



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 98608
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FEB 28 1995

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

YUCCA MOUNTAIN SITE CHARACTERIZATION OFFICE WEEKLY HIGHLIGHTS FOR THE WEEK ENDING FEBRUARY 17, 1995 (SCPB: N/A)

I. FORECAST OF SIGNIFICANT EVENTS

A. Assistant Manager for Engineering and Field Operations

The Integrated Data and Control System design package is in comment resolution. The scheduled release date for construction is the end of February 1995.

Design Package 1E is progressing as planned. The final external review of Design Package 1E is scheduled for April 17, 1995.

Tunnel boring machine operations will continue throughout the weekend and the Presidents' Holiday on Monday, February 20.

The License Application Annotated Outline is being reviewed by the Assistant Manager for Engineering and Field Operations staff with comments due by Friday, February 17, 1995.

Submittal of the Waste Package Conceptual Design Report is scheduled for March 10, 1995.

The current construction schedule shows the tunnel boring machine reaching milestone station 3+75 meters by March 20, 1995.

The design for the muck conveyor foundations continues and the scheduled release date for construction is May 22, 1995.

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The development of the waste package Conceptual Design Report is progressing toward a scheduled delivery date of March 10, 1995.

The Repository Horizon Selection Report is in progress and is scheduled for completion on April 10, 1995.

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 Advisory Committee on Nuclear Waste 71st Meeting is scheduled for February 21-22, 1995, in Rockville, Maryland. Discussions will include the following: meeting between U.S. Nuclear Regulatory Commission staff and the Swedish Nuclear Power Inspectorate on validation strategies for computer models and conceptual models; topical guidelines for the Licensing Support System; meeting with the Director, Division of Waste Management, related to ground water travel time, and key technical uncertainties associated with high-level radioactive waste disposal; and discussions with the Director, U.S. Nuclear Regulatory Commission's Office of Research, to discuss safety research as it relates to radioactive waste disposal.

A U.S. Department of Energy-U.S. Nuclear Regulatory Commission Technical Exchange on Criticality Control is scheduled for March 1, 1995, in Rockville.

U.S. Department of Energy presentations will include the following: Overview of Disposal Criticality; Regulatory Interaction Plan for Disposal Criticality; Disposal Criticality Analysis Topical Report Annotated Outline; Testing Needs to Support Disposal Criticality Analysis; and the Status of Topical Report on Burnup Credit for Storage and Transportation.

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A U.S. Department of Energy-U.S. Nuclear Regulatory Commission Technical Meeting on Exploratory Studies Facility Design and Construction is scheduled for March 21, 1995, in Las Vegas, Nevada. Tentative meeting topics include Exploratory Studies Facility updates of the following activities: construction; drilling, testing, and sampling program; design status; rationale for seismic design values; and Waste Package Design/Site Characterization Interface. Other topics include: the U.S. Nuclear Regulatory Commission's response to the U.S. Department of Energy's letter of November 14, 1994; license application schedule under the Program Approach; and the relationship of design stages to Program Approach milestones.

E. Assistant Manager for Administration

No significant forecast items to report.

F. Office of Public Affairs

The Deputy Project Manager will present an update on Yucca Mountain Site Characterization Project activities at the Civilian Radioactive Waste Management Decision Makers Summit, February 21, 1995, in Washington, D.C.

Yucca Mountain Site Characterization Project staff will present an assessment of the probability of a future volcanic event disrupting the potential repository during the 10,000 year postclosure period at the Probabilistic Volcanic Hazard Analysis Project Conference, February 22-23, 1995, in Phoenix, Arizona.

II. CRITICAL ITEM STATUS - YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

A. Assistant Manager for Engineering and Field Operations

1. Exploratory Studies Facility

Reynolds Electrical and Engineering, Co., Inc. has begun fabricating steel sets for the tunnel to increase the stock of available steel sets and to preclude a lack of steel sets for future construction.

Delivery of the first 20 steel sets from Energy Steel was due on February 13, 1995. Due to a delay with welders' qualification to this program, fabrication did not begin until February 16, 1995. The scheduled shipping date is now February 20. No problems are anticipated since previous shipments were ahead of schedule.

The tunnel boring machine reached competent ground and was able to tunnel 11 meters on February 14, 1995. The shield behind the cutter head has passed the Bowridge Fault Zone. The current ground conditions are soft but stable and still require the use of steel sets and full lagging. The tunnel boring machine is at station 2+50.0 meters as of February 17, 1995.

2. Construction

Continued placing and compacting select fill for the water tank foundation at the Booster Pump Station, the Exile Hill water storage tank footings, as well as the installation and backfilling of the water line trenches southward from the North Portal Pad.

B. Assistant Manager for Scientific Programs

Began excavation of trenches at three sites across known and suspected Quaternary fault scarps on the Crater Flat Fault on February 14, 1995. This fault is the westernmost, west-dipping normal fault in Crater Flat.

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

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	C1-36 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

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	25	0
In Screening Review	0	0
In Yucca Mountain Site		
Characterization Office Review	3	0
Awaiting Comment Resolution	5	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	102	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	44
Responses Transmitted from U.S. Department of Energy	
to U.S. Nuclear Regulatory Commission.....	36

C. Assistant Manager for Environment, Safety, and Health

Submitted the fourth quarter calendar year 1994 Ambient Air Monitoring Report for air quality operating permit compliance to the State of Nevada Bureau of Air Quality. Fulfillment of this permit requirement allows continuation of uninterrupted surface-disturbing activities.

D. Assistant Manager for Suitability and Licensing

No critical items to report.

E. Assistant Manager for Administration

No critical items to report.

F. Office of Public Affairs

No critical items to report.

III. GENERAL INFORMATION ITEMS

Yucca Mountain Site Characterization Project staff attended the Technical Program Review, which was held February 13-17, 1995, in Las Vegas. Project participants discussed technical aspects of the Yucca Mountain Site Characterization Project. The meetings were open to the public and oversight groups were encouraged to participate.

A. Assistant Manager for Engineering and Field Operations

No general information items to report.

B. Assistant Manager for Scientific Programs

The Sandia National Laboratories white paper, "A Thermal Testing Program for the Program Approach," is in Quality Assurance Procedure 6.2 review. The paper presents a consolidated program for the in situ thermal testing in the Exploratory Studies Facility to support technical site suitability confirmation and licensing application.

C. Assistant Manager for Environment, Safety, and Health

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

D. Assistant Manager for Suitability and Licensing

Staff initiated a regulatory review of the Waste Isolation Pilot Plant's No-Migration Variance Petition draft. The final report is due to the U.S. Environmental Protection Agency in May 1995.

E. Assistant Manager for Administration

No general information items to report.

F. Office of Public Affairs

Yucca Mountain Site Characterization Project staff attended a Congressional Information Program Leadership Workshop sponsored by the Nuclear Energy Institute February 15-17, 1995, in Las Vegas. The focus of the workshop was on high-level waste legislation and also provided a technical briefing status report on the U.S. program for spent-fuel management. Workshop attendees were also given a tour of Yucca Mountain on February 17, 1995.

Yucca Mountain Site Characterization Project staff gave three educational presentations, on geology, "Yucca Mountain Johnny," and Black History Month, and a presentation on Career Day. Total attendance for these presentations was 305 students. A geology field trip to Red Rock Canyon was attended by 15 students.

Yucca Mountain Site Characterization Project staff gave general project overviews for the Nuclear Energy Institute and for citizens of Furnace Creek, California, to an audience of 265 people. Staff also taped a project overview presentation that will be aired on the Public Broadcasting Station.

Yucca Mountain Site Characterization Project staff gave a presentation on the Yucca Mountain safety overview to 300 people at the annual U.S. Department of Energy/Nevada Operations Occupational Safety and Health Symposium in Las Vegas on February 14, 1995.

Yucca Mountain Site Characterization Project staff coordinated and conducted two Lawrence Livermore Elementary School Science Study of Nature (LESSON) workshops. A LESSON I Workshop was held for 40 teachers and a LESSON II Workshop was held for 30 teachers. Both workshops involved hands-on instructions in physics activities the teachers can use in classroom teaching.

Yucca Mountain Site Characterization Project staff gave two geology workshops for 106 fifth graders, February 13-14, 1995; and an energy workshop for 30 fifth graders, February 16, 1995, at the Las Vegas Yucca Mountain Science Center. A Science Day was also held for 200 students at William R. Lummis Elementary School on February 17, 1995.

Yucca Mountain Site Characterization Project staff coordinated and conducted two tours of Yucca Mountain for 160 guests.

Yucca Mountain Site Characterization Project staff attended the National Site Specific Advisory Board Workshop, February 14-15, 1995, in Washington.

Staff completed 39 external information requests by providing written responses to written and verbal queries and/or by supplying available literature.

Other General Interest Items

Field and Operations Support personnel completed the vehicle(s) Master Equipment List, a project deliverable.

The Mined Geologic Disposal System group delivered Level 3 Milestone TM450A, "Emplacement Equipment/Concept Development Status Report" (effective February 17, 1995) to the Yucca Mountain Site Characterization Office.

The Mined Geologic Disposal System group supported the Office of Civilian Radioactive Waste Management Quality Assurance inspectors to begin a surveillance concerning the baseline change process. Individuals in the design group were interviewed in addition to field engineers at the Yucca Mountain site in Construction Management. The surveillance will continue starting on February 21, 1995 until complete. The surveillance closure date is open-ended. Individuals involved with the baseline change process will be contacted on February 21 primarily regarding Nevada Implementing Line Procedures 3-10 and 3-25 and the design control process. Potential issues will be addressed as they surface within the design group.

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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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Yucca Mountain Site Characterization 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>			
No significant meetings to report.			
C. <u>U.S. Nuclear Regulatory Commission Interactions</u>			
Wednesday, March 1	Technical Exchange Repository Criticality Control	Rockville, MD	T. Bjerstedt
Tuesday- Wednesday, March 21-22	Bi-Monthly ESF Technical Meeting	Las Vegas, NV	C. Hanlon
D. <u>Nuclear Waste Technical Review Board Interactions</u>			
No significant interactions to report.			
E. <u>Advisory Committee on Nuclear Waste Interactions (ACNW)</u>			
Wednesday- Thursday, February 22-23	71st ACNW Meeting NRC approach to Evaluate Ground Travel Time	Rockville, MD	C. Hanlon
Wednesday- Thursday, March 15-16	72nd ACNW Meeting Briefing on Apache Leap Test Site and Hydrology RES Program	Rockville, MD	C. Hanlon
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 Outreach/Stakeholder Interactions</u>			
Wednesday, February 22	UNR Speaker Series - Risk Assessment	Reno, NV	B. Andrews
Wednesday- Thursday, February 22-23	Probabilistic Volcanic Hazard Analysis Project Project Assessment of Probability of Future Volcanic Event Disrupting Potential Repository	Phoenix, AZ	B. Crowe

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>Public Outreach/Stakeholder Interactions</u> (continued)			
Thursday, February 23	Civilian Radioactive Waste Management Decisionmakers Summit - Status Report on Yucca Mountain Site Characterization	Washington, DC	R. Dyer
Thursday, February 23	Teachers Workshop at Las Vegas YMSC - Native American Culture	Las Vegas, NV	R. Arnold
Thursday, February 23	University of Calgary/ Department of Geology and Geophysics - Decision Analysis and Risk Assessment	Calgary, Canada	S. Mattson
Friday, February 24	State, Tribal and Local Government Coordination Group Meeting - Overview of DOE Plans for Repository Environmental Impact Statement	Tonopah, NV	W. Dixon
Friday, February 24	University of Calgary/ Department of Geology & Geophysics-Petrology and Geology of Yucca Mountain	Calgary, Canada	S. Mattson
Monday, February 27	Clark High School - Black History Assembly	Las Vegas, NV	L. Weekly
Tuesday, February 28	Robert E. Lake Elementary School - "Forces"	Las Vegas, NV	J. Blink
Tuesday, February 28	Dondero Elementary School - Native American Culture	Las Vegas, NV	R. Arnold
Wednesday, March 1	UNLV Civil Engineering Graduate Seminar Series - Subsurface Conditions and Tunnel Boring Machine	Las Vegas, NV	K. Beall
Wednesday, March 8	UNR Speaker Series - Potential for Mineral Deposits at YM	Reno, NV	TBD

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. Educational Interactions			
Monday, February 20	"Points of Pride" - The JASON Project	Las Vegas, NV	D. Merritt
Tuesday, February 21	C. P. Squires - Energy Field Trip to Las Vegas YMSC	Las Vegas, NV	D. Taylor J. Sizemore M. d'Ouille
Tuesday, February 21	LESSON Teacher Workshop I	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
Tuesday, February 21	R. O. Gibson Middle School - "Waves"	Las Vegas, NV	J. Blink
Thursday, February 21	Critical Thinking Teacher Workshop - Various Science Topics	Las Vegas, NV	E. Harle J. Sizemore
Wednesday, February 22	Ernest J. May - Environmental Field Trip to Las Vegas YMSC	Las Vegas, NV	D. Taylor J. Sizemore
Thursday, February 23	LESSON Teacher Workshop II	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
Thursday, February 23	C. P. Squires Energy Field Trip to Las Vegas YMSC	N. Las Vegas, NV	D. Taylor J. Sizemore M. d'Ouille
Thursday, February 23	Critical Thinking Teacher Workshop - Various Science Topics	Las Vegas, NV	E. Harle J. Sizemore
Saturday, February 25	Critical Thinking Teacher Workshop - Various Science Topics	Las Vegas, NV	E. Harle J. Sizemore
Monday, February 27	Clark High School - Black History Assembly	Las Vegas, NV	L. Weekly
Tuesday, February 28	Robert E. Lake Elementary School - "Forces"	Las Vegas, NV	J. Blink

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. <u>Educational Interactions</u> (continued)			
Tuesday, February 28	Dondero Elementary School - Native American Culture	Las Vegas, NV	R. Arnold
Monday- Saturday, February 27- March 11	JASON Project - Electronic Field Trip to the Hawaiian Islands	Las Vegas, NV	E. Harle J. Sizemore
Tuesday, February 28	LESSON Teacher Workshop I	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
Tuesday, February 28	Critical Thinking Teacher Workshop - Various Science Topics	Las Vegas, NV	E. Harle J. Sizemore
Thursday, March 2	LESSON Teacher Workshop II -	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke
Tuesday, March 7	LESSON Teacher Workshop I -	Las Vegas, NV	D. Stewart E. Harle J. Blink J. Sizemore P. Cloke

<u>Date</u>	<u>Event</u>	<u>Location</u>
I. <u>Exhibits Scheduled</u>		
Saturday, February 25	Public Open House	Las Vegas, NV
Sunday- Thursday, February 26- March 2	Waste Management '95	Tucson, AZ
Sunday- Wednesday, March 5-8	American Association of Petroleum Geologists	Houston, TX
Monday- Thursday, March 6-9	Society for Mining Metallurgy and Exploration	Denver, CO

Daniel A. Dreyfus

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. <u>Tours Scheduled</u>		
Friday, February 24	Waste Management '95	TBD
Saturday, February 25	Public Open House	Various Escorts
Monday, February 27	San Francisco Bay Guardian	S. Richardson
Wednesday, March 1	Commercial Vehicle Safety Alliance	TBD
Wednesday, March 1	PNC - Japan	B. Levich T. Ricketts
Friday, March 3	Waste Management '95	TBD
Friday, March 3	ANDRA - France	B. Levich
Wednesday, March 8	Zweites Deutsches Fernsehen - Germany	S. Richardson

AMSL:DSB-2247


Wesley E. Barnes
Project Manager