



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: SEPTEMBER 15, 1993  
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE  
WEEK ENDING AUGUST 20 AND AUGUST 27, 1993

Please find enclosed the above-referenced reports.

There is nothing requiring specific management attention in the reports.

cc: w/enc.: Charlotte Abrams, M/S 4 H 3  
Rosetta Virgilio, M/S 3 D 23  
Dean Kunihiro, Region 5

JSP:nan  
Enclosure as stated

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NHD3 / 1



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

WBS 1.2.9.2  
QA: N/A

SEP 10 1993

Lake H. Barrett, Acting Director, Civilian Radioactive Waste Management,  
HQ (RW-1) FORS  
THRU: Linda M. Smith, Acting Associate Director

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING  
AUGUST 27, 1993 (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

A. Site Characterization Activities

Exploratory Studies Facility (ESF)

Continue comment resolution for the 90 percent review of Design Package 1B.

Construction will continue in the Starter Tunnel, including bench excavation, placement of fibercrete, and installation of cement grouted pattern bolts.

Surface-Based Testing

Recovery testing will continue at UZ-14 until August 30, 1993. Cementing of the UZ-14 borehole is tentatively scheduled for September 1, 1993. Support, installation, excavation, and mapping will continue on the ESF bench, beyond approximate station 0+90. Trenching will continue at Solitario Canyon. Drilling will continue at NRG-2B.

B. Public Outreach and Institutional Activities

A tour of Yucca Mountain (YM), Nevada, will be conducted on August 31, 1993, for John G. Keliher, Director, Office of Intelligence and National Security.

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

A. Site Characterization Activities

ESF

Construction

Permanent rockbolts were grouted between approximate stations 0+00 and 0+90. The next round of geologic mapping, photography, and sampling is tentatively scheduled for the week of September 7, 1993. Geologic mapping, photogrammetry, and sampling is complete to station 0+85.

On ESF North Portal Pad and Facilities, grouting of pattern bolts continues. The face of the Starter Tunnel upper level remains at 00+60.4 meters. The face of the Starter Tunnel bench is at 00+27.4 meters.

SEP 10 1993

Lake H. Barrett

-2-

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

Complete 60 Meters of Tunnel Boring      September 22, 1993  
Machine Starter Tunnel

Design

The 90 percent design review of Package 1B continued. Formal comment resolution meetings were held this week.

Resolution of comments will continue on the 90 percent review of Package 2A.

Exploratory drilling operations progress is summarized as follows:

<u>Borehole</u>	<u>Current Core Depth 8/27/93</u>	<u>Current Ream Depth 8/27/93</u>	<u>Total Planned Depth</u>
NRG-2B	130.84 feet	130.84 feet	315 feet
UZ-14	1,282. feet	1,282. feet	2,000 feet
UZ-39	59.48 feet	60.08 feet	

The Site Manager briefed the U.S. Department of Energy (DOE)/Nevada Test Site (NTS) duty officer on the responsibilities and reporting requirements in providing shift coverage for field activities (ESF work and/or Unsaturated Zone drilling). He was also briefed on the points of contact in case of emergencies or technical decisions/evaluations.

Review assessment efforts commenced this week when the YMP Safety and Health Officer met with management control review personnel. The review assessment is to determine if adequate control measures exist and are operating as intended to prevent or detect potential waste, loss, mismanagement, unauthorized use, or misappropriation of resources. The final report is due September 30, 1993.

Twenty-one new Facility Use Permits were prepared and submitted to DOE/NTS for temporary structures in Area 25.

On NRG-2B, drilling operations have been suspended until Standard Penetration Resistance Testing sampling equipment is received on site. Drilling is expected to resume on August 30, 1993.

On NRG-6, Vertical Seismic Profiling (VSP) was completed on August 23, 1993.

On UZ-14, the bottom of the hole is in the Topopah Spring basal vitrophyre unit. Drilling operations have been temporarily suspended since August 6, 1993, so that water testing and sampling can be completed.

A pump test was conducted on UZ-14 to determine the aquifer limits.

On UZ-16, gas testing will begin as soon as an eight-packer string is lowered into the hole. Efforts to lower the packer to the required depth for testing are continuing.

SEP 10 1993

Lake H. Barrett

-3-

On WT-2, crews removed 2 7/8-inch tubing string from the borehole. Prepared subcontracts conditions and technical provisions for geophysical logging.

The VSP began on WT-2 on August 25, 1993, and was completed August 27, 1993, at 9:05 a.m.

On UZN-39, drilling was completed on August 25, 1993.

On Solitario Canyon Trench, two trenches have been completed (SCF-T1A and SCF-T3) and another (SCF-T2) is in progress.

The Sample Management Facility (SMF) processed drive core from UE-25 UZN-39. Radiation contamination survey was conducted on drive core and cuttings.

Finalized the Preliminary Borehole Composite Log for UE-25 NRG-4.

A total of 15 sample examinations were conducted at the SMF by Sandia National Laboratories (SNL), the U.S. Geological Survey (USGS), DOE, Los Alamos National Laboratory (Los Alamos), Reynolds Electrical & Engineering Co., Inc., and the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O).

Conducted VSP work on UE-25 NRG-6 from August 21-23, 1993, and on USW WT-2 from August 24-27, 1993; data collected will be used for surface seismic support.

Removed 39 specimens from core samples for various analyses performed by Principal Investigators.

Accepted into the SMF approximately 100 water samples from USW UZ-14 that were collected by USGS for analysis.

Discontinued use of the core examination overflow area until safety concerns regarding potential earthquake hazards are addressed.

Reboxing and reorganizing nonborehole and noncuttings sample storage area at SMF to accommodate increasing sample transfers and to enhance sample retrieval efficiency.

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

SCP ACTIVITY	TITLE	COMMENTS
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	Surface mapping
8.3.1.17.4.4	Quaternary Faulting in NE-Trending Fault Zones	Surface mapping
8.3.1.17.4.10	Geodetic Leveling	Traversing
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	Cl-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

#### Environmental Programs

Received four rights-of-way from the U.S. Bureau of Land Management that allow installation of seismic monitoring stations.

Conducted three environmental compliance surveillances at the YM site ensuring compliance with permit and programmatic requirements.

The Center for Disease Control took over 500 blood samples from approximately ten different mammal species that occur in the YM area to determine if any are carriers of hanta virus antibodies.

Completed involvement in the 90 percent design review of Design Package 1B for compliance with ESF Design Requirements environmental design requirements.

#### Safety and Health Compliance

Reviewed the functional appraisal findings of CRWMS M&O with the DOE Safety Specialist and produced a report.

SEP 10 1993

Lake H. Barrett

-5-

Performed three surveillances: UZN-39 borehole drilling, UZN-39 borehole dust survey, and Fran Ridge activities.

#### Large Block Test

Prototype testing of the rock saw is underway.

#### Regulatory Interactions

##### Mined Geologic Disposal System (MGDS) License Application (LA) Annotated Outline (AO)

Participant and CRWMS M&O review of Revision 3 of the MGDS LA AO began on August 17, 1993.

##### Advisory Committee on Nuclear Waste (ACNW) Interactions

The 56th ACNW meeting was held this week in Bethesda, Maryland. The ACNW members met with commissioners from the U.S. Nuclear Regulatory Commission (NRC) and discussed plans for the September and October 1993 meetings. Current plans are to hold the October 1993 meeting in Las Vegas, Nevada, October 27-28, 1993; this meeting may include a tour of the site.

#### Issue Resolution

A Technical Exchange on Substantially Complete Containment (SCC) was held on August 24, 1993. Presentations on waste package (WP) development, materials testing, and Site Characterization Analysis comments related to SCC were given.

##### Site Characterization Progress Report (PR)

The PR 8 was signed by The Secretary on August 25, 1993, and the camera-ready copy was sent to DOE/Headquarters (HQ) by the Yucca Mountain Site Characterization Project Office (YMPO) on August 26, 1993. Printing and distribution is expected to take two weeks.

#### Technical Analysis

The Performance Assessment (PA) staff is working with USGS technical staff involved in Study Plan (SP) 8.3.1.2.2.8, "Characterization of Fluid Flow in Unsaturated, Fractured Rock," to facilitate scheduling efforts of Golder Associates. Golder Associates is assisting in application of FracMan/MAFIC analysis capability to obtain discrete fracture realizations using the USGS field fracture mapping data. The software Golder Associates is providing to enable transfer of discrete fracture realization data for use in either the TOUGH and FEHM coupled multiphase thermal flow codes, will likely be used in the USGS fracture flow SP.

Technical Analysis Branch (TAB) and PA staff attended the meeting of the National Academy of Sciences (NAS) panel on Standards for YM. Several participant staff made presentations to the panel, which is evaluating the basis for, and the potential approaches to, setting health-based dose limits for a repository. The standards, mandated by the Comprehensive Nuclear Energy Policy Act of 1992, will influence the form of future PAs for YM.

Total construction water use to complete the Starter Tunnel is now estimated to be about 436,000 gallons. Of this total, about 79,000 gallons are bound in cementitious materials, leaving 357,000 gallons of "free" water available for movement in the geosphere. Previous evaluation, using conservative arguments, concluded that 200,000 gallons of free water could be used without affecting waste isolation. The PA staff is considering different technical arguments to ascertain if the additional water use can be shown to have no impact on waste isolation.

The TAB Chief escorted a reporter and film crew from the British Broadcasting Company to the site on August 24, 1993, and discussed the Early Site Suitability Evaluation with a reporter from the MacNeill-Lehrer News Hour on August 25, 1993.

Site Characterization Plan/SP Status

No SPs were approved by YMPO this week.

STUDY PLAN BREAKDOWN

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	Initial Plans	Major Revisions
Not Submitted to YMPO .....	38	0
In Screening Review .....	0	0
In YMPO Review .....	2	1
Awaiting Comment Resolution .....	4	3
In Verification Audit .....	4	1
Awaiting YMPO Approval .....	1	3
Awaiting Submission to NRC .....	0	0
Awaiting NRC Phase 1 Review .....	11	1
Accepted by NRC .....	44	5
Totals .....	<u>104</u>	<u>14</u>
Total Submitted to NRC .....	55	6

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State of Nevada Comments Status:

Received Comments from the State of Nevada..... 19  
 Responses Transmitted to the State of Nevada ..... 18

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NRC Comments Status:

Received Comments from NRC ..... 24  
 Responses Transmitted from DOE to NRC ..... 20

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SEP 10 1993

Lake H. Barrett

-7-

B. Project Planning and Control

Prepared and coordinated project-level consolidated Variance Analysis Reports and distributed them to DOE managers and CRWMS M&O functional managers.

Developed and presented new Planning and Control System schedule presentation capabilities.

C. Quality Assurance Implementation

SNL Audit YMP-93-17 will be held September 13-17, 1993, in Albuquerque, New Mexico.

Science Applications International Corporation Audit YMP-93-18 will be held September 27-October 1, 1993, in Las Vegas, Nevada.

Q-List and Management Control (MC)-List Implementation

Revisions to the Q-List and the MC-List to incorporate the natural barriers are continuing. -

The Assessment Team completed review of Raytheon Services Nevada's classification analysis of the 69kV power distribution system.

III. GENERAL INFORMATION ITEMS

The Analysis and Verification Division staff participated in the following meetings in Washington, D.C.: the DOE/NRC meeting on Multi-Purpose Canister (MPC) and Burnup Credit on August 27, 1993; the DOE/NRC Technical Exchange on SCC and WP/Engineered Barrier System (EBS) Design Concepts on August 24, 1993; the WP Workshop Planning Meeting on August 25, 1993; and the MPC Implementation Integration Meeting on August 26, 1993.

The staff participated in the NAS Committee on the Technical Basis for YM Standards Meeting August 26-27, 1993.

The MGDS staff attended the second NAS 801 Committee meeting in Las Vegas, Nevada.

A preliminary Quaternary fault map of the YM region was submitted for formal USGS review. The map shows the location and surface characteristics of all faults mapped to date at YM. Emphasis is placed on those faults that display clear evidence of Quaternary faulting. The map will be used to guide continuing trench studies and to provide input for tectonic modeling studies.

Early water chemistry results for USW UZ-14 water samples (FID "hydrocarbon scan") from the USGS Water Quality Laboratory did not show any indications of the polymer from the hydrocarbon solvent used with the polymer. There were hydrocarbons in the Nalco Adamite WFR-2 standard, but none of the peaks found in the Adamite were detected in the samples. Due to vaporization, weathering, etc., the hydrocarbon peaks in the polymer were not present in three water samples. The technique performed ten years ago is the same as that used this time. The gas chromatography/mass spectrometry data contained a peak found in

SEP 10 1993

Lake H. Barrett

-8-

the reference standard-WFR-2. This peak was tentatively identified as an ethoxylated phenol. This same peak is found in a sample from 1,262 feet, in a lesser amount in a sample from 1,272 feet, and not detected in a sample from 1,282 feet. Reasons for this are not certain. The USGS laboratory will continue to process the analyses for gross phenols.

Regarding Work Breakdown Structure 1.2.2.2.5 (Characterization of the Effects of Man-Made Materials on Chemical and Mineralogical Changes in the Post-Emplacement Environment), scoping diesel fuel stability experiments continue. There is now good evidence of chemical reactions taking place at 200 degrees Celsius. Some of the products are carboxylic acids which can produce potentially aggressive environments for the WP container. The Principal Investigators of the Man-Materials and Metal Barriers tasks are working together to plan experiments to determine the effects in a more quantitative manner.

David Vaniman of the Los Alamos mineralogy/petrology group reported that advances were made this week in developing apparatus to be used for controlled-pH<sub>2</sub>O experiments, which will address the consequences of heating altered tuff at YM. These experiments are important because future assessment of the response of hydrous minerals in altered tuff to the thermal pulse will, to a large extent, depend on their dehydration and rehydration properties as a function of temperature and pH<sub>2</sub>O. The results being obtained will be important in evaluating "hot" repository models.

The Los Alamos volcanism staff exposed a thin sequence of Holocene tephra in trenches south of the Lathrop Wells main cone. This is the first documented occurrence of these deposits outside the quarry area and provides strong confirmation of Los Alamos stratigraphic models of the eruptive history of the center.

The Los Alamos volcanism staff completed a 1:12,000 geologic map of the lava sequence (85 ka) at the Lathrop Wells center. This new mapping incorporates the results of revised stratigraphic sequences based on newly obtained geochronology data.

The Los Alamos volcanism staff completed electron microprobe analyses of olivines and magnetites for three tephra units associated with the Lathrop Wells volcanic center. They are attempting to correlate ashes erupted at Lathrop Wells to ashes exposed in fault trenches near YM.

A preliminary experiment by SNL investigating the effect of matrix imbibition on water percolation through fractures in large format (21" x 12") tuff slab was completed. The large format successfully eliminated previous problems with lower boundary condition effects present in previous smaller format experiments. Full transient imbibition field was successfully imaged in addition to solute diffusion processes. This experiment was the first to utilize the newly-installed YMP industrial x-ray equipment.

Field Operations Department staff investigated a motor vehicle accident which resulted in minor damage to the vehicles, but no personal injuries. This information was reported through NORSOC and the Office of Civilian Radioactive Waste Management (OCRWM) reporting channels.

Field Test Facilities Support Department staff began preparation of a strawman schedule showing ESF construction activities, testing activities, and testing types for use in preparing a detailed implementation plan for operations and maintenance support for ESF testing. They also initiated weekly CRWMS M&O ESF electrical, communications, Integrated Data System, and construction monitoring meetings which are required to keep DOE informed on the status of the respective activities.

Technical and Management Support Services prepared a white paper on "Recommendations for the Management of Real Property for the Yucca Mountain Site Characterization Project."

#### IV. PUBLIC OUTREACH AND INSTITUTIONAL ACTIVITIES

The YMP Speaker Series, "Desert Tortoise--Ecology and Conservation," was presented by Danny Rakestraw and Kurt Rautenstrauch, both EG&G Energy Measurements, Inc., on August 24, 1993, at the Las Vegas Yucca Mountain Science Center (YMSC) and on August 26, 1993, at the Beatty, Nevada, YMSC. A total of approximately 75 people attended these presentations.

A Public Open House tour of YM was coordinated and conducted on August 21, 1993, for approximately 139 people. Tour participants visited the Las Vegas YMSC, the Field Operations Center, two laboratories, the LM-300 drill rig, the top of YM, and the ESF North Portal construction area.

Tours of YM were conducted on August 23, 1993, for Luther Carter, NAS Publications; on August 24, 1993, for John Slater of the British Broadcasting Company; on August 26, 1993, for Tom Bearden, MacNeil-Lehrer; on August 26, 1993, for Congressman John T. Myers and two members of the Energy and Water Development Appropriations Subcommittee; and on August 27, 1993, for five staff members from the Public Affairs Office of the Waste Isolation Pilot Plant. Carl Gertz, Project Manager, gave a pretour briefing to Congressman Myers' group.

James Replogle, YMPO, gave a presentation on DOE Research Opportunities to 30 attendees of the Department of Civil and Environmental Engineering Retreat on August 27, 1993, at Mt. Charleston, Nevada.

The Institutional and External Affairs (IEA), CRWMS M&O, and SNL staff set up and staffed a YMP exhibit at the Nevada State Fair in Reno, Nevada, August 25-29, 1993. Approximately 50 people visited the display.

The IEA and YMPO staff attended the Affected Units of Local Government Workshop, hosted by Nye County, in Pahrump, Nevada, August 24-25, 1993. The IEA staff also attended the NAS meeting August 26-27, 1993, in Las Vegas, Nevada.

#### 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 Rebecca Nick at (702) 794-7769, 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>
<b>A. <u>Stakeholders Meetings</u></b>			
No significant meetings to report.			
<b>B. <u>DOE/HQ Meetings</u></b>			
Wednesday, September 29 (televideo)	OCRWM Director's Program Review Meeting	Washington, DC	L. Smith/ C. Gertz
<b>C. <u>CRWMS M&amp;O/DOE Meetings</u></b>			
Tuesday, August 31	YMPO Monthly Management Meeting	Las Vegas, NV	C. Gertz
<b>D. <u>Internal and DOE/Nevada Operations Office Meetings</u></b>			
Thursday- Friday, September 23-24	YMPO Management Off-site	St. George, UT	C. Gertz
<b>E. <u>NRC Interactions</u></b>			
Wednesday, October 13	Technical Exchange - Radioactive Migration in the Unsaturated Zone (P)	Los Alamos, NM	T. Bjerstedt
Thursday, October 14	Technical Exchange - Near-Field Phenomena Related To Radio- nuclide Releases from the EBS (P)	Los Alamos, NM	T. Bjerstedt
Friday, October 15	Los Alamos Site Visit (P)	Los Alamos, NM	T. Bjerstedt
Wednesday, November 17	Interactions Scheduling Management Meeting (P)	Washington, DC	T. Bjerstedt
Thursday, November 18	Seismic Hazards Assessment Technical Meeting (P)	Washington, DC	T. Bjerstedt
<b>F. <u>Nuclear Waste Technical Review Board (NWTRB) Interactions</u></b>			
Tuesday- Friday, October 19-22	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Nesbit

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>F. <u>NWTRB Interactions (Continued)</u></b>			
Monday- Tuesday, November 1-2	NWTRB Joint T&S/ EBS Panel Workshop (P)	Dallas, TX	J. Nesbit
Monday- Wednesday, January 10-12, 1994	NWTRB Full Board Meeting (P)	Arlington, VA	J. Nesbit
January or February 1994	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	NWTRB Full Board Meeting (P) (Tentative)	Denver, CO	J. Nesbit
Wednesday- Friday, October 12-14 1994	NWTRB Full Board Meeting (P) (Tentative)	Las Vegas, NV	J. Nesbit
<b>G. <u>ACNW Interactions</u></b>			
Wednesday- Thursday, September 29-30	ACNW 57th Meeting (P)	Bethesda, MD	A. Gil
Tuesday, October 26	ACNW Working Group on Unsaturated Zone Hydrology	TBD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 58th Meeting (P)	Las Vegas, NV	A. Gil
Monday- Tuesday, November 22-23	ACNW 59th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, December 15-16	ACNW 60th Meeting (P)	TBD	A. Gil
<b>H. <u>NAS Interactions</u></b>			
Tuesday- Wednesday, November 9-10	NAS Committee on YM Standards (P)	TBD	S. Jones

SEP 10 1993

Lake H. Barrett

-12-

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>H. <u>NAS Interactions</u> (Continued)</b>			
Thursday-Friday, December 16-17	NAS Committee on YM Standards (P)	TBD	S. Jones
Monday-Tuesday, February 7-8, 1994	NAS Committee on YM Standards (P)	TBD	S. Jones
Thursday-Friday, April 28-29, 1994	NAS Committee on YM Standards (P)	TBD	S. Jones

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u></b>			
Saturday, August 28	Discovery Day (P) - Fossils, Hydrology, Rocks and Minerals, Volcanoes, Gold Panning	Pahrump, NV	Various Speakers
Wednesday-Thursday, September 1-2	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold G. Fasano
Tuesday September 7	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold G. Fasano
Tuesday, September 7	International Atomic Energy Course - General Overview	Argonne, IL	C. Gertz
Wednesday, September 8	C. C. Gem Club - Minerals	Las Vegas, NV	TBD
Wednesday, September 8	Radioactive Waste Management Video Conference Series, High-Level Waste Management - General Overview	Albuquerque, NM	C. Gertz
Thursday, September 9	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Friday, September 10	Pretour, Nuclear Programs - China - General Overview	Las Vegas, NV	G. Fasano
Friday, September 10	Public Gas Service Gas Company - General Overview	New Brunswick, NJ	C. Gertz
Tuesday, September 21	Pretour, Western Legislative Conference, Environmental & Resource Management Committees - General Overview	Las Vegas, NV	A. Robison
Sunday, September 26	YM Speaker Series (P) - "Radiation"	Pahrump, NV	M. Griffin
Sunday, September 26	Discovery Day (P) - Fossils, Hydrology, Rocks and Minerals, Volcanoes, Gold Panning, Streamtable	Beatty, NV	Various Speakers
Sunday, September 26	Children's Discovery Museum - Native American Indian Culture	Las Vegas, NV	R. Arnold G. Fasano
Monday, September 27	Emerging Technologies in Hazardous Waste Management - General Overview	Atlanta, GA	C. Gertz
Tuesday, September 28	Pretour, Entergy Energy Corporation - General Overview	Las Vegas, NV	J. Peck
Tuesday, September 28	Pretour, Southern Nevada Chevron Retirees Association - General Overview	Las Vegas, NV	J. Peck
Tuesday, September 28	YM Speaker Series (P) - "Radiation"	Las Vegas, NV	M. Rose
Friday, October 1	Pretour, Chubu Electric Power, Japan - General Overview	Las Vegas, NV	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u> (Continued)</b>			
Tuesday, October 5	Sun City Residents - General Overview	Las Vegas, NV	TBD
Tuesday, October 5	East Las Vegas Library - General Overview	Las Vegas, NV	J. Peck
Tuesday, October 19	Community College of Southern Nevada - General Overview	Las Vegas, NV	G. Fasano
Wednesday, October 20	Basset Book Shop - Native American Indian Culture	Las Vegas, NV	R. Arnold
Thursday, November 4	Discover Southern Nevada - General Overview	Las Vegas, NV	TBD
Tuesday, November 16	Society for Mining, Metallurgy, and Exploration - General Overview	Pomona, CA	TBD
Monday, November 18	American Nuclear Society - Results of In-Situ Testing at Geologic Disposal Sites	San Francisco, CA	TBD
Sunday, February 27, 1994	Waste Management Symposia - TBD	Tucson, AZ	TBD
Sunday, March 20, 1994	Risk Management Quarterly Association - TBD	San Diego, CA	TBD
<u>Date</u>	<u>Event</u>	<u>Location</u>	

**J. Exhibits Scheduled**

Wednesday- Sunday, August 25-29	Nevada State Fair (P)	Reno, NV
Thursday- Monday, September 2-6	Tri-County Fair (P)	Bishop, CA
Friday- Monday, September 3-6	Elko County Fair (P)	Elko, NV

<u>Date</u>	<u>Event</u>	<u>Location</u>
J. <u>Exhibits Scheduled</u> (Continued)		
Wednesday- Friday, September 15-17	Nevada League of Cities	Henderson, NV
Friday- Sunday, September 17-19	Harvest Day Festival (P)	Pahrump, NV
Sunday- Wednesday, September 19-22	American Society for Quality Control	Palm Springs, CA
Saturday, September 25	Public Open House (P)	Las Vegas, NV
Wednesday- Saturday, September 29- October 2	Nevada Library Association	Elko, NV
Friday- Sunday, October 1-10	Jaycees State Fair (P)	Las Vegas, NV
Saturday- Friday, October 9-15	Association of Engineering Geologists	San Antonio, TX
Wednesday- Friday, October 13-15	Nevada Association of Counties	Pahrump, NV
Saturday, October 23	Public Open House (P)	Las Vegas, NV
Monday- Thursday, October 25-28	Geological Society of America	Boston, MA
Saturday, November 6	Boy Scouts Expo '93	Las Vegas, NV
Sunday- Wednesday, November 14-17	American Nuclear Society	San Francisco, CA
Saturday, November 17	Public Open House (P)	YM, NV
Monday- Friday, December 6-10	American Geophysical Union	San Francisco, CA

Lake H. Barrett

-16-

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>J. Exhibits Scheduled (Continued)</b>		
Saturday, December 18	Public Open House (P)	YM, NV
<u>Date</u>	<u>Event</u>	<u>Escorts</u>
<b>K. Tours Scheduled</b>		
Tuesday, August 31	John G. Keliher, Director, Office of Intelligence and National Security	J. Peck
Friday, September 10	Nuclear Programs - China	TBD
Monday, September 13	Senior Tripsters	TBD
Thursday, September 16	Edison Electric Institute	TBD
Friday, September 17	Lincoln County School Board	C. Binder B. Bush
Saturday, September 18	Nevada League of Cities	TBD
Monday, September 20	WP Development Workshop	TBD
Tuesday, September 21	Western Legislative Conference	D. Bradford
Thursday, September 23	Jewish Community Center/Detroit Club	TBD
Saturday, September 25	Public Open House (P)	Various Escorts
Tuesday, September 28	Southern Nevada Chapter Chevron Retirees Association	TBD
Tuesday, September 28	Entergy Energy Group	D. Bradford
Friday, October 1	Chubu Electric Power, Japan	TBD
Tuesday, October 12	Sun City Senior Citizens	TBD

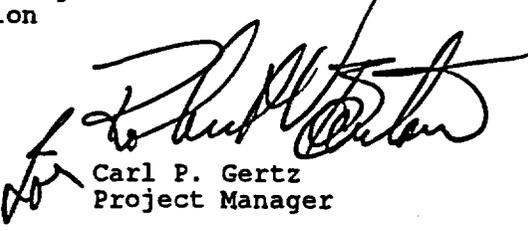
SEP 10 1993

Lake H. Barrett

-17-

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled</u> (Continued)		
Thursday, October 14	Nevada Association of Counties	TBD
Wednesday, October 20	Wildland Shrub and Arid Land Restoration Symposium	K. Ostler
Saturday, October 23	Public Open House (P)	Various Escorts
Tuesday, October 26	National Association of Regulatory Utility Commissioners	TBD
Wednesday, November 17	Public Open House (P)	Various Escorts
Tuesday, November 23	Sun City B'nai Brith	TBD
Monday, November 29	NAS Tunnel Technology Committee	TBD
Saturday, December 18	Public Open House (P)	Various Escorts
Thursday, March 31, 1994	National Council, State Garden Club Specific Region Convention	TBD

YMP:RVB-5918

  
for Carl P. Gertz  
Project Manager



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

WAS 1.2.9.2  
QA: N/A

SEP 0 1 1993

Lake H. Barrett, Acting Director, Civilian Radioactive Waste Management,  
HQ (RW-1) FORS  
THRU: Linda M. Smith, Acting Associate Director, OGD

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING  
AUGUST 20, 1993 (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

A. Site Characterization Activities

Exploratory Studies Facility (ESF)

Comment resolution meetings will begin on the 90 percent review of Design Package 1B.

Construction will continue in the Starter Tunnel, including bench excavation, placement of fibercrete, and installation of cement grouted pattern bolts.

Pump testing and sampling of water will continue at UZ-14. Drilling at UZN-39 will continue. Support, installation, excavation, and mapping will continue on the ESF bench, beyond approximate station 0+90. Vertical Seismic Profiling (VSP) will begin in WT-2 next week. Trenching is tentatively scheduled to begin on August 23, 1993, at Solitario Canyon.

The staff will escort a reporter and film crew from the British Broadcasting Company to the site on August 24, 1993, and will discuss the Early Site Suitability Evaluation with a reporter from the MacNeill-Lehrer News Hour on August 25, 1993.

The staff will attend the meeting of the National Academy of Sciences (NAS) panel on Standards for Yucca Mountain (YM), Nevada. Several participant staff have been invited to speak to the panel, which is evaluating the basis for, and the potential approaches to, setting health-based dose limits for a repository. The standards, mandated by the Comprehensive Nuclear Energy Policy Act of 1992, will influence the form of future performance assessments (PA) for YM.

B. Public Outreach and Institutional Activities

Tours of YM will be conducted on August 23, 1993, for Luther Carter, NAS Publications; on August 24, 1993, for John Slater of the British Broadcasting Company; on August 26, 1993, for Tom Bearden, MacNeill-Lehrer; and on August 26, 1993, for Congressman John T. Myers and two members of the Energy and Water Development Appropriations Subcommittee. Carl Gertz, Project Manager, will give a pretour briefing to Congressman Myers' group.

SEP 01 1993

The Institutional and External Affairs (IEA) and Yucca Mountain Site Characterization Project Office (YMPO) staff will attend the Affected Units of Local Government Workshop, hosted by Nye County, in Pahrump, Nevada, August 24-25, 1993.

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

A. Site Characterization Activities

ESF

Construction

On ESF North Portal Pad and Facilities, three sections of ventline were installed in the Starter Tunnel and ribs were cleaned for investigators. Excavation of the bench section of the Starter Tunnel continued. As of August 20, 1993, the bench face was at 00+27.4 meters (00+90 feet). Fibercrete was applied, geologic mapping was carried out, and pattern bolts were grouted. Construction is continuing on the stormwater diversion channel around the North Portal area, with application of shotcrete and placement of riprap. The next round of geologic mapping, photography, and sampling is tentatively scheduled for the week of August 23, 1993. Mapping is complete to station 0+85.

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

Complete 60 Meters of Tunnel Boring Machine Starter Tunnel	September 22, 1993
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Design

The 90 percent design review of Package 1B continued. Comment resolution began and formal comment resolution meetings are scheduled to begin on August 23, 1993.

Resolution of comments will continue on the 90 percent review of Package 2A.

The 50 percent management and independent technical reviews of Design Package 1B (Surface Facilities, North Portal) and Design Package 2 (North Ramp - Surface to Topopah Spring Level) are complete. All comments have been addressed. The records packages for these reviews have been compiled, and are being reviewed for completeness.

Surface-Based Testing Activities

Exploratory drilling operations progress is summarized as follows:

<u>Borehole</u>	<u>Current Core Depth 8/20/93</u>	<u>Current Ream Depth 8/20/93</u>	<u>Total Planned Depth</u>
NRG-2B	130.84 feet	130.84 feet	315 feet
UZ-14	1,282. feet	1,282. feet	2,000 feet
UZN-39	33.15 feet	30.99 feet	

On NRG-2B, drilling operations have been suspended since August 16, 1993, pending receipt of Standard Penetration Resistance Testing sampling equipment.

On August 20, 1993, VSP testing began on NRG-6; it is expected to be completed on August 23, 1993.

On UZ-14, the bottom of the hole is in the Topopah Spring basal vitrophyre unit. The most recent deviation survey was taken at 1,250 feet and showed 1 degree 20 minutes deviation from vertical. Water was encountered at 1,256.6 feet on July 30, 1993. Drilling operations have been temporarily suspended since August 6, 1993, so that water testing and sampling can be completed.

On UZ-16, gas testing will begin as soon as an eight-packer string is lowered into the hole. To date, five of the eight-packers have been lowered.

On August 23, 1993, VSP is scheduled to begin on WT-2.

Drilling of UZN-39 began on August 18, 1993. Core recovery has been 100 percent.

#### Sample Management Facility (SMF)

Began supporting drilling on UE-25 UZN-39. Drilling Support staff collected drive core from 0.0 feet to 37.9 feet in alluvium.

The SMF processed drive core from UE-25 UZN-39.

Produced a detailed structure log on USW UZ-14 core from 1,228 feet to 1,282 feet.

Nine examinations were conducted at the SMF by Sandia National Laboratories (SNL), the U.S. Geological Survey (USGS), the U.S. Department of Energy (DOE), Los Alamos National Laboratory (Los Alamos), and the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O).

Continued to provide monitoring and oversight of prototype drilling tool development activities currently being conducted at Colorado School of Mines. Performing analysis on data collected from EXLOG vibration sub-studies.

Removed 49 specimens from core samples for various analyses performed by Principal Investigators.

Continued Schmidt Hammer testing on NRG boreholes for SNL.

Accepted into the SMF 22 USW UZ-14 water samples collected by USGS for analysis.

Continued development of the new version of the sample tracking data base which will allow for multiple user activities.

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	Surface mapping
8.3.1.17.4.4	Quaternary Faulting in NE-Trending Fault Zones	Surface mapping
8.3.1.17.4.10	Geodetic Leveling	Traversing
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	Cl-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

#### Environmental Programs

Field data recovery was completed at site 26Ny8187, near Bare Mountain.

The Biological Resources Monitoring Annual Progress Report for fiscal year (FY) 1992 was distributed.

Conducted four environmental compliance surveillances at the YM site to ensure compliance with permit and programmatic requirements.

Two papers on YM's desert tortoise activities were presented at a national meeting on reptiles in Indiana.

#### Safety and Health Compliance

Submitted CRWMS M&O Safety and Health Functional Appraisal Finding to the DOE Safety and Health Specialist.

#### Large Block Test

All equipment for the prototype sawing is installed and cutting will begin next week.

#### Regulatory Interactions

##### Site Characterization Progress Report (PR)

The PR 8 was held up in the offices of General Counsel and the Secretary. The Secretary was expected to approve the document during the week of August 9, 1993. The revised distribution date for PR 8 is now September 10, 1993.

##### Mined Geologic Disposal System (MGDS) License Application (LA) Annotated Outline (AO)

Submitted Revision 3 of the MGDS LA AO to the 24-member review team (19 CRWMS M&O, 5 participant) for the CRWMS M&O/participant review. This revision consists of Sections 3.1, "Description of Individual Systems and Characteristics of the Site," and 3.3, "Assessment of Compliance with 10 CFR 60." The review package contains approximately 650 pages. Comments are expected by August 26, 1993.

#### Issue Resolution

The Substantially Complete Containment Working Group is preparing for the U.S. Nuclear Regulatory Commission (NRC) technical exchange scheduled for August 24, 1993, in Bethesda, Maryland, at the NRC's Phillips Building.

#### Technical Analysis

The PA staff participated in an expert elicitation on the subject of thermal loading. The elicitation will provide a preliminary judgment on preferred thermal loads in order to support systems analysis of this critical design issue.

The Technical Analysis Branch and PA staff conducted a meeting to lay out generic waste isolation evaluations. These evaluations are intended to streamline the process of evaluating potential impacts of design, testing, and construction materials, and to improve the connection between PA and the design and testing communities. The PA staff completed an initial draft of the implementing line procedure for the development of waste isolation evaluations in order to clarify the CRWMS M&O internal process for conducting these evaluations. Evaluations continued of the impact of various construction activities on waste isolation.

The following items were discussed at a PA management meeting: the strategy for PA for FY 1994, the status and future plans for the completion of Total System PA II, and the outcome of the waste isolation evaluation meeting the previous day. The purpose of the meeting was to determine how to proceed to avoid significant impact on the site characterization and ESF design programs resulting from the severe restriction in PA budget and the uncertain status of models to evaluate impacts of testing and construction.

Site Characterization Plan/Study Plan (SP) Status

No SPs were approved by YMPO this week.

STUDY PLAN BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to YMPO .....	38	0
In Screening Review .....	0	0
In YMPO Review .....	2	1
Awaiting Comment Resolution .....	4	4
In Verification Audit .....	4	0
Awaiting YMPO Approval .....	1	3
Awaiting Submission to NRC .....	0	0
Awaiting NRC Phase 1 Review .....	11	1
Accepted by NRC .....	44	5
Totals .....	<u>104</u>	<u>14</u>
Total Submitted to NRC .....	55	5

State of Nevada Comments Status:

Received Comments from the State of Nevada..... 19  
 Responses Transmitted to the State of Nevada ..... 18

NRC Comments Status:

Received Comments from NRC ..... 24  
 Responses Transmitted from DOE to NRC ..... 20

B. Project Planning and Control

Received variance analysis inputs from participants for Planning and Scheduling accounts exceeding established thresholds and prepared consolidated variance analysis reports.

C. Quality Assurance Implementation

CRWMS M&O Surveillance 93-039, Software Quality Assurance, will be held August 23-27, 1993 at the site.

Raytheon Services Nevada Surveillance 93-041, Processing of Shotcrete Test Samples, will be held the week of August 30, 1993, at the site.

SNL Surveillance 93-043, Special Sampling Activities at NRG-2B, will be held the week of August 30, 1993, at the site.

### III. GENERAL INFORMATION ITEMS

Participated in the "dry run" for DOE presentations in preparation for the August 26-27, 1993, NAS Committee on the Technical Basis for YM Standards meeting on August 19, 1993, in Washington, D.C.

Met informally with U.S. Environmental Protection Agency (EPA) representatives in Washington, D.C., on August 19, 1993, to discuss DOE framework of considerations in the development of the EPA standard.

Regarding Work Breakdown Structure 1.2.2.3.2 (Metal Barriers), Lawrence Livermore National Laboratory (LLNL) staff members observed the carbon steel pipe string that had been exposed in Well USW H-5 for more than ten years in both the unsaturated and saturated zones. As would be expected, the portions of the pipe string that were exposed to the saturated zone were corroded, while the portions in the unsaturated zone appeared to be nearly intact. Samples from different parts of the string were shipped to LLNL for characterization. The corrosion products will be analyzed, the corrosion attack pattern will be characterized, and an estimate will be made of the metal lost during the exposure period.

Bruce Crowe of Los Alamos reported that six new tephra pits were constructed at four sites on the south flank of Lathrop Wells volcanic center.

Los Alamos volcanism staff obtained preliminary results for three new sets of cosmogenic  $^3\text{He}$  studies of lava sites at Lathrop Wells volcanic center.

Mineralogy/petrology staff performed moisture evolution analysis on zeolites and smectites equilibrated at 0 percent and 100 percent relative humidities at ambient temperatures. The staff is collecting these data, along with new sets of reference-intensity ratios for hydrous minerals (principally clays and zeolites) at various humidities, to improve their x-ray diffraction quantitative determinations of these minerals. Since the weight of many hydrous minerals at YM varies as a function of relative humidity, a knowledge of this variation will improve the quantitative determinations. Moreover, using this knowledge, data obtained from core samples that have dried out in storage can be cast into a form that more accurately reflects their weight proportions under both ambient and repository thermal loads conditions.

Sample preparation and analysis at Los Alamos continued on samples from UE-25 UZ-16 and USW NRG-6. Using results of studies of these cores, and of additional core samples, focus will be on obtaining mineralogical evidence of unsaturated-zone transport, applications to waste retardation, and development of site mineralogical data for regions proximal to but beyond the extent of ESF workings.

June Fabryka-Martin of Los Alamos reported that results of preliminary  $^{36}\text{Cl}/\text{Cl}$  analyses of nine samples from UZ-16 do not show any evidence of penetration of modern (bomb-pulse) water into the Paintbrush nonwelded and bedded units or into the Topopah Spring welded unit along Ghost Dance fault. All  $^{36}\text{Cl}/\text{Cl}$  ratios were at or below the natural background (pre-bomb) levels.

Technical & Management Support Services (T&MSS) prepared a book for DOE which contains printouts of all photographic products on hand or available from Johnson Controls. This information included printouts of all still and video photography done by Johnson Controls, and also had information on material on file at the SMF and YM items of interest from EG&G Energy Measurements, Inc. The information will be used by DOE to satisfy queries received from NRC, Clark County, and other agencies who may have an interest.

Reviewed, edited, and revised the text for a display on "Major Earthquakes Scarps in Nevada and Landers, California: Perspective Regarding a Potential Repository at Yucca Mountain."

The USGS unsaturated zone staff report that conclusive results have not been obtained from the USGS National Water Quality Laboratory to confirm the presence of drilling polymer in the water samples bailed out of USW UZ-14 from the depth interval 1,262 feet to 1,282 feet. The inorganic laboratory results, especially from the deepest sample, indicate that these water samples have a different chemical make-up than previously collected samples. Additional organic analyses for stable phenol compounds are currently underway and should be completed within a couple of days.

Two short term pumping tests have been completed by USGS with the collection of additional water samples. A long term (four to five day) pumping test is scheduled to begin next week. After this final pumping test, the producing zones will be pressure grouted and dry coring will continue through the unsaturated zone to the regional water table.

The USGS tectonics staff submitted a report entitled, "Recommendations and Revisions to Seismic Source Characterization." The report outlines the methodology that should be used to assess the seismic hazard at YM. The methodology will be incorporated into the DOE topical report on seismic hazards.

#### IV. PUBLIC OUTREACH AND INSTITUTIONAL ACTIVITIES

John Peck, T&MSS, gave a general YMP overview to 30 attendees of the 1993 American Institute of Chemical Engineers Summer National Meeting on August 17, 1993, in Seattle, Washington.

Carl Gertz gave an update on YM to 200 attendees of the Second International Mixed Waste Symposium on August 19, 1993, in Baltimore, Maryland.

Two tours to YM were conducted on August 17, 1993: one for 10 interns of CRWMS M&O and one for 40 guests comprised of Congressional staff, utility representatives, and members of the American Nuclear Energy Council (ANEC). Carl Gertz gave a pretour briefing for the ANEC tour group.

Kenton Beall, T&MSS, gave a general YMP overview to 50 members of the Loyal Order of the Moose on August 20, 1993, in Pahrump.

The IEA staff set up and staffed a YMP exhibit at the Eureka County Fair, August 13-15, 1993, in Eureka, Nevada. Approximately 40 people visited the display.

The IEA staff completed development of a newspaper announcement for the YM Speaker Series on the desert tortoise. The staff also completed a new display on the use of nuclear energy for the Las Vegas YM Science Center; this display uses the Point Beach power plant in Wisconsin as an example of nuclear power production.

The IEA staff attended the Churchill County Commission meeting on August 18, 1993, and the Lander County Commission meeting on August 19, 1993.

The IEA staff finalized arrangements for YMP personnel to tour Zion nuclear power station in Chicago, Illinois, and the Illinois Department of Nuclear Safety in Springfield, Illinois, August 30-31, 1993. Arrangements were also finalized for Esmeralda County to tour the Palo Verde Nuclear Station in Phoenix, Arizona, on August 31, 1993.

#### 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 Rebecca Nick at (702) 794-7769, 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>			
No significant meetings to report.			
B. <u>DOE/Headquarters Meetings</u>			
Wednesday, September 29 (televideo)	OCRWM Director's Program Review Meeting	Washington, DC	L. Smith/ C. Gertz
C. <u>CRWS M&amp;O/DOE Meetings</u>			
Wednesday, August 25 (televideo)	CRWS M&O Program Management Review	Vienna, VA	L. Smith/ C. Gertz
Tuesday, August 31	YMPO Monthly Management Meeting	Las Vegas, NV	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>D. <u>Internal and DOE/Nevada Operations Office (NV) Meetings</u></b>			
Wednesday, August 18	NV Managers Program Review	Las Vegas, NV	C. Gertz
Wednesday- Friday, September 22-24	YMPO Management Off-site	TBD	C. Gertz
<b>E. <u>NRC Interactions</u></b>			
Tuesday, August 24	Technical Exchange - Substantially Complete Containment & Waste Package (WP)/ EBS Design Concepts (P)	Washington, DC	T. Bjerstedt
Wednesday, October 13	Technical Exchange - Radioactive Migration in the Unsaturated Zone (P)	Los Alamos, NM	T. Bjerstedt
Thursday, October 14	Technical Exchange - Near-Field Phenomena Related To Radio- nuclide Releases from EBS (P)	Los Alamos, NM	T. Bjerstedt
Friday, October 15	Los Alamos Site Visit (P)	Los Alamos, NM	T. Bjerstedt
Wednesday, November 17	Interactions Scheduling Management Meeting (P)	Washington, DC	T. Bjerstedt
Thursday, November 18	Seismic Hazards Assessment Technical Meeting (P)	Washington, DC	T. Bjerstedt
<b>F. <u>Nuclear Waste Technical Review Board (NWTRB) Interactions</u></b>			
Tuesday- Friday, October 19-22	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Cooper
Monday- Tuesday, November 1-2	NWTRB Joint T&S/EBS Panel Workshop (P)	TBD	J. Cooper
Monday- Wednesday, January 10-12, 1994	NWTRB Full Board Meeting (P)	Arlington, VA	J. Cooper
January or February 1994	NWTRB - SG&G Panel (P)	TBD	J. Cooper

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>F. <u>NWTRB Interactions (Continued)</u></b>			
Monday- Wednesday, April 11-13, 1994	NWTRB Full Board Meeting (P)	Reno, NV	J. Cooper
Monday- Wednesday, July 11-13, 1994	NWTRB Full Board Meeting (P) (Tentative)	Denver, CO	J. Cooper
Wednesday- Friday, October 12-14 1994	NWTRB Full Board Meeting (P) (Tentative)	Las Vegas, NV	J. Cooper
<b>G. <u>Advisory Committee on Nuclear Waste (ACNW) Interactions</u></b>			
Wednesday- Thursday, September 29-30	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 57th Meeting (P)	Las Vegas, NV	A. Gil
Monday- Tuesday, November 22-23	ACNW 58th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, December 15-16	ACNW 59th Meeting (P)	TBD	A. Gil
<b>H. <u>NAS Interactions</u></b>			
Thursday- Friday, August 26-27	NAS Committee on YM Standards-Alternative Formulations of a Risk-Based Standard (P)	Las Vegas, NV	S. Jones
Tuesday- Wednesday, November 9-10	NAS Committee on YM Standards (P)	TBD	S. Jones
Thursday- Friday, December 16-17	NAS Committee on YM Standards (P)	TBD	S. Jones
Monday- Tuesday, February 7-8, 1994	NAS Committee on YM Standards (P)	TBD	S. Jones

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>H. <u>NAS Interactions (Continued)</u></b>			
Thursday-Friday, April 28-29, 1994	NAS Committee on YM Standards (P)	TBD	S. Jones
<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u></b>			
Tuesday, August 24	YM Speaker Series (P) - "Desert Tortoise --Ecology and Conservation"	Las Vegas, NV	D. Rakestraw K. Rautenstrauch
Thursday, August 26	Pretour, Nevada Test Site tour for Congressman John T. Myers staff, Energy & Water Development Appropriations Subcommittee - General Overview	Las Vegas, NV	C. Gertz
Thursday, August 26	YM Speaker Series (P) - "Desert Tortoise --Ecology and Conservation"	Beatty, NV	D. Rakestraw K. Rautenstrauch
Friday, August 27	Department of Civil and Environmental Engineering Retreat - DOE Research Opportunities	Mt. Charleston, NV	J. Replogle
Saturday, August 28	Discovery Day (P) - Fossils, Hydrology, Rocks and Minerals, Volcanoes, Gold Panning	Pahrump, NV	Various Speakers
Wednesday- Thursday, September 1-2	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold G. Fasano
Monday- Tuesday, September 6-7	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold G. Fasano
Tuesday, September 7	International Atomic Energy Course - General Overview	Argonne, IL	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u> (Continued)</b>			
Wednesday, September 8	Radioactive Waste Management Video Conference Series, High-Level Waste Management - General Overview	Albuquerque, NM	C. Gertz
Friday, September 10	Public Gas Service Gas Company - General Overview	New Brunswick, NJ	C. Gertz
Monday, September 13	Basset Book Shop - Native American Indian Culture	Las Vegas, NV	R. Arnold G. Fasano
Tuesday, September 21	Pretour, Western Legislative Conference, Environmental & Resource Management Committees - General Overview	Las Vegas, NV	A. Robison
Sunday, September 26	YM Speaker Series (P) - "Radiation"	Pahrump, NV	TBD
Sunday, September 26	Discovery Day (P) - Fossils, Hydrology, Rocks and Minerals, Volcanoes, Gold Panning	Beatty, NV	Various Speakers
Sunday, September 26	Children's Discovery Museum - Native American Indian Culture	Las Vegas, NV	R. Arnold G. Fasano
Monday, September 27	Emerging Technologies in Hazardous Waste Management - General Overview	Atlanta, GA	TBD
Tuesday, September 28	Pretour, Entergy Energy Corporation - General Overview	Las Vegas, NV	J. Peck
Tuesday, September 28	Pretour, Southern Nevada Chevron Retirees Association - General Overview	Las Vegas, NV	J. Peck
Tuesday, September 28	YM Speaker Series (P) - "Radiation"	Las Vegas, NV	TBD
Thursday, September 30	Pretour, League of Women Voters - General Overview	Las Vegas, NV	B. Reilly J. Younker

Lake H. Barrett

-14-

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u> (Continued)</b>			
Friday, October 1	Pretour, Chubu Electric Power, Japan - General Overview	Las Vegas, NV	TBD
Tuesday, October 5	Sun City Residents - General Overview	Las Vegas, NV	TBD
Tuesday, October 19	Community College of Southern Nevada - General Overview	Las Vegas, NV	G. Fasano
Thursday, November 4	Discover Southern Nevada - General Overview	Las Vegas, NV	TBD
Monday, November 15	American Nuclear Society (ANS) - Results of In-Situ Testing at Geologic Disposal Sites	San Francisco, CA	TBD
Sunday, February 27, 1994	Waste Management Symposia - TBD	Tucson, AZ	TBD
Sunday, March 20, 1994	Risk Management Quarterly Association - TBD	San Diego, CA	TBD

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>J. <u>Exhibits Scheduled</u></b>		
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Wednesday- Sunday, August 25-29	Nevada State Fair (P)	Reno, NV
Thursday- Monday, September 2-6	Tri-County Fair (P)	Inyo, CA
Friday- Monday, September 3-6	Elko County Fair (P)	Elko, NV
Wednesday- Friday, September 15-17	Nevada League of Cities	Henderson, NV

Lake H. Barrett

-15-

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>J. Exhibits Scheduled (Continued)</b>		
Sunday- Wednesday, September 19-22	American Society for Quality Control	Palm Springs, CA
Saturday, September 25	Public Open House (P)	Las Vegas, NV
Wednesday- Saturday, September 29- October 2	Nevada Library Association	Elko, NV
Friday- Sunday, October 1-10	Jaycees State Fair (P)	Las Vegas, NV
Saturday- Friday, October 9-15	Association of Engineering Geologists	San Antonio, TX
Wednesday- Friday, October 13-15	Nevada Association of Counties	Pahrump, NV
Saturday, October 23	Public Open House (P)	Las Vegas, NV
Monday- Thursday, October 25-28	Geological Society of America	Boston, MA
Saturday, November 6	Boy Scouts Expo '93	Las Vegas, NV
Sunday- Wednesday, November 14-17	ANS	San Francisco, CA
Saturday, November 17	Public Open House (P)	Yucca Mountain, NV
Monday- Friday, December 6-10	American Geophysical Union	San Francisco, CA
Saturday, December 18	Public Open House (P)	Yucca Mountain, NV
<u>Date</u>	<u>Event</u>	<u>Escorts</u>
<b>K. Tours Scheduled</b>		
Saturday, August 21	Public Open House (P)	Various Escorts

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled</u> (Continued)		
Monday, August 23	Luther Carter, NAS- Publications	S. Williams
Tuesday, August 24	BBC Television Features	S. Williams
Thursday, August 26	Congressman John T. Myers	R. Dyer W. Repke
Friday, September 10	Nuclear Programs - China	TBD
Monday, September 13	Senior Tripsters	TBD
Thursday, September 16	Edison Electric Institute	TBD
Friday, September 17	Lincoln County School Board	C. Binder B. Bush
Saturday, September 18	Nevada League of Cities	TBD
Monday, September 20	WP Development Workshop	TBD
Tuesday, September 21	Western Legislative Conference	D. Bradford
Thursday, September 23	Jewish Community Center/Detroit Club	TBD
Saturday, September 25	Public Open House (P)	Various Escorts
Tuesday, September 28	Southern Nevada Chapter Chevron Retirees Association	TBD
Tuesday, September 28	Entergy Energy Group	D. Bradford
Thursday, September 30	League of Women Voters	TBD
Friday, October 1	Chubu Electric Power, Japan	TBD
Tuesday, October 12	Sun City Senior Citizens	TBD
Thursday, October 14	NACO	TBD

Lake H. Barrett

-17-

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled</u> (Continued)		
Tuesday, October 19	National Association of Regulatory Utility Commissioners	TBD
Wednesday, October 20	Wildland Shrub and Arid Land Restoration Symposium	K. Ostler
Saturday, October 23	Public Open House (P)	Various Escorts
Wednesday, November 17	Public Open House (P)	Various Escorts
Tuesday, November 23	Sun. City B'nai Brith	TBD
Monday, November 29	NAS Tunnel Technology Committee	TBD
Saturday, December 18	Public Open House (P)	Various Escorts

YMP:RVB-5843

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 Jr. Carl P. Gertz  
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