

November 29, 1995

Mr. Ronald A. Milner, Director  
for Program Management and Integration  
Office of Civilian Radioactive Waste Management  
U. S. Department of Energy, RW 30  
1000 Independence Avenue, S.W.  
Washington, D.C. 20585

SUBJECT: MINUTES OF THE SEPTEMBER 6, 1995, BI-MONTHLY MANAGEMENT MEETING

Dear Mr. Milner:

Enclosed are the minutes of the September 6, 1995, bi-monthly management meeting which was held at NRC headquarters in Washington, D.C. between the staff of the U.S. Nuclear Regulatory Commission and representatives of the U.S. Department of Energy (DOE).

This meeting included a discussion of potential legislative actions and their impact on the high-level waste (HLW) program. Since the date of the meeting, some Congressional action has occurred through the budget process and additional legislation is under consideration. It is recognized by both parties that final Congressional action will have significant impacts on both the NRC and DOE HLW programs.

If you have any questions regarding this letter, please contact John Thoma of my staff. Mr. Thoma can be reached at (301) 415-7293.

Sincerely,

Original Signed By

Daniel Gillen, Acting Branch Chief  
High Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosure: As stated

cc: See attached list

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**LIST FOR LETTER TO R. MILNER DATED November 29, 1995**

cc: R. Loux, State of Nevada  
J. Meder, Nevada Legislative Counsel Bureau  
W. Barnes, YMPO  
C. Einberg, DOE/Washington, DC  
M. Murphy, Nye County, NV  
M. Baughman, Lincoln County, NV  
D. Bechtel, Clark County, NV  
D. Weigel, GAO  
P. Niedzielski-Eichner, Nye County, NV  
B. Mettam, Inyo County, CA  
V. Poe, Mineral County, NV  
W. Cameron, White Pine County, NV  
R. Williams, Lander County, NV  
L. Fiorenzi, Eureka County, NV  
J. Hoffman, Esmeralda County, NV  
C. Schank, Churchill County, NV  
L. Bradshaw, Nye County, NV  
W. Barnard, NWTRB  
R. Holden, NCAI  
A. Melendez, NIEC  
S. Brocoum, YMPO  
R. Arnold, Pahrump, NV  
M. Stellavato, Nye County, NV  
J. Lyznicki, AMA

## MINUTES

U.S. NUCLEAR REGULATORY COMMISSION/U.S. DEPARTMENT OF ENERGY

### BI-MONTHLY MANAGEMENT MEETING

SEPTEMBER 6, 1995

On September 6, 1995, staff from the U.S. Nuclear Regulatory Commission, Division of Waste Management and the Spent Fuel Project Office met with representatives of the U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM) for a bimonthly management meeting. The meeting was held at NRC headquarters in Rockville, Maryland. These management meetings provide an opportunity for items of mutual concern in the high-level waste program to be discussed by NRC and DOE management in an open public forum. Other attendees represented the State of Nevada; Nye County, Nevada; the United States Nuclear Waste Technical Review Board ; and the Center for Nuclear Waste Regulatory Analysis and DOE contractors. Attachment 1 shows the meeting agenda and Attachment 2 lists the attendees.

DOE began the meeting with a discussion of current legislative proposals that might affect the DOE repository program at Yucca Mountain and of the uncertainties introduced by legislative changes being considered. A general theme of Congressional committee discussions has been to shift to interim storage and reduce activity at Yucca Mountain. In light of the funding uncertainties, DOE is preparing contingency plans and determining options that would be appropriate for various levels of funding. Options that are being considered range from the level of funding that would require DOE to cease the repository program to the funding level needed to stay on the current program plan. At a lower funding level, resolution of many issues would have to be deferred and the program plan would need revision. At Yucca Mountain, DOE considers it essential for the tunnel boring machine (TBM) to reach the Ghost Dance Fault and, at a minimum, to obtain information from heater tests. Currently, it is expected that the TBM can reach the Ghost Dance Fault by mid-1996. NRC noted that it is also faced with funding uncertainties. One of NRC's key concerns is to preserve the Center for Nuclear Regulatory Analysis. It was emphasized that in the planning process it is important for NRC and DOE to discuss what is important from a regulatory point of view.

Enclosure

With regard to the spent fuel program, should the funding be reduced below a certain level, DOE may have to shut down generic research on dry storage. At the lowest funding level, the multi-purpose canister (MPC) might have to be deferred and specifications would be put on the storage facility so that industry could propose a design. The Mescalero tribal group indicates a December 1995 application date. The current plan calls for the pad to receive an NRC certified dual-purpose cask in the first phase and for a simplified hot cell to be transferred to storage in the second phase. If it is decided that the United States should have interim storage only, the MPC will not be the choice. Since many decisions are yet to be made, the system needs a great deal of flexibility at this point.

The next discussion related to the establishment of a single point of contact at each of the two agencies. NRC indicated that Joseph J. Holonich, Chief of the High-Level Waste and Uranium Recovery Projects is the general point of contact for the high-level waste program. Similarly, the general point of contact for DOE currently named in Appendix 1 of the NRC/DOE Project Specific Agreement is the Associate Director for Systems and Compliance, OCRWM. It was agreed to update this appendix with regard to any changes in organizational titles for NRC and DOE and to name specific points of contact. As part of this discussion, the NRC wanted to discuss the exchange of technical information at the staff level via informal mechanisms. The three specific points that NRC wanted to emphasize concerning informal contacts are discussed in Attachment 3. Basically, informal technical communications are allowed provided (1) no positions are taken by either side, (2) no direction of work may be given by either side, and (3) no modifications of work may result from these technical discussions.

NRC then discussed its revised prelicensing program strategy, which focuses on the key technical issues (KTIs) that are judged by staff as most important to repository performance. This "vertical slice approach" is described more fully in Attachment 4. With the addition of an "integration slice", there are eleven KTIs, rather than the ten KTIs mentioned in the attachment. However, the number of KTIs may change as more detailed information is obtained. This approach streamlines the NRC program and allows focused modifications in the program due to budgetary changes. Though the types of interactions between NRC and DOE will not change, interactions will be more sharply focused on the resolution of key issues. Emphasis will be on

careful planning to optimize information exchange with the least impact on DOE's program. It is expected that facilitating communication on KTIs will help expedite information exchange.

The NRC is committed to the license application annotated outline (AO) process for documentation of information on DOE's developing license application, with some issue resolution via the Progress Reports. A preliminary evaluation report (PER) prepared by the NRC will evaluate DOE's most recent AO. DOE expressed appreciation for NRC's PER on Chapter 10 of the AO (Quality Assurance). Since the process is new, the timing for the first PER is slower than hoped. NRC is preparing three additional chapters of the PER. As DOE provides updates of the AO, NRC will provide updates of the PER, resources permitting.

The NRC is proposing a new type of interagency transmittal, the "Issue Resolution Progress Report." A question was raised as to whether issue resolution Progress Reports are needed if PERs are being used to assess the AO. The NRC responded that issue resolution reports are designed to give an overview of a specific technical issue which may be fragmented into multiple components in the AO. Therefore a specific PER may focus only on one part of a technical issue. The NRC will continue to prepare PER chapters in order to assure a focus on licensing. In response to another question regarding the scope and content of this new type of report, NRC noted that even though issue resolution progress reports focus on specific issues, they should be consistent with the PER.

DOE noted that Appendix A in Progress Report Number 12 will relate the Site Characterization Plan (SCP) to the AO and reflect changes in the SCP due to changes in the Program Plan.

NRC stated that it is currently considering only a limited number of in-field verifications (IFVs) to evaluate how DOE is addressing specific NRC concerns, such as the Exploratory Studies Facility design control process. Since there will be a limited number of IFVs, NRC considers it unnecessary to develop a generic procedure. Future IFVs will be coordinated with DOE on an issue specific basis.

In response to a question from DOE on plans to finalize the Format and Content Review Guide (FCRG), NRC replied that no

revisions would come before a new EPA standard is adopted.

The next discussion concerned the schedule for completing two rulemakings: one on potentially adverse conditions and one on design basis accidents. With regard to the rulemaking on potentially adverse conditions, NRC stated that the Commission had disapproved issuance of the final amendments to clarify the requirements for the assessment of the siting criteria for a high-level waste repository and the relationship of these criteria to post-closure performance. The proposed rulemaking would have amended 10 CFR 60.122 and 10 CFR 60.21. DOE requested a copy of the Commission paper on this rulemaking and the staff requirements memorandum when they were released to the public. The State and County representatives requested copies also. NRC also stated that the proposed design basis events rulemaking was issued for public comment in March 1995. Ten comment letters were received and the paper with recommended changes is scheduled to be sent to the Commission for consideration by December 1995. A third rulemaking issue, concerning safeguards, was briefly discussed. It was agreed to put a discussion of this safeguards rulemaking on the next management or licensing meeting agenda.

DOE then discussed the status of the Environmental Impact Statement (EIS), noting that the 120 day comment period ends on December 5. NRC would like to maintain cognizance of this document but will not send comments unless a major problem is identified. DOE stated that it would interpret NRC's silence as equivalent to finding the EIS satisfactory. Silence does not necessarily mean NRC acceptance, but NRC acknowledges it has a responsibility to identify any major concerns with the DOE EIS.

The new licensing paradigm was included on the agenda because clarification is needed as to whether site characterization should precede design. NRC pointed out that a key question is what design is proposed to go into the mountain. A discussion ensued about the iterative, interactive process of building a body of plans and information while changes in site information are affecting design and vice versa. And while DOE appreciates the NRC goal of providing timely feedback on areas of regulatory uncertainty, DOE expressed concerns about the timing of some guidance proposed by the NRC (for example, in the area of Substantially Complete Containment).

In discussing the availability of the geochemistry whitepaper, DOE pointed out that the basic issue is determining when a paper is ready for public release. DOE stated that the time of issuance of papers would normally be when the paper is signed by the Director of OCRWM as an official DOE document. DOE will make preliminary data available to the NRC, upon written request, providing that NRC recognizes that such data has not yet been approved by DOE and is not to be referenced as a DOE document. NRC agreed that if a draft document is sent at the request of NRC, it would be appropriate to acknowledge that the document is an early draft in commenting on potential deficiencies. As a separate, but related issue, NRC stated that it is continuing to review past Center technical documents to make them publicly available.

In discussing the document submittal priority list (Attachment 5), the role of the PER and the AO was discussed. For example, the response to the Erosion Topical Report will receive a PER response corresponding to the appropriate chapter of the AO. The process of reviewing Topical Reports in the form of a PER was discussed. DOE expressed concerns regarding NRC's proposed use of PER's to provide comments to DOE in lieu of Safety Evaluation Reports (SER) as specified in the NRC's "Topical Report Review Plan." DOE was especially concerned regarding the use of a PER to document the NRC's comments on the Erosion Topical Report, as the use of SERs has precedent in licensing proceedings.

It was noted that the vertical slice on Igneous Activity will include two study plans. DOE stated that it has received some Center reports. NRC then discussed accomplishments since the June 2 NRC-DOE Management meeting. DOE discussed upcoming submittals through February 1996 in keeping with the agreement reached at the June Management meeting to provide the NRC with a six month advance notice of submittals (Attachment 6).

After noting that the next bi-monthly management meeting will be a videoconference at DOE facilities in November rather than the originally planned October date, the meeting was adjourned.

*John O. Thoma*

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John O. Thoma  
High-Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management  
Office of Nuclear Material  
Management Safety and Safeguards  
U.S. Nuclear Regulatory Commission

*Priscilla Bunton*

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Priscilla Bunton  
Regulatory Integration  
Division  
Office of Civilian  
Radioactive Waste  
U.S. Department of Energy



## **AGENDA**

**SEPTEMBER 6, 1995 MANAGEMENT MEETING**

**U. S. DEPARTMENT OF ENERGY / U.S. NUCLEAR REGULATORY COMMISSION**

**ROOM T8-A1,F1  
11545 ROCKVILLE PIKE  
ROCKVILLE, MARYLAND**

<b>1:00pm</b>	<b>Opening Comments</b>	<b>All</b>
	<b>Legislative Update</b>	<b>DOE</b>
	<b>Initial Reaction to National Academy of Sciences Recommendation</b>	<b>All</b>
	<b>NRC Single Point of Contact</b>	<b>DOE</b>
	<b>Vertical Slice Update</b>	<b>NRC</b>
	<b>Expectations for LA AO Prelicensing Evaluation Reports</b>	<b>DOE</b>
	<b>Schedule for completing rulemakings</b>	<b>NRC</b>
	<ul style="list-style-type: none"><li>● <b>Potentially Adverse Conditions</b></li><li>● <b>Design Basis Events</b></li><li>● <b>Safeguards Rulemaking</b></li></ul>	
	<b>Environmental Impact Statement</b>	<b>DOE</b>
	<b>New Licensing Paradigm</b>	<b>NRC</b>
	<b>Availability of DOE Geochemistry Whitepaper</b>	<b>NRC</b>
	<b>Document Submittal/Priority List</b>	<b>DOE/NRC</b>
	<b>Closing Remarks</b>	<b>All</b>
	<b>Adjournment</b>	

**NRC-DOE MANAGEMENT MEETING ATTENDANCE LIST**

September 6, 1995

NRC Headquarters

Room T8 A-1, Two White Flint North

Rockville, Maryland

PRINTED NAME	ORGANIZATION/COMPANY	PHONE
MARK DELLICATTI	NRC	301 415-6620
Pauline Brooks	NRC	301 415-6604
JOHN LINEHAN	NRC	301 415-7280
William Travers	NRC	301 415-5500
JANIS WINTER	NRC	301-415-6780
John Assell	CNWRRA	301/881-0289
Steve Frushman	NV NWPO	702/687-3744
DAN FARRAR	NRC	301 235-6073
Robert Johnson	NRC	301-415-7282
KEVIN KALMAN	NRC	301-415-6664
Chris Einberg	DOE	202-586-8869
Steve Nesbit	DOE-MRO	702-295-9301
Richard Goff	Ray F Weston	202 646 6743
Robert Gamble	CRWMS HQ	703-204-8520
DAN PROCHNOW	DOE SUPPORT	301-428-9583
Russell Irish	NRC/OEG	301-415-5912
Bob Hinds	NRC/OEG	301-415-5776
PRISCILLA BUNTON	DOE	202 586-8365
JOHN O. THOMA	NRC	301-415-7293
Keith J. McConnell	NRC	301-415-7289
DAN GRASER	NRC/ERM/ESSA	301 415 5507
MICHAEL BELL	NRC/DWM	301-415-7286
Joe Holonick	NRC/DWM	301 415 7238
David F. Fenster	CRWMS HQ/WCFS	703-204-8866



## STAFF CONTACTS WITH DOE

- Strictly technical discussions can take place from staff to staff.
  
- Initial contacts between NRC and DOE staff (and/or contractors) should be preceded by communication between the points of contact for informal technical communications (e.g., telephone calls) listed in Appendix 1 of the Project Specific Agreement which implements the NRC/DOE Procedural Agreement.
  
- The rules governing these technical discussions are:
  1. No positions may be taken by either side;
  2. No direction of work may be given by either side;
  3. No modifications of work may result from the technical discussions.

c. Telephonic Communications

Formal transmittal of technical information to the NRC shall be through the Office of Systems and Compliance. The points of contact for informal, technical communications (eg., telephone calls) are listed below:

AREA	NRC	DOE
Quality Assurance	Quality Assurance Section Leader or designee	Director, Yucca Mountain Quality Assurance Division
Performance Assessment	Repository Performance Assessment Section Leader or designee	Chief, Technical Analysis Branch
Waste Package	Materials Engineering Section Leader or designee	Chief, Field Engineering Branch
Geologic Repository Operations Area	Geotechnical Engineering Section Leader or designee	Chief, Field Engineering Branch
Exploratory Studies Facility	Geotechnical Engineering Section Leader or designee	Chief, Exploratory Studies Facility Branch
Geology	Geology-Geophysics Section Leader or designee	Chief, Site Investigations Branch
Hydrology	Hydrologic Transport Section Leader or designee	Chief, Site Investigations Branch
Geochemistry	Hydrologic Transport Section Leader or designee	Chief, Site Investigations Branch

d. NRC On-site Representative (OR)

Communications and interactions between the NRC OR and DOE are discussed in Appendix 7.

DRAFT

REVISED PRELICENSING PROGRAM STRATEGY FOR THE  
U.S. NUCLEAR REGULATORY COMMISSION HIGH-LEVEL WASTE REPOSITORY PROGRAM  
("VERTICAL SLICE APPROACH")  
HIGHLIGHTS OF INTEREST TO THE DOE

- o The vertical slice approach has been developed to streamline the NRC program in response to declining budgets and changes to DOE's program.
- o NRC vertical slice activities will focus on the resolution, at the staff level, of key technical issues significant to repository performance.
- o Using this audit approach, NRC will evaluate the overall effectiveness of DOE's program for preparing an acceptable license application and the sufficiency of site characterization.
- o The vertical slice approach will facilitate prioritizing NRC activities based on significance to repository performance, will integrate NRC activities to focus on issue resolution, and will simplify NRC and DOE products and interactions toward preparing an acceptable license application.
- o Plans for implementing the vertical slice approach for each key technical issue are under development by NRC staff. NRC urges scheduling technical exchanges to discuss the key technical issues as well as the implementation plans.
- o Specifically, the Vertical Slice Approach:
  1. Focuses the NRC program on those interactions and activities needed to resolve, at the staff level, the key technical issues judged by the staff as most important to repository performance.
    - NRC staff will focus its review and guidance on these issues.
    - Issue resolution is consistent with NRC-DOE agreements.
    - 10 key technical issues have been identified based on performance assessment and a systematic evaluation of regulatory requirements.
    - Although DOE must demonstrate compliance with all licensing requirements, this audit approach will provide insight to the effectiveness of DOE's program for the key technical issues.

2. Focuses the development of the License Application Review Plan (LARP) and independent models and codes on the key technical issues; prioritizes review plan and model development consistent with DOE's schedules for high-level findings and other important milestones.
3. Includes "vertical slice" reviews and interactions for each issue.
  - Reviews and interactions with DOE and others are specifically identified in key technical issue plans for implementing the vertical slice approach. These interactions will focus on selected DOE activities and documents relevant to an issue in a time frame compatible with DOE's activities (from the compliance conclusions in the License Application Annotated Outline to supporting models, data, and testing procedures).
  - Reviews will use the draft LARP and will focus on how DOE's program is addressing the key technical issues.
  - The results of these reviews will be used to evaluate the effectiveness of DOE's program.
  - DOE will need to determine if NRC comments are applicable to other parts of its program not reviewed and make appropriate adjustments.
  - The types of open and documented interactions with DOE, including other parties, will not change; however, interactions will be focused on progressing toward resolution of issues.
  - Emphasis will be given to early access to information and feedback to DOE.
  - Interactions will be carefully scheduled with DOE so as to avoid unnecessarily impacting DOE's program.
  - Interactions will be carefully planned and coordinated to optimize the exchange of information while simplifying formal preparation for these interactions.
  - Only a limited number of in-field verifications will be conducted as necessary to evaluate how DOE is addressing specific NRC significant concerns (e.g., ESF design control process).
  - Reviews and interactions will be documented using letter reports, Prelicensing Evaluation Reports, and Issue Resolution Progress Reports.
  - Letter reports have been used routinely to document interactions and transmit results of staff reviews.

- Prelicensing Evaluation Reports will document reviews of portions of DOE's LAAO and references related to the key technical issues; acceptable areas and concerns (open items) will be documented to show progress toward an acceptable license application.
- Issue Resolution Progress Reports will be prepared to document the staff's perception based on the results of a collection of activities, about the progress toward resolution of the key technical issues and effectiveness of DOE's new program approach.

4. Enhances integration of staff work by reorganizing staff teams.

- Multidisciplinary teams have been established for each issue to help coordinate all activities needed to address each issue.
- The Yucca Mountain Team will continue.
- An NRC Management Board has been established to review the progress of the vertical slice program, and to promptly raise concerns to DOE requiring management attention to facilitate issue resolution.



YUCCA  
MOUNTAIN  
PROJECT

Studies

DOE-NRC Bi-Monthly Management Meeting

DOE Document Submittal Priority List

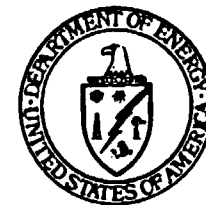
Presented by:

April V. Gil

Licensing Team Leader

Assistant Manager for Suitability and Licensing

Yucca Mountain Site Characterization Office



September 6, 1995

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

Attachment 5

# **DOE/YMSCO Priority List**

- **Draft Regulatory Guide DG-3003, Format and Content for the License Application for the High-Level Waste Repository (FCRG) (DOE Comments August 1993)**
- **Proposed Rule Change to 10 CFR Part 60 on Potentially Adverse Conditions (DOE Comments October 1993)**
- **Seismic Topical Report I (Submitted June 1994, Supplemental Information November 1994, March 1995)**
- **License Application Annotated Outline Rev. 0 (March 1995)**
- **Study Plan 8.3.1.17.3.6, “Probabilistic Seismic Hazards Analyses” (April 1995)**

# **DOE/YMSCO Priority List**

(continued)

- **Erosion Topical Report Supplemental Responses (April 1995)**
- **Proposed Rule change to 10 CFR Part 60 on Design Basis Events (DOE Comments June 1993)**
- **Responses to Comments on Study Plan 8.3.1.8.5.1, “Characteristics of Volcanic Features” (July 1995)**
- **Responses to Comments on Study Plan 8.3.1.8.1.2, “Physical Processes of Magmatism and Effects on the Potential Repository” (August 1995)**
- **Annotated Outline for the Disposal Criticality Topical Report (August 1995)**

# Upcoming Submittals

- **Seismic Topical Report II (September 1995)**
- **Site Characterization Progress Report #12 (September 1995)**
- **Site Characterization Analysis Open Item Responses - Six Month Submittal (October 1995)**
- **License Application Annotated Outline Rev. 1 (January 1996)**
- **Numerous Study Plans**