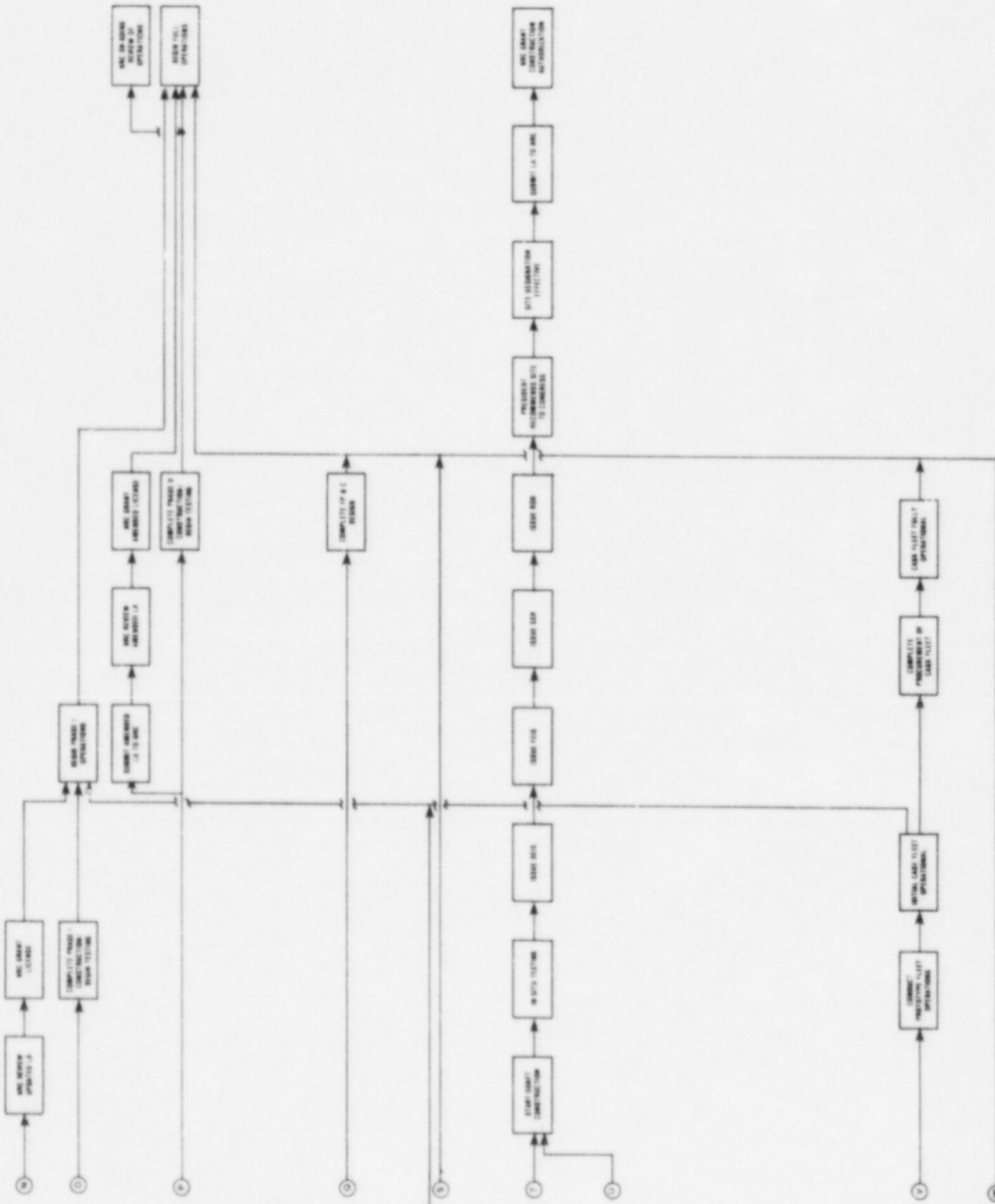
The Department, in cooperation with affected Federal agencies, intends to revise the Project Decision Schedule when one of the following events occur:

- 1) Annually;
- 2) The Department changes the scope and/or schedule of the Radioactive Waste Management Program;

FIGURE 2



FIGURE 2



- 3) An affected Federal agency notifies the Department that it cannot comply with a deadline contained in the Project Decision Schedule. Should the Department and the affected Federal agency agree on a new milestone date, a letter amendment to the Project Decision Schedule will be issued to affected Federal agencies. Any letter amendment issued will be incorporated into the Project Decision Schedule when the annual revision of the Project Decision Schedule is accomplished;
- 4) External factors (enactment of Federal statutes, issuance of regulations, court decisions, etc.) that may affect the Radioactive Waste Management System schedule take effect. Should these occur, affected Federal agencies should bring such changes and their possible effects to the attention of the Department; or,
- 5) Schedule extensions permitted by the NWPA occur (e.g., Presidential extension of time permitted for nomination, Congressional action upholding a notice of disapproval, etc.).

4. FEDERAL AGENCY ACTIVITIES AND REQUIREMENTS

The Project Decision Schedule describes, in Sections 6-9, the major program activities associated with the First and Second Geologic Repository Program, Transportation System, and the Monitored Retrievable Storage Program.

Tables I-III appear after those sections. They depict all major program activities and specifically include those activities for which the Department has identified a role for the affected Federal agencies and the associated milestone date for taking action.

Table I provides a listing of the activities associated with the development and operation of the First and Second Geologic Repository. Table II relates to the Transportation System. Table III addresses the Monitored Retrievable Storage Program up to the time of MRS proposal submission to Congress.

For ease of reference, Appendix A presents a cross-cutting view of the activities and milestones that Federal agencies are responsible for on an agency-by-agency basis.

The Department, in implementing the NWPA, needs the active participation and assistance of the affected Federal agencies. This takes a number of forms. In support of the Department's activities, the affected Federal agencies will; 1) issue regulations or standards; 2) enter into memorandum of understandings and/or interagency agreements; 3) promulgate requirements and criteria; 4) issue reports, determinations, permits, and licenses; and, 5) review and comment on program documents.

Only the activities that are identified in the tables as being a critical activity that are scheduled to be completed within the three fiscal year time frame from the issuance of the Project Decision Schedule, or any revisions thereto, are deadlines and, thus, are subject to the reporting requirements of Section 114(e)(2) of the NWPA.

5. COMPONENTS OF THE RADIOACTIVE WASTE MANAGEMENT SYSTEM

The Project Decision Schedule addresses those components of the Radioactive Waste Management System that span all functions from acceptance of spent nuclear fuel and high-level radioactive waste to final disposal in a geologic repository. These components are:

1. First Geologic Repository;
2. Second Geologic Repository;
3. Transportation System; and,
4. Monitored Retrievable Storage Program.

6. FIRST GEOLOGIC REPOSITORY

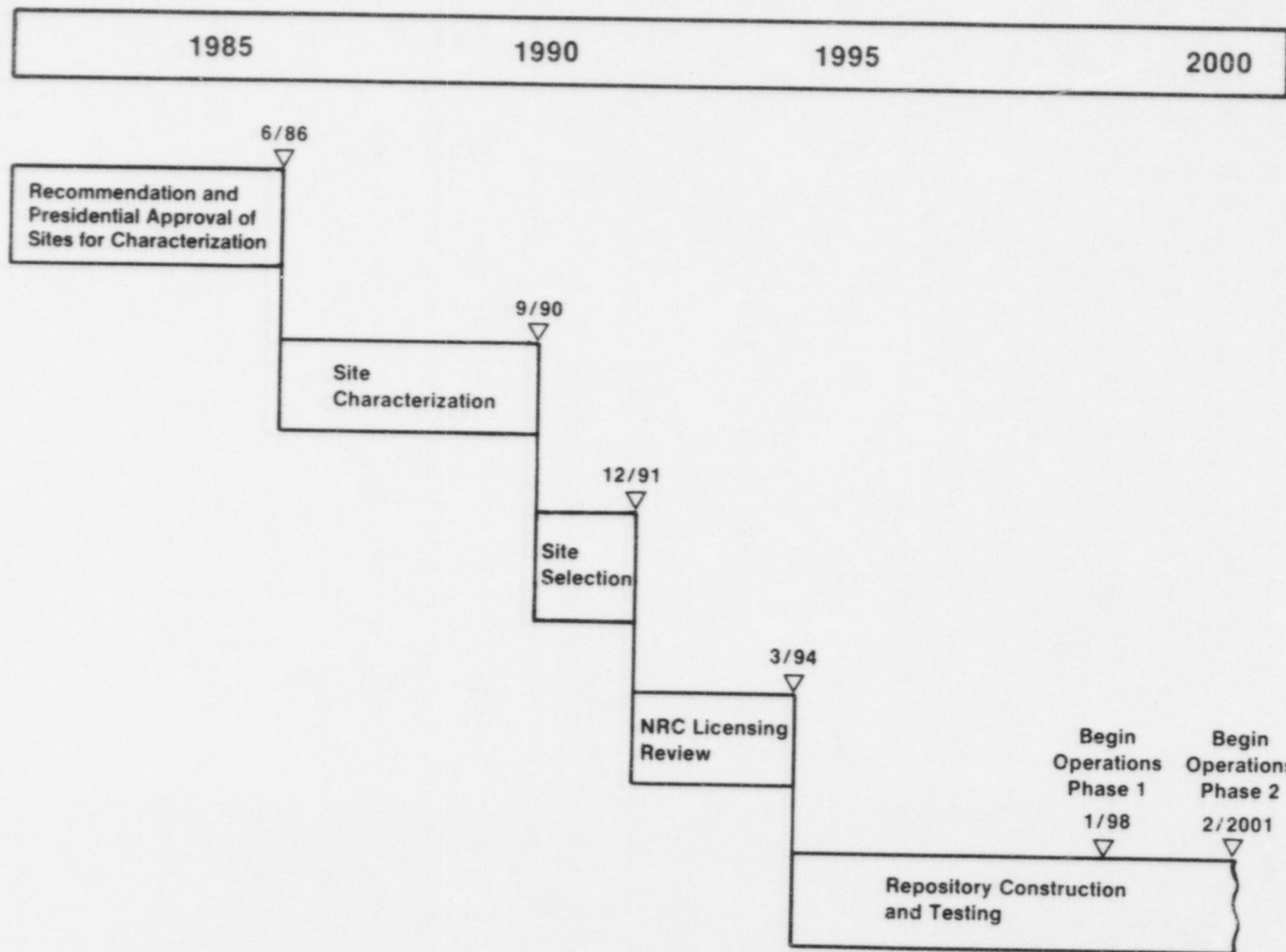
6.1 First Geologic Repository Overview

The mission of the Department's geologic repository program is to develop geologic repositories for the permanent disposal of high-level radioactive waste and spent nuclear fuel in a manner that fully protects the health and safety of the public, the quality of the environment, and in a time frame responsive to national needs.

As shown in Figure 3, the Department has divided the First Geologic Repository Program into five major phases:

1. Recommendation of Sites for Characterization;
2. Site Characterization;

**FIGURE 3
REFERENCE SCHEDULE FOR
FIRST GEOLOGIC REPOSITORY**



3. Site Selection;
4. NRC Licensing Review; and,
5. Repository Construction and Testing.

Each phase and associated major milestones are summarized below.

6.2 Phase 1 - Recommendation of Sites for Characterization

The Department is currently conducting those activities associated with the first phase of the repository program. As a first step in the process leading to the Presidential recommendation of sites to be characterized, the Department issued final siting guidelines in December 1984. These siting guidelines were utilized in developing the Environmental Assessments which addressed site specific issues. The EAs were issued in draft form for public comment in December 1984. The Department is currently in the process of reviewing and considering comments received during the public comment period and is planning on issuing the EAs in April 1986.

Using the EAs, the Secretary will nominate at least five and subsequently recommend three sites for site characterization in April 1986. At that time, the Secretary will also make a Preliminary Determination as to site suitability as required by Section 114(f) of the NWPA.

Upon approval by the President of the sites for characterization, Phase 1 will be completed.

The specific milestones for Phase 1 are as follows:

- o Issuance of the Siting Guidelines: December 1984.
- o Issuance of the Draft EAs: December 1984.
- o Issuance of the EAs: April 1986.
- o Secretarial Nomination of five candidate sites: April 1986.
- o Secretarial Recommendation of three candidate sites suitable for characterization: April 1986.
- o Secretarial Preliminary Determination as to site suitability: April 1986.
- o Presidential approval of the recommended sites: June 1986.

6.3 Phase 2 - Site Characterization

Site Characterization Plans describing the testing program for each site will be issued during Phase 2. After obtaining the required permits and following the procedures contained in Section 113 of the NWPA related to public comment, the Department will begin construction of the exploratory shafts. The work on the shafts includes drilling or mining followed by lining the shafts and outfitting them with utility and service lines. Subsurface drifts would then be excavated, and, finally, test equipment would be installed.

Both surface testing and in-situ testing will be conducted at each of the three sites approved for characterization to determine site suitability. The Department does not plan, at this time, to use any spent nuclear fuel or high-level radioactive waste during the in-situ testing program. Information

from the surface and in-situ testing will be used in the License Application (LA) along with any additional data that are gathered while the Draft Environmental Impact Statement (DEIS) is being prepared and issued. During Phase 2, the development of repository designs will continue and laboratory testing of site samples will be performed. In addition, laboratory testing to evaluate the performance of materials planned for use as engineered barriers will also be performed. Additional testing to support the LA will continue into Phase 3. Phase 2 will be completed when sufficient testing has been performed to support the DEIS.

The specific milestones for Phase 2 are as follows:

- o Site Characterization Plans are issued in December 1986 for Basalt, December 1986 for Tuff, and April 1987 for Salt.
- o The permitting process for any Salt site, which have the most extensive permitting requirements, is completed by July 1987.
- o Construction of the initial exploratory shaft begins in May 1987 for Basalt, May 1987 for Tuff, and April 1988 for Salt.
- o Testing to support the draft EIS is completed in September 1990.

6.4 Phase 3 - Site Selection

During Phase 3, the Department will prepare and issue a DEIS based on the data compiled during the in-situ testing period. In accordance with the provisions of 40 CFR Section 1501.6, DOE anticipates that it will request the Department of the Interior, the Environmental Protection Agency, and the Nuclear Regulatory Commission, because of their specific expertise in the

area, to serve as cooperating agencies in the preparation of the Environmental Impact Statement. Upon the close of the public comment period for the DEIS, the Department will review and consider all comments received from Federal agencies, States, affected Indian Tribes, other interested parties, and members of the public. The Final Environmental Impact Statement (FEIS) will then be issued along with a Site Selection Report (SSR) as required by the NHPA. The SSR is the comprehensive statement of the basis of such recommendation as required by Section 114(a)(1) of the NHPA. No sooner than thirty days after the issuance of the FEIS, the Department will issue a Record of Decision (ROD) as required by 40 CFR Part 1505. Upon the issuance of the ROD, the Secretary shall recommend one repository site to the President. The President shall then recommend the first repository site to Congress.

The NHPA provides that a State and/or affected Indian Tribe on whose land or reservation the recommended site is located, may submit to Congress, within sixty days, a notice of disapproval of the site recommended for repository development. If no notice of disapproval is filed, then the site designation takes effect sixty days after the site is recommended by the President to Congress. If a notice of disapproval is filed, Congress has ninety days of continuous session to act on the notice. If Congress overrides the notice of disapproval by a joint resolution, the site designation becomes effective. If Congress does not override the disapproval, the disapproval stands and the President must recommend another site not later than 1 year after the disapproval.

The program schedule assumes that the site designation will take effect sixty days after the site is recommended to Congress by the President and that no notice of disapproval is filed by a State or affected Indian Tribe. Phase 3 will be completed when the site designation is effective.

The specific milestones for Phase 3 are as follows:

- o The DEIS is issued by January 1991.
- o The FEIS is issued by July 1991.
- o The Site Selection Report is issued in August 1991.
- o The President recommends the site by October 1991.
- o Site designation is effective December 1991.

The program schedule for Phases 1, 2, and 3 is depicted in Figure 4.

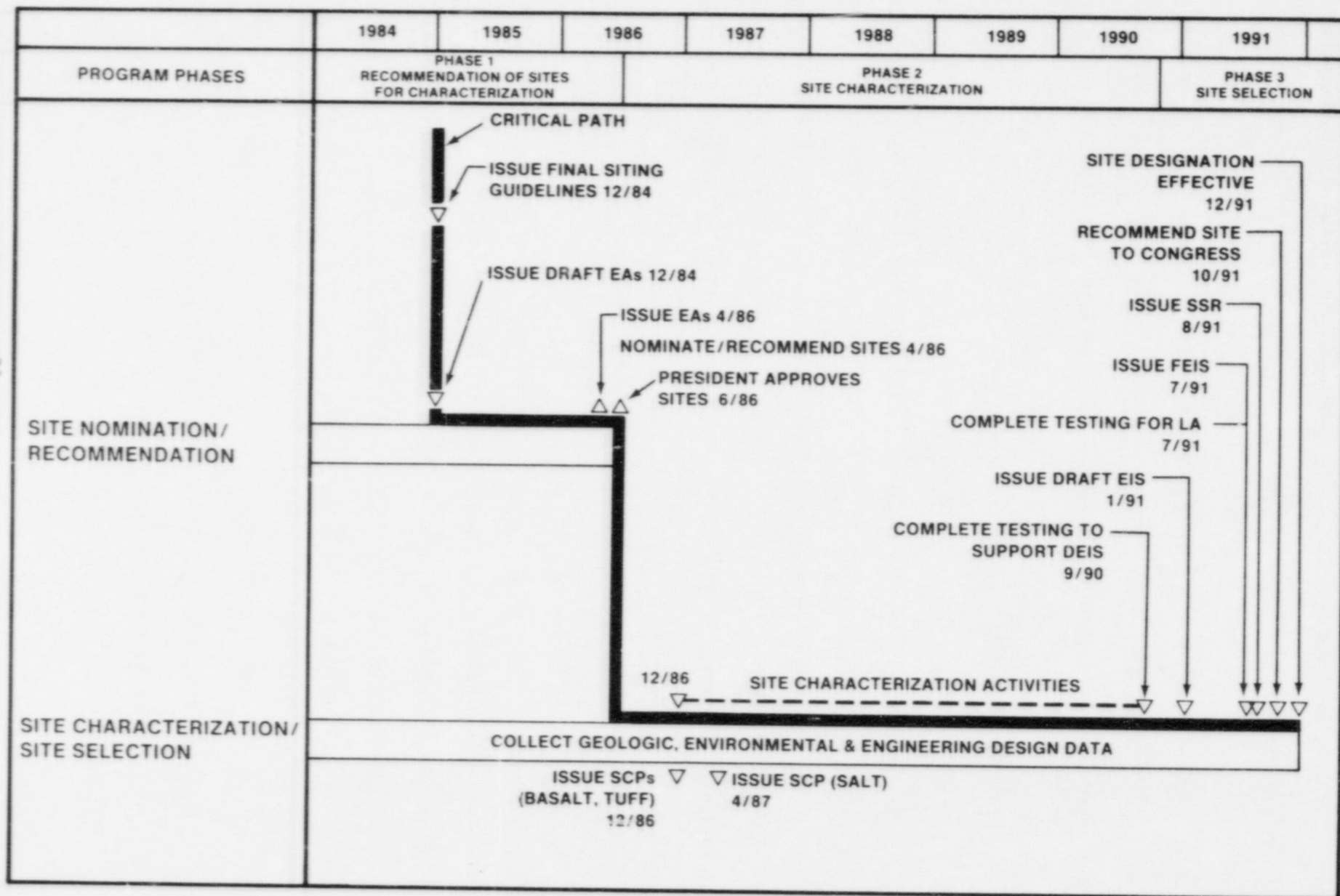
6.5 Phase 4 - NRC Licensing Review

Following site approval and site designation, the Department will submit a License Application (LA) for the construction of a repository to NRC. The NWPA allows the NRC a three year review period. It also authorizes NRC to extend the review period by one year, if needed.

The specific milestones for Phase 4 are as follows:

- o The LA is submitted in December 1991.
- o NRC review of the LA is completed by March 1994.
- o NRC issues a Construction Authorization in March 1994.

FIGURE 4
FIRST GEOLOGIC REPOSITORY
SITE RECOMMENDATION, CHARACTERIZATION AND SELECTION PHASES



The program schedule assumes that NRC will take twenty-seven months to issue the Construction Authorization.

It should also be noted that NRC licensing activities do not terminate at the end of this phase, rather they continue during the repository construction and testing phase.

6.6 Phase 5 -- Construction

The program schedule for Phase 5 assumes that the Department constructs the repository in two phases. Phase 1 construction consists of the construction of the surface and shaft facilities required to allow the Department to begin accepting up to 400 MTU/yr of spent fuel in 1998. Phase 2 construction consists of the construction of the remaining facilities needed to develop the repository to its full scale capacity.

The specific milestones for Phase 5 are as follows:

- o Begin repository construction: March 1994.
- o Submit updated License Application to NRC (to receive and possess radioactive waste for Phase 1: March 1996.
- o Complete Phase 1 construction and begin pre-operational testing: July 1997.
- o NRC completes review of updated LA: December 1997.
- o Receive license for Phase 1 operations: December 1997.
- o Complete phase 1 pre-operational testing and begin operation: January 1998.

- o Submit application to NRC for an amended license (to receive and possess radioactive waste for Phase 2): June 1998.
- o Complete Phase 2 construction and begin pre-operational testing: August 2000.
- o Receive amended license for Phase 2 operations: January 2001.
- o Complete phase 2 pre-operational testing and begin operation: February 2001.

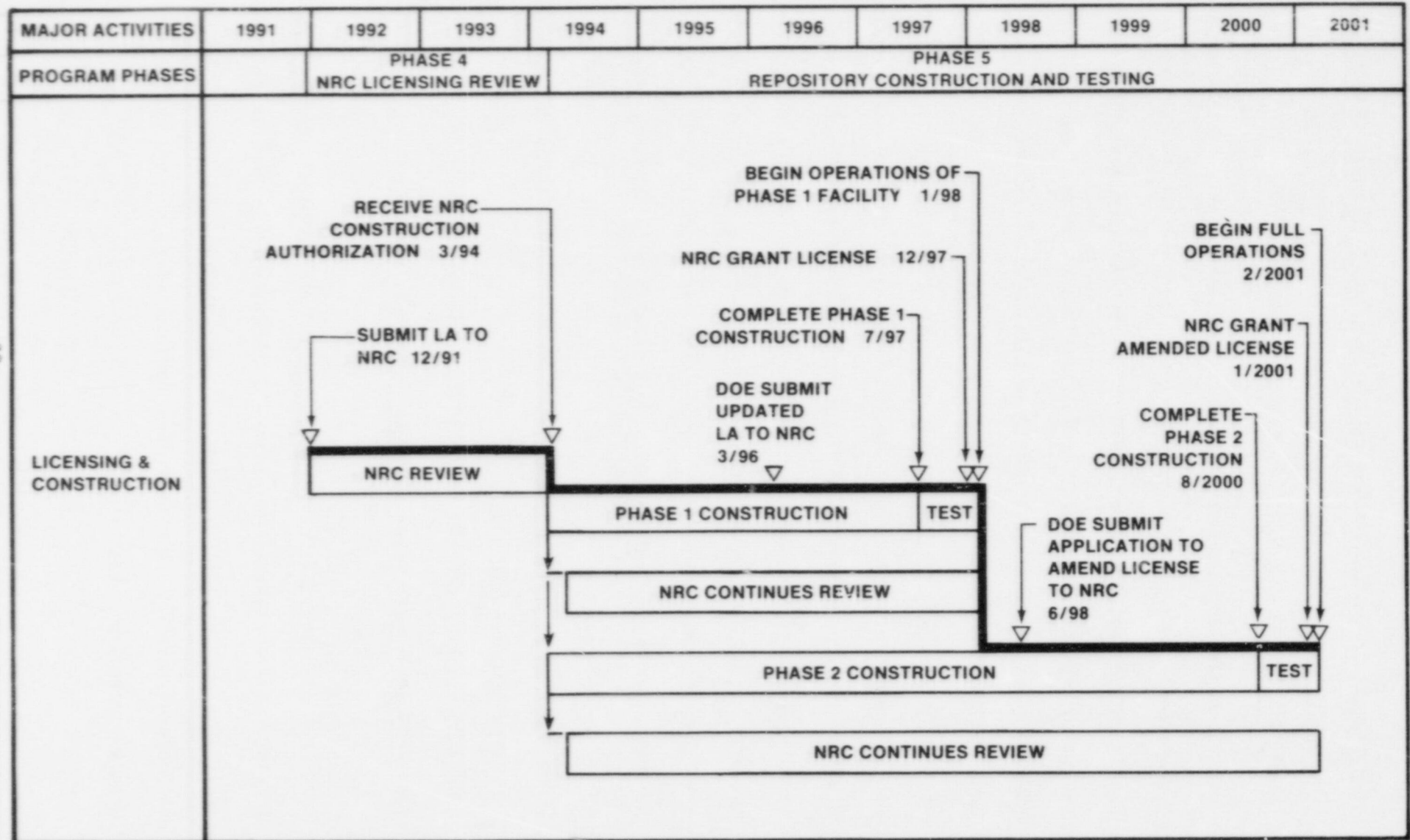
The program schedule for phases 4 and 5 is shown in Figure 5.

7. SECOND GEOLOGIC REPOSITORY

7.1 Second Geologic Repository Overview

The Department anticipates that a Second Geologic Repository will be required and, therefore, is proceeding to conduct the siting of the second repository. The activities described in the preceding section for the first repository, with respect to site selection, site characterization, and NRC licensing will be essentially similar for the Second Geologic Repository. As discussed in Section 1.4.2, the Draft Project Decision Schedule does not address those elements of the Radioactive Waste Management System for which there are no authorizations provided by the NWPA. Consequently, the activities identified and deadlines for taking action for the Second Geologic Repository Program extend only to the NRC issuance of the Construction Authorization. The process and the schedule associated with the Second Geologic Repository Program is discussed below.

FIGURE 5
FIRST GEOLOGIC REPOSITORY
LICENSING AND CONSTRUCTION PHASES



7.2 Planned Crystalline Repository Program Activities as part of Second Geologic Repository Activities

The Department conducted screening activities in seventeen States in the Northeastern, Southeastern, and North Central regions of the Nation. The Department issued, in January 1986, a Draft Area Recommendation Report for public comment that narrowed the 235 rock bodies under consideration in the seventeen States to 12 proposed potentially acceptable sites in seven States. The Department plans to issue the Area Recommendation Report later in 1986 after consideration of public comments. This report will identify areas within the 7 States where the Department plans to conduct more detailed studies, including field investigations. Data collected during these investigations will allow the Department to evaluate sites that may be suitable for nomination and recommendation for site characterization. These area field investigations will be completed in November 1991. As noted, activities conducted subsequent to the completion of the area field investigations with respect to site characterization, site selection, and NRC licensing will be similar as to those conducted during the First Geologic Repository Program.

7.3 Relationship to First Geologic Repository Schedule

The schedules for the Second Geologic Repository recognizes the fact that some of the sites not selected for the First Geologic Repository are eligible for the Second Geologic Repository. This aspect of the Second Geologic Repository Program is directly dependent on the First Geologic Repository program. Sites are nominated for site characterization for the Second Geologic Repository in October 1993, which is after the First Geologic

Repository site is recommended to Congress in October 1991. This allows the Department to consider sites characterized, but not selected, for the First Geologic Repository for nomination for the Second Geologic Repository.

7.4 Second Geologic Repository Schedule

Subsequent to site nomination, the process of siting and characterizing the Second Geologic Repository will be similar to that of the First Geologic Repository. The major milestones for the Second Geologic Repository are listed below and are also shown in Figure 6:

o Issue Area Recommendation Report:	1986
o Identify potentially acceptable sites for the second repository:	1986
o Issue Environmental Assessments:	September 1993
o Nominate and recommend sites for characterization:	October 1993
o President approves recommended sites:	December 1993
o Issue initial Site Characterization Plan:	December 1994
o President Recommends Site for Repository to Congress and DOE requests Congressional authorization to construct the second repository	December 1999
o Submit LA to NRC:	February 2000
o Receive Construction Authorization from NRC:	May 2002

Table I that follows Figure 6 depicts the activities, scheduled milestone dates and agencies responsible for taking action that are associated with the siting, construction, and operation of the First and Second Geologic Repositories.

FIGURE 6
SECOND GEOLOGIC REPOSITORY SITE
RECOMMENDATION, CHARACTERIZATION, SELECTION, AND LICENSING PHASES

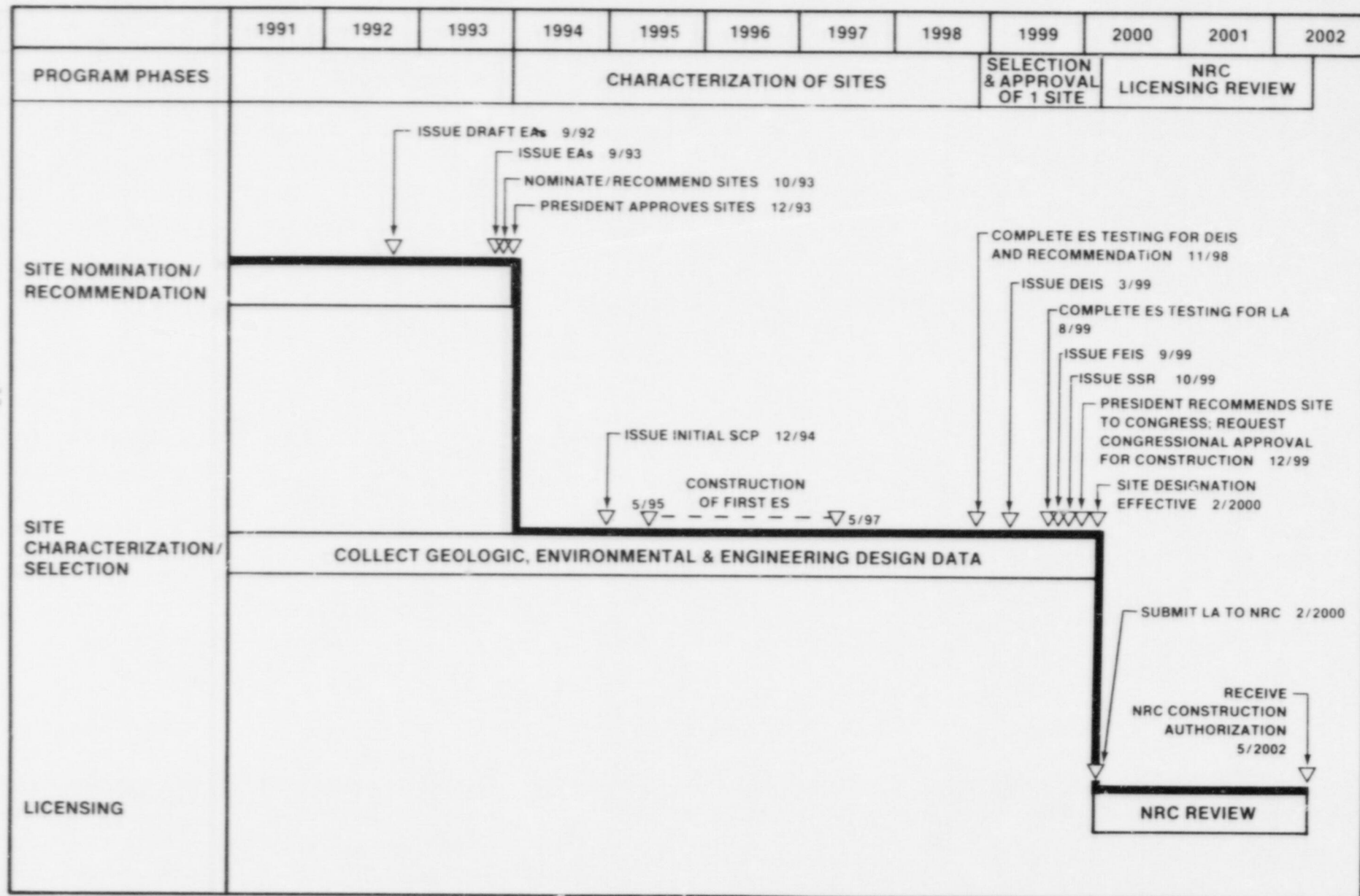


TABLE I
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
<p>*(1) <u>State Notification</u> (1st Repository) "The Secretary shall identify the States with one or more potentially acceptable sites for a repository within 90 days after the date of enactment of this Act." Section 116(a).</p> <p>(1a) State Notification of Potentially Acceptable Site by DOE</p>	2/2/83 Actual	DOE
<p>(2) <u>Grants for Potentially Acceptable Sites</u> (1st Repository) The Secretary shall make grants to each State (affected tribe) notified under Section 116(a) for the purpose of participating in activities required by Sections 116 and 117 or authorized by written agreement entered into pursuant to subsection 117(c). Sections 116(c)(1)(A) and 118(b)(1).</p> <p>(2a) Provide Grants to States and/or Affected Indian Tribes Having been notified as to their PAS status</p>	Ongoing	DOE
<p>(3) <u>Memorandum of Understanding (MOU) with NRC</u></p> <p>(3a) Develop MOU between NRC and DOE concerning interaction during the Site Characterization Phase of Repository Deployment</p>	6/27/83 Actual	DOE, NRC
<p>(4) <u>Memorandum of Understanding (MOU) with DOI</u></p> <p>(4a) Develop MOU between DOI and DOE concerning BLM reviewing Site Characterization Plans for the First and Second Repositories</p>	6/83 Actual	DOE, DOI (BLM)
<p>(5) <u>Memorandum of Understanding (MOU) with DOI</u></p> <p>(5a) Develop MOU between DOI and DOE concerning USGS reviewing Site Characterization Plans for the First and Second repositories</p>	3/29/84 Actual	DOE, DOI (USGS)
<p>(6) <u>Memorandum of Understanding (MOU) with DOI</u></p> <p>(6a) Develop MOU between DOI and DOE concerning NPS role for consultation and review of OCRWM documents</p>	5/1/84 Actual	DOE, DOI (NPS)
<p>(7) <u>Interagency Agreement with DOI</u></p> <p>(7a) Sign Interagency Agreement between DOI and DOE concerning NPS role for reviewing EA's</p>	9/14/84 Actual	DOE, DOI (NPS)

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
<p>*(8) <u>Siting Guidelines</u> "Not later than 180 days after the date of the enactment of this Act, the Secretary, following consultation with the Council on Environmental Quality, the Administrator of the Environmental Protection Agency, the Director of the Geological Survey, and interested Governors, and the concurrence of the Commission, shall issue general guidelines for the recommendation of sites for repositories." Section 112(a).</p>		
(8a) Complete Consultation on Siting Guidelines/Issue Draft to NRC for Concurrence	11/22/83 Actual	CEQ, EPA, DOI (USGS), DOE
(8b) Concurrence from NRC on Siting Guidelines	6/22/84 Actual	NRC
(8c) Issue Siting Guidelines	12/6/84 Actual	DOE
<p>(9) <u>Pre-nomination Notification</u> (1st Repository) "Before nominating a site, the Secretary shall notify the Governor and legislature of the State in which such site is located, or the governing body of the affected Indian tribe where such site is located, as the case may be, of such nomination and the basis for such nomination. Before nominating any site, the Secretary shall hold public hearings in the vicinity of such site to inform the residents of the area in which such site is located of the proposed nomination of such site and to receive their comments. At such hearings, the Secretary shall also solicit and receive any recommendations of such residents with respect to issues that should be addressed in the environmental assessment described in paragraph (1) and the site characterization plan described in section 113(b)(1)." Section 112(b)(1)(H) and 112(b)(2).</p>		
(9a) Notify States and Affected Indian Tribes of Pre-Nomination	12/19/84 Actual	DOE
(9b) Participate in Public Hearings	3/83-5/83 Actual	DOE
<p>*(10) <u>Environmental Assessments</u> (1st Repository) Following the issuance of guidelines and consultation with the Governors of the affected States, the Secretary shall nominate at least five sites that he determines suitable for site characterization for selection of the first repository site. Each nomination shall be accompanied by an environmental assessment. Section 112(b)(1)(A) and (E).</p>		
(10a) DOE Issue Draft EAs for Review	12/20/84 Actual	DOE
(10b) Review and Comment on Draft EAs	12/20/84 - 3/20/85 Actual	DOD, NRC, DOT, DOI, USDA, EPA

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(10c) Issue Final EAs	4/86	DOE
<p>*(11) <u>NRC Requirements for SCP</u> *(A) A general plan for site characterization activities to be conducted at such candidate site, which plan shall include--... (V) any other information required by the Commission." Section 113(b)(1)(A).</p> <p>(11a) Issue Final Regulatory Guide 4.17</p> <p>(11b) Identify Additional SCP Content Requirements</p>	<p>5/87</p> <p>Continuing through 7/91</p>	<p>NRC</p> <p>NRC</p>
<p>*(12) <u>Environmental Protection Agency Standards</u> "Not later than 1 year after the date of the enactment of this Act, the Administrator, pursuant to authority under other provisions of law, shall, by rule, promulgate generally applicable standards for protection of the general environment from offsite releases from radioactive material in repositories. "Section 121(a).</p> <p>(12a) EPA Develop Standards</p>	<p>8/15/85 Actual</p>	EPA
<p>*(13) <u>NRC Requirements and Criteria</u> Not later than January 1, 1984, the Commission, pursuant to authority under other provisions of law, shall, by rule, promulgate technical requirements and criteria that it will apply, under the Atomic Energy Act of 1954 (42 U.S.C. 2011, et seq.) and the Energy Reorganization Act of 1974 (42 U.S.C. 5081, et seq.). Section 121(b).</p> <p>(13a) NRC Develop Requirements and Criteria</p> <p>(13b) NRC Revise Requirements and Criteria, if Necessary, to be Consistent with the Provisions of the NWPA and EPA Standards - Issue Proposed Amendment to conform 10 CFR Part 60 to EPA standards</p> <p>(13c) Issue Final Amendment</p>	<p>6/21/83 Actual</p> <p>3/86</p> <p>9/87</p>	<p>NRC</p> <p>NRC</p> <p>NRC</p>
<p>(14) <u>Define Affected Indian Tribes which have Treaty Rights (1st Repository)</u></p> <p>(14a) Make Determination</p>	<p>Upon Application By Tribe</p>	DOI

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

	<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
*(15)	<u>Nominate and Recommend Sites for Characterization</u> (1st Repository) "Subsequent to such nomination, the Secretary shall recommend to the President three of the nominated sites not later than January 1, 1985, for characterization as candidate sites." Section 112(b)(1)(B).		
	(15a) Secretary Nominate at Least Five (5) Sites for Characterization	4/86	DOE
	(15b) Secretary Recommend Three (3) Sites for Characterization	4/86	DOE
*(16)	<u>Preliminary Determination</u> (1st Repository) "...the Secretary shall consider as alternate sites for the first repository to be developed under this subtitle the candidate sites with respect to which (1) site characterization has been completed under section 113; and (2) the Secretary has made a preliminary determination, that such sites are suitable for development as repositories..." Section 114(f).		
	(16a) Secretary Makes Preliminary Determination That Sites Are Suitable for Development as Repositories	Concurrent with 15b	DOE
(17)	<u>Presidential Review of Recommendation</u> (1st Repository) "The President shall review each candidate site recommendation made by the Secretary under Subsection (b) Not later than 60 days after the submission by the Secretary of a recommendation of a candidate site, the President, in his discretion, may either approve or disapprove such candidate site." Section 112(c)(1).		
	(17a) Transmit Decision on Approval or Disapproval of Site Recommendation to the DOE and the Affected States and/or Indian Tribes.	6/86	President
(18)	<u>Grants for Candidate Sites</u> (1st Repository) The Secretary shall make grants to each State (affected Indian tribe) in which a candidate site for a repository is approved under section 112(c). Section 116(c)(1)(B) and (118(b)(2)(A)).		
	(18a) Provide Grants to States and/or Affected Indian Tribes Having a Candidate Site	Negotiated Upon Request	DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(19) <u>Payment Equal to Taxes</u> (1st Repository) The Secretary shall also grant to each State (affected Indian tribe) and unit of general local government in which a site for a repository is approved under section 112(c) an amount each fiscal year equal to the amount such State (Indian tribe) and unit of general local government, respectively, would receive were they authorized to tax site characterization activities at such site, and the development and operation of such repository... Section 116(c)(3) and (118(b)(4)).		
(19a) Provide Payment Equal to Taxes	Candidate Site Designation thru completion of operations at site	DOE
*(20) <u>Site Characterization Plan</u> (1st Repository) Before proceeding to sink shafts at any candidate site, the Secretary shall submit to the NRC and the affected States or Indian tribes, for review and comment, a general plan for site characterization activities, a waste form or packaging description and a conceptual repository design. Section 113(b)(1).		
(20a) Issue SCP for Review and Comment	Basalt 12/86 Tuff 12/86 Salt 4/87	DOE
(20b) NRC staff Provide Comments and Guidance on Shaft-Related Activities	Basalt 3/87 Tuff 3/87 Salt 7/87	NRC
(20c) Review and Comment on SCP	Basalt 3/87 Tuff 3/87 Salt 7/87	DOI, DOD, EPA, DOT, USDA
*(21) <u>Quality Assurance Program</u> (1st Repository)		
(21a) Develop and Implement Site Specific Quality Assurance Program	Basalt 9/86 Tuff 9/86 Salt 1/87	DOE
(21b) Review and Comment	Basalt 12/86 Tuff 12/86 Salt 4/87	NRC
*(22) <u>Annotated Outline for License Application</u> (1st Repository)		
(22a) Issue Draft Annotated Outline	9/86	DOE
(22b) Review and Concur	9/87	NRC

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
<p>*(23) <u>Site Characterization Analysis</u> (10 CFR 60)⁽¹⁾ (1st Repository)</p> <p>(23a) Issue Final SCA</p>	<p>Basalt 6/87 Tuff 6/87 Salt 10/87</p>	NRC
<p>(24) <u>Radioactive Material Use</u> (1st Repository)</p> <p>"In conducting site characterization activities-- (A) the Secretary may not use any radioactive material at a candidate site unless the Commission concurs that such use is necessary to provide data for the preparation of the required environmental reports and an application for construction authorization for a repository at such candidate site. Section 113(c)(2)(A)</p> <p>(24a) NRC Concurrence on Use of Radioactive Materials for Characterization</p>	<p>Basalt 6/87 Tuff 6/87 Salt 10/87</p>	NRC
<p>*(25) <u>SCP Public Hearings</u> (1st Repository)</p> <p>"Before proceeding to sink shafts at any candidate site, the Secretary shall (A) make available to the public the site characterization plan described in paragraph (1); and (B) hold public hearings in the vicinity of such candidate site to inform the residents of the area in which such candidate site is located of such plan, and to receive their comments." Section 113(b)(2).</p> <p>(25a) Conduct Public Hearings on SCP</p>	<p>Basalt 2/87 Tuff 2/87 Salt 6/87</p>	DOE

⁽¹⁾ According to the Current Procedural Rule (10 CFR Part 60), the NRC will issue a draft and final Site Characterization Analysis (SCA). The final would be completed ten months after issuance of the initial SCP. A change to this rule is pending and would require the NRC to issue only a final SCA. The final SCA would be issued for comment six months after receipt of the initial SCP. NRC comments contained in their final SCA would then be incorporated into the next SCP report issued by the Department.

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

Provision and Required Action	Reference Schedule	Agency
(26) <u>Written Agreements</u> (1st Repository) "Not later than 60 days after (1) the approval of a site for site characterization for such a repository under Section 112(c), or (2) the written request of the State or Indian tribe in any affected State notified under Section 116(a) to the Secretary, whichever first occurs, the Secretary shall seek to enter into a binding written agreement, and shall begin negotiations, with such State and, where appropriate, to enter into a separate binding agreement with the governing body of any affected Indian tribe, setting forth (but not limited to) the procedures under which the requirements of sub-sections (a) and (b), and the provisions of such written agreement, shall be carried out.... Each such written agreement shall, to the maximum extent feasible, be completed not later than six months after such notification. If such written agreement is not completed within such period, the Secretary shall report to the Congress in writing within 30 days on the status of negotiations to develop such agreement..." Section 117 (c).	Ongoing	DOE
(26a) DOE Negotiate Written Agreements with States and/or Affected Indian Tribes	7 Months After Request	DOE
(26b) If No Agreement is Reached, DOE Submit Written Explanation to Congress		
*(27) <u>Land Acquisition Procedures for Tuff Site (If President Approves Site)</u> (1st Repository)		
(27a) Renew Land Use Permit	6/86	DOE, DOD (AF)
(27b) Extend Cooperative Agreement	9/86	DOE, DOI (BLM)
(27c) Renew Permits and Agreements as Needed	6/86-11/95	DOE, DOD (AF), DOI (BLM)
(27d) Begin Pre-Application Consultation	8/91	DOE, DOI (BLM)
(27e) Apply for Withdrawal of Public Land	10/91	DOE
(27f) Begin Preparation of Case File Reports	10/91	DOE
(27g) Publish Notice in Federal Register for Withdrawal Application, Invitation to Comment, and Public Meeting	11/91	DOE
(27h) Hold Public Meeting	1/92	DOE, DOI (BLM)
(27i) Public Comment Period Closes	1/92	DOE

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(27j) Submit Case File Reports	3/92	DOE
(27k) Issue Public Land Order	12/92	DOI
(27l) Provide Congress with Withdrawal Information	12/92	DOE, DOI (BLM)
(27m) Withdrawal Takes Effect	12/93	Congress
*(28) <u>Land Acquisition Procedures for Salt Sites (If President Approves Site)</u> ⁽¹⁾ (1st Repository)		
(28a) Sign Interagency Agreement on Land Acquisition Support for Site Characterization	3/86	DOE, DOD (COE)
(28b) Prepare and Submit Land Acquisition Plan for ES, Site Characterization, and Site Protection	4/86	DOD (COE)
(28c) Approve Land Acquisition Plan	5/86	DOE
(28d) Initiate Land Acquisition	6/86	DOD (COE), DOJ
(28e) Complete Negotiations, Acquisition of Land, and File Condemnation Proceedings, if necessary	3/87	DOD (COE), DOJ
(28f) Complete Relocation, if necessary/Take Possession of Site	5/87	DOD (COE), DOJ
(28g) Prepare and Submit Land Acquisition Plan for Repository Acquisition	1/91	DOD (COE)
(***) Steps for Acquiring Federal land at Davis and Lavender Canyons, Utah and Cypress Creek, Mississippi are Different from this step on. (Refer to (27)***)		
(28h) Approve Land Acquisition Plan	3/91	DOD (COE)
(28i) Initiate Land Acquisition	3/91	DOD (COE), DOJ
(28j) Complete Negotiations, Acquisition of Land, and File Condemnation Proceedings, if necessary	9/93	DOD (COE), DOJ
(28k) Complete Relocation, if necessary/Take Possession of Land	11/93	DOD (COE), DOJ

(***) Steps for Acquiring Land at Davis and Lavender Canyons, Utah, and Cypress Creek, MS (***)⁽²⁾

⁽¹⁾ Land Acquisition procedures for Second Repository sites have not been developed at this time, but are expected to be similar to those for the First Repository. These procedures will be included in future updates of the Project Decision Schedule.

⁽²⁾ Depending on Site Selected, either DOI (BLM) (NPS) or USDA will be the Affected Agency.

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(28l) Begin Pre-Application Consultation	3/91	DOE, DOI (BLM), USDA, DOD(COE), DOI (NPS)
(28m) Apply for Withdrawal of Public Land	10/91	DOE, DOI (BLM), USDA, DOI (NPS)
(28n) Begin Preparation of Case File Reports	10/91	DOE, DOD (COE)
(28o) Publish Notice in Federal Register for Withdrawal Application, Invitation to Comment, and Public Meeting	11/91	DOE
(28p) Hold Public Meeting	1/92	DOE, DOI (BLM), USDA, DOI (NPS)
(28q) Public Comment Period Closes	1/92	DOE
(28r) Submit Case File Reports	3/92	DOD (COE)
(28s) Issue Public Land Order	12/92	DOI (NPS), USDA, DOI (BLM)
(28t) Provide Congress with Withdrawal Information	12/92	DOE, DOI (NPS), USDA, DOI (BLM)
(28u) Withdrawal Takes Effect	12/93	Congress
*(29) <u>Site Characterization</u> (1st Repository) "The Secretary shall carry out, in accordance with the provisions of this section, appropriate site characterization activities..." Section 113(a).		
(29a) DOE perform Site Characterization Activities	12/86- 12/91	DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
*(30) <u>State Notification</u> (2nd Repository) Section 116(a)		
(30a) State Notification of Potentially Acceptable Sites by DOE	11/86	DOE
(31) <u>Grants to Potentially Acceptable Sites</u> (2nd Repository) Sections 116(c)(1)(A) and 118(b)(1)		
(31a) Provide Grants to States and/or Affected Indian Tribes Having a PAS	After (31a)	DOE
(32) <u>Semi-annual SCP Report</u> (1st Repository) "During the conduct of site characterization activities at a candidate site, the Secretary shall report not less than once every 6 months to the Commission and to either the Governor and legislature of the State in which such candidate site is located, or the governing body of the affected Indian tribe where such candidate site is located, as the case may be, on the nature and extent of such activities and the information developed from such activities." Section 113(b)(3).		
(32a) Issue Semi-Annual SCP Reports	6/87- 1/91	DOE
(33) <u>Site Recommendation Public Hearing</u> (1st Repository) "The Secretary shall hold public hearings in the vicinity of each site under consideration for recommendation to the President under this paragraph as a site for the development of a repository, for the purposes of informing the residents of the area in which such site is located of such consideration and receiving their comments regarding the possible recommendation of such site." Section 114(a).		
(33a) DOE Hold Public Hearings on Site Recommendation	2/91	DOE
*(34) <u>Environmental Impact Statement</u> (1st Repository) "...A final environmental impact statement prepared pursuant to subsection (f) and the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), including an analysis of the consideration given by the Secretary to not less than three candidate sites for the first proposed repository or to all of the characterized sites for the development of subsequent repositories..." Section 114(a)(1)(D).		

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(34a) Pursuant to Section 1501.6 of the CEQ NEPA regulations, 40 CFR Parts 1500-1508, DOE as the lead agency will request certain other affected Federal agencies to serve as cooperating agencies.	5/87	EPA, DOI, HRC
(34b) Conduct Scoping Hearings For EIS	6/87- 9/87	DOE
(34c) DOE Issue Draft EIS for Review	1/91	DOE
(34d) Review and Comment on Draft EIS	1/91- 4/91	DOT, DOD, CEQ NRC, DOI, EPA, USDA
(34e) Issue FEIS, Incorporating Above Comments	7/91	DOE
*(35) <u>NRC Preliminary Sufficiency Comments</u> (1st Repository) "Preliminary comments of the Commission concerning the extent to which the at-depth site characterization analysis and the waste form proposal for such site seem to be sufficient for inclusion in any application to be submitted by the Secretary for licensing of such site as a repository." Section 114(a)(1)(E).		
(35a) NRC Comment on Characterization Analysis	1/91- 9/91	NRC
*(36) <u>Site Selection Report</u> (1st Repository) "...the Secretary shall notify the Governor and legislature of the State in which such site is located, or the governing body of the affected Indian tribe where such site is located, as the case may be, of such decision....Together with any recommendation of a site under this paragraph, the Secretary shall make available to the public, and submit to the President, a comprehensive statement of the basis of such recommendation." Section 114(a)(1)(A)(B)(C)(F)(G)(H).		
(36a) Notify Affected States and/or Indian Tribes of Proposed Site Selection	1/91	DOE
(36b) Notify Affected States and/or Indian Tribes of Site Selections	7/91	DOE
(36c) Issue Site Selection Report to President	8/91	DOE
(37) <u>Record of Decision (ROD)</u> (40 CFR Part 1505) (1st Repository)		
(37a) DOE prepare and issue ROD	8/91	DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
<p>*(38) <u>Site Recommendation</u> (1st Repository) "Not later than March 31, 1987, the President shall submit to the Congress a recommendation of one site from the three sites initially characterized that the President considers qualified for application for a construction authorization for a repository." Section 114(a)(2)(A).</p> <p>(38a) President Recommend Site to Congress</p>	10/91	President
<p>(39) <u>Pre-Nomination Notification</u> (2nd Repository) Section 112(b)(1)(H) and 112(b)(2)</p> <p>(39a) Notify States and Affected Indian Tribes of Pre-Nomination</p> <p>(39b) Conduct Public Hearings</p>	9/92 1/92- 3/92	DOE DOE
<p>*(40) <u>Environmental Assessments</u> (2nd Repository) Section 112(b)</p> <p>(40a) DOE Issue Draft EAs for Review</p> <p>(40b) Review and Comment on Draft EAs</p> <p>(40c) DOE Issue EAs</p>	9/92 9/92- 12/92 9/93	DOE DOT, DOI, EPA, NRC, USDA, DOD DOE
<p>*(41) <u>Nominate and Recommend Sites for Characterization</u> (2nd Repository) Section 112(b)</p> <p>(41a) Secretary Nominate Five (5) Sites for Characterization</p> <p>(41b) Secretary Recommend Three (3) Sites for Characterization</p>	10/93 10/93	DOE DOE
<p>(42) <u>Assistance for Repository State</u> (1st Repository) The Secretary shall provide financial and technical assistance to any State (affected Indian tribe) requesting such assistance in which there is a site with respect to which the Commission has authorized construction of a repository. Section 116(c)(2)(A) and 118(b)(3)(A).</p> <p>(42a) Prepare and Submit to DOE an Impact Description Report</p> <p>(42b) Enter into a Binding Agreement Defining Assistance</p> <p>(42c) Provide Financial and Technical Assistance to Mitigate Impact of Repository Development</p>	After site characteri- zation and before 37a 4/94 8/94	States Indian tribes DOE DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
<p>*(43) <u>License Application</u> (1st Repository) "If the President recommends to the Congress a site for a repository under subsection (a) and the site designation is permitted to take effect under section 115, the Secretary shall submit to the Commission an application for a construction authorization for a repository at such site not later than 90 days after the date on which the recommendation of the site designation is effective..." Section 114(b).</p> <p>(43a) Submit LA (License Application per 10 CFR Part 60)</p> <p>(43b) Review LA</p> <p>(43c) Issue Construction Authorization</p>	<p>12/91</p> <p>12/91-3/94</p> <p>3/94</p>	<p>DOE</p> <p>NRC</p> <p>NRC</p>
<p>*(44) <u>Preliminary Determination</u> (2nd Repository) Section 114(f)</p> <p>(44a) Secretary makes Preliminary Determination that Sites are Suitable for Development As Repositories</p>	<p>Concurrent with 41b.</p>	<p>DOE</p>
<p>(45) <u>Grants to Candidates Sites</u> (2nd Repository) Section 112(c) and 116(c)(1)(B) and 118(b)(2)(A)</p> <p>(45a) Provide Grants to States and/or Affected Indian Tribes Having a Candidate Site</p>	<p>Negotiated by Request</p>	<p>DOE</p>
<p>(46) <u>Presidential Review of Recommendation</u> (2nd Repository) Section 112(c)</p> <p>(46a) Transmit Decision on Approval or Disapproval of Site Recommendation to the DOE and the Affected States and/or Indian Tribes</p>	<p>12/93</p>	<p>President</p>
<p>(47) <u>Payment Equal to Taxes</u> (2nd Repository) Sections 116(c)(3) and 118(b)(4)</p> <p>(47a) Provide Payment Equal to Taxes</p>	<p>Candidate Site Designation thru Completion of Operations at Site, if Site is Authorized</p>	<p>DOE</p>

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(48) <u>NRC Status Report</u> (1st Repository) "Not later than 1 year after the date on which an application for a construction authorization is submitted under subsection (b), and annually thereafter until the date on which such authorization is granted, the Commission shall submit a report to the Congress describing the proceedings undertaken through the date of such report with regard to such application..." Section 114(c).		
(48a) NRC's Status Report on LA Review to Congress	12/92, 12/93	NRC
*(49) <u>Site Characterization Plan</u> (2nd Repository) Section 113(b)		
(49a) DOE Issue SCP for Review and Comment	12/94	DOE
(49b) NRC staff Provide Comments and Guidance on Shaft-Related Activities	3/95	NRC
(49c) Review and Comment on SCP	3/95	DOI, EPA, DOD, DOT, USDA
*(50) <u>Quality Assurance Program</u> (2nd Repository)		
(50a) Develop and Implement Site Specific Quality Assurance Program	12/94	DOE
(50b) Review and Comment	3/95	NRC
*(51) <u>Site Characterization Analysis</u> (10 CFR 60) ⁽¹⁾ (2nd Repository)		
(51a) Issue SCA	6/95	NRC
(52) <u>Adoption of FEIS</u> (1st Repository) "...Any environmental impact statement prepared in connection with a repository proposed to be constructed by the Secretary under this subtitle shall, to the extent practicable, be adopted by the Commission in connection with the issuance by the Commission of a construction authorization and license for such repository." Section 114(f).		
(52a) NRC Adoption of DOE FEIS, to Extent Practicable	3/94	NRC

⁽¹⁾ According to the Current Procedural Rule (10 CFR Part 60), the NRC will issue a draft and final Site Characterization Analysis (SCA). The final would be completed ten months after receipt of the initial SCP. A change to this is pending and would require the NRC to issue only a final SCA issued. The final SCA would be issued for comment six months after receipt of the initial SCP. Comments would then be incorporated into the next SCP report.

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(53) <u>Radioactive Material Use</u> (2nd Repository) Section 113(c)(2)(A)		
(53a) NRC Concurrence on Use of Radioactive Materials for Characterization	6/95	NRC
*(54) <u>Update License Application in Accordance with 10 CFR Part 60.24</u> (1st Repository)		
(54a) Submit Updated LA to NRC-Authority to Receive and Possess HLW for Phase 1 operations of First Repository	3/96	DOE
(54b) NRC Review of Updated LA	3/96-12/97	NRC
(54c) Issue License to Receive and Possess HLW for Phase 1 operations for First Repository	12/97	NRC
(55) <u>NRC Requirements for SCP</u> (2nd Repository) Section 113(b)(1)(A)		
(55a) Identify Additional SCP Content Requirements	Continuing thru 11/99	NRC
*(56) <u>SCP Public Hearings</u> (2nd Repository) Section 113(b)(2)		
(56a) Conduct Public Hearings	2/95	DOE
(57) <u>Written Agreements</u> (2nd Repository) Section 117(c)		
(57a) DOE Negotiate Written Agreements with States and/or Indian Tribes	Within 6 mos after request	DOE
(57b) If no Agreement is reached, DOE Submit Written Explanation to Congress	7 months after request	DOE
*(58) <u>Request for Authorization to Construct Second Repository</u>		
(58a) DOE Request Authorization from Congress to Proceed with Development and Construction of a Second Repository	12/99	DOE
(59) <u>Semi-Annual SCP Report</u> (2nd Repository) Section 113(b)(3)		
(59a) Issue Semi-Annual SCP Report	6/95- 1/99	DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

	<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(60)	<u>Site Recommendation Public Hearing</u> (2nd Repository) Section 114(a)		
	(60a) DOE Hold Public Hearings on Site Recommendation	5/99	DOE
*(61)	<u>Environmental Impact Statement</u> (2nd Repository) Section 114(a)(1)(D)		
	(61a) Pursuant to Section 1501.6 of the CEQ NEPA Regulations 40 CFR Parts 1500-1508, DOE as the lead agency will request certain other affected Federal agencies to serve as cooperating agencies.	11/93	DOI, EPA, NRC
	(61b) Conduct Scoping Hearings for EIS	12/93- 3/94	DOE
	(61c) DOE Issue DEIS	3/99	DOE
	(61d) Review and Comment on DEIS	3/99- 6/99	DOT, DOD, CEQ, NRC, DOI, EPA, USDA
	(61e) Issue FEIS, Incorporating Above Comments	9/99	DOE
(62)	<u>NRC Preliminary Sufficiency Comments</u> (2nd Repository) Section 114(a)(1)(E)		
	(62a) NRC Comment on Characterization Analysis	3/99- 11/99	NRC
*(63)	<u>Site Selection Report</u> (2nd Repository) Section 114(a)		
	(63a) Notify Affected States and/or Indian Tribes of Proposed Site Selection	3/99	DOE
	(63b) Notify Affected States and/or Indian Tribes of Site Selection	9/99	DOE
	(63b) Issue Site Selection Report to President	10/99	DOE
(64)	<u>Record of Decision (ROD)</u> (40 CFR Part 1505) (2nd Repository)		
	(64a) DOE prepare and issue ROD	10/99	DOE
*(65)	<u>Site Recommendation</u> (2nd Repository) Section 114(a)(2)(A)		
	(65a) President Recommend Site to Congress	12/99	DOE

*CRITICAL ACTIVITY

TABLE I (Continued)
Activities Associated with the Siting, Construction, and
Operation of the Radioactive Waste Management System
(First and Second Geologic Repositories)

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
*(66) <u>Submittal of Amended License Application</u> (1st Repository)		
(66a) Submit Application to Amend License to NRC - Authority to receive and possess HLW for Phase 2 operations of First Repository	6/98	DOE
(66b) NRC Review of Amended LA	6/98- 1/2001	NRC
(66c) Issue Amended License to receive and possess HLW for Phase 2 operations of First Repository	1/2001	NRC
(67) <u>Adoption of FEIS</u> (2nd Repository) Section 114(f)		
(67a) NRC adoption of DOE FEIS, to Extent Practicable	5/2002	NRC
(68) <u>Assistance for Repository States</u> (2nd Repository) Section 116(c)(2)(A) and 118(b)(3)(A)		
(68a) Prepare and Submit to DOE an Impact Description Report	After Site Characteri- zation and Before (61a)	States, Indian tribes
(68b) Enter into a Binding Agreement Defining Assistance	9/2002	States, Indian tribes, DOE
(68c) Provide Financial and Technical Assistance to Mitigate the Impact of Repository Development	1/2003	DOE
*(69) <u>License Application</u> (2nd Repository) Section 114(b)		
(69a) Submit LA (License Application per 10 CFR Part 60)	2/2000	DOE
(69b) Review LA	2/2000- 5/2002	NRC
(69c) Issue Construction Authorization	5/2002	NRC
(70) <u>NRC Status Report</u> (2nd Repository) Section 114(c)		
(70a) NRC's Status Report on LA Review to Congress	2/2001, 2/2002	NRC

*CRITICAL ACTIVITY

8. TRANSPORTATION SYSTEM

8.1 Transportation System Overview

The Department will take title to civilian spent nuclear fuel and high-level radioactive waste at reactor sites, or at other points of origin, and arrange for transportation to repositories or to related storage facilities. Although the Department has full responsibility for the management of transportation activities, Section 137(a)(2) of the NWPA further directs that the private sector be utilized to the fullest extent possible in all aspects of developing and operating the Transportation System. Direct federal services for nuclear waste transportation would be considered only if the Secretary of Transportation, in consultation with the Secretary of Energy, determined that the private sector was unwilling or unable to provide the needed equipment or services at reasonable costs. In addition to the shipment of civilian spent nuclear fuel and high-level radioactive waste, the Department also has the responsibility for transporting high-level radioactive waste from Federal defense activities to repositories. These defense waste shipments will be made on a schedule designed not to interfere with civilian spent nuclear fuel or high-level radioactive waste shipments. The Transportation System also may be called upon, as specified by Section 136 of the NWPA, to transport spent nuclear fuel to a federally owned and operated interim away-from-reactor storage facility.

All Transportation System related activities (e.g., cask procurement, fleet procurement, and transportation operations) will be subject to rigorous Departmental supervision and will be required to comply with DOE, NRC, and DOT regulations.

8.2 Planned Development of the Transportation System

The current strategy for the development and operation of the Transportation System assumes that the Department would be an active participant with industry throughout the entire process.

The Department will describe the overall strategy and planned development of the Transportation System in two separate but interrelated documents. These are the Transportation Business Plan and the Transportation Institutional Plan. These plans define the tasks that are associated with the objectives that must be achieved by the Department in planning, designing, developing, and operating the transportation subsystem of the Radioactive Waste Management System.

The Transportation Institutional Plan describes the process that the Department will utilize to establish responsible and effective interactions with those institutions that may be affected by the transportation of spent nuclear fuel or high-level radioactive waste. The issuance of the Transportation Institutional Plan is scheduled for April 1986. The Transportation Business Plan defines the transportation systems acquisition task. It will describe the Department's expected contracting methods, strategies, and actions to acquire equipment and contractors for developing and operating the Transportation Systems.

The Department plans to issue, in the spring of 1987, a comprehensive Transportation Plan where the institutional and business elements are integrated and the framework for an operational Transportation System is provided.

The acquisition strategy decisions to support the "authorized" plan as described in the Mission Plan are discussed below. The Department has also considered other transportation requirements designed to support the "Improved Performance" Plan. These are not discussed in the Project Decision Schedule but will be incorporated in it at a later date should Congress approve construction of a Monitored Retrievable Storage (MRS) facility.

8.2.1 Transportation System Acquisition - Phase I - Cask Development

Transportation Systems Acquisition Phase I includes the development of prototypical spent fuel and radioactive waste casks required by the Department for civilian radioactive waste transport. Two initiatives will allow the Department to ensure the availability of proven casks for the following uses: (1) shipments of spent fuel and consolidated fuel rods from most reactors to facilities in the Federal disposal system, and (2) shipment of nonstandard spent fuel and nonfuel materials (where applicable) from reactors to Federal disposal facilities. These cask initiatives are referred to as (1) From-Reactor Casks, and (2) Nonstandard Spent Fuel and Components Casks. A third initiative related to the development of casks for shipment of spent nuclear fuel or high-level radioactive waste from an MRS facility to a geologic repository is not discussed at this time.

8.2.2 Initiative I - From-Reactor Casks

Initiative 1 covers the development of the spent fuel casks that will be used to ship most of the radioactive waste from reactors. A request for

proposals (RFP) will be issued in summer 1986 to private industry for supplying prototype spent fuel casks that are certified by the NRC. At least two designs for each modal option (truck and rail/barge) will be developed. The Department will perform or will require its contractors to perform all tests necessary to satisfy NRC requirements for certification.

8.2.3 Initiative II - Nonstandard Spent Fuel and Components Cask

This initiative will provide for the development and/or procurement of specialty casks for nonstandard spent fuel and nonfuel hardware destined for the Federal repository. Following detailed characterization of the materials to be shipped, a competitive RFP, if needed, will be issued by the Phase II service contractor for the design and fabrication of prototype casks to be used to transport these wastes. The Department may ultimately use several options such as assembling a fleet of casks with valid NRC certificates of compliance; amending the NRC certificates of casks developed under Initiative I or developed independently by the bidder; or establishing new specialty casks. This initiative is expected to occur in the mid-1990s.

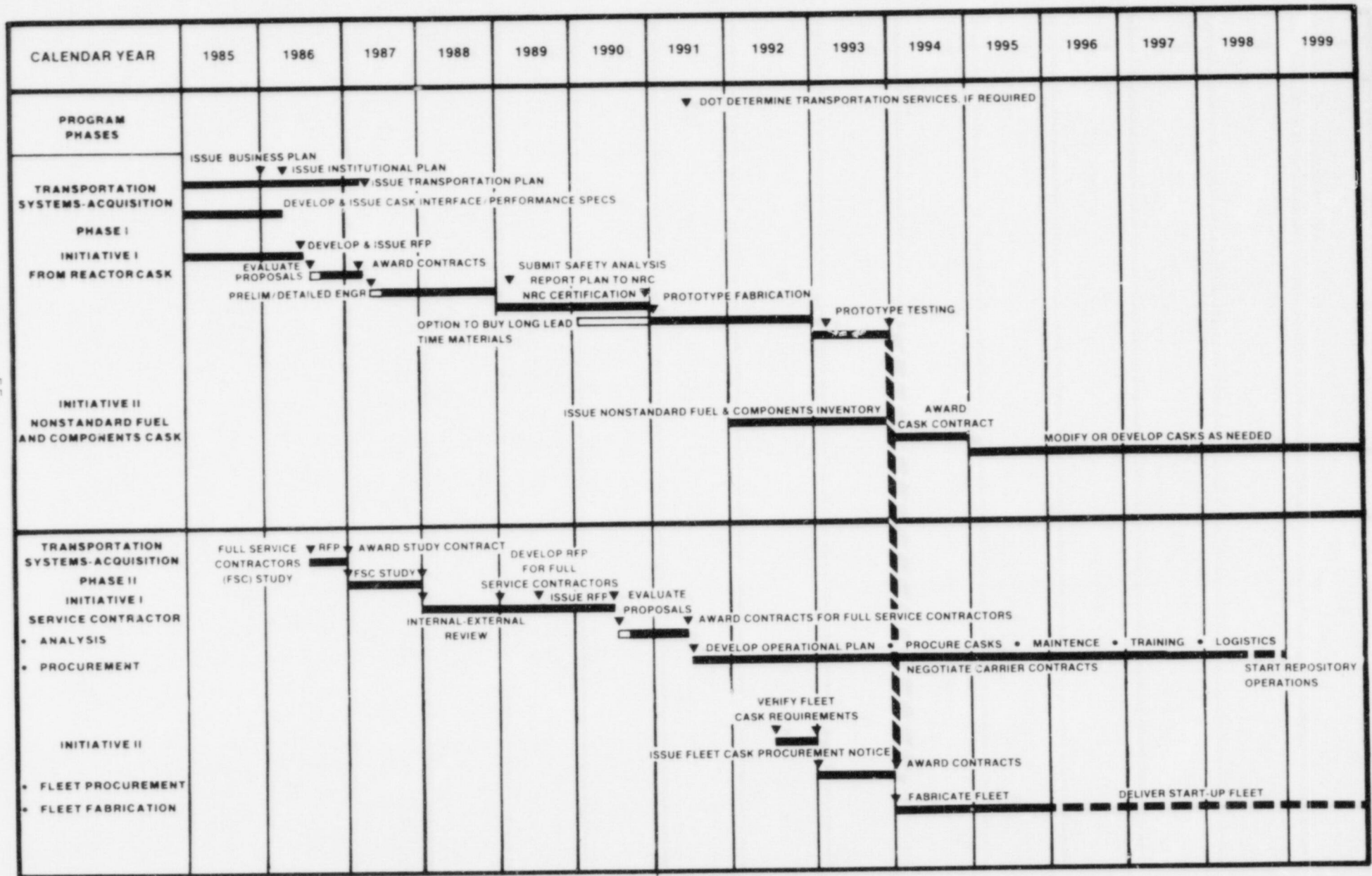
8.2.4 Transportation Systems Acquisition - Phase II - Service Contractors

The Department will develop a Transportation System to conduct waste shipments as required. This includes, but is not limited to, assuring the availability of a sufficient quantity of casks for a transportation fleet, carriage arrangements, equipment servicing, inspection of equipment and operations, interfacing with emergency-response organizations, and training of

all operations personnel. Contractors selected by the Department through a competitive process will be responsible for completing all technical and administrative tasks needed to ship waste from generators to Federal waste facilities. The inclusion of defense wastes in activities under this phase is currently being coordinated within the Department. All fleet-procurement actions and transportation operations by the private sector will be subjected to rigorous Departmental supervision and will be required to comply with DOE, NRC, and DOT regulations.

Figure 7 depicts the Transportation System Schedule. Table II that follows, depicts the activities, scheduled milestone dates, and agencies responsible for taking action associated with the development and operation of the Transportation System.

**FIGURE 7
TRANSPORTATION SYSTEM SCHEDULE**



/// CRITICAL PATH

TABLE II
Activities Associated With The Development and
Operation of the Radioactive Waste Management Transportation System

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(1) <u>Transportation System Planning</u>		
(1a) Sign procedural Agreement with NRC to Address Certification Process for Transportation Casks	11/3/83 Actual	DOE, NRC
(1b) Issue Business Plan	1/86 Actual	DOE
(1c) Issue Institutional Plan	4/86	DOE
(1d) Issue Transportation Plan	6/87	DOE
(1e) Interact with Public and Intergovernmental Agencies to Identify Fuel Acceptance Scheduling, Routing, and Impacts	2/85-1/98	DOE, DOT
(2) <u>Transportation System Acquisition</u>		
<u>Phase I:</u>		
<u>Initiative I - From Reactor Cask Development</u>		
2(a) Develop Transportation Cask Performance Spec for RFP	11/85 Actual	DOE
2(b) Issue Info Package for From Reactor Cask Program	2/86 Actual	DOE
2(c) Issue RFP to Private Industry for From Reactor Cask Development	6/86	DOE
2(d) Award Cask Development Contracts	3/87	DOE
2(e) Initiate NRC Review Safety Analysis Report Packages (SARPs)	3/89	NRC
2(f) From Reactor Cask Available for Testing	3/93	DOE
(3) <u>Phase I:</u>		
<u>Initiative II - Nonstandard Fuel and Components Cask</u>		
3(a) Issue Nonstandard Fuel and Components Inventory	1/92-1/94	DOE
3(b) Issue Nonstandard Fuel and Components Cask RFP	1/92	DOE
3(c) Award Cask Contract	1/94	DOE
3(d) Nonstandard Fuel and Components Cask Available for Testing	1/95	DOE

*CRITICAL ACTIVITY

TABLE II (Continued)
Activities Associated With The Development and
Operation of the Radioactive Waste Management Transportation System

	Reference Schedule	Agency
(4) <u>Phase II:</u> <u>Service Contractor Acquisition</u>		
4(a) Issue RFP for Full Service Contract	6/90 ⁽¹⁾	DOE
4(b) Award Service Contract	6/91	DOE
4(c) Issue Fleet Cask RFP	1/93 ⁽²⁾	DOE
4(d) Award Fleet Cask Contracts	12/93	DOE
(5) <u>DOE/DOT Interaction</u>		
5(a) Sign M.O.U. with DOT to Cover Transportation Aspects of the Nuclear Waste Policy Act	8/85 Actual	DOE, DOT
5(b) DOT Determine Transportation Services, if Required	6/91	DOT

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⁽¹⁾ DOT could become involved in determination of cask procurement decision process if private industry is unable or unwilling to provide transportation services at a reasonable cost.

⁽²⁾ Projected Date for Procurement of Cask fleet and full service contractors is in support of MRS start up in 1996 if approved by Congress. These dates will otherwise be projected into the 1993-1995 time period if first repository start up is only consideration.

9. MONITORED RETRIEVABLE STORAGE

9.1 Monitored Retrievable Storage Overview

The Nuclear Waste Policy Act, in addition to authorizing the Department to develop and operate a geologic repository, directed, in Section 141 of the NWPA, that the Department complete a study of the need for, and feasibility of, a Monitored Retrievable Storage Facility, and submit to the Congress a proposal for the construction of one or more MRS facilities.

The Department plans to submit a proposal to Congress, accompanied by an Environmental Assessment and Program Plan and comments from EPA and the NRC, to construct an MRS facility. This proposal will not, however, be submitted until resolution of a law suit filed against the Department by the State of Tennessee is achieved.

The proposal will contain a number of elements. They are:

- o A program for the siting, development, construction, and operation of MRS facilities;
- o A plan for the funding of the construction and operation of MRS facilities;
- o Site-specific designs, specifications, and cost estimates; and,
- o A plan for integrating the MRS facilities with other storage and disposal facilities authorized by the Act.

Congress, after review of the proposal submitted by the Secretary, may approve construction of a Monitored Retrievable Storage facility. However, the timing of such approval is, at this time, uncertain. Therefore, the Project Decision Schedule does not identify Federal agency actions necessary for the licensing, construction, and operation of an MRS facility. As noted previously, the Project Decision Schedule will be revised to incorporate an MRS facility at such time Congress may approve it.

Table III that follows, depicts the activities, scheduled milestone dates, and agencies responsible for taking action associated with the development and submittal of the MRS proposal and Environmental Assessment to Congress.

TABLE III
Activities Associated With The Development and Submittal of
MRS Proposal and EA to Congress

<u>Provision and Required Action</u>	<u>Reference Schedule</u>	<u>Agency</u>
(1) <u>Monitored Retreivable Storage (MRS) Proposal</u> "On or before June 1, 1985, the Secretary shall complete a detailed study of the need for and feasibility of, and shall submit to the Congress a proposal for, the construction of one or more Monitored Retreivable Storage facilities for high-level radioactive waste and spent nuclear fuel. . . The Secretary shall prepare, in accordance with regulations issued by the Secretary implementing such Act, an environmental assessment with respect to such proposal." Section 141(b), 141(c).		
(1a) Consultation with EPA and NRC for the Development of an MRS Proposal	11/85 Actual	NRC, EPA
(1b) Issue draft MRS Proposal	12/85 Actual	DOE
(1c) Review and comment on draft MRS Proposal	12/85-2/86 Actual	NRC, EPA
(1d) Submit MRS Proposal and EA to Congress	(1)	DOE

- (1) Submission of MRS proposal to Congress is being held in abeyance pending resolution of a law suit filed by the State of Tennessee regarding the MRS proposal.

*CRITICAL ACTIVITY

APPENDIX A

Activities Associated with the Siting, Construction and Operation of the Radioactive Waste Management System (Agency-By-Agency Cross-Cut)

NOTE: The following appendix list activities by agency. The numbers in the far left column correspond to the activity numbers on Table I, II, and III. For example, the number I-2a is an activity associated with the siting, construction, and operation of the Radioactive Waste Management System (First and Second Geologic Repositories) listed in Table I; the number II-1b is an activity associated with the Transportation System and is listed in Table II and the number III-1a relates to an activity associated with the development of the MRS proposal listed in Table III.

- A.1 U.S. Department of Agriculture
- A.2 U.S. Department of Defense
- A.3 U.S. Department of Interior
- A.4 U.S. Department of Justice
- A.5 U.S. Department of Transportation
- A.6 Council on Environmental Quality
- A.7 Environmental Protection Agency
- A.8 Nuclear Regulatory Commission

APPENDIX A-1

AGENCY: U.S. DEPARTMENT OF AGRICULTURE (USDA)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plan	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-28 *	Land Acquisition for Salt Sites	Negotiate Land Use Permits or Agreements, As Needed; Review and Approve Land Withdrawal, if Necessary	3/91 - 12/92
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plan For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment	3/99 - 6/99

*CRITICAL ACTIVITY

APPENDIX A-2

AGENCY: U.S. DEPARTMENT OF DEFENSE (DOD)

<u>Table</u> <u>Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
<u>Air Force (AF)</u>			
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plan	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-27 *	Land Acquisition for Tuff Site	Review Permits and Agreements; Review and Approve Land Withdrawal, if Necessary	6/86 - 12/93
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments ⁽¹⁾ For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization ⁽¹⁾ Plan For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact State- ⁽¹⁾ ment For Second Repository	Review and Comment	3/99 - 6/99

(1) Only required if the Nevada Tuff site is included in those being considered for the second repository.

*CRITICAL ACTIVITY

APPENDIX A-2 (Continued)

AGENCY: U.S. DEPARTMENT OF DEFENSE (DOD)

<u>Table</u> <u>Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
<u>Army Corps of Engineers (COE)</u>			
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plan	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-28 *	Land Acquisition for Salt Sites	Acquire Necessary Real Property	3/86 - 11/93
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plan For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment	3/99 - 6/99

*CRITICAL ACTIVITY

APPENDIX A-3

AGENCY: U.S. DEPARTMENT OF THE INTERIOR (DOI)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-14a	Define Affected Indian Tribes	Make a Determination	Upon Appli- cation By Tribe
I-20b *	Site Characterization Plans	Review and Comment	(Basalt) 3/76 (Tuff) 3/87 (Salt) 7/87
I-34a	1st Repository EIS Cooperating Agency	Serve as Cooperating Agency	5/87 - 7/91
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plans For Second Repository	Review and Comment	3/95
I-61b	2nd Repository EIS Cooperating Agency	Serve As Cooperating Agency	1/94 - 9/99
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment	3/99 - 6/99

*CRITICAL ACTIVITY

APPENDIX A-3 (Continued)

AGENCY: U.S. DEPARTMENT OF THE INTERIOR (DOI)

Bureau of Land Management (BLM)⁽¹⁾

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-4a	MOU Concerning Environmental Reviews for Site Characterization Activities	Develop MOU	6/83 Actual
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plans	Review and Comment	(Basalt) 3/76 (Tuff) 3/87 (Salt) 7/87
I-27 *	Land Acquisition for Tuff Site	Review and Approve Land Withdrawal	9/86 - 12/92
I-28 *	Land Acquisition for Salt Sites	Review and Approve Land Withdrawal	3/91- 12/92
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments ⁽²⁾ For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plans ⁽²⁾ For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact State- ⁽²⁾ ment for Second Repository	Review and Comment	3/99 - 6/99

(1) BLM's involvement will be principally limited to salt sites located in Utah.

(2) Only required if the Nevada Tuff site is included in those being considered for the second repository.

*CRITICAL ACTIVITY

APPENDIX A-3 (Continued)

AGENCY: U.S. DEPARTMENT OF THE INTERIOR (DOI)

National Park Service (NPS)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-6a	MOU Concerning NPS Role in OCRWM Program	Develop MOU	5/1/84 Actual
I-7a	Interagency Agreement Con- cerning NPS Review of EA's	Sign Interagency Agreement	9/14/84 Actual
I-28 *	Land Acquisition For Salt Sites	Review and Approve Land Withdrawal	3/91 - 12/92

*CRITICAL ACTIVITY

APPENDIX A-3 (Continued)

AGENCY: U.S. DEPARTMENT OF THE INTERIOR (DOI)

U.S. Geological Survey (USGS)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-5a	MOU on Site Characterization Plans	Develop MOU with DOE	3/29/84 Actual
I-8a *	Siting Guidelines	Consultation	11/22/83 Actual
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plans	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plans For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact Statement For Second Repository	Review and Comment	3/99 - 6/99

*CRITICAL ACTIVITY

APPENDIX A-4

AGENCY: U.S. DEPARTMENT OF JUSTICE (DOJ)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-28 *	Land Acquisition for Salt Sites	Provide Legal Assistance re. Land Acquisition	3/86 - 11/93

*CRITICAL ACTIVITY

APPENDIX A-5

AGENCY: U.S. DEPARTMENT OF TRANSPORTATION (DOT)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-20b *	Site Characterization Plan	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plan For Second Repository	Review and Comment	3/95
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment	3/99 - 6/99
II-1e	Interaction of Public and Intergovernmental agencies during Transportation Program	Consultation	2/85 - 1/98
II-5a	MOU on Transportation aspects of NWPA	Develop MOU with DOE	8/85
II-5b	Determination of Transportation Services, if required	Determine if direct Transportation Services are appropriate	6/91

*CRITICAL ACTIVITY

APPENDIX A-6

AGENCY: COUNCIL ON ENVIRONMENTAL QUALITY (CEQ)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-8a *	Siting Guidelines	Consultation	11/22/83 Actual
I-34d *	Environmental Impact Statement	Review and Comment pursuant to Sec. 309 of the Clean Air Act, if referred by EPA	1/91 - 4/91
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment pursuant to Sec. 309 of the Clean Air Act, if referred by EPA	3/99 - 6/99

*CRITICAL ACTIVITY

APPENDIX A-7

AGENCY: ENVIRONMENTAL PROTECTION AGENCY (EPA)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-8a *	Siting Guidelines	Consultation	11/22/83 Actual
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85
I-12a *	EPA Standards	Develop Standards under Applicable statutes	8/15/85
I-20b *	Site Characterization Plan	Review and Comment	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-34a	1st Repository EIS Cooperating Agency	Serve as Cooperating Agency	5/87 - 7/91
I-34d *	Environmental Impact Statement	Review and Comment pursuant to Sec. 309 of the Clean Air Act	1/91 - 4/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-49b *	Site Characterization Plan For Second Repository	Review and Comment	3/95
I-61b	2nd Repository EIS Cooperating Agency	Serve As Cooperating Agency	1/94 - 9/99
I-61d *	Environmental Impact State- ment For Second Repository	Review and Comment	3/99 - 6/99
III-1a	Development of MRS Proposal	Consultation	11/85
III-1c	Draft MRS Proposal	Review and Comment	12/85- 2/86

*CRITICAL ACTIVITY

APPENDIX A-8

AGENCY: NUCLEAR REGULATORY COMMISSION (NRC)

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-3a	MOU on Site Characterization Activities	Develop MOU with DOE	6/27/83 Actual
I-8a *	Siting Guidelines	Concurrence	6/22/84 Actual
I-10b *	Environmental Assessments	Review and Comment	12/84 - 3/85 Actual
I-11a	Final Regulatory Guide 4.17	Issue Final RG 4.17	5/87
I-11b	SCP Content	Identify Information Requirements	Through 7/91
I-13a *	NRC Requirements and Criteria	Develop Criteria	6/21/83 Actual
I-13b *	Issue Proposed Amendment	Revise Criteria Based on EPA Standards	3/86
I-13c *	Issue Final Amendment	Review and Comment	9/87
I-20b *	Site Characterization Plan	NRC staff Provide Comments and Guidance on Shaft-Related Activities	(Basalt) 3/87 (Tuff) 3/87 (Salt) 7/87
I-21b *	Quality Assurance Program	Review and Comment	(Basalt) 12/86 (Tuff) 12/86 (Salt) 4/87
I-22b *	Annotated Outline For License Application	Review and Concur	9/87

- (1) According to the Current Procedural Rule (10 CFR Part 60), the NRC will issue a draft and final Site Characterization Analysis (SCA). The final would be completed ten months after issuance of the initial SCP. A change to this rule is pending and would require the NRC to issue only a final SCA. The final SCP would be issued for comment six months after receipt of the initial SCP. NRC comments contained in their final SCA would then be incorporated into the next SCP report issued by the Department.

*CRITICAL ACTIVITY

APPENDIX A-8 (Continued)

AGENCY: NRC

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-23a *	Site Characterization Analysis	Issue Final SCA ¹	(Basalt) 6/87 (Tuff) 6/87 (Salt) 10/87
I-24a	Radioactive Material Use	Concur on Use	(Basalt) 6/87 (Tuff) 6/87 (Salt) 10/87
I-34a	1st Repository EIS Cooperating Agency	Serve as Cooperating Agency	5/87 - 7/91
I-34d *	Environmental Impact Statement	Review and Comment	1/91 - 4/91
I-35a	NRC Preliminary Sufficiency Comments	Review and Comment	1/91 - 9/91
I-40b *	Environmental Assessments For Second Repository	Review and Comment	9/92 - 12/92
I-43b *	License Application	Review	12/91 - 3/94
I-43c *	License Application	Issue Construction Authorization (CA)	3/94
I-48a	NRC Status Report	Report to Congress	12/92, 12/93
I-49b *	Site Characterization Plan For Second Repository	NRC staff Provide Comments and Guidance on Shaft-Related Activities	3/95
I-50b *	Quality Assurance Program	Review and Comment	3/95

(1) According to the Current Procedural Rule (10 CFR Part 60), the NRC will issue a draft and final Site Characterization Analysis (SCA). The final would be completed ten months after issuance of the initial SCP. A change to this rule is pending and would require the NRC to issue only a final SCA. The final SCP would be issued for comment six months after receipt of the initial SCP. NRC comments contained in their final SCA would then be incorporated into the next SCP report issued by the Department.

*CRITICAL ACTIVITY

APPENDIX A-8 (Continued)

AGENCY: NRC

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-51a *	Site Characterization Analysis For Second Repository	Issue SCA	6/95
I-52a	Adoption of FEIS	Adopt FEIS, to Extent Practicable	3/94
I-53a	Radioactive Material Use For Second Repository	Concur on Use	6/95
I-54b *	Update License Application in Accordance With 10 CFR Part 60.24	Review and Update LA License to receive and possess HLW	3/96 - 12/97
I-54c *	Issue License to Receive and Possess HLW	Issue License for Phase 1 Operations of First Repository	12/97
I-55a *	Requirements for SCPs for Second Repository	Identify Information Requirements	Con- tinuing thru 11/99
I-61a	2nd Repository EIS Cooperating Agency	Serve as Cooperating Agency	11/93 - 9/99
I-61d *	Environmental Impact Statement For Second Repository	Review and Comment	3/99 - 6/99
I-62a	Preliminary Sufficiency Comments For Second Repository	Review and Comment	3/99 - 11/99
I-66b *	Amended License Application	Review Amended LA for Phase 2 Operations for First Repository	6/98- 1/2001
I-66c *	Amended License Application	Issue Amended License for Phase 2 Operations for First Repository	1/2001
I-67a	Adoption of FEIS for Second Repository	Adopt FEIS, to Extent Practicable	5/2002

*CRITICAL ACTIVITY

APPENDIX A-8 (Continued)

AGENCY: NRC

<u>Table Reference</u>	<u>Task</u>	<u>Action Required</u>	<u>Date</u>
I-69b *	License Application For Second Repository	Review LA	2/2000- 5/2002
I-69c *	License Application For Second Repository	Issue Construction Authorization	5/2002
I-70a *	NRC Status Report	Report to Congress	2/2001, 2/2002
II-1a	Develop Procedural Agree- ment with DOE	Sign Procedural Agreement	11/3/83 Actual
II-2e *	Review Safety Analysis Report Packages (SARPs) and Grant Cask Design Certifications	Review and Comment; Grant Certification of Designs	3/89 - 12/90
III-1a	Development of MRS Proposal	Consultation	11/85 Actual
III-1c	Draft MRS Proposal	Review and Comment	12/85 - 2/86 Actual

*CRITICAL ACTIVITY

APPENDIX B

NUCLEAR WASTE POLICY ACT OF 1982, SECTION 114(e)

(e) PROJECT DECISION SCHEDULE

- (1) The Secretary shall prepare and update, as appropriate, in cooperation with all affected Federal agencies, a project decision schedule that portrays the optimum way to attain the operation of the repository involved, within the time periods specified in this subtitle. Such schedule shall include a description of objectives and a sequence of deadlines for all Federal agencies required to take action, including an identification of the activities in which a delay in the start, or completion, of such activities will cause a delay in beginning repository operation.
- (2) Any Federal agency that determines that it cannot comply with any deadline in the project decision schedule, or fails to so comply, shall submit to the Secretary and to the Congress a written report explaining the reason for its failure or expected failure to meet such deadline, the reason why such agency could not reach an agreement with the Secretary, the estimated time for completion of the activity or activities involved, the associated effect on its other deadlines in the project decision schedule, and any recommendations it may have or actions it intends to take regarding any improvements in its operation or organization, or changes to its statutory directives or authority, so that it will be able to

mitigate the delay involved. The Secretary, within 30 days after receiving any such report, shall file with the Congress his response to such report, including the reasons why the Secretary could not amend the project decision schedule to accommodate the Federal agency involved.

APPENDIX C

NUCLEAR WASTE POLICY ACT OF 1982, SECTION 120

EXPEDITED AUTHORIZATIONS

Section 120(a) ISSUANCE OF AUTHORIZATIONS

(1) To the extent that the taking of any action related to the site characterization of a site or the construction or initial operation of a repository under this subtitle requires a certificate, right-of-way, permit, lease, or other authorization from a Federal agency or officer, such agency or officer shall issue or grant any such authorization at the earliest practicable date, to the extent permitted by the applicable provisions of law administered by such agency or officer. All actions of a Federal agency or officer with respect to consideration of applications or requests for the issuance or grant of any such authorization shall be expedited, and any such application or request shall take precedence over any similar applications or requests not related to such repositories.

(2) The provisions of paragraph (1) shall not apply to any certificate, right-of-way, permit, lease, or other authorization issued or granted by, or requested from, the Commission.

(b) TERMS OF AUTHORIZATION--Any authorization issued or granted pursuant to subsection (a) shall include such terms and conditions as may be required by law, and may include terms and conditions permitted by law.

APPENDIX D

ACRONYMS AND DEFINITIONS

ACP Area Characterization Plan
AF Air Force
ARR Area Recommendation Report
BIA Bureau of Indian Affairs
BLM Bureau of Land Management
CA Construction Authorization
CEQ Council on Environmental Quality
COE Army Corps of Engineers
DEIS Draft Environmental Impact Statement
Department Department of Energy
DOC Department of Commerce
DOD Department of Defense
DOE Department of Energy
DOI Department of Interior
DOJ Department of Justice
DOL Department of Labor
DOT Department of Transportation
EA Environmental Assessment
EIS Environmental Impact Statement
EPA Environmental Protection Agency
ES Exploratory Shaft
FEIS Final Environmental Impact Statement
FWS Fish and Wildlife Service
LA License Application
Mission Plan Mission Plan for the Civilian Radioactive Waste Management
Program (DOE/RW 0005, June 1985)
MOU Memorandum of Understanding
MRS Monitored Retrievable Storage
N/A Not Applicable
NLT No Later Than
NRC Nuclear Regulatory Commission
NPS National Park Service
NWSA The Nuclear Waste Policy Act of 1982--Pub. L. 97-425
OCRWM Office of Civilian Radioactive Waste Management
OMB Office of Management and Budget
PAS Potentially Acceptable Sites
PDS Project Decision Schedule
PDPDS Preliminary Draft Project Decision Schedule
PRSB Program Reference Schedule Baseline
RCR Regional Characterization Report
Regulatory Standard Format and Content of Site Characterization Report
Guide 4.17 for High-Level-Waste Geologic Repositories
RFP Request for Proposal
SCA Site Characterization Analysis
SCP Site Characterization Plan
Secretary Secretary of Energy
SSR Site Selection Report
TEF Test and Evaluation Facility
USDA United States Department of Agriculture
USGS United States Geological Survey

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