



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 98608
Las Vegas, NV 89193-8608

JAN 30 1995

Daniel A. Dreyfus, Director, Civilian Radioactive Waste Management,
HQ (RW-1) FORS

**YUCCA MOUNTAIN SITE CHARACTERIZATION OFFICE WEEKLY HIGHLIGHTS FOR THE WEEK
ENDING JANUARY 13, 1995 (SCPB: N/A)**

I. FORECAST SIGNIFICANT EVENTS

A. Assistant Manager for Engineering and Field Operations

No significant forecast events to report.

B. Assistant Manager for Scientific Programs

No significant forecast events to report.

C. Assistant Manager for Environment, Safety, and Health

No significant forecast events to report.

D. Assistant Manager for Suitability and Licensing

The 70th Advisory Committee on Nuclear Waste will meet January 18-19, 1995 in Rockville, Maryland. The Committee plans to consider the following: Nuclear Waste Container Materials Research Program presentations from U.S. Nuclear Regulatory Commission staff which include anticipated discussions on topics such as the use of regulatory analysis, the engineered barrier system and the integrated waste package program; the history of ground water travel time; rock mechanics research and technical assistance programs; and a tentative U.S. Nuclear Regulatory Commission Probabilistic Risk Assessment Policy and Implementation presentation followed by a discussion of the policy and its applicability to radioactive waste disposal issues.

A U.S. Department of Energy-U.S. Nuclear Regulatory Commission Management Meeting on Isolation Demonstration Strategy will be held via videoconference on January 17, 1995. Topics include: an update on the Waste Isolation Strategy; linkages and interfaces from Site Characterization Plan design and Performance Assessment licensing strategies/performance allocation tables to the document hierarchy/requirements documents; and the actions underway to document linkages, revisions, and transitions for project documents/reports, e.g., the Site Characterization Program Baseline.

A U.S. Department of Energy-U.S. Nuclear Regulatory Commission Technical Meeting on Exploratory Studies Facility Design and Construction will be held in Rockville, Maryland, on January 24, 1995. Discussions include: an Exploratory Studies Facility

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construction update; a drilling, testing and sampling program update; a discussion on Exploratory Studies Facility design control and the U.S. Nuclear Regulatory Commission in-field verification; an overview of design progress and the design process; an integration of site characterization data into repository design; and the U.S. Department of Energy process for identification and tracking of commitments to the U.S. Nuclear Regulatory Commission.

A U.S. Department of Energy-U.S. Nuclear Regulatory Commission Technical Exchange on Seismic Hazard Assessment and Seismic Design will be held via videoconference on January 26, 1995. Topics include: U.S. Nuclear Regulatory Commission discussions regarding their response to the U.S. Department of Energy letter of November 9, 1994, on the review of Seismic Topical Report I, and U.S. Nuclear Regulatory Commission concerns and U.S. Department of Energy discussions about the Annotated Outline for Seismic Topical Report II.

The U.S. Nuclear Regulatory Commission will conduct an in-field verification of Management and Operating Contractor design control and quality assurance activities February 6-9, 1995 in Las Vegas, Nevada.

E. Assistant Manager for Administration

No significant forecast items to report.

F. Office of Public Affairs

No forecast items to report.

II. CRITICAL ITEM STATUS - YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

A. Assistant Manager for Engineering and Field Operations

1. Exploratory Studies Facility

The tunnel boring machine advanced to Station 1+35.2 by January 11, 1995. There is a planned shutdown of tunnel boring machine operations until Tuesday, January 17, 1995, due to the holiday on Monday, modifications to facilitate steel set installation, and a faulty hydraulic cylinder.

2. Construction

Construction continues on the Switchgear Building foundation, subsurface switchgear pad, and water supply system. Construction activities have been hampered by recent heavy rains.

3. Design

Design Package 1D is currently on schedule for a release date of February 10, 1995.

B. Assistant Manager for Scientific Programs

1. The following is a listing of site characterization field activities that are currently active:

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SITE CHARACTERIZATION PLAN ACTIVITY	TITLE	COMMENT
8.3.1.3.2.1	Mineralogy, Petrology & Rock Chemistry of Transport Pathways	Exploratory Studies Facility sampling
8.3.1.3.2.2	Mineralogic & Geochemical Alteration	Exploratory Studies Facility sampling
8.3.1.4.2.1	Characterization of Vertical/Lateral Distribution of Stratigraphic Units in Site Area	Ongoing core logging
8.3.1.4.2.2	Structural Features within Site Area	Surface and Exploratory Studies Facility mapping
8.3.1.4.3.1	Systematic Acquisition of Site Specific Subsurface Information	Systematic drilling/testing
8.3.1.8.5.1	Characterization of Volcanic Features	Test pits, trenching
8.3.1.14.2	Soil & Rock Properties of Potential Location of Surface Facilities	Trenching and ramp exploration holes
8.3.1.17.4.2	Location & Recency of Faulting Near Prospective Surface Facilities	Trench logging
8.3.1.17.4.3	Quaternary Faulting within 100 km of Yucca Mountain	Surface mapping
8.3.1.17.4.4	Quaternary Faulting in NE-Trending Fault Zones	Surface mapping
8.3.1.17.4.6	Quaternary Faulting within Site Area	Trench logging
8.3.1.2.1.1	Precipitation & Meteorological Monitoring for Regional Hydrology	Ongoing measurements
8.3.1.2.1.2	Runoff & Streamflow	Ongoing measurements
8.3.1.2.1.3	Regional Groundwater Flow System	Ongoing monitoring
8.3.1.2.2.1	Unsaturated Zone Infiltration	Logging of neutron-access holes; ponding tests
8.3.1.2.2.2	Water Movement Tracer Tests	Cl-36 measurements (surface-based testing drillholes, Exploratory Studies Facility)
8.3.1.2.2.3	Percolation in the Unsaturated Zone	Unsaturated zone drilling/testing
8.3.1.2.2.4	Characterization of Unsaturated Zone (Exploratory Studies Facility)	Hydrochemistry/radial boreholes testing
8.3.1.2.2.6	Gaseous Phase Movement in Unsaturated Zone	Unsaturated Zone drilling/testing
8.3.1.2.2.7	Unsaturated Zone Hydrochemistry	Unsaturated Zone drilling/testing
8.3.1.2.3.1	Site Saturated Zone Groundwater Flow System	Ongoing monitoring, C-Well testing
8.3.1.2.3.2	Saturated Zone Hydrochemistry	Ongoing monitoring
8.3.1.15.1.8	In Situ Design Verification	Construction monitoring/testing
8.3.4.2.4.4	Engineered Barrier System Field Test	Preparation of Fran Ridge Test Block

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2. Site Characterization Plan/Study Plan Status

No study plans were approved by the Yucca Mountain Site Characterization Office.

STUDY PLAN BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to Yucca Mountain Site Characterization Office	26	0
In Screening Review	0	0
In Yucca Mountain Site Characterization Office Review	2	0
Awaiting Comment Resolution	4	3
In Verification Audit	3	2
Awaiting Yucca Mountain Site Characterization Office Approval	0	0
Awaiting Submission to U.S. Nuclear Regulatory Commission	0	0
Awaiting U.S. Nuclear Regulatory Commission Initial Review	9	3
Accepted by U.S. Nuclear Regulatory Commission	57	11
Totals	101	19
Total Submitted to U.S. Nuclear Regulatory Commission	66	14

State of Nevada Comments Status:

Received Comments from the State of Nevada	32
Responses Transmitted to the State of Nevada	32

U.S. Nuclear Regulatory Commission Comments Status:

Received Comments from U.S. Nuclear Regulatory Commission	42
Responses Transmitted from U.S. Department of Energy to U.S. Nuclear Regulatory Commission	29

C. Assistant Manager for Environment, Safety, and Health

Presented Yucca Mountain environmental and socioeconomic issues to the Nuclear Waste Technical Review Board on January 10, 1995, in Beatty, Nevada. Presentations included an environmental monitoring program update, a repository National Environmental Policy Act overview, and a review of the socioeconomic program.

D. Assistant Manager for Suitability and Licensing

No critical items to report.

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E. Assistant Manager for Administration and

No critical items to report.

F. Office of Public Affairs

No critical items to report.

III. GENERAL INFORMATION ITEMS

A. Assistant Manager for Engineering and Field Operations

Waste Package

Staff completed and issued a white paper on Mined-Geologic Disposal System preferences for waste stream considering oldest fuel first and youngest fuel first, but none less than ten years. The paper quantified the differences in the two choices.

Staff participated in discussions at Lawrence Livermore National Laboratory concerning the corrosion testing program needed to support substantially complete containment. Areas were identified where additional testing resources may be needed.

Staff are reviewing the waste package design for the low thermal loading case to determine alternative methods to more efficiently provide protection from an aggressive corrosion environment.

Repository Design

Staff completed the Data Needs Status Report and submitted it to the Yucca Mountain Site Characterization Office on January 13, 1995. This report describes the scope of work, provides examples of the content of the final report due on April 28, 1995, and fulfills the requirements of Level 3 Milestone TM 567A.

Staff completed quality assurance reviews of the Technical Document Preparation Plan for the task Repository Design Data Needs. This document is required by Quality Assurance Procedure 3-5 for quality affecting studies and describes the scope of work, methodology, quality assurance reviews, and schedule for the task.

B. Assistant Manager for Scientific Programs

No general information items to report.

C. Assistant Manager for Environment, Safety, and Health

Conducted environmental compliance and safety surveillances at the Yucca Mountain site ensuring compliance with permit and programmatic requirements.

D. Assistant Manager for Suitability and Licensing

Staff participated in the Nuclear Waste Technical Review Board's Winter Meeting held in Beatty, Nevada, January 10-11, 1995. The topics covered in the Board meeting included U.S. Department of Energy's environmental monitoring program; their strategy for

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complying with the National Environmental Policy Act for preparing an Environmental Impact Statement for the multipurpose canister procurement and repository development; U.S. Department of Energy's socioeconomic program; their waste isolation strategy for underground testing in the Exploratory Studies Facility; and relative viewpoints from local, state, and tribal units.

Staff incorporated changes resulting from the Office of Civilian Radioactive Waste Management comments on Progress Report 11, and forwarded replacement pages for incorporation into the copy being sent to General Counsel and Congressional Programs for the next phase of the concurrence review.

Staff participated in the January 9, 1995 preliminary dry run for the January 24, 1995 Exploratory Studies Facility Technical Meeting.

Staff participated in a meeting of the Seismic Design Topical Report writing team on January 12, 1995. The primary purpose for the meeting was to prepare for the U.S. Department of Energy-U.S. Nuclear Regulatory Commission Technical Exchange on January 26, 1995.

Staff coordinated a dry run for the U.S. Department of Energy-U.S. Nuclear Regulatory Commission Management Meeting on Waste Containment and Isolation Strategy scheduled for January 17, 1995.

Developed a draft agenda for the U.S. Department of Energy-U.S. Nuclear Regulatory Commission Bi-Monthly Management Meeting scheduled for February 8, 1995. The draft agenda includes the following: U.S. Department of Energy presentations on document submittal reductions and the status of submittals; a U.S. Nuclear Regulatory Commission presentation on the harassment and intimidation policy; and an open discussion on the isolation demonstration strategy.

The Mined Geologic Disposal System License Application Interactive review meetings and comment resolutions were held throughout the week with cleanup and reproduction proceeding through the end of January. However, the comment period has been extended to February 23, 1995, to accommodate preparations for the Technical Program Review.

E. Assistant Manager for Administration

No general items to report.

F. Office of Public Affairs

Yucca Mountain Site Characterization Project staff gave two general project overviews to 65 people. A presentation on transportation and geology was also given for 50 people for the University of Nevada, Reno speaker series, in Reno, Nevada.

Yucca Mountain Site Characterization Project staff coordinated and conducted two tours of Yucca Mountain for five guests from the Office of Civilian Radioactive Waste Management and for ten guests from the Nuclear Waste Technical Review Board.

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Yucca Mountain Site Characterization Project staff attended an Affected Units of Government meeting with the Under Secretary in Washington, D.C., on January 13, 1995. Staff prepared detailed briefing books about the ten affected counties for the Deputy and Under Secretaries of Energy to prepare for the meeting. The books gave a detailed history, biographies of key county people, and current issues the counties intended to discuss.

Yucca Mountain Site Characterization Project staff developed and delivered three outdoor signs informing the public of the Yucca Mountain Science Center in Beatty, Nevada. One sign is posted next to the center; the other two are at each end of town.

Staff completed 51 external information requests by providing written responses to written and verbal queries and/or by supplying existing literature.

G. Program Participants

Field Operations Support

Completed Drilling Management Organizational Plan for providing technical direction on field drilling operations. Plan will be presented to senior management for approval.

Lawrence Livermore National Laboratory

At Lawrence Livermore National Laboratory, the YMIM model was analyzed using an object-oriented program development approach. Such an approach will aid in the software quality assurance process by allowing the recording of design-stage developments in progress and by providing complementary views of the model structure. The analysis was done in parallel with the testing of a commercial software package for object-oriented modeling which includes diagramming, database, and internal consistency checking features. The test was a two-week trial-basis test of the package. The test application on YMIM resulted in some proposed streamlining of the code operation and some streamlining of the higher-level structure to better communicate the model structure and assumptions to the engineering and earth science subject-matter experts.

IV. UPCOMING EVENTS CALENDAR

Please note that the usage of "(P)" in the calendar indicates that the event is open to the public. Educational presentations and State and Public/Stakeholder Interactions are coordinated by the Speakers Bureau; contact Jackie Brandt at (702) 794-7759 or Lawrence Weekly at (702) 794-7896 for additional information. Exhibits are coordinated by Joanna Magruder at (702) 794-7056, and tours are coordinated by Carleen Hill at (702) 794-7375.

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Yucca Mountain
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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Project Contact</u>
A. <u>U.S. Department of Energy/Headquarters Meetings</u>			
No significant meetings to report.			
B. <u>Internal and U.S. Department of Energy/Nevada Operations Office (NV) Meetings</u>			
Wednesday, January 18	NV Managers Program Review	Las Vegas, NV	R. Nelson
C. <u>U.S. Nuclear Regulatory Commission Interactions</u>			
Tuesday, January 17	DOE/NRC Management Meeting: Isolation Demonstration Strategy	Video- conference	A. Gil
Thursday, January 19	NRC TE: Isolation Demonstration Strategy	Video- conference	A. Gil
Tuesday, January 24	Bi-Monthly ESF Technical Meeting (P)	Rockville, MD	C. Hanlon
Thursday, January 26	Technical Exchange Seismic Hazards Assessment (P)	Video- conference	T. Bjerstedt
D. <u>Nuclear Waste Technical Review Board Interactions</u>			
No significant interactions to report.			
E. <u>Advisory Committee on Nuclear Waste Interactions</u>			
Wednesday- Thursday, January 18-19	70th ACNW Meeting - NRC nuclear waste container materials research program; history of GWTT, NRC Probabilistic Risk Assessment)	Rockville, MD	TBD
F. <u>National Academy of Sciences Interactions</u>			
No significant interactions to report.			

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>Public/Stakeholder Interactions</u>			
Tuesday, January 17	Pahrump Science Center - Laser and Lights	Pahrump, NV	J. Blink
Saturday, January 21	Boy Scouts Nuclear Energy Workshop	Las Vegas, NV	Various

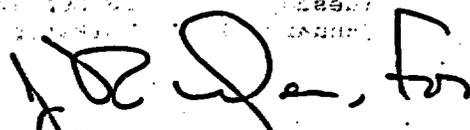
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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>Public/Stakeholder Interactions</u> (continued)			
Tuesday, January 24	LESSON Teacher Workshop I	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
Tuesday, January 24	Yucca Mountain Speaker Series "Oklo - A Natural Fission Reactor"	Las Vegas, NV	P. Kuroda
Tuesday, January 31	LESSON Teacher Workshop I	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
H. <u>Educational Interactions</u>			
Wednesday, January 18	Johnson Elementary School - Yucca Mountain Johnny	Las Vegas, NV	J. Hartley
Wednesday, January 25	O'Callahan Middle School - "Forces"	Las Vegas, NV	J. Blink
Tuesday, January 31	Johnson Elementary School - Lights	Las Vegas, NV	J. Blink
<u>Date</u>	<u>Event</u>	<u>Location</u>	
I. <u>Exhibits Scheduled</u>			
Saturday, January 21	Public Open House	Las Vegas, NV	
Tuesday, January 24	Futures Expo	Las Vegas, NV	
Wednesday, January 25	Corporate Facility Management Order, Future Use, and SDP Workshops	Las Vegas, NV	
<u>Date</u>	<u>Event</u>	<u>Escorts</u>	
J. <u>Tours Scheduled</u>			
Wednesday, January 18	Massachusetts Institute of Technology		TBD
Thursday, January 19	U.S. Nuclear Regulatory Commission		TBD

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Date	Event	Escorts
J. Tours Scheduled (continued)		
Saturday, January 21	Public Open House	Various
Tuesday, January 24	American Glovebox Society	TBD
Wednesday, January 25	Inyo County	TBD
Monday, January 30	Senior Tripsters	TBD


 Wesley E. Barnes
 Project Manager

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