



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

Reply to:  
301 E. Stewart Ave., #203  
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 17, 1993  
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE  
WEEK ENDING SEPTEMBER 3, 1993

Please find enclosed the above-referenced report.

There is nothing requiring specific management attention in the report.

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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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

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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  
SEPTEMBER 3, 1993 (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

A. Site Characterization Activities

Exploratory Studies Facility (ESF)

Comment resolution will continue 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. Mapping will continue of the ESF bench beyond approximate station 0+90.

Surface-Based Testing

Recovery testing will continue at UZ-14. Trenching will continue at Solitario Canyon. Drilling will continue at NRG-2B. Remediation of soil contamination will continue at the C-Well Complex.

B. Public Outreach and Institutional Activities

Carl Gertz, Project Manager, will give a general Yucca Mountain Site Characterization Project (YMP) overview to 27 participants of the International Atomic Energy Course on September 7, 1993, in Argonne, Illinois. Carl Gertz will also give a general YMP overview to approximately 60 participants of the Radioactive Waste Management Video Conference Series, High-Level Waste Management, on September 8, 1993, in Albuquerque, New Mexico.

Institutional and External Affairs (IEA) staff will attend the Lincoln County Impact Alleviation Committee meeting in Panaca, Nevada, and the Clark County Steering Committee meeting in Las Vegas, Nevada, on September 9, 1993.

II. CRITICAL ITEM STATUS - YMP

A. Site Characterization Activities

ESF

Construction

On Job Package 92-20, ESF North Portal Pad and Facilities, Reynolds Electrical & Engineering Co., Inc., continued rework of the north drainage channel; installation of the concrete batch plant waterline; and installation of the grizzly and feeder belt to store



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Sample Management Facility (SMF)

Fifteen sample examinations were conducted at the SMF by Sandia National Laboratories (SNL), the U.S. Geological Survey (USGS), the U.S. Department of Energy (DOE), and Los Alamos National Laboratory (Los Alamos).

The Sample Overview Committee met on September 1, 1993, to review and either approve or disapprove requests relating to core and cuttings, such as Specimen Removal Requests and sample handling and packaging requirements.

Continued to provide monitoring and oversight of prototype drilling tool development activities currently being conducted at Colorado School of Mines (CSM). The CSM is analyzing data collected from EXLOG vibration sub studies.

Removed 220 specimens from core samples for various analyses performed by PIs.

Continued Schmidt Hammer testing on NRG boreholes for SNL (95 percent completed).

Accepted into the SMF approximately 45 water samples from USW UZ-14 that were collected by USGS and Los Alamos for analysis.

Reboxing and reorganizing noncore and noncuttings sample storage area at SMF to accommodate increasing sample transfers and to enhance sample retrieval efficiency (50 percent).

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

SCP ACTIVITY	TITLE	COMMENTS
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

#### Environmental Programs

Presentations on Desert Tortoise Ecology and Conservation were given at the Yucca Mountain Information Offices in Las Vegas and Beatty, Nevada.

The seven mile powerline archaeological preactivity survey was completed revealing 12 new archaeological sites.

The upgrade of monitoring sensors at the four original remote meteorological monitoring stations was completed.

The feasibility study of sample collection and analysis for ambient Carbon-14 (C-14) was completed, including a written statement of parameters for C-14 sampling.

Conducted six environmental compliance surveillances at the Yucca Mountain (YM), Nevada, site ensuring compliance with permit and programmatic requirements.

Began remediation of oil spills at the C-Well Complex before initiation of C-Well hydrologic pump tests.

Received a waiver from the Nevada State Engineer for Borehole SD-12, allowing drilling down to the water table.

#### Large Block Test (LBT)

Prototype saw cutting was completed. The SNL saw met all requirements. The saw cuts were very smooth, and fractures were not loosened by the sawing process. This successful prototype test augers well for construction of the LBT and for SNL geomechanics test construction in the ESF.

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### Regulatory Interactions

The Yucca Mountain Site Characterization Project Office (YMPO) provided DOE/Headquarters (HQ) with responses to U.S. Nuclear Regulatory Commission (NRC) Phase II review comments on Study Plan (SP) 8.3.1.4.2.1 and Phase II comments and questions on SP 8.3.1.2.1.4.

A 90 day plan was prepared to reply to the NRC letter on design control.

### Site Characterization Progress Report (PR)

PR 8 is expected to be distributed by September 10, 1993. The guidance letter for PR 9 will be out on September 8, 1993.

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

Comments received from the participant and Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) review of MGDS LA AO, Revision 3, have been received and are in the resolution process. Revision 3 of the MGDS LA AO will be transmitted to DOE on September 22, 1993, for review. This revision of the MGDS LA AO will contain a description of the geology of the site, and will identify information needs related to the site description.

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

The ACNW is planning its 58th meeting to be held in Las Vegas, October 26-27, 1993. A site tour is planned for October 28, 1993.

### Issue Resolution

The Issue Resolution Steering Group videoconference meeting was held on August 31, 1993. Topics of discussion included the recently completed report on Calcite-Silica deposits in Trench 14 and Busted Butte, use of Office of Civilian Radioactive Waste Management (OCRWM) procedures for Issue Resolution reports, and the status of copyright clearances.

### Technical Analysis

Performance Assessment staff completed a draft plan for waste isolation impact evaluations associated with ESF construction activities. The plan discusses activities in fiscal year (FY) 1994 in support of "generic" impact analysis.

Staff attended a meeting in Albuquerque with Waste Isolation Pilot Plant (WIPP) staff and staff of the Office of Strategic Planning. The purpose of the meeting was to discuss the lessons the WIPP program has learned during the nearly 20 years of site selection and site and design validation studies. He also attended a briefing at SNL by the INTERGRAPH Corporation on their data and model integration software and hardware systems.

Reviewers have been provided with the final draft of Branch Procedure YLP-31.3-RSED "Preliminary Assessment of Required Test Interference/Waste Isolation Evaluations." Upon completion of the verification process, this procedure will be issued for use in determining which activities at the site must be evaluated for potential impacts to waste isolation or potential interference with testing.

Work is ongoing in refining and streamlining the process used in establishing, reporting, and monitoring waste isolation and test interference controls on activities at the site.

A revised version of the Tracers, Fluids, and Materials Management Plan was distributed for formal review.

Site Characterization Plan/SP Status

The YMPO approved the following: major revisions to SP 8.3.1.15.1.1, Revision 1, "Laboratory Thermal Properties"; and SP 8.3.1.15.1.2, Revision 1, "Laboratory Thermal Expansion Testing." The YMPO also approved one minor revision to SP 8.3.1.4.2.1, Revision 3, "Characterization of the Vertical and Lateral Distribution of Stratigraphic Units in the Site Area."

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 .....	1	1
Awaiting Comment Resolution .....	5	3
In Verification Audit .....	3	1
Awaiting YMPO Approval .....	2	1
Awaiting Submission to NRC .....	0	2
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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B. Project Planning and Control

Received participant FY 1994 planning data. Processed uploads from the participant workstations to the Planning and Control System.

C. Quality Assurance Implementation

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

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

Waste Isolation Evaluations Review

A checklist was developed for reviewing waste isolation evaluations.

III. GENERAL INFORMATION ITEMS

A proposal was developed for special session on considerations in the development of standards and regulations for geologic disposal to be held at the International High-Level Radioactive Waste Management Conference in 1994.

A summary was distributed of the August 26-27, 1993, meeting of the National Academy of Sciences (NAS) Committee on Technical Bases for YM Standards.

Staff participated in the DOE meeting on the presentation regarding the potential use of the French vitrification process for Hanford Waste on September 1-2, 1993, in Hanford, Washington.

Regarding Work Breakdown Structure 1.2.2.2.4, Engineered Barrier System (EBS) Field Tests, Lawrence Livermore National Laboratory continued to do pre-test modeling and analysis of the LBT. In order to maximize the vertical extent of re-fluxing (i.e., two-phase conditions) above the heater horizon, it is necessary to maintain an adiabatic upper boundary until the top of the block approaches the nominal boiling point. An adiabatic upper boundary was maintained until the temperature at the top of the block reached 83 degrees Celsius (C) and thereafter the upper boundary was maintained at 83 degrees C. Controlling the upper boundary in this manner resulted in the upper two-phase zone being more than one meter in vertical extent. The saturation buildup in this zone was substantially greater than the case where the upper boundary temperature was fixed at ambient temperature.

David Bish and Schon Levy of Los Alamos thoroughly reassessed mineral stability as it relates to the "hot" repository concept and proposed specific experiments and calculations to address this important issue. Their contributions, which dealt with mineralogical and geochemical constraints on thermal loading at YM, were incorporated into the Los Alamos revisions to the Thermal Goals Reevaluation report.

David Vaniman of Los Alamos prepared graphic results for a paper entitled, "Combined Quantitative-XRD and Chemical Evaluation of Soil Formation at Yucca Mountain, Nevada," which will be presented at the

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Clay Minerals Society Annual Meeting September 25-30, 1993. These graphics summarize evidence for dissolution of cristobalite and tridymite, with silica transport and accumulation as opal-A. Research in this area is being conducted because the distribution of opal, as well as calcite, may help to define the transmissive fractures through the unsaturated zone at YM.

Los Alamos Volcanism staff completed new simulation modeling of the probability of E1, the recurrence rate of volcanic events. (Cumulative distribution curves for E1 are generally similar for a range of alternative models.) Los Alamos Volcanism staff revised the geologic map of the lava sequence of the Lathrop Wells volcanic center and evaluated the structural trends of the vent distributions.

To test whether ashes exposed in fault trenches can be discriminated and correlated to Lathrop Wells eruptions, Frank Perry of the Los Alamos Volcanism staff plotted endmember compositions and began statistical evaluation of olivine and magnetite compositions in two distal ashes from the Lathrop Wells volcanic center.

YMPO approval was received by Los Alamos for "SORBEQÑA One-Dimensional Model for Simulating Column Transport Experiments," by Bruce Robinson. It will be published as a Los Alamos report.

A paper by Steven Chipera et al. entitled "Equilibrium Modeling of the formation of zeolites in fractures at Yucca Mountain, Nevada," intended for publication in the Zeolites '93 Proceedings was submitted to YMPO for approval.

The SNL staff continued design verification activities in the ESF North Ramp Starter Tunnel. These activities are being conducted under SP 8.3.1.15.1.8, "In Situ Design Verification." Current activities include recording seismic data from each blast round and completing installation of rockbolt load cells. Rock quality data is also being collected from the bench portion of the excavation. These data will be correlated with the ground support classification used and with damage assessments made by inspection of boreholes drilled for instrumentation to verify or improve the design methodology for determining the level of ground support needed in various rock conditions. In the past week, SNL completed installation of the first three rockbolt load cells and began collecting baseline data. A letter report is in preparation that will provide the methodology and results of the rock quality estimates made during excavation of the pilot heading. Norwegian Geotechnical Institute "Q" estimates were made. Rock Mass Rating (RMR) was also estimated based on the Q index. Both RMR and Q estimates will be made from inspection of the lower bench. A letter report will transmit these data to YMPO and the design team as soon as the activity is completed.

As part of a separate construction monitoring effort, SNL has been monitoring the closure of the tunnel at key locations. This week, monitoring continued at two stations on the girders in the first 30 feet of tunnel. Vertical closure stations at 60 and 100 feet were removed by the bench blasting and are no longer being monitored. These will be replaced by permanent monitoring stations installed as part of the Design Verification Study Plan. The load changes on three rockbolt load cells in the high wall at the portal are also being monitored. The

intent of this activity is to provide data to the constructor so that they can make continuous evaluations of safety conditions as construction proceeds.

The soil and rock properties study continued. Core logs from NRG-3, NRG-5, and NRG-6 have been completed and are in review and final production. Mechanical properties testing and thermal properties testing on core from the lower part of NRG-6 is nearly completed. Test data packages have been transmitted to the YMPO. The SNL is also reviewing the potential of seismic geophysical methods to assist in resolving some of the uncertainty in geologic structure along the north ramp alignment. If it is found that the seismic techniques will provide adequate resolution, SNL will conduct a field trial.

Appendices were completed by USGS for the Seismic Source Characterization Methodology topical report, a draft of which is now ready for DOE and NRC review.

The USGS installed equipment for three new stream gage sites planned for this year to measure surface runoff. One site is on the Amargosa River near Stateline, and the other two sites are in upper and lower Split Wash on YM. The Split Wash sites contain manometer stage-sensing devices to monitor the streamflow profile, and crest-stage gages for measuring peak streamflow.

A USGS data report on streamflow and precipitation data for the years 1983 to 1985 has been approved by DOE for distribution.

#### IV. PUBLIC OUTREACH AND INSTITUTIONAL ACTIVITIES

Several members of the YMP participated in Discovery Day, held at the Yucca Mountain Science Center, on August 28, 1993, in Pahrump, Nevada. Discovery Day featured hands-on science activities and information on fossils, rocks, minerals, volcanoes, hydrology, and gold panning. Approximately 100 people attended.

Richard Arnold, a consultant, gave a Native American Indian cultural presentation to 240 students of C.P. Squires Elementary School September 1-2, 1993, in Las Vegas.

Personnel from IEA set up and staffed a YMP exhibit at the Lander County Fair in Battle Mountain, Nevada, August 28-29, 1993. The IEA and CRWMS M&O personnel also staffed an exhibit at the Elko County Fair in Elko, Nevada, September 3-6, 1993, and an exhibit at the Tri-County Fair in Bishop, California, September 2-6, 1993. A total of approximately 425 people visited these displays.

The IEA and YMPO staff accompanied YMP and University of Nevada System staff on tours of the Zion Nuclear Power Station in Zion, Illinois, on August 30, 1993, and the Illinois Department of Nuclear Safety in Springfield, Illinois, on August 31, 1993. The staff also accompanied Esmeralda County representatives on a tour of the Palo Verde Nuclear Station in Phoenix, Arizona, on August 31, 1993.

A tour of YM was conducted on August 31, 1993, for John G. Keliher, Director, Office of Intelligence and National Security.

The IEA staff have completed development of a new fact sheet entitled, "Studying the Movement of Rocks and Earthquakes."

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>			
Friday, October 1 (tentative)	YMPO Monthly Management Meeting	Las Vegas, NV	C. Gertz
<b>D. <u>Internal and DOE/Nevada Operations Office (NV) Meetings</u></b>			
Thursday, September 16	NV Managers Program Review	Las Vegas, NV	C. Gertz
Friday, September 17 (tentative)	TPO Meeting	Las Vegas, NV	C. Gertz
Friday, September 17 (tentative)	Planning and Budget Meeting	Las Vegas, NV	C. Gertz
Thursday- Friday, September 23-24	YMPO Management Off-site	TBD	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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>E. <u>NRC Interactions (Continued)</u></b>			
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
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

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>G. <u>ACNW Interactions</u></b>			
Wednesday- Thursday, September 29-30	ACNW 57th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 58th Meeting (P)	Las Vegas, NV	A. Gil
Friday, October 29	ACNW Site Tour (P)	Las Vegas, NV	A. Gil
Monday- Tuesday, November 15-16,	ACNW 59th Meeting (P)	TBD	A. Gil
Wednesday, November 17	ACNW Working Group on Unsaturated Zone Hydrology (P)	TBD	A. Gil
Tuesday, December 14,	ACNW Working Group on Low Level Waste Performance Assessment (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
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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>I. <u>State and Public Interactions</u></b>			
Tuesday September 7	C.P. Squires Elementary - Native American Indian Culture	N. Las Vegas, NV	R. Arnold
Tuesday, September 7	International Atomic Energy Course - General Overview	Argonne, IL	C. Gertz
Wednesday, September 8	Clark County Gem Club - Minerals	Las Vegas, NV	A. Gil
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
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	J. Peck
Monday, September 13	Pretour, Senior Tripsters - General Overview	Las Vegas, NV	J. Peck
Tuesday, September 14	Las Vegas Luncheon Optimist Club - YM vs Keep at Producing Sites	Las Vegas, NV	J. Peck
Tuesday, September 21	Pretour, Western Legislative Conference Environmental & Resource Management Committees - General Overview	Las Vegas, NV	A. Robison
Sunday, September 26	Discovery Day (P) - Fossils, Hydrology, Rocks and Minerals, Volcanoes, Gold Panning, Streamtable	Beatty, NV	Various Speakers

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
I. <u>State and Public Interactions</u> (Continued)			
Sunday, September 26	Children's Discovery Museum - Native American Indian Culture	Las Vegas, NV	R. Arnold G. Fasano
Sunday, September 26	YM Speaker Series (P) - Radiation	Pahrump, NV	M. Griffin
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	TBD
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
Tuesday, October 5	Sun City Residents - General Overview	Las Vegas, NV	R. Dyer A. Flint
Tuesday, October 5	East Las Vegas Library - General Overview	Las Vegas, NV	J. Peck
Thursday, October 7	Las Vegas Break- fasters Lions Club - 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

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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, November 5	International Brotherhood of Electrical Workers - General Overview	Las Vegas, NV	J. Peck
Monday, November 8	International Brotherhood of Electrical Workers - General Overview	Las Vegas, NV	J. Peck
Thursday, November 11	International Brotherhood of Electrical Workers - General Overview	Las Vegas, NV	J. Peck
Tuesday, November 16	Nevada Environmental Conference - High Level Waste Storage	Reno, NV	L. Smith
Tuesday, November 16	Society for Mining, Metallurgy, and Exploration - General Overview	Pomona, CA	TBD
Thursday, 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
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	

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>J. Exhibits Scheduled</b>		
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)	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>		
Friday, September 10	Nuclear Programs - China	TBD
Monday, September 13	Senior Tripsters	TBD
Thursday, September 16	Edison Electric Institute	TBD

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled</u> (Continued)		
Friday, September 17	Lincoln County School Board	C. Binzer B. Bush
Saturday, September 18	Nevada League of Cities	TBD
Monday, September 20	Waste Package Development Workshop	TBD
Tuesday, September 21	Western Legislative Conference	D. Bradford
Thursday, September 23	Jewish Community Center/Detroit Club	TBD
Thursday, September 23	DOE Programmatic	L. Smith
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
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, October 27	Dadaelians	M. Voegele
Wednesday, November 17	Public Open House (P)	Various Escorts

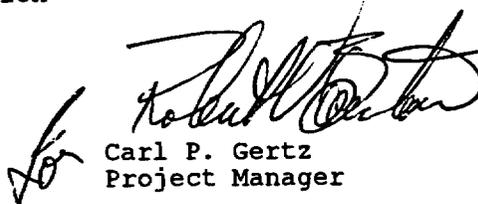
SEP 15 1993

Lake H. Barrett

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
K. <u>Tours Scheduled (Continued)</u>		
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-6011

  
Carl P. Gertz  
Project Manager