



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Reply to:
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Las Vegas, NV 89101

Tel: (702) 388-6125

TO: Joseph Holonich, Director, HLPD, M/S 4 H 3
FROM: Sr. On-Site Licensing Representatives' Office, Las Vegas
DATE: January 14, 1994
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE
WEEK ENDING DECEMBER 31, 1993

Please find enclosed the above-referenced information. There is nothing requiring specific management attention.

cc: w/enc.: Charlotte Abrams, M/S 4 H 3
Anne Garcia, M/S 4 H 3

Enclosure as stated

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DEPARTMENT OF ENERGY
Office of Civilian Radioactive Waste Management
Office of Geologic Disposal
Yucca Mountain Site Characterization Project Office
P.O. Box 98608
Las Vegas, NV 89193-8608

WBS 1.2.9.2
QA: N/A

JAN 12 1994

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

OFFICE OF GEOLOGIC DISPOSAL WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
DECEMBER 31, 1993 (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

Site Characterization Activities

Exploratory Studies Facility (ESF)

Work will resume in the test alcove with completion of shotcreting and preparation for continued excavation.

Construction will continue on the 69kV power distribution system with the continuation of trenching for duct banks on the pad. Rework of Canyon Substation and modification to switchgear at the substation will begin.

Continue placement of bedding sand in the trench and installation of pipe for the water line.

II. CRITICAL ITEM STATUS - YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT (YMP)

A. Site Characterization Activities

ESF

Construction

On Job Package 92-20, ESF North Portal Pad and Facilities, application of fibercrete is complete. Construction of the water line and 69kV power distribution system continues.

The face of the test alcove remains at 27.4 meters (00+90 feet), measured from the centerline of the starter tunnel.

The following milestone represents the near-term plan for ESF activities:

69kVA power available
at the North Portal

February 14, 1994

Surface-Based Testing

Created approximately 35 specimens from core samples for analysis by Principal Investigators. One shipment was delivered to the U.S Geological Survey.

JAN 12 1994

Exploratory drilling operations progress is summarized as follows:

Borehole	Current Core Depth 12/31/93	Current Ream Depth 12/31/93	Total Planned Depth
UZ-14	1,442.10 feet	1,421.6 feet	2,000 feet
NRG-7/7A	848.62 feet	302.1 feet	1,445 feet

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

SCP ACTIVITY	TITLE	COMMENTS
8.3.1.3.2.1	Mineralogy, Petrology & Rock Chemistry of Transport Pathways	Outcrop sampling
8.3.1.3.2.2	Mineralogic & Geochemical Alteration	Outcrop sampling
8.3.1.4.2.2	Structural Features within Site Area	Surface mapping, ESF mapping
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	Test pits, trenching, ramp exploration holes
8.3.1.17.4.2	Location & Recency of Faulting Near Prospective Surface Facilities	Trench mapping
8.3.1.17.4.3	Quaternary Faulting within 100 km of Yucca Mountain, Nevada	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 mapping
8.3.1.2.1.1	Precipitation & Meteorological Monitoring for Regional Hydrology	Ongoing measurements
8.3.1.2.1.2	Runoff & Streamflow	Ongoing measurements
8.3.1.2.2.1	Unsaturated Zone Infiltration	Drilling/logging of neutron-access holes; ponding tests
8.3.1.2.2.2	Water Movement Tracer Tests	C1-36 measurements
8.3.1.2.2.3	Percolation in Unsaturated Zone	UZ drilling/testing Perched water testing
8.3.1.2.2.4	Characterization of YM Percolation in UZ-ESF Investigation	Perched water
8.3.1.2.2.6	Gaseous Phase Movement in Unsaturated Zone	UZ drilling/testing
8.3.1.2.2.7	Unsaturated Zone Hydrochemistry	UZ drilling/testing
8.3.1.2.3.1	Site Saturated Zone Groundwater Flow System	Ongoing monitoring
8.3.1.2.3.2	Saturated Zone Hydrochemistry	Ongoing sampling
8.3.1.15.1.8	In Situ Design Verification	Construction monitoring/testing

JAN 12 1994

Environmental Safety and Health Programs

Copies of over 320 environmental compliance surveillance reports were transmitted to the State of Nevada Nuclear Waste Project Office (NWPO), as requested.

Copies of preactivity survey case files were also sent to NWPO. These files illustrate YMP's commitment to review each site characterization activity before it occurs in order to detect potential significant adverse environmental impacts.

Regulatory Interactions

An abstract entitled, "Interactive Outreach: Getting Students Interested in Science," was prepared for submittal to the National Association of Geology Teachers/Geological Society of America joint symposium to be held May 4-6, 1994, in Durango, Colorado. The abstract is due on January 13, 1994, and has been submitted for Administrative Procedure 1.3 review.

Guidance on the new procedures to be followed in preparing for interactions with the Nuclear Waste Technical Review Board (NWTRB) was forwarded to the division directors.

Site Characterization Progress Report (PR)

The status of PR 9, which is now at U.S. Department of Energy (DOE)/Headquarters (HQ) for concurrence, has not changed. Office of Civilian Radioactive Waste Management (OCRWM) RW-2 concurrence was received on December 16, 1993. Notice on DOE concurrence to prepare the camera-ready copy for printing and a scheduled January 31, 1994, issuance is pending.

Site Characterization Plan/Study Plan (SP) Status

SP BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to the Yucca Mountain Site Characterization Project		
Office (YMPO)	37	0
In Screening Review	1	0
In YMPO Review	0	1
Awaiting Comment Resolution	4	2
In Verification Audit	5	1
Awaiting YMPO Approval	0	0
Awaiting Submission to the U.S. Nuclear Regulatory Commission (NRC)	0	1
Awaiting NRC Initial Review	8	5
Accepted by NRC	49	5
Totals	104	15
Total Submitted to NRC	57	10

JAN 12 1994

State of Nevada Comments Status:

Received Comments from the State of Nevada..... 25
Responses Transmitted to the State of Nevada 19

NRC Comments Status:

Received Comments from NRC 28
Responses Transmitted from DOE to NRC 24

III. GENERAL INFORMATION ITEMS

Regarding Spent Fuel Dissolution (Work Breakdown Structure 1.2.2.3.1.1), Lawrence Livermore National Laboratory (LLNL) started two repeat experiments at 20 percent oxygen and 75 degrees Celsius. The original data seemed unusually high when compared to the other experiments in the test plan. The new data will be included in the paper submitted for the International High-Level Radioactive Waste Management Conference in Las Vegas, Nevada, during May 1994 that combines and compares the uranium oxide (UO₂) dissolution data obtained at LLNL and the similar spent fuel dissolution data obtained at Pacific Northwest Laboratories.

Technical and Management Support Services issued Field Operations Permit for installation of telephone and data lines to the Fran Ridge work site.

Provided YMPO Property Management Department with input for preparation of a white paper on the Operation and Maintenance Management Information System.

Drafted responses to findings of Management Control Review Audit YMP-93-01.

Reviewed and provided comments on the draft YMP Technical Implementation Plan.

Collected ambient air samples for background fiber collection data.

Sampled for respirable silica on Reynolds Electrical & Engineering Co., Inc., water line compactor operators.

IV. PUBLIC OUTREACH AND INSTITUTIONAL ACTIVITIES

A general YMP overview was given to 25 guests of the Widowed Persons Group in Las Vegas, on December 31, 1993.

JAN 12 1994

The YMP staff completed 10 information requests that were assigned by the YMP. This was accomplished by writing responses, answering questions, or providing existing materials.

Institutional and External Affairs staff completed development of a new newspaper announcement for the Yucca Mountain Speaker Series program for January 1994 at the Yucca Mountain Science Centers.

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 Jacqueline Brandt at (702) 794-7896 or Theresa Hirsch at (702) 794-7759 for additional information. Exhibits are coordinated by Joanna Magruder at (702) 794-7056, Public Update Meetings are coordinated by Jamie Elliott at (702) 794-7496, and Tours are coordinated by Carleen Hill at (702) 794-7375 or Kelly Doyle at (702) 794-7133.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
A. <u>Stakeholders Meetings</u>			
Thursday - Friday, February 10-11, 1994	Affected Units of Government	Las Vegas, NV	A. Robison
B. <u>DOE/HQ Meetings</u>			
Wednesday, February 2, 1994	OCRWM Director's Program Review	Video- conference	R. Nelson
Monday- Friday, February 14-18, 1994	DOE/YMP Technical Program Review	Las Vegas, NV	R. Nelson
C. <u>Civilian Radioactive Waste Management System Management and Operating Contractor/DOE Meetings</u>			
Monday, January 24, 1994 (Tentative)	YMPO Monthly Management Meeting	Las Vegas, NV	R. Nelson
D. <u>Internal and DOE/Nevada Operations Office (NV) Meetings</u>			
Wednesday, January 19, 1994	NV Manager's Monthly Program Review	Las Vegas, NV	R. Nelson
E. <u>NRC Interactions</u>			
Tuesday - Wednesday, February 1-2, 1994	NRC Technical Exchange and Site Visit on Erosion TR Related Topics	Las Vegas, NV	T. Bjerstedt

JAN 12 1994

Daniel A. Dreyfus

-6-

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
E. <u>NRC Interactions</u> (Continued)			
Wednesday, February 9, 1994	NRC Technical Meeting on ESF Status	Rockville, MD	T. Bjerstedt
Tuesday - Wednesday, March 15-16, 1994	NRC Technical Exchange on Status on Work Relevant to Characterization of Saturated and Unsaturated Flow	Denver, CO	T. Bjerstedt
Tuesday - Thursday, May 3-5, 1994	NRC Site Visit: Surface-Based/ Underground Site Characterization Activities	Yucca Mountain, NV	T. Bjerstedt
Tuesday, May 17, 1994	NRC Meeting on Interactions Scheduling	TBD	T. Bjerstedt
Thursday, May 26, 1994	NRC Technical Meeting on ESF Status and Update	Rockville, MD	T. Bjerstedt
Monday - Tuesday, June 20-21, 1994	NRC Technical Exchange on Total System Performance Assessment	Rockville, MD	T. Bjerstedt
Tuesday - Thursday, July 26-28, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt
Tuesday - Thursday, August 23-25, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt
Tuesday - Thursday, September 13-15, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt
Tuesday - Thursday, October 25-27, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt
Monday - Wednesday, November 7-9, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
E. <u>NRC Interactions (Continued)</u>			
Tuesday - Thursday, December 6-8, 1994	NRC Interactions: Topic TBD	TBD	T. Bjerstedt
<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>NWTRB Interactions</u>			
Tuesday- Wednesday, January 11-12, 1994	NWTRB Full Board Meeting (P)	Arlington, VA	J. Nesbit
Tuesday- Wednesday, March 8-9, 1994 (Tentative)	NWTRB - SG&G Panel (P)	TBD	J. Nesbit
Monday- Wednesday, April 11-13, 1994	NWTRB Full Board Meeting (P)	Reno, NV	J. Nesbit
Monday- Wednesday, July 11-13, 1994 (Tentative)	NWTRB Full Board Meeting (P)	Denver, CO	J. Nesbit
Wednesday- Friday, October 12-14, 1994 (Tentative)	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Nesbit
G. <u>Advisory Committee on Nuclear Waste Interactions</u>			
No significant meetings to report.			
H. <u>National Academy of Sciences (NAS) Interactions</u>			
Monday- Tuesday, February 7-8, 1994	NAS Committee on Yucca Mountain Standards (P)	TBD	S. Jones
Thursday- Friday, April 28-29, 1994	NAS Committee on Yucca Mountain Standards (P)	TBD	S. Jones

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u>			
Tuesday, January 4, 1994	Elaine Wynn Elementary School - Native American Culture	Las Vegas, NV	R. Arnold
Thursday, January 6, 1994	Clayton Middle School - General Overview	Reno, NV	K. Beall (T)
Friday, January 7, 1994	National Park Service - Native American Culture	Lake Mead, NV	R. Arnold
Saturday, January 8, 1994	JASON Project Teacher Workshop - Mapping and Caving	Las Vegas, NV	C. Newbury D. Hoxie L. Cuba
Wednesday, January 12, 1994	Red Rock Visitors' Center - Native American Culture	Red Rock, NV	R. Arnold
Wednesday, January 12, 1994	Sierra Club - General Overview	Las Vegas, NV	J. Peck
Friday, January 14, 1994	Fay Herron Elementary School - "Gee Whiz Science"	Las Vegas, NV	J. Blink
Friday, January 14, 1994	G. C. Wallace Engineers & Architects - General Overview	Las Vegas, NV	J. Peck
Saturday, January 15, 1994	Amargosa Valley Girl and Boy Scouts - Geology Workshop	Las Vegas, NV	Various YMP Staff
Tuesday, January 18, 1994	Roy Martin Junior High School - Botany	Las Vegas, NV	K. Wirtz
Tuesday, January 18, 1994	4-H T.E.C. - Native American Culture	Las Vegas, NV	R. Arnold
Wednesday, January 19, 1994	Roy Martin Junior High School - Native American Culture	Las Vegas, NV	R. Arnold
Wednesday, January 19, 1994	George Harris Elementary School - Yucca Mountain Johnny	Las Vegas, NV	J. Hartley

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Wednesday, January 19, 1994	Elko County Commissioners - General Overview/ Transportation	Elko, NV	B. Bush P. Standish
Thursday, January 20, 1994	4-H T.E.C. - Native American Culture	Las Vegas, NV	R. Arnold
Friday, January 21, 1994	Nevada Regional Science Bowl - Training	Las Vegas, NV	Various YMP Staff
Friday, January 21, 1994	Johnson Junior High School - "Gee Whiz Science"	Las Vegas, NV	J. Blink
Tuesday, January 25, 1994	Johnson Junior High School - Paleontology	Las Vegas, NV	A. Gil
Tuesday, January 25, 1994	Green Valley High School Key Club - General Overview	Las Vegas, NV	A. Robison
Tuesday, January 25, 1994	Yucca Mountain Speaker Series (P) - "Constructing a Tunnel to Study a Mountain"	Las Vegas, NV	D. McKenzie J. Peck
Thursday, January 27, 1994	Yucca Mountain Speaker Series (P) - "Constructing a Tunnel to Study a Mountain"	Beatty, NV	D. McKenzie J. Peck
Friday, January 28, 1994	Ute Perkins Elementary School - Native American Culture	Moapa, NV	R. Arnold
Saturday, January 29, 1994	Amargosa Valley Girl and Boy Scouts - Geology Field Trip	Las Vegas, NV	TBD
Wednesday, February 2, 1994	C. P. Squires Elementary School - Energy	N. Las Vegas, NV	E. Harle
Thursday, February 3, 1994	Cannon Middle School - Native American Culture	Las Vegas, NV	R. Arnold

JAN 12 1994

Daniel A. Dreyfus

-10-

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Thursday, February 3, 1994	ASCE/Engineering Design for the Community - General Overview/Emphasis on Engineering	Irvine, CA	D. Kessel
Friday, February 4, 1994	University of Nevada, Las Vegas - Native American Culture	Las Vegas, NV	R. Arnold
Friday- Sunday, February 11-13, 1994	1994 Nevada Regional High School Science Bowl	Las Vegas, NV	E. Harle
Saturday, February 12, 1994	Girl Scouts - Geology Merit Badge Workshop	Las Vegas, NV	Various
Tuesday, February 22, 1994	Yucca Mountain Speaker Series (P) - "Fossils Tell a Story"	Las Vegas, NV	A. Gil
Thursday, February 24, 1994	Yucca Mountain Speaker Series (P) - "Fossils Tell a Story"	Beatty, NV	A. Gil
Sunday, February 27, 1994	Waste Management Symposia - TBD	Tucson, AZ	TBD
Monday- Saturday, February 28- March 12, 1994	JASON Project - "Rain Forest"	Las Vegas, NV	E. Harle
Wednesday, March 9, 1994	Youth Leadership Las Vegas Program - Environmental	Las Vegas, NV	D. Bradford M. d'Oville
Saturday, March 12, 1994	Expanding Your Horizons - Math & Science	Las Vegas, NV	A. Gil L. Linden
Sunday, March 20, 1994	Risk Management Quarterly Association - TBD	San Diego, CA	TBD
Sunday, March 27, 1994	Yucca Mountain Speaker Series (P) - "Desert Beauties - Spring Wildflowers"	Pahrump, NV	K. Wirtz

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Tuesday, March 29, 1994	Yucca Mountain Speaker Series (P) - "Desert Beauties - Spring Wildflowers"	Las Vegas, NV	K. Wirtz
Saturday, April 2, 1994	Girl Scouts - Geology Merit Badge Workshop	Las Vegas, NV	Various
Tuesday, April 5, 1994	Science and Mountains Teacher Workshop	Las Vegas, NV	E. Harle
Thursday, April 7, 1994	Science and Mountains Teacher Workshop	Las Vegas, NV	E. Harle
Monday, April 11, 1994	Critical Thinking Teacher Workshop	Las Vegas, NV	E. Harle
Tuesday, April 12, 1994	Science and Mountains Teacher Workshop	Las Vegas, NV	E. Harle
Thursday, April 14, 1994	Critical Thinking Teacher Workshop	Las Vegas, NV	E. Harle
Saturday, April 16, 1994	Critical Thinking Teacher Workshop	Las Vegas, NV	E. Harle
Saturday, April 16, 1994	Science and Mountains Teacher Workshop	Las Vegas, NV	E. Harle
Monday, April 18, 1994	Critical Thinking Teacher Workshop	Las Vegas, NV	E. Harle
Sunday, April 24, 1994	Yucca Mountain Speaker Series (P) - "Eating Your Way Through a Mountain"	Pahrump, NV	L. Destwolinski
Tuesday, April 26, 1994	Yucca Mountain Speaker Series (P) - "Eating Your Way Through a Mountain"	Las Vegas, NV	L. Destwolinski
Tuesday, May 31, 1994	LESSON Teacher Workshop - Science Workshop	Las Vegas, NV	TBD

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Saturday, June 4, 1994	Girl Scouts - Geology Merit Badge Workshop	Las Vegas, NV	Various
Sunday, June 12, 1994	Southeast Area Regulatory Utility Commissioners Conference - TBD	Charleston, SC	TBD
Monday, June 13, 1994	LESSON Teacher Workshop - Science Workshop	Las Vegas, NV	TBD

J. Exhibits Scheduled

None scheduled.

K. Tours Scheduled

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
Thursday, January 6, 1994	Inyo County	TBD
Tuesday, January 11, 1994	Amargosa Middle School	TBD
Wednesday, January 12, 1994	YMP Orientation Tour	A. Stephenson
Thursday, January 13, 1994	Massachusetts Institute of Technology/U.C. Berkeley	TBD
Saturday, January 22, 1994	Public Open House (P)	Various Escorts
Monday, January 31, 1994	Steering Committee on High-Level Radioactive Waste Project - Japan	TBD
Tuesday - Wednesday February 1-2, 1994	NRC	TBD

JAN 12 1994

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled</u> (Continued)		
Friday, February 4, 1994	American Nuclear Energy Council	TBD
Thursday, February 10, 1994	Conference of Radiation Control Program Directors Committee on Radioactive Materials Transportation	TBD
Wednesday, February 16, 1994	Quannah McCall Sixth Grade Center	TBD
Friday, February 18, 1994	South Mountain High School	TBD
Wednesday, February 23, 1994	Fremont Middle School	TBD
Saturday, February 26, 1994	Public Open House (P)	Various Escorts
Wednesday, March 2, 1994	Fremont Middle School	TBD
Tuesday, March 8, 1994	St. Cloud State University (MN)	TBD
Thursday, March 10, 1994	Laughlin High School	TBD
Tuesday, March 15, 1994	Jewish War Veterans	TBD
Saturday, March 19, 1994	Public Open House (P)	Various Escorts
Tuesday, March 29, 1994	W. Mac Lyon Middle School	TBD
Thursday, March 31, 1994	National Council, State Garden Club Specific Region Convention	TBD

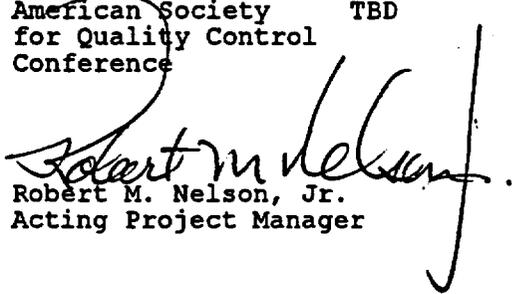
JAN 12 1994

Daniel A. Dreyfus

-14-

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled (Continued)</u>		
Tuesday, April 12, 1994	Thurman White Middle School	TBD
Friday, April 15, 1994	Desert Survivors	TBD
Saturday, April 16, 1994	Public Open House (P)	Various Escorts
Wednesday, April 20, 1994	Cannon Junior High School	TBD
Thursday, April 28, 1994	Garside Junior High School	TBD
Thursday, May 12, 1994	CVT Gilbert Sixth Grade Center	TBD
Thursday, May 19, 1994	Western High School	TBD
Monday, May 23, 1994	American Society for Quality Control Conference	TBD

YMP:RVB-1522


Robert M. Nelson, Jr.
Acting Project Manager