



Youngblood

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APR 06 1988

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**INVITATION TO PARTICIPATE IN THE U.S NUCLEAR REGULATORY COMMISSION AND
U.S. DEPARTMENT OF ENERGY (DOE) TECHNICAL MEETING ON ALTERNATE CONCEPTUAL
MODELS OF THE GROUNDWATER SYSTEM AT THE YUCCA MOUNTAIN SITE**

The DOE is planning to conduct a technical meeting on the subject of alternative conceptual models of the groundwater system at Yucca Mountain, Nevada. This workshop is being planned as part of the consultation process. The purpose of the meeting is to consider different conceptual models of the groundwater system, including geologic, tectonic, hydrologic, geochemical, and climatological influences in the Yucca Mountain region. Open discussion of the similarities, differences, and compatibilities of the various conceptual models is anticipated. The relative merits of the models will not be evaluated during the meeting.

Our records indicate that you commented on, or expressed an interest in, the conceptual model of the Yucca Mountain groundwater system as presented in the Environmental Assessment or in the Site Characterization Plan/Consultation Draft (SCP/CD). The DOE is therefore encouraging you to attend the technical meeting and to present or participate in discussions of alternate conceptual models. If you are unable to attend and have a colleague(s) who has expressed an interest, please extend this invitation to that person(s).

Presenters are encouraged to address the following points to facilitate open discussion about aspects of the various conceptual models:

- o Assumptions underlying the model.
- o Physical processes and disruptive events incorporated in the model.
- o Boundary conditions.
- o Available data supporting the model.
- o Additional data needed to refine the model and field and laboratory testing proposed to gather the additional data.
- o Analyses to be performed to evaluate the data and the conceptual model.
- o Implications for groundwater travel time and radionuclide release.

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Please note that information concerning the additional data needed to refine the model and the testing proposed to gather the additional data is considered essential to the objective of the meeting. That objective is to outline steps needed to determine if the testing program proposed in the SCP/CD will provide the data needed to test alternative conceptual models of the groundwater system at Yucca Mountain. A verbatim transcript of the meeting will be prepared in order to maintain as complete a record as possible.

The meeting will be held April 11-14, 1988, at the Aladdin Hotel in Las Vegas, Nevada. A preliminary agenda of the meeting is enclosed. Please contact Edward Regnier, DOE Office of Civilian Radioactive Waste Management, (202) 586-4959 or FTS 586-5355, if you have any questions. We also request that you advise Mr. Regnier as to whether you will participate or not.



Carl P. Gertz, Project Manager
Waste Management Project Office

WMPO:RAL-1729

Enclosure:
Preliminary Agenda

cc w/encl:

V. J. Cassella, HQ (RW-222) FORS
Ralph Stein, HQ (RW-24) FORS
S. H. Kale, HQ (RW-20) FORS
T. H. Isaacs, HQ (RW-20) FORS
E. P. Regnier, HQ (RW-242) FORS
S. J. Brocoum, HQ (RW-233) FORS
D. L. Siefken, Weston, Washington, DC
B. J. Youngblood, NRC, Washington, DC
M. A. Glora, SAIC, Las Vegas, NV
M. B. Blanchard, WMPO, NV

DOE-NRC TECHNICAL MEETING
ALTERNATIVE CONCEPTUAL MODELS OF THE GROUNDWATER SYSTEM
YUCCA MOUNTAIN

AGENDA

Meeting purpose is to consider different conceptual models of the groundwater system, including geologic, tectonic, hydrologic, geochemical, and climatologic influences in the Yucca Mountain region. This is to promote open discussion about similarities, differences, and compatibilities of the various conceptual models. Using such information, the DOE will be able to ensure that the SCP contains plans for data collection sufficient to evaluate alternative models. Each presentation of a conceptual model should include the following six items:

- o Assumptions supporting the model
- o Physical processes and disruptive events incorporated in the model
- o Boundary conditions
- o Available data supporting the model
- o Additional data needed to refine the model and testing proposed to gather the additional data (surface-based/ESF)
- o Analyses to be performed to evaluate the data and the conceptual model

Day 1

9:00 - 9:20	DOE Introductory Remarks	
	Purpose and Scope Background	R. Stein, DOE/HQ M. Blanchard, DOE/NV
9:20 - 9:30	State of Nevada Introductory Remarks	R. Loux, State of NV
9:30 - 11:00	NRC Introductory Remarks and Summary of SCP-CD Concerns Relevant to Conceptual Models	
11:00 - 11:30	DOE Response	
11:30 - 1:00	Lunch	
1:00 - 4:00	DOE Conceptual Model	
1:00 - 1:10	Introduction	M. Blanchard, DOE/NV
1:10 - 2:45	The Hydrologic Setting o Include the 6 items identified above	W. Wilson, USGS
2:45 - 3:15	Clarifying questions and commentary from participants	

3:15 - 3:30	Break	
3:30 - 4:30	Translation to numerical models for performance assessment	S. Sinnock, SNL
	o Include the 6 items identified above	
4:30 - 5:00	Clarifying questions and commentary from participants	
<u>Day 2</u>	Presentations of other conceptual models: (Presenters to be arranged)	
1 to 3 hrs for each presenter	Description of Alternative Conceptual Model	
	o Include the 6 items identified above	
15 to 30 min.	Clarifying Questions from Participants on Description of Conceptual Model	
<u>Day 3</u>		
8:00 - 10:30	Moderator-led Open Discussion of Similarities and Differences Among the Various Conceptual Models	
	o Extent to which the alternative conceptual models incorporate the same physical processes and disruptive events and where they differ	
	o Extent to which the alternative conceptual models employ the same underlying assumptions and where they differ	
	o Extent to which the alternative conceptual models have similar initial fixed and variable boundary conditions and where they differ	
	o Extent to which the alternative conceptual models have similar information needs and where they differ	
	o Implication of models on ground water travel time and radionuclide transport	
10:30 - 11:00	Caucus/Break	
11:00 - 12:00	View of Each Participating Organization presented by a Spokesperson from Each Organization	
12:00 - 1:00	Lunch	

1:00 - 3:00

Moderator-led Open Discussion on Sufficiency of Data
Collection Plans in SCP-CD
(DOE to provide brief summary/overview of related
topics from SCP-CD)

- o Extent to which the surface-based testing information needs are similar and where they differ
- o Extent to which the ESF testing information needs are similar and where they differ

3:00 - 3:30

Break

3:30 - 5:00

Discussion on Sufficiency of Data (continued)

5:00 - 5:30

Caucus for Day 4 Wrap-up Statements

Day 4

8:00 - 9:00

DOE Statement: Discussion Relevant to Szymanski's Draft
Report; Wrap-up Statement on Alternative Conceptual Models

9:00 - 9:30

NRC Wrap-up Statement on Alternative Conceptual Models

9:30 - 10:00

State Wrap-up Statement on Alternative Conceptual Models

10:00 - 12:00

Preparation of Draft Meeting Summary

12:00 - 1:00

Lunch

1:00 - 5:00

Discussion and Finalization of Meeting
Summary