

ENCLOSURE

Minutes From the November 18, 1993,  
Interactions Scheduling Meeting

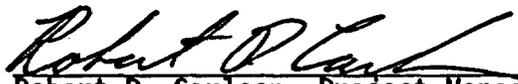
On November 18, 1993, staff from the Nuclear Regulatory Commission met at the U.S. Department of Energy (DOE) headquarters with representatives from DOE for an interactions scheduling meeting. The purpose of the meeting was to discuss and schedule interactions in the area of high-level waste management between the NRC staff and DOE from January through June 1994. Also in attendance were representatives from the State of Nevada, Nye County, NV, and Clark County, NV. A list of attendees is found in Attachment 1.

At the meeting, the NRC and DOE staff agreed to schedule three technical exchanges and one site visit during the period from January to June 1994. Also, two status update meetings on the Exploratory Studies Facility (ESF) were scheduled during this period. The list of interaction topics, including the objective, scope, date, and location of each is provided in Attachment 2.

The scheduling of the NRC proposed technical exchange, "Field Heater Experiments to Resolve Issues Associated With Coupled Thermal-Hydrologic-Mechanical-Chemical (THMC) Processes," was deferred until the next interactions scheduling meeting when DOE would have more information to provide. However, DOE stated that it would forward the Scientific Investigations Plan and any other pertinent documentation on its field heater experiments related to coupled THMC processes to the NRC staff for reference.

Both NRC and DOE staff agreed that there should be early discussions prior to all scheduled interactions to establish the details of the agendas. This entails providing mutual access to relevant documents and letters containing key issues on the respective interaction topics.

The next interactions scheduling meeting was scheduled for May 17, 1994, in Washington, D.C. This meeting will be conducted to select and schedule interactions for July through December 1994. In order to avoid scheduling conflicts with other meetings held by related organizations or interested parties, NRC and DOE staff agreed to block-out time frames each month for the remainder of 1994 to schedule future interactions. The dates that were tentatively agreed upon were the following: July 26-28; August 23-25; September 13-15; October 25-27; November 7-9; and December 6-8. Interaction topics, scopes, objectives, dates, and locations will be determined at the next interactions scheduling meeting.

 11/29/93  
Robert D. Carlson, Project Manager  
Repository Licensing and Quality  
Assurance Project Directorate  
Division of High-Level Waste  
Management  
Office of Nuclear Material Safety  
and Safeguards  
U.S. Nuclear Regulatory Commission

 11/30/93  
Linda J. Desely, Chief  
Regulatory Integration Branch  
Office of Civilian Radioactive  
Waste Management  
U.S. Department of Energy

NRC/DOE INTERACTIONS SCHEDULING MEETING  
November 18, 1993

Attendance List

Washington, D.C. (Forrestal Building)

<u>Name</u>	<u>Organization</u>	<u>Phone</u>
Robert Carlson	NRC/HLWM	(301) 504-2435
Charlotte Abrams	NRC/HLWM	(301) 504-3403
Linda Desell	DOE/HQ	(202) 586-1462
Chris Einberg	DOE/HQ	(202) 586-8869
April Gil	DOE/YMPO	(702) 794-7622
Tom Bjerstedt	DOE/YMPO	(702) 794-7590
Susan Jones	DOE/YMPO	(702) 794-7613
E. Tiesenhausen	Clark County, NV	(702) 455-5175
R. Murphy	Nye County, NV	(206) 754-6001
Carl Johnson	State of Nevada	(702) 687-3744
Marva Johnson	State of Nevada	(702) 687-3744
Mary Birch	M&O/Duke	(703) 204-8862
Steven LeRoy	M&O/Duke	(702) 794-7836
Mike Lugo	M&O/TRW	(702) 794-7830

## NRC/DOE INTERACTIONS FOR JANUARY - JUNE 1994

---

- Topic:** "Evaluation of the Potentially Adverse Condition 'Evidence of Extreme Erosion During the Quaternary Period' at Yucca Mountain, Nevada" (Erosion Topical Report, March 1993) (Technical Exchange/Site Visit)
- Objective:** To discuss preliminary staff questions developed during the review of the subject topical report and to visit, in the field, specific locations/features relevant to the staff's preliminary concerns. The purpose of the technical exchange is to better understand the field relations used to support the analyses presented in the topical report, thereby possibly expediting the review process. This technical exchange would be a precursor to facilitate development of the safety evaluation.
- Scope:** This technical exchange would focus on questions resulting from the staff's review of the subject topical report. The scope should include discussion of the staff's questions as well as field visits to key exposures and sample localities that form the basis for analyses made in the DOE report.
- Date:** February 1-2, 1994 (Based on receipt of questions from NRC staff 30 days in advance of interaction)
- Location:** Las Vegas, NV/Yucca Mountain, NV
- 

- Topic:** Exploratory Studies Facility (ESF) Status Update (Technical Meeting)
- Objective:** To provide an update of activities related to the design and construction of the ESF.
- Scope:** To be negotiated during an NRC/DOE teleconference prior to the meeting.

**Date:** February 9, 1994

**Location:** Washington, D.C.

---

**Topic:** Status of Work Relevant to Characterization of the Saturated and Unsaturated Zone Flow (Technical Exchange)

**Objective:** To discuss the status of DOE's efforts relevant to data collection and modeling of groundwater flow at Yucca Mountain.

**Scope:** This technical exchange will focus on the current understanding of hydrological flow in the saturated and unsaturated zone at Yucca Mountain, and the work being conducted by DOE to progress toward developing a methodology for determining groundwater travel time.

**Date:** March 15-16, 1994

**Location:** Denver, CO

---

**Topic:** DOE's Approach to the Characterization of Faults and Fractures Near Yucca Mountain and the Stratigraphy, Structure, and Rock Properties Along the North Ramp of the ESF (Site Visit)

**Objective:** To discuss DOE's progress in the characterization of faults and fracture networks at Yucca Mountain as described in the Site Characterization Plan (SCP) and Study Plan 8.3.1.4.2.2. and to apprise the NRC staff of the current understanding of stratigraphic and structural data collected along the path of the ESF prior to initiation of large-scale tunnel boring activities. To facilitate staff reviews of DOE ESF documents and study plans and address concerns raised in reviews of the SCP and related study plans.

**Scope:** This site visit would focus on DOE's efforts to characterize faults and fracture networks at the Yucca Mountain site and on DOE's efforts to characterize the stratigraphy, structure, and rock properties in advance of the construction of the ESF. The visit would include an update of DOE efforts to characterize faults in the Yucca Mountain region. Additionally, in its review of Study Plan 8.3.1.4.2.2 (Rev. 2), the staff notes that there are several activities still in the testing phase in which DOE will assess the adequacy of data collection methodologies. This site visit would update the NRC staff on the progress made in the characterization of faulting and fracture networks, including the final results of photo-grammetric mapping of the ESF starter tunnel, the results of testing the seismic tomography/vertical seismic profiling methods, and the results of surface fracture network studies performed on Fran Ridge. The scope of discussions would include information related to the characterization of faults and fractures, and how these data are being incorporated into models used for geohydrology, geology, thermomechanical testing, and engineering design. Because stratigraphic and structural factors play a key role in the configuration of the ESF, the site visit would also include discussions of the results of drilling of the North Ramp-Geologic Holes and Systematic Drilling hole SD-12, as well as any trenching activities. Discussions would also address stratigraphic and structural modeling (including cross-sections and 3-point problems) and the analysis of rock characteristics used in support of ESF design activities. Anticipated revisions in stratigraphy of the site or stratigraphic nomenclature would also be discussed. Additionally, anticipated encounters with fault zones and testing activities associated with those faults would be discussed.

**Date:** May 3-5, 1994

**Location:** Yucca Mountain, NV

---

**Topic:** ESF Status Update (Technical Meeting)

**Objective:** To provide an update of activities related to the design and construction of the ESF.

**Scope:** To be negotiated during an NRC/DOE teleconference prior to the meeting.

**Date:** May 26, 1994

**Location:** Las Vegas, NV

---

**Topic:** Total System Performance Assessment (TSPA) (Technical Exchange)

**Objective:** To provide an update on the progress achieved by NRC and DOE in the area of TSPA.

**Scope:** To discuss the preliminary results of DOE's TSPA, the integration of site characterization results into the TSPA, DOE's scenario methodology, and radionuclide release modeling. NRC will present Iterative Performance Assessment, Phase 2 and DOE will present TSPA, Phase 2. The respective parties will discuss the results of their assessments and plans to incorporate further improvements in subsequent iterations, including ways to use the results of TSPA to direct the collection of data in order to reduce uncertainty.

**Date:** June 20-21, 1994

**Location:** Washington, D.C.

---