



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

*C. Hickey*

JAN 7 1985

MEMORANDUM FOR: Ronald L. Ballard, Chief  
 Environmental & Hydrologic Engineering Branch, DE

FROM: Clarence R. Hickey, NRR Coordinator

SUBJECT: NRR STAFF INVOLVEMENT IN POST-EA ACTIVITIES RELATED  
 TO NRC LICENSING OF DOE HIGH LEVEL WASTE GEOLOGIC  
 REPOSITORIES

The current role of NRR in providing technical assistance to NMSS for environmental review of the Department of Energy's EAs will be completed on-or-about March 20, 1985, when NRC submits its formal written comments to DOE. NRR expertise and staff time apparently will be needed by NMSS after the EA review period in order to assist NMSS in further carrying out its function under NEPA and the Nuclear Waste Policy Act of 1982 (NWPA).

In the long term, the licensing of the first two geologic repositories will occur on a schedule roughly like that below. The dates given are the most current estimates provided by DOE.

<u>Milestone</u>	<u>1st Repository</u>	<u>2nd Repository</u>
• Draft EAs	12/84	9/88
• Final EAs	6/85	12/88
• Selection of 3 sites for characterization	9/85	9/89
• Development of 3 SCPs	10/85-6/86	10/89-6/90
• Draft EIS	1990	1/95
• Final EIS	1991	7/95
• DOE Submits Phase I Construction Authorization (CAA) to NRC	8/90	12/95
• NRC Construction Authorization	8/93	12/98
• DOE Submits License Application to NRC	8/95	10/01

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<u>Milestone</u>	<u>1st Repository</u>	<u>2nd Repository</u>
• NRC Grants License	12/97	9/04
• DOE Submits Phase II LA to NRC	6/98	-
• NRC Grants License	1/01	-

NRC (and NRR staff) will be involved at several points along the paths to licensing.

In the near term, NRR staff may be asked to provide technical assistance to NMSS, probably through DOE's development of a final EIS - see Enclosure 1. Specifically, the Davis-to-Denton memo of August 28, 1984 and the NMSS Technical Assistance SOW of May 8, 1984 identified several environmental and socioeconomic tech. assistance needs through at least FY86. These are described below.

#### Davis-to-Denton Memo (General NMSS Needs)

1. After the submittal of formal comments to DOE on each EA (about 3/20/85), the NRR staff may, from time to time, be expected to assist NMSS staff on follow-up activities related to their particular portion of the review [4th page of the memo].
2. To be able to meet the NRC commitment not to delay DOE's program, NMSS may need to have NRR's technical resources available virtually on demand over the next six to nine months, as DOE completes its site screening process and the President makes decisions on the sites to be characterized [4th page of the memo].

#### Technical Assistance SOW (Specific NMSS Needs)

1. Following completion of the comments on the EAs, the NRR staff may assist NMSS staff in identifying issues which may require resolution in order for NRC to adopt DOE's EIS. This work may include, but not be limited to the following:
  - (a) working with DOE toward resolution of EA comments and problems;
  - (b) critical review of selected DOE reports and plans;

- (c) technical review of monitoring programs;
- (d) preparing guidance documents on site monitoring, Site Characterization Plans (SCP), and SCP updates; and
- (e) investigating areas of environmental concern. [from page 4 of the SOW].

- These four general categories of post-EA activities are related to item 1 of the Davis-to-Denton memo that requests the availability of NRR staff for general follow-up work.
- The NRR reviews of the EAs already have provided comments on the DOE plans and monitoring (as outlined in the EAs). Future work on items (a) and (b) above, therefore, will be follow-up and in addition to the support already provided by NRR staff via the EA review mechanism.
- All four NRR branches may be involved at various times during the review process.

2. Technical work [needed by NMSS] includes reviewing environmental and socioeconomic sections of Site Characterization Plans (SCP), SCP updates, technical documents, as well as participating in meetings and site visits as needed. [from pages 1-2 of the SOW]

- SCP review work will occur after DOE issues the Final EAs and recommends 3 sites (of the original 9) for detailed characterization and study as potential repository locations. NRC Reg. Guide 4.17 outlines the format and content of site characterization reports (including environmental and natural resource considerations) that will guide the staff's review. NRC efforts will entail detailed review of DOE study plans for on-site and near-site work at three separate sites. Meeting with DOE and its contractors may occur. Site visits by selected NRR staff might be in order for sites with identified problems.
- Site Characterization Plans are scheduled to be developed and submitted to NRC as follows:

BWIP - late in calendar year 1985 (FY 86)  
NTS - early in calendar year 1986 (FY 86)  
Salt - middle of calendar year 1986 (FY 86)

- The potential exists for interagency environmental workshops to be held, during which DOE would present its plans for environmental studies and mitigation that will be contained in the SCPs. The tentative schedule for these workshops is:
    - BWIP - Summer 1985 (FY 85)
    - NTS - Fall 1985 (FY 85)
    - Salt - Late 1985 (FY 86)
  - METB, SAB and EHEB may be involved in this effort, beginning during late FY 85 and extending well into FY 86 (see Enclosure 1).
3. NRR may be requested to provide assistance to NMSS in the evaluation of the extent to which NRC can adopt the DOE EIS, as called for in the NWPA. [page 2 of the SOW]
- The EIS will address one site as the proposed first repository location and two alternative sites. The site-specific information to be used in the EIS will come from the site characterization studies (that NRC will have reviewed and commented on during the SCP stage). This EIS-related work, therefore, will consist of the NRC pre-EIS efforts, as well as on our reviews of the Draft and Final EISs issued by DOE. A continuing involvement by NRR, therefore, could contribute substantially to the assurance that the EIS will be essentially complete, and one that will fulfill NRC's needs and requirements without modification by NRC during the Draft-to-Final-EIS stage.
  - All 4 NRR review branches could be involved in the review of the published draft EIS, probably during FY 89-90.
4. Input and advice [by NRR] will be needed for sections of NRC review plans and generic and site technical positions that might be developed by the staff. [page 2 of SOW]
- This is an open-ended statement related to development of work products and inputs designed to improve the NRC review process related to HLWS licensing and impact assessment.
  - No NRR work related to the environmental or socioeconomic aspects of this item has occurred yet. It is likely that as the current review proceeds, the need to develop positions or review plans will arise. The needs can be addressed at that time. Any standardization of procedures during the

licensing of the first repository will permit a more efficient process to result during licensing of the second repository.

- All four NRR review branches could be involved.
5. NMSS has requested that all NRC groups reviewing the EAs (including the NRR branches) identify regulatory issues which would benefit from further study prior to receipt of the actual license application. The studies should be designed to resolve licensing issues prior to the publication (by DOE) of the Draft EIS. NMSS must approve these studies, and has the potential to fund those determined to be relevant and essential for NRC's licensing of the repository.

NRR staff has given preliminary thought to some relevant studies, such as those briefly described below. It is expected that NRR staff would provide additional input to the development of work scopes.

- Impacts for the three sites selected for characterization should be expressed in the terms used in Table S-3 which NRR uses in reactor licensing decision making. This should be of value to NMSS in the ultimate licensing decision and may be of value to NRR in future casework. (EHEB, Samworth and Billups)
- DOE has based its conclusions regarding long term climatic changes solely on projections from historical records. This may not account adequately for the influence of man's activities on climate. For example the chemical composition of the atmosphere is being changed by man. A study is recommended to determine whether climatic projections are adequate. (METB, Spickler)
- NMSS is preparing an interagency agreement between NRC and the Bureau of Mines (BM) for the purpose of assessing the future natural resource potential of metallic, non-metallic, and oil and gas resources at the repository sites. Don Cleary (SAB) is assisting NMSS on this project by conducting the analysis of the economic significance of the resources described and enumerated by BM.
- NMSS should evaluate some of the decision making tools being developed by NRR to take advantage of some of our experience. For example: risks in waste repository development should be

put in perspective with other societal risks; criteria for "acceptable risks" should be developed; "how-safe-is-safe-enough" concept should apply to NMSS decisions, also. (EHEB, Samworth)

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Enclosure:  
As stated

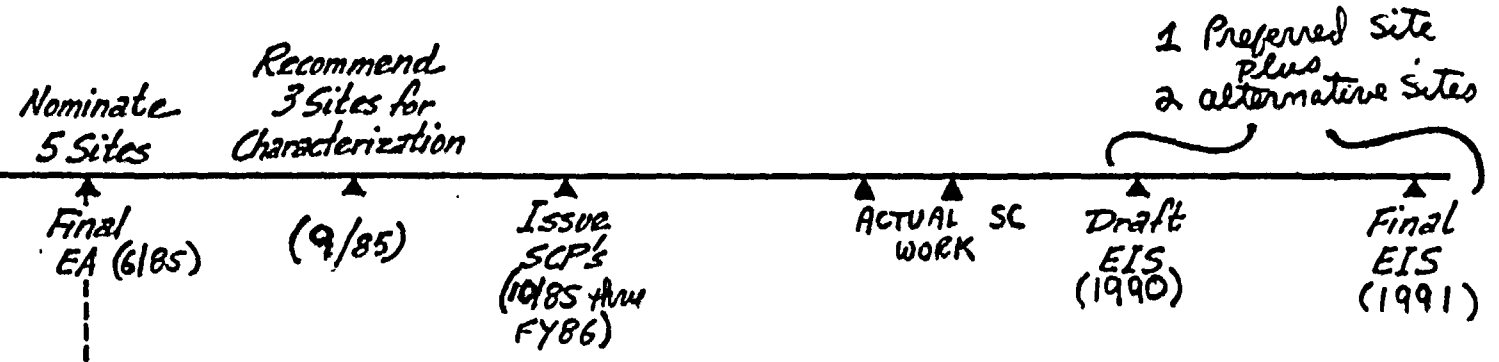
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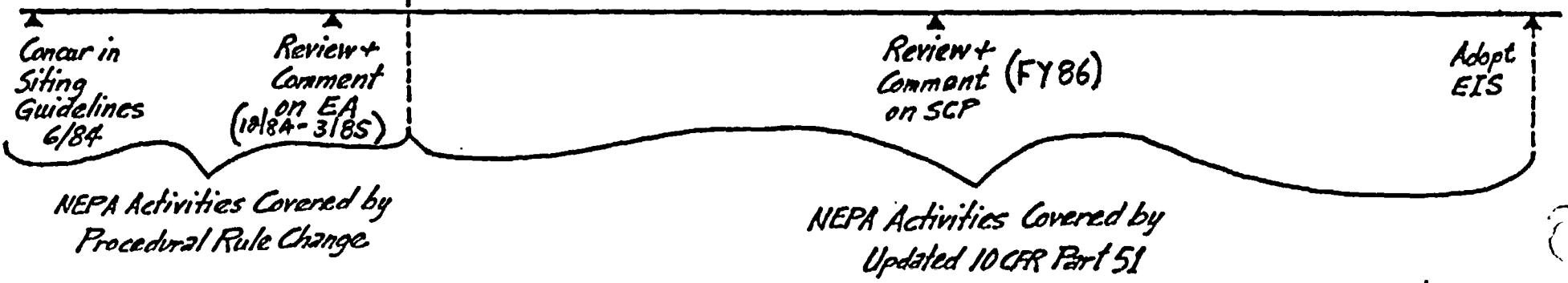
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# NEPA-Related Activities for Geologic Repositories

DOE



NRC



Note: This approximates the steps and timing of the NEPA activities related to licensing of the first repository. A similar framework will occur for the licensing of the second repository.