



Department of Energy
Office of Civilian Radioactive Waste Management
Yucca Mountain Site Characterization Office
P.O. Box 98608
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JUL 01 1994

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

YUCCA MOUNTAIN SITE CHARACTERIZATION OFFICE WEEKLY HIGHLIGHTS FOR THE WEEK
ENDING JUNE 17, 1994 (SCPB: N/A)

I. FORECAST SIGNIFICANT EVENTS

Exploratory Studies Facility

Continue two shift, six days-a-week assembly of the tunnel boring machine.

Design

Plan to complete comment resolution and continue incorporation of comment resolutions for design documentation for Design Package 2C. Continue comment resolution and comment incorporation into the design documentation for the Integrated Data and Control System. Continue design activities for Design Packages 1D and 8A.

II. CRITICAL ITEM STATUS - YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT

Construction

Regarding Job Package 92-20, Exploratory Studies Facility North Portal Pad and Facilities, continued two shift, six days-a-week assembly of the tunnel boring machine. Continued assembly operations in support of the tunnel boring machine involving the following: tail shield segments and the muck hopper on the forward shield being assembled. Electrical wiring for the tunnel boring machine motors also continues.

The following milestone represents the near-term plan for Exploratory Studies Facility activities: begin tunnel boring machine operations on August 8, 1994.

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NH03-11
102
WM-11

YMP-5

9407220006 940701
PDR WASTE
WM-11 PDR

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Completed placement of the mud slab in the starter tunnel invert.

Began forming and placement of invert slab in the starter tunnel.

Continued final grading and backfilling in the box cut area in preparation for extending the tunnel boring machine runway to the starter tunnel portal.

Continued construction of the subsurface waste water, sanitary sewer, and fire/potable water lines on the North Portal Pad. Continued backfilling of utility trenches.

Continued placement of work slabs at tunnel liner segment precast yard.

Completed certification of the concrete batch plant.

Resumed backfilling water line trench along H Road after successful pressure test of water line last week.

Completed construction on the temporary power system on the North Portal pad.

Extending conduits to the underground power center at the starter tunnel portal.

Site Characterization Testing

Exploratory drilling operations progress is summarized as follows:

<u>Borehole</u>	<u>Current Core Depth 06/17/94</u>	<u>Current Ream Depth 06/17/94</u>	<u>Total Planned Depth</u>
SD-9	309.9 meters (1016.8 feet)		(2,120 feet)
SD-12	292.8 meters (960.8 feet)	292.8 meters (960.7 feet)	701.04 meters (2,300 feet)

Regarding Job Package 94-04, SD-12 Borehole, the bottom of the borehole is presently in the Topopah Springs (TSw,) unit.

Regarding Job Package 94-06, SD-9 Borehole, current drilling is in the Topopah Spring (TSw,) member.

Geophysical logging was successfully completed in Borehole NRG-7/7A on June 13, 1994.

Completed five sample examinations at the Sample Management Facility for U.S. Geological Survey and Los Alamos National Laboratory.

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

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SITE CHARACTERIZATION PLAN ACTIVITY	TITLE	COMMENTS
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 Bloc

Large Block Test

Excavating continues around the Large Block and, currently, the excavation is between mapping elevations.

Site Characterization Plan/Study Plan Status

One Study Plan, 8.3.1.5.1.6, "Characterization of Future Regional Climates and Environments," was approved by the Yucca Mountain Site Characterization Office.

STUDY PLAN BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to Yucca Mountain Site		
Characterization Office	32	0
In Screening Review	0	0
In Yucca Mountain Site		
Characterization Office Review	2	2
Awaiting Comment Resolution	3	4
In Verification Audit	6	0
Awaiting Yucca Mountain Site		
Characterization Office Approval	1	0
Awaiting Submission to		
U.S. Nuclear Regulatory Commission...	1	1
Awaiting U.S. Nuclear Regulatory		
Commission Initial Review	9	6
Accepted by U.S. Nuclear Regulatory		
Commission	50	6
Totals	104	19
Total Submitted to U.S. Nuclear		
Regulatory Commission	59	12

State of Nevada Comments Status:

Received Comments from the State of Nevada.....	32
Responses Transmitted to the State of Nevada	29

U.S. Nuclear Regulatory Commission Comments Status:

Received Comments from U.S. Nuclear Regulatory	
Commission	32
Responses Transmitted from U.S. Department of Energy	
to U.S. Nuclear Regulatory Commission.....	27

Environmental Safety and Health Programs

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

Completed the June 1994 trapping session to monitor small mammal populations in support of site characterization effects studies.

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The Wilson Drill rig Air Quality permit was received from the Bureau of Air Quality.

Staff scientists presented a Desert Tortoise Investigations overview to the Deputy Associate Director, Office of Management and Budget.

Staff scientists completed the covered sample vegetation investigations for fiscal year 1994 in support of site characterization effects studies.

III. GENERAL INFORMATION ITEMS

Developed preliminary draft of Assistant Manager for Suitability and Licensing Site Suitability Team 10 CFR Part 960 Options White Paper. Analysis of pertinent stakeholder input from the May 21, 1994, public meeting will be incorporated into subsequent revision, as a result of the Federal Register Notice published on April 25, 1994, and it being received prior to the June 24, 1994 close of comment period.

Continued activities supporting the Assistant Manager for Suitability and Licensing Site Suitability Team anticipated Suitability Process Federal Register Notice.

Continued planning for the anticipated joint Assistant Manager for Suitability and Licensing-Assistant Manager for Scientific Programs technical findings guidance outlines.

Many participants attended the Nuclear Waste Technical Review Board Surface Geology and Geoenvironment Panel Meeting June 13-14, 1994, in Las Vegas, addressing the Exploratory Studies Facility design and construction. Issues potentially impacted by the Office of Civilian Radioactive Waste Management Proposed Program Approach were also discussed. Also attended the Geochemistry Integration Team meeting, June 13, 1994, held in Las Vegas.

The Director's Program Review was held in Las Vegas on June 14, 1994.

Participants attended the Nuclear Waste Technical Review Board Engineered Barrier System Panel Meeting on the Hanford Waste Management Program June 15, 1994, in Richland, Washington.

Los Alamos National Laboratory Technical Coordinators and Principal Investigators continued work on planning and milestone definitions that will be used as input to the 2001 license application process.

The Mineralogy/Petrology task reported they reviewed six Quality Procedures and resolved reviewer comments on Quality Procedure 8.1, Revision 4. The technical review of Los Alamos National Laboratory Milestone 3376, "Petrography, Mineralogy, and Chemistry of Calcite-Silica Deposits at Exile Hill, Nevada, in Comparison with Local Spring Deposits," was completed.

Compiled the microprobe data tables for the LA-MS report on fracture mineralogy of all pre-1984 core samples that have been studied (Milestone 3371). Revised the draft and compiled the X-ray diffraction data tables.

Suitability and Licensing staff developed a consolidated draft response to the Nuclear Waste Technical Review Board questions on the Proposed Program Approach.

A meeting was held June 16, 1994, between the Yucca Mountain Site Characterization Office Assistant Manager of Suitability and Licensing and the U.S. Nuclear Regulatory Commission on-site representatives. Phillip Justus, the current on-site representative, introduced Ray Hall as his potential replacement. Yucca Mountain Site Characterization Office Licensing Team members and Civilian Radioactive Waste Management System Management and Operating Contractor support personnel described their responsibilities and functions, the role of Suitability and Licensing within the Yucca Mountain Site Characterization Project and protocol agreements and interactions.

Technical and Management Support Services completed the first draft of Chapter 2, Revision 1, to the Operations and Maintenance Plan.

Technical and Management Support Services modified the Functional Requirements for the Ghost Dance Fault Trenches to include comments from the Yucca Mountain Site Characterization Office Suitability and Licensing Department.

Technical and Management Support Services prepared location map and environmental clearance sketch of the Booster Pump Station.

Technical and Management Support Services prepared draft Site Manager's input to Job Package 94-03, "Stagecoach Road Fault Shallow Boreholes."

Technical and Management Support Services prepared Field Change Request to incorporate plate loading tests at the Booster Pump Station into Job Package 92-08, "Soil and Rock Properties, Phase II, Test Pits."

Technical and Management Support Services submitted Implementation Plan for Exploratory Studies Facility, Testing Operations and Maintenance Support Services for Study Plan 1.35 review.

The Office of Quality Assurance has formally accepted the Science Applications International Corporation/Technical and Management Support Services Quality Assurance Program for implementation of the Office of Civilian Radioactive Waste Management Quality Assurance Requirements Description, DOE/RW-0333P.

The Technical and Management Support Services Quality Assurance Program for participant work scope was audited by the Yucca Mountain Quality Assurance Division and was found to be fully effective.

IV. PUBLIC OUTREACH AND INSTITUTIONAL ACTIVITIES

A presentation was given on June 13, 1994, in Charleston, South Carolina, to the Southeast Area Regulatory Utility Commissioners on how Yucca Mountain was selected as a possible permanent disposal site. An exhibit was also staffed for this event. A general overview presentation was also given to 25 guests of the National Congress of American Indians on June 13, 1994, in Las Vegas.

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LESSONS Teacher Workshops were conducted June 13-23, 1994, in Las Vegas. Thirty teachers attended these sessions that included workshops on physics and astronomy, chemistry, biology, earth science, and electromagnetism.

Yucca Mountain Site Characterization Office staff set up and staffed exhibits for two events. These included exhibits for the American Association of Petroleum Geologists, in Denver, Colorado, June 12-15; and for Gridley Days in Austin, Nevada, June 17-19, 1994. Approximately 1,250 people attended these events.

Tours to Yucca Mountain were conducted on June 15, 1994, for three guests from the U.S. Nuclear Regulatory Commission; on June 17, 1994, for 40 guests of the National Federation of Press Women; and on June 17, 1994, for 32 guests from the Lawrence Livermore National Laboratory LESSONS Workshops.

The Speaker series titled, "Take a Walk Through Nevada History," that addresses how Nevadans have lived with their desert environment from early settlers through today, was publicized by announcements produced and placed by Yucca Mountain Site Characterization Project staff. Staff completed 36 external information requests. This was accomplished by providing written responses to written and verbal queries and/or by supplying existing literature.

V. 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 Interactions are coordinated by the Speakers Bureau; contact Lawrence Weekly at (702) 794-7896 for additional information. Exhibits are coordinated by Joanna Magruder at (702) 794-7056; Neighborhood Dialogues are coordinated by Lawrence Weekly at (702) 794-7896; and Tours are coordinated by Carleen Hill at (702) 794-7375.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Yucca Mountain Site Characterization Project Contact</u>
A.	<u>Stakeholders' Meetings</u>		
	No significant meetings to report.		
B.	<u>U.S. Department of Energy/Headquarters Meetings</u>		
	No significant meetings to report.		
C.	<u>Civilian Radioactive Waste Management System Management and Operating Contractor/U.S. Department of Energy Meetings</u>		
Wednesday, July 6	Civilian Radioactive Waste Management System Management and Operating Contractor - Program Management Review (P)	Video- conference	R. Nelson

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Project Contact</u>
D. <u>Internal and U.S. Department of Energy/Nevada Operations Office (NV) Meetings</u>			
No significant meetings to report.			
E. <u>U.S. Nuclear Regulatory Commission Interactions</u>			
No significant interactions to report.			
F. <u>Nuclear Waste Technical Review Board Interactions</u>			
Tuesday- Wednesday July 12-13	Nuclear Waste Technical Review Board Full Board Meeting	Denver, CO	C. Newbury
G. <u>Advisory Committee on Nuclear Waste Interactions</u>			
Wednesday- Thursday, June 29-30	65th Advisory Committee on Nuclear Waste Meeting on Topics (TBD) (P)	Bethesda, MD	A. Gil
H. <u>National Academy of Sciences Interactions</u>			
No significant interactions to report.			
<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u>			
Tuesday, June 21	Yucca Mountain Speaker Series - "Walk Through Nevada History" (P)	Las Vegas, NV	R. Arnold C. Chairsell M. Johnson
Tuesday, June 21	Elko's Lion Club Brief Yucca Mountain Update with Major Emphasis on Transportation	Elko, NV	P. Standish
Thursday, June 23	Institute of Transportation Engineers - Transportation Issues with YM General Overview	Las Vegas, NV	P. Standish

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (continued)			
Friday, June 24	Teachers' Workshop - General Overview & Native American Culture	Palo Verde, AZ	R. Arnold G. Fasano
Sunday, June 26	Yucca Mountain Speaker Series - "Take a Hike With a Geologist" (P)	Pahrump, NV	J. Peck
J. <u>Educational Interactions</u>			
Monday, June 20	C.C. Ronnow Elementary School - "Yucca Mountain Johnny"	Las Vegas, NV	J. Hartley
Tuesday, June 21	John F. Mendoza Elementary School - 5th Grade Tour - Geology	Las Vegas, NV	J. Sizemore M. d'Ouille
Tuesday, June 28	Hewetson Elementary School - "Yucca Mountain Johnny"	Las Vegas, NV	J. Hartley
Wednesday, June 29	4-H T.E.C. - Paleontology	Las Vegas, NV	A. Gil
Tuesday, July 5	Robinson Community School - Native American Culture	Las Vegas, NV	R. Arnold
<u>Date</u>	<u>Event</u>	<u>Location</u>	
K. <u>Exhibits Scheduled</u>			
Friday- Sunday, June 17-19	Gridley Days	Austin, NV	
Sunday- Wednesday, June 19-22	American Nuclear Society	New Orleans, LA	
Wednesday, June 22	Yucca Mountain Open House and Tour	Las Vegas, NV	

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
L. <u>Tours Scheduled</u>		
Tuesday, June 21	Babcock & Wilcox	TBD
Wednesday, June 22	Public Open House (P)	Various Escorts
Thursday, June 23	Nye County Nuclear Waste Repository Office	TBD
Thursday, June 23	Study Committee	TBD
Thursday, June 23	U.S. DOE Waste Acceptance Technical Review Group	TBD

AMSL:CLH-4022


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