



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: JULY 21, 1993
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE
WEEK ENDING JULY 2 (SECOND REPORT) AND JULY 9, 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
Enclosures as stated

NOTE TO CHARLOTTE: Also enclosed: LLNL YMP Status Report, June 1993 and
REECo YMP Status Report, June 1993

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PDR WASTE
WM-11

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ENCLOSURE DTD
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WM-11
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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

JUL 19 1993

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

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
JULY 2, 1993 (SECOND REPORT) (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

A. Site Characterization Activities

Exploratory Studies Facility (ESF)

Design activities will continue in preparation for 90 percent design reviews in July and August 1993.

Construction will continue in the Starter Tunnel, including placement of shotcrete, installation of cement grouted pattern bolts, and excavation of the pilot drift and north and south slashes.

On UZ-16, the geophysical logging subcontract has been submitted for review and approval. Logging is estimated to start the week of July 6, 1993.

Exploratory drilling operations will continue at NRG-4 and UZ-14. Geologic mapping and sampling will continue in the ESF Starter Tunnel beyond station 1+37 in the crown drift and slash cuts as the excavation continues.

B. Public Outreach and Institutional Activities

Project Manager Carl Gertz will give a general Yucca Mountain Site Characterization Project (YMP) overview with new work status to 30 members of the Inyo County Board of Supervisors on July 6, 1993, in Inyo, California. Carl Gertz will also give this overview to 35 students at the University of California, Santa Barbara, on July 7, 1993.

II. CRITICAL ITEM STATUS - YMP

A. Site Characterization Activities

ESF

Construction

Excavation continues on the Tunnel Boring Machine (TBM) Starter Tunnel at the North Portal area. The pilot drift and the north and south slashes are in approximately 42 meters as of July 2, 1993. Construction is continuing on surfacing (base course aggregate application) of the North Portal access road, and on the stormwater diversion channel around the North Portal area.

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On Job Package (JP) 92-20, North Portal Pad and Facilities, Reynolds Electrical & Engineering Co., Inc., continued rework of the north drainage channel and began grading and compacting for final grade at the concrete batch plant site. Application of shotcrete and installation of split set rock bolts continued. The P-022, NS-022, and PD-023 were drilled, loaded, shot, and mucked. The face of the pilot drift is at 00+42.1 meters (1+38 feet) and the faces of the north and south slashes are at 00.39.6 meters (1+30 feet).

Crown drift and slashes are excavated to construction station 1+37. Mapping is in progress between construction stations 1+20 and 1+32 on July 1, 1993. Shotcrete has been placed to construction station 1+15.

The following milestones represent the near-term plan for ESF activities:

Award Subcontract for Underground Construction	July 1993
Begin 90 Percent Design Review, Package 2A	July 19, 1993
Begin 90 Percent Design Review, Package 1B	August 2, 1993
Complete 60 Meters of TBM Starter Tunnel	September 20, 1993

Design

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 nearing completion. The final comment resolution process is in progress. Only a small number of comments remain to be resolved.

Surface-Based Testing

Field Activities Progress

Exploratory drilling operations progress is summarized as follows:

<u>Borehole</u>	<u>Starting Core Depth 6/29/93</u>	<u>Ending Core Depth 7/2/93</u>	<u>Total Planned Depth</u>
UE NRG-4	462.43 feet	571.39 feet	725.00 feet
USW UZ-14	883.90 feet	921.79 feet	2000.00 feet

The notice to proceed will be issued this week for construction of the drill pad for NRG-2b. Drilling operations are scheduled to start next the middle of next week.

Geophysical logging was completed on NRG-6 on June 30, 1993.

Verbal approval and authorization was given to Schlumberger Well Services to commence logging operations at Borehole USW NRG-6.

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Field Activities

On JP 93-2A, NRG-4, drilling continues with the Failing 1500 drill rig. The core depth of NRG-4 is 564.40 feet (made 199.4 feet). The bottom of the hole is in the Topopah Spring caprock. Two deviation surveys have been taken. The first at 400 feet was 0 degrees 2 minutes, and the second at 500 feet was 0 degrees 30 minutes.

Geophysical surveys were performed in Borehole NRG-6 to 1096 feet (original total depth 1100 feet). The surveys began on June 29, 1993, and were finished on June 30, 1993. Geophysical tools included dual induction, gamma ray, caliper, dual porosity, compensated neutron, and compensated formation density.

On JP 92-17, UZ-14 drilling with the LM-300 drill rig, the core depth of UZ-14 is 902.0 feet (made 20.11 feet) and the ream depth is 888.0 feet (made 26.38 feet).

The bottom of the hole is in the Topopah Spring lower lithophysal unit. A successful fishing operation was performed this week after twisting off the dual wall pipe. The deviation survey at 850 feet was 1 degree 15 minutes.

The Sample Management Facility laid out 2191 feet of core from Boreholes UE-25 NRG-2, NRG-2A, NRG-3, NRG-5, USW UZ-14, UE-25 RF-8, and RF-3 for examinations conducted by the U.S. Geological Survey (USGS).

A total of 41 specimens was removed from core samples to be used by Principal Investigators for analyses.

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

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SCP ACTIVITY	TITLE	COMMENTS
8.3.1.17.4.6	Quaternary Faulting within Site Area	Trench mapping
8.3.1.2.1.1	Precipitation & Meteorological Monitoring for Regional Hydrology	Ongoing measurements
8.3.1.2.1.2	Runoff & Streamflow	Ongoing measurements
8.3.1.2.2.1	Unsaturated Zone Infiltration	Drilling/logging of neutron-access holes; ponding tests
8.3.1.2.2.2	Water Movement Tracer Tests	C1-36 measurements
8.3.1.2.2.3	Percolation in Unsaturated Zone	UZ drilling/testing
8.3.1.2.2.4	Characterization of Yucca Mountain 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 Field Programs

The "Meteorological Five Year Data Summary Report" was issued allowing participants immediate access to qualified and validated meteorological data collected from December 1985 through December 1992 (actually six years of data). This action completes a Site Characterization Plan (SCP) milestone.

The Administrative Procedure (AP) 8.1 Environmental Compliance and Land Access approval for the C-Well Complex was issued. This approval allows construction of the discharge system necessary for the C-Well hydrologic pump tests.

The YMP Environmental Protection Implementation Plan, required by U.S. Department of Energy (DOE) Order 5400.1, was issued as a YMP managed document.

Eight environmental compliance surveillances were conducted at the Yucca Mountain, Nevada, site to ensure that site characterization activities are being performed in compliance with permit and programmatic requirements. Processing of seven preactivity survey requests continued, as required by AP 8.1.

Safety and Health Compliance

Six surveillances were completed: two at the ESF Portal area, three at NRG-4, and two on emergency lighting in Buildings 4215 and 4221.

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Large Block Test (LBT)

The Lawrence Livermore National Laboratory (LLNL) Study Plan for Engineered Barrier System (EBS) Field Tests has been revised to the tie with the Scientific Investigation Plan (SIP) for the LBT. The LBT SIP has been revised to respond to YMP review comments. The procurement package of the load-retaining frame for the LBT has been sent to potential vendors.

Regulatory Interactions

Technical Analysis

A meeting was held on July 2, 1993, regarding the process for Waste Isolation/Test Interference evaluations. The merits and shortcomings of the present process were discussed, along with recommendations on improving process implementation. The Technical Analysis Branch staff will be evaluating present plans and procedures and determining if additional clarification is required.

Performance Assessment staff completed a preliminary evaluation of the waste isolation impact of diesel exhaust on the conceptual repository. The evaluation shows that some of the components of diesel exhaust may be permanently retained in the ESF and that the quantities may be large enough to significantly perturb the natural background concentrations of SO_4^- , NO_3^- , and organics. Therefore, an electric powered transportation system for hauling personnel and materials between the portal and the TBM is recommended.

A meeting on modeling thermal effects on the hydrologic system at Yucca Mountain was held June 29, 1993. The meeting presented a range of modeling results from coupled multiphase thermal flow analyses through thermal conductances only evaluations. Participants provided updates on their current modeling activities and identified areas of uncertainty in model inputs and sensitivities. Information from this activity will be provided to the Engineering & Development Division for consideration in developing thermal loading scenarios.

SCP/Study Plan (SP) Status

One new SP was approved by the Yucca Mountain Site Characterization Project Office (YMPO) this week: SP 8.3.1.2.2.9, "Site Unsaturated Zone Synthesis and Modeling."

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STUDY PLAN BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to YMPO	39	0
In Screening Review	0	0
In YMPO Review	2	0
Awaiting Comment Resolution	3	4
In Verification Audit	5	3
Awaiting YMPO Approval	2	1
Awaiting Submission to the U.S. Nuclear Regulatory Commission (NRC)	1	0
Awaiting NRC Phase 1 Review	9	1
Accepted by NRC	43	4
Totals	104	13
Total Submitted to NRC	52	5

State of Nevada Comments Status:

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

NRC Comments Status:

Received Comments from NRC	21
Responses Transmitted from DOE to NRC	19

Monitored Retrievable Storage (MRS) Project April 1993 data was loaded to the Planning and Control System, in preparation for a demonstration to DOE/Headquarters (HQ) on July 14, 1993.

The participant capital equipment carryover distribution analysis was completed and a matrix delineating the distribution was developed. A draft Cost/Schedule Change Request is currently being developed and coordinated with DOE, incorporating capital equipment carryover funds into the baseline.

The mid-year analysis was finalized and a final letter was issued to the Division Directors.

The Software Refinements Specification for PACSVIEW was issued to the Information Systems Division.

B. Quality Assurance (QA) Implementation

Surveillance 93-026 of USGS Calibration of Measuring and Test Equipment was conducted June 29-30, 1993.

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A revision to the Quality (Q)-List and the initial issue of the Management Control List continues in the Quality Assurance Procedure 6.2 review process. All comments have been resolved on draft A of revision 1 to the Q-List.

C. Public Outreach and Institutional Activities

Gave a general overview of the YMP with new work status to 200 members of the National Congress of American Indians in Green Bay, Wisconsin, on June 29, 1993.

The staff attended the State/Local Government Planning Group meeting in Ely, Nevada, on June 29, 1993.

Gave a technical presentation to approximately 50 attendees of the 34th U.S. Symposium on Rock Mechanics in Madison, Wisconsin, on June 29, 1993.

The staff set up and staffed a YMP exhibit at the Teen Faire in Las Vegas, Nevada, June 25-26, 1993.

The staff completed the writing, editing, reviews, and supervision of photograph selection and layout to provide camera-ready art to the Office of Civilian Radioactive Waste Management (OCRWM), and assisted in press checks at the printers for printing the YMP newsletter, "Of Mountains and Science," for inclusion with the "OCRWM Bulletin."

Staff from DOE/Nevada Operations Office (NV) and DOE/HQ were accompanied by Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) staff on a tour of the Oconee Nuclear Station and MRS site in South Carolina on June 29, 1993.

The staff attended the Multi-Purpose Canister (MPC) Stakeholder meeting in Washington, D.C., July 1-2, 1993.

III. Analysis and Verification Division

Geologic Disposal

Two House Hearings on the High-Level Waste Program were attended on July 1, 1993: the House Energy and Commerce Subcommittee on Energy and Power and the House Natural Resources Subcommittee on Energy and Mineral Resources. Also, the MPC Workshop was attended July 1-2, 1993, in Crystal City, Virginia.

Planning began for the EXCOM presentation on convergence, suitability, licensing strategy, and the Environmental Impact Statement process.

The staff completed preparation of, and distributed for review, the preliminary draft OGD HQ procedure for the Occurrence Reporting and Processing System.

IV. GENERAL INFORMATION ITEMS

Regarding Work Breakdown Structure 1.2.2.3.2 (Metal Barriers), an experimental plan is being prepared for studying the degradation (oxidation and corrosion) of materials in humid environments. The

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emphasis of this work will be on carbon steel and other iron-base materials and will focus on the effect of humidity and temperature in the transition from oxidation under "dry" conditions to corrosion under "wet" conditions. A system was designed for generating different humidity levels. This system will be used in conjunction with the thermal gravimetric analysis until that was recently ordered as part of the YMP capital acquisition.

The Los Alamos National Laboratory (Los Alamos) scientists from the Sorption, Solubility, and Transport tasks participated in a Sandia National Laboratories (SNL)-organized expert elicitation that will provide information on sorption coefficients and solubility limits to be used in this year's performance assessment calculations.

Field work at the Lathrop Wells volcanic center was completed. Staff obtained tephra-size data on the scoria-fall sheet of this volcanic center. The first simulation modeling runs of the probability density function for El, the recurrence rate of volcanic events, were completed.

The Colloid strategy was revised based on comments from the Geochemistry Integration Team. This strategy was incorporated in a report summarizing the Los Alamos-hosted Colloid Workshop of May 1993.

The caisson is currently being saturated with water. Ports, instrument leads, and sampling tubes will need additional sealing to avoid leakage. As soon as the caisson is saturated, it will be flushed to obtain constant moisture content and reduce problems with hysteresis.

Flux distributions have been developed for Total System Performance Assessment (TSPA)-II based on interactions with USGS and Waste Isolation Pilot Plant, and on literature searches. The distributions reflect flux changes influenced by glacial and interglacial episodes. The distributions are being reviewed and may be revised to incorporate reviewer comments.

Some bugs have been found in the YMIM code used to generate the source term for TSPA-II. The LLNL is working on correcting the problems and will try to transmit the final code by the end of the week.

Fracture porosity, density, spacing, and aperture treatments are being developed for the aqueous flow models for TSPA-II.

For a period of time, SNL YMP QA staff have been conducting an evaluation of the Sandia Standards Laboratories (SSL) and an SSL Extension to determine if they can be considered "qualified suppliers" of calibration services. The SSL and the SSL Extension are secondary standards facilities who would be the suppliers of calibration services to SNL YMP staff that require calibrated tools or instruments. The evaluation has now been completed, and these facilities will be designated "qualified suppliers," pending resolution of some issues.

The June 1993 meeting of the DOE Supplier Quality Information Group (SQIG) was hosted by Science Applications International Corporation in Las Vegas. The SQIG is an ongoing effort to create a shared data base of quality suppliers among DOE contractors.

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Ten of those Technical & Management Support Services documents required for implementation of the OCRWM Quality Assurance Requirements Document (QARD) were completed and approved in June 1993. The QARD Implementation Task is 88 percent complete. Completion is scheduled for July 30, 1993. The Requirements Traceability Network is being effectively used to document implementation of the QARD.

The report of the internal audit of Control of Nonconforming Items and Corrective Action was issued this week.

The USGS completed the shallow seismic refraction profile across the southern Windy Wash Fault in southern Crater Flat. Excellent data was retrieved and a correlative set of data was collected by the University of Nevada, Reno, seismologists. The profile will constrain the amount of offset on a three million-year-old Basalt flow that is cut by the Windy Wash Fault. Data from the profile will be used to calculate a long-term displacement rate on the Windy Wash Fault and to correlate the offset basalt flow with flows in southern Crater Flat.

Personnel from USGS and CRWMS M&O reviewed and revised data used as input for the seismic hazard evaluation of the ESF. Results of the effort are listed in the Preliminary Table of Fault Parameters for the ESF Technical Assessment at Yucca Mountain. The table of fault parameters includes the preliminary results of USGS site characterization activities as well as comprehensive compilations of existing information.

Pre-ESF baseline construction data priorities were established for the unsaturated zone surface based boreholes. The schedule and budget for these changes are being prepared for DOE management.

Testing at the C-hole complex has been delayed due to delays in DOE procurement of the discharge pipeline. In the interim, the drill rig will be used to set the packer strings, instruments, and pump. The instruments can then be used to monitor prepumping barometric and water level fluctuations.

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 and Public Update Meetings are coordinated by Joanna Magruder at (702) 794-7056, 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>DOE/HQ Meetings</u>			
Wednesday, July 21	OCRWM Program Management Meeting	Washington, DC	L. Smith/ C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
B. <u>CRWMS M&O/DOE Meetings</u>			
No significant meetings to report.			
C. <u>Internal and DOE/NV Meetings</u>			
Wednesday, July 21	NV Monthly Program Review	Las Vegas, NV	L. Smith/ C. Gertz
D. <u>NRC Interactions</u>			
Tuesday, July 13	NRC Appendix 7 Meeting (P)	TBD	T. Bjerstedt
Wednesday, July 14	NRC Appendix 7 Meeting (P)	Albuquerque, NM (Tentative)	T. Bjerstedt
Thursday, July 15	NRC Appendix 7 Meeting (P)	Las Vegas, NV	T. Bjerstedt
Tuesday- Wednesday, July 27-28	Technical Exchange - ESF Title II Design and Design Control (P)	Las Vegas, NV	T. Bjerstedt
Tuesday, August 24	Technical Exchange - Substantially Complete Containment & Waste Package/EBS Design Concepts (P)	Washington, DC	T. Bjerstedt
September or October TBD	Glass and Spent Fuel Waste Form Research Site Visit (P) (Tentative)	Argonne, IL	T. Bjerstedt
Wednesday, October 13	Technical Exchange - Radioactive Migration in the Unsaturated Zone (P)	Albuquerque, NM	T. Bjerstedt
Thursday, October 14	Technical Exchange - Near-Field Phenomena Related To Radio- nuclide Releases from the EBS (P)	Albuquerque, 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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
D. <u>NRC Interactions</u> (Continued)			
Thursday, November 18	Seismic Hazards Assessment Technical Meeting (P)	Washington, DC	T. Bjerstedt
E. <u>Nuclear Waste Technical Review Board (NWTRB) Interactions</u>			
Tuesday- Wednesday, July 13-14	NWTRB Full Board Meeting (P)	Denver, CO	J. Cooper
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) (Tentative)	Arlington, VA	J. Cooper
Monday- Wednesday, April 11-13, 1994	NWTRB Full Board Meeting (P) (Tentative)	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
F. <u>Advisory Committee on Nuclear Waste (ACNW) Interactions</u>			
Tuesday- Thursday, July 20-22	ACNW 55th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, August 25-26	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, September 29-30	ACNW 57th Meeting (P)	TBD	A. Gil

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>ACNW Interactions (Continued)</u>			
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

G. National Academy of Sciences (NAS) Interactions

Thursday- Friday, August 26-27	NAS Committee on YM Standards-Alternative Formulations of a Risk-Based Standard (P)	Las Vegas, NV	S. Jones
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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. <u>State and Public Interactions</u>			
Monday, July 12	Washoe County Commission	Washoe County, NV	TBD
Tuesday- Wednesday, July 13-14	NWTRB	Denver, CO	C. Gertz
Thursday, July 15	Spring Valley Library	Las Vegas, NV	T. Bjerstedt
Friday, July 16	Loyal Order of the Moose	Pahrump, NV	J. Peck
Friday July 16	Fay Herron Elementary School	Las Vegas, NV	R. Arnold
Sunday, July 18	Institute of Nuclear Materials Management	Scottsdale, AZ	C. Gertz
Monday, July 19	Dorothy Eisenberg Elementary	Las Vegas, NV	J. Hartley
Wednesday, July 21	C. T. Sewell Elementary School	Las Vegas, NV	T. Kaish/ M. Griffin
Wednesday, July 28	American Nuclear Society (ANS) Teacher Workshop	Deerfield, MA	J. Peck

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. State and Public Interactions (Continued)			
Monday, August 2	U.S. Council on Energy Awareness Energy Information Centers	Chicago, IL	C. Gertz
Thursday, August 12	Second International New Avenues in Risk and Crisis Management Conference	Las Vegas, NV	TBD
Tuesday, August 17	1993 American Institute of Chemical Engineers Summer National Meeting	Seattle, WA	TBD
Wednesday, August 18	Second International Mixed Waste Symposium	Baltimore, MD	TBD
Wednesday- Thursday, September 1-2	C. P. Squires Elementary	N. Las Vegas, NV	R. Arnold
Monday- Tuesday, September 6-7	C. P. Squires Elementary	N. Las Vegas, NV	R. Arnold
Tuesday, September 7	International Atomic Energy Course	TBD	TBD
Friday, September 10	Public Gas Service Gas Company	TBD	TBD
Monday, September 13	Entergy Energy Corporation	Las Vegas, NV	TBD
Sunday, September 26	Children's Discovery Museum	Las Vegas, NV	R. Arnold
Monday, September 27	1993 I&EC Division Symposium	Atlanta, GA	TBD
Monday, November 15	ANS	San Francisco, CA	TBD
Sunday, February 27, 1994	Waste Management Symposia	Tucson, AZ	TBD
Sunday, March 20, 1994	Risk Management Quarterly Association	San Diego, CA	TBD

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<u>Date</u>	<u>Event</u>	<u>Location</u>
I. Exhibits Scheduled		
Saturday, July 24	Public Open House (P)	Las Vegas, NV
Friday- Sunday, August 20-22	Home Show (P)	Las Vegas, NV
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Tuesday- Monday, August 24-30	Nevada State Fair (P)	Reno, NV
Thursday- Tuesday, September 2-7	Elko County Fair (P)	Elko, NV
Thursday- Tuesday, September 2-7	Tri-County Fair (P)	Bishop, CA
Wednesday- Friday, September 15-17	Nevada League of Cities	Henderson, NV
Friday- Sunday, September 17-19	Harvest Day Festival (P)	Pahrump, NV
Saturday, September 25	Public Open House (P)	Las Vegas, NV
Tuesday- Saturday, September 28- October 2	Nevada Library Association	Elko, NV
Friday- Monday, October 1-11	Jaycee State Fair (P)	Las Vegas, NV
Saturday, November 6	Boy Scouts Expo	Las Vegas, NV

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. Tours Scheduled		
Friday, July 16	International Safeguards Group	D. Kessel

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. <u>Tours Scheduled (Continued)</u>		
Saturday, July 24	Public Open House (P)	Various Escorts
Thursday, July 29	State of Minnesota Department of Public Service	TBD
Friday, August 6	Military Order of Laos	P. Carmack
Thursday, August 12	New York Power Authority	TBD
Tuesday, August 17	American Nuclear Energy Council (ANEC)	TBD
Saturday, August 21	Public Open House (P)	Various Escorts
Monday, September 13	Senior Tripsters	TBD
Monday, September 20	Wastepackage Development Workshop	R. Fish
Saturday, September 25	Public Open House (P)	Various Escorts
Tuesday, September 28	Southern Nevada Chevron Retirees Association	TBD
Thursday, September 30	League of Women Voters	TBD
Friday, October 1	Chubu Electric Power Japan	TBD
Tuesday, October 19	National Association of Regulatory Utility Commissioners	TBD

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. <u>Tours Scheduled (Continued)</u>		
Wednesday, October 20	Wildland Shrub and Arid Land Restoration Symposium	K. Ostler
Saturday, October 23	Public Open House (P)	Various Escorts

YMP:RVB-4920


for Carl P. Gertz
Project Manager



Department of Energy
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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, CCRW

OFFICE OF GEOLOGIC DISPOSAL WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
JULY 9, 1993 (SCP: N/A)

I. FORECAST SIGNIFICANT EVENTS

A. Site Characterization Activities

Exploratory Studies Facility (ESF)

Design activities will continue in preparation for 90 percent design reviews in July and August 1993.

Construction will continue in the Starter Tunnel, including placement of shotcrete, installation of cement grouted pattern bolts, and excavation of the pilot drift and north and south slashes.

Exploratory drilling operations will continue at NRG-4 and UZ-14. Geologic mapping and sampling will continue in the ESF Starter Tunnel beyond station 1+37 in the crown drift and slash cuts as the excavation continues.

Bare Mountain Trench II is scheduled to be benched and scaffolding installed and TP-6 and TP-7 excavated.

Site preparation for Borehole NRG-2B will be conducted early next week so that drilling can begin as soon as the State of Nevada grants a permit for use of the dust suppression equipment.

Surface-Based Testing Activities

On UZ-16, the prototype geophysical logging subcontract is at the U.S. Department of Energy (DOE)/Nevada Operations Office (NV) for review and approval. Prototype logging is planned during mobilization. Logging is expected to begin the week of July 12, 1993, at the earliest.

B. Public Outreach and Institutional Activities

Carl Gertz, Project Manager, will give an update on the new work status to 50 members of the Nuclear Waste Technical Review Board (NWTRB) on July 13, 1993, in Denver, Colorado.

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

A. Site Characterization Activities

ESF

Construction

Excavation continues on the Tunnel Boring Machine (TBM) Starter Tunnel at the North Portal area. The pilot drift and the north and

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south slashes are in approximately 52 meters as of July 9, 1993. Construction is continuing on surfacing (base course aggregate application) of the North Portal access road, and on the stormwater diversion channel around the North Portal area.

On Job Package (JP) 92-20, ESF North Portal Pad and Facilities, rework continues of the north drainage channel, as well as site preparations at the concrete batch plant site. Application of shotcrete and installation of split set rock bolts continued. The NS-024, SS-024, and PD-025 were drilled, loaded, shot, and mucked.

The following milestones represent the near-term plan for ESF activities:

Award Subcontract for Underground Construction	July 1993
Begin 90 Percent Design Review, Package 2A	July 19, 1993
Begin 90 Percent Design Review, Package 1B	August 2, 1993
Complete 60 Meters of TBM Starter Tunnel	September 20, 1993

Design

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 nearing completion. The final comment resolution process is in progress. Only a small number of comments remain to be resolved. Design continues on both packages for 90 percent reviews scheduled in July and August 1993.

Surface-Based Testing Activities

Exploratory drilling operations progress is summarized as follows:

<u>Borehole</u>	<u>Starting Core Depth 7/2/93</u>	<u>Ending Core Depth 7/9/93</u>	<u>Total Planned Depth</u>
UE NRG-4	571.39 feet	594.16 feet	725.00 feet
USW UZ-14	921.79 feet	981.84 feet	2000.00 feet

On JP 93-2A, NRG-4, drilling continues with the Failing 1500 drill rig. The bottom of the hole is in Topopah Spring - caprock. Drilling progress was slowed this week by a successful fishing operation. Moisture was detected on the drilling equipment at a depth of 580.4 feet. Subsequent sampling determined the moisture was attributed to condensation from compressed air used in drilling operations.

On JP 92-17, UZ-14 drilling with the LM-300 drill rig, the bottom of the hole is in the Topopah Spring - lower lithophysal unit.

A total of 102 specimens were created from core samples for analyses. One core examination was conducted by Sandia National Laboratories (SNL).

A total of 16 nonborehole samples were received and collected for Los Alamos National Laboratory (Los Alamos).

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Continued preparation of the white paper addressing the requirements for a sanitary landfill in Area 25 and the current refuse handling methods. The Science Applications International Corporation Environmental Department is still waiting for the State of Nevada to issue the new landfill requirements.

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	C1-36 measurements
8.3.1.2.2.3	Percolation in Unsaturated Zone	UZ drilling/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

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Environmental Programs

Approval was received from the Nevada Division of Environmental Protection for discharging the effluent from the C-Well Complex. This approval allows the discharge necessary for the C-Well hydrologic pump tests.

Six environmental compliance surveillances were conducted at the Yucca Mountain, Nevada, site to ensure that site characterization activities are being performed in compliance with permit and programmatic requirements. Processing of eight preactivity survey requests continued, as required by Administrative Procedure 8.1.

Safety and Health Compliance

Researched the Civilian Radioactive Waste Management Systems Management and Operating Contractor's (CRWMS M&O) Safety Program as part of the functional appraisal requested by the Safety and Health Officer.

Completed a draft copy of protocols for confined space entry to comply with new Occupational Safety and Health Administration regulation.

Completed a statistical analysis of surveillance report findings for the past six months.

Large Block Test (LBT)

The study plan (SP) for the ESF Engineered Barrier System (EBS) field tests was submitted by Lawrence Livermore National Laboratory to the Yucca Mountain Site Characterization Project Office (YMPO) for review and approval. The LBT is a precursor activity to the ESF tests.

Regulatory Interactions

Site Characterization Progress Report (PR):

The PR 8 is still in concurrence at DOE/Headquarters (HQ).

Mined Geologic Disposal System Annotated Outline (AO)

Comments on the U.S. Nuclear Regulatory Commission's (NRC) Draft Format and Content Regulatory Guide (FCRG) for the License Application for the High-Level Waste Repository have been sent to DOE/HQ for transmittal to the NRC. The comments include those generated by AO authors during preparation of the document, as well as a cross-reference from FCRG sections to the applicable portions of the 10 CFR 60.

Issue Resolution

The next Issue Resolution Steering Group meeting is scheduled for July 15, 1993; the meeting will be a videoconference and will include an update on the status of all current issues, as well as discussion of potential new issues for consideration.

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Technical Analysis

The Integrated Test Evaluation working group met July 7-8, 1993, and briefed J. Russell Dyer, Regulatory and Site Evaluation Division Director, on progress to date.

The Technical Data Parameter Dictionary was distributed for review.

Hydrology Work Breakdown Structure (WBS) Managers toured the Hydrologic Research Facility and various well sites and trenches at Yucca Mountain on July 8, 1993.

Site Characterization Plan/SP Status

The NRC completed Phase I review of SP 8.3.1.5.2.1, Revision 2, "Characterization of the Yucca Mountain Quaternary Regional Hydrology." One new SP was submitted to YMPO this week: SP 8.3.4.2.4.4, "Engineered Barrier System Field Tests."

STUDY PLAN BREAKDOWN

	Initial Plans	Major Revisions
Not Submitted to YMPO	38	0
In Screening Review	1	0
In YMPO Review	2	0
Awaiting Comment Resolution	3	4
In Verification Audit	5	3
Awaiting YMPO Approval	2	1
Awaiting Submission to NRC	1	0
Awaiting NRC Phase 1 Review	9	0
Accepted by NRC	43	5
Totals	104	13
Total Submitted to NRC	52	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

Loaded and tested the May 1993 actuals for the Monitored Retrievable Storage demonstration scheduled for July 14, 1993.

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C. Quality Assurance (QA) Implementation

Quality (Q)-List Implementation

The analysis/evaluation packages for all natural barriers were revised and resubmitted to the Assessment Team.

A revision to the Q-List and the initial issue of the Management Control-List continues in the Quality Assurance Procedure 6.2 review process. Draft B of Revision 1 to the Q-List was completed and is ready for verification review.

General

The staff attended the DOE Waste Isolation Pilot Plant (WIPP)/U.S. Environmental Protection Agency (EPA) meeting on WIPP performance assessment issues and the test phase plan July 7-9, 1993, in Albuquerque, New Mexico.

A draft hierarchy was developed for consideration to be discussed by the working group for framework for Section 801 activities. A meeting of the Section 801 Working Group will be held on July 15, 1993, to discuss the framework for activities and status of plans for the August 1993 committee meeting.

Materials were prepared for the EPA Standard Working Group related to the overall approach to developing a new standard.

Regarding WBS 1.2.2.2.2 (Hydrologic Properties of the Waste Package Environment), validating the performance of high-AML systems is facilitated by addressing several fundamental hypotheses:

1. Whether heat conduction dominates heat flow.
2. Whether a region of above-boiling temperatures surrounding the repository corresponds to the absence of mobile liquid water at the waste package environment.
3. Whether fracture density and connectivity are sufficient to promote rock dry-out due to boiling and condensate shedding.
4. Whether re-wetting of the dry-out zone back to ambient saturation significantly lags behind the end of the boiling period.
5. Whether large-scale, buoyant, gas-phase convection may eventually dominate moisture movement in the unsaturated zone.

Analyses have shown that hypotheses 1 and 5 are also important to the performance of low-AML systems. Analysis of large-scale in situ heater tests indicate that after two years of full-power heating with 21 5.5-kW heaters (three heater drifts with seven heaters per drift), temperature measurements will be useful in resolving the first and fifth hypotheses. After four years of full-power heating, resolution of hypotheses 1 and 5 will be even more likely. After four years of full-power heating, there may be enough information to resolve the second and third hypotheses tests. Partial validation of the fourth hypothesis test will probably require a minimum of six to seven years.

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The Los Alamos Technical Project Officer (TPO) was named to the Los Alamos Middle Management Council. Stephen Bolivar, the QA Project Leader, was named to the Los Alamos Continuous Quality Improvement Team on Process Improvement; this team supports the Los Alamos Quality, Policy, and Performance Directorate.

The SNL has been monitoring the closure of the Starter Tunnel at key locations. This week, monitoring continued at two stations on the girders in the first 30 feet of tunnel. Additional vertical closure stations were installed between 50 and 100 feet. As the top heading advances, more temporary stations will be installed to monitor rock movement during construction. Load changes are being monitored on three rock bolt load cells in the high wall at the portal. 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 at a rapid pace. Core logs from NRG-3, NRG-5, and NRG-6 have been completed and are in review and final production. The first set of mechanical properties data from NRG-6 was transmitted to YMPO. Mechanical properties testing on core from the lower part of NRG-6 is in progress. 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.

The U.S. Geological Survey rock characteristics section continued detailed petrographic examination on a suite of rock samples collected from a vertical section (along the southern flank of Antler Ridge) within the Tiva Canyon Tuff of the Paintbrush Group. This work is being performed to determine if microscopic textures, variability of pumice, crystal content, lithics, and other physical attributes observed in thin section may be used as distinguishing criteria to better define the subunits within the Tiva Canyon Tuff. Over the past months, thin sections of subunits within the Tiva Canyon Tuff of the Paintbrush Group have been described and documented by photomicrographs. Focus has been on preliminary descriptions of devitrification textures and vapor-phase mineralization. Emphasis this week was on examination of thin sections at the hackly/lower lithophysal contact.

All 12 satellite data collection platforms that monitor wells on an hourly basis at Yucca Mountain have been switched so that the data are received at a Local Readout Ground Station in Denver. Previously, several different ground stations were used. This should improve the network in the long run, but has caused some temporary loss of data; however, backup data is being preserved at the platforms and barring any unforeseen problems, the data should be recovered in the next few weeks.

D. Public Outreach and Institutional Activities

Carl Gertz provided a general YMP overview with new work status to five members and staff of the Inyo County Board of Supervisors on July 6, 1993, in Inyo, California. Carl Gertz also gave an overview to 35 students at the University of California, Santa Barbara, on July 7, 1993.

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Tours to Yucca Mountain were conducted on July 6, 1993, for 25 students from the University of Georgia, and on July 9, 1993, for five guests from the Harrisburg Area Geological Society. John Peck gave a pretour briefing on the YMP, emphasizing geology, to the students from the University of Georgia. John Peck also gave a general YMP overview, focusing on new work status, to 30 members of the National Property Management Association on July 8, 1993, in Las Vegas, Nevada.

Richard Arnold provided a Native American Indian cultural presentation to 170 members of the YMCA on July 6, 1993, in Las Vegas.

The YMP staff held a meeting for the State of Nevada and affected counties on July 9, 1993, in Las Vegas, to brief them on current and future activities and to develop greater interactive involvement.

The Institutional and External Affairs (IEA) staff developed new announcements in support of the upcoming Discovery Day activities to be held at the Las Vegas Yucca Mountain Information Office. A total of 4500 flyers were mailed out.

A new 40-inch by 40-inch display for the Field Operations Center entitled, "Technology for Mechanically Excavating the Exploratory Studies Facility at Yucca Mountain," was completed by IEA staff. This display features photographs and captions of TBM work similar to that planned for Yucca Mountain.

The IEA staff attended the Nevada Development Authority breakfast on July 7, 1993, to interact with business and community leaders, and attended the Clark County Steering Committee Meeting on July 8, 1993, in Las Vegas.

III. 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 and Public Update Meetings are coordinated by Joanna Magruder at (702) 794-7056, 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>DOE/HQ Meetings</u>			
Wednesday, July 21	OCRWM Program Management Meeting	Washington, DC	L. Smith/ C. Gertz
B. <u>CRWMS M&O/DOE Meetings</u>			
Thursday, July 29	YMPO Monthly Management Meeting	Las Vegas, NV	C. Gertz
Wednesday, August 4	CRWMS M&O Program Management Review	Las Vegas, NV	L. Smith/ C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
C. <u>Internal and DOE/NV Meetings</u>			
Wednesday, July 21	NV Monthly Program Review	Las Vegas, NV	L. Smith/ C. Gertz
Friday, July 30	TPO Meeting	Las Vegas, NV	C. Gertz
Friday, July 30	Planning and Budget Meeting	Las Vegas, NV	C. Gertz
D. <u>NRC Interactions</u>			
Tuesday, July 13	NRC Appendix 7 Meeting (P)	TBD	T. Bjerstedt
Tuesday- Thursday, July 13-15	NRC Appendix 7 Meeting (P)	Albuquerque, NM	T. Bjerstedt
Thursday, July 15	NRC Appendix 7 Meeting (P)	Las Vegas, NV	T. Bjerstedt
Tuesday- Wednesday, July 27-28	Technical Exchange - ESF Title II Design and Design Control (P)	Las Vegas, NV	T. Bjerstedt
Tuesday, August 24	Technical Exchange - Substantially Complete Containment & Waste Package/EBS Design Concepts (P)	Washington, DC	T. Bjerstedt
Wednesday, October 13	Technical Exchange - Radioactive Migration in the Unsaturated Zone (P)	Albuquerque, NM	T. Bjerstedt
Thursday, October 14	Technical Exchange - Near-Field Phenomena Related To Radio- nuclide Releases from the EBS (P)	Albuquerque, 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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
E. <u>NWTRB Interactions</u>			
Tuesday- Wednesday, July 13-14	NWTRB Full Board Meeting (P)	Denver, CO	J. Cooper
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) (Tentative)	Arlington, VA	J. Cooper
Monday- Wednesday, April 11-13, 1994	NWTRB Full Board Meeting (P) (Tentative)	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
F. <u>Advisory Committee on Nuclear Waste (ACNW) Interactions</u>			
Tuesday- Thursday, July 20-22	ACNW 55th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, August 25-26	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, September 29-30	ACNW 57th Meeting (P)	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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>ACNW Interactions (Continued)</u>			
Wednesday- Thursday, December 15-16	ACNW 60th Meeting (P)	TBD	A. Gil

G. <u>National Academy of Sciences (NAS) Interactions</u>			
Thursday- Friday, August 26-27	NAS Committee on YM Standards-Alternative Formulations of a Risk-Based Standard (P)	Las Vegas, NV	S. Jones

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. <u>State and Public Interactions</u>			
Tuesday- Wednesday, July 13-14	NWTRB	Denver, CO	C. Gertz
Thursday, July 15	Spring Valley Library	Las Vegas, NV	T. Bjerstedt
Friday, July 16	Loyal Order of the Moose	Pahrump, NV	J. Peck
Friday July 16	Fay Herron Elementary School	Las Vegas, NV	R. Arnold
Sunday, July 18	Institute of Nuclear Materials Management	Scottsdale, AZ	C. Gertz
Monday, July 19	City of Las Vegas Yucca Mountain Nuclear Repository	Las Vegas, NV	C. Gertz
Monday, July 19	Dorothy Eisenberg Elementary	Las Vegas, NV	J. Hartley
Wednesday, July 21	C. T. Sewell Elementary School	Las Vegas, NV	T. Kaish/ M. Griffin
Thursday, July 22	Fresno Geological Society	Fresno, CA	J. Peck
Monday, July 26	Washoe County Commission	Reno, NV	A. Robison
Wednesday, July 28	American Nuclear Society (ANS) Teacher Workshop	Deerfield, MA	B. Reilly/ J. Peck
Monday, August 2	U.S. Council on Energy Awareness Energy Information Centers	Chicago, IL	C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. <u>State and Public Interactions</u> (Continued)			
Monday-Friday, August 2-6	Desert Explorers Camp, YMCA	Las Vegas, NV	Various Speakers
Friday, August 6	University of Utah	Brianhead, UT	TBD
Monday-Tuesday August 9-10	Desert Explorers Camp, YMCA	Las Vegas, NV	Various Speakers
Thursday, August 12	Second International New Avenues in Risk and Crisis Management Conference	Las Vegas, NV	TBD
Tuesday, August 17	1993 American Institute of Chemical Engineers Summer National Meeting	Seattle, WA	TBD
Wednesday, August 18	Second International Mixed Waste Symposium	Baltimore, MD	TBD
Thursday-Friday, August 19-20	YMCA	Las Vegas, NV	A. Gil
Friday, August 20	Loyal Order of the Moose	Pahrump, NV	TBD
Wednesday- Thursday, September 1-2	C. P. Squires Elementary	N. Las Vegas, NV	R. Arnold
Monday-Tuesday, September 6-7	C. P. Squires Elementary	N. Las Vegas, NV	R. Arnold
Tuesday, September 7	International Atomic Energy Course	TBD	TBD
Friday, September 10	Public Gas Service Gas Company	TBD	TBD
Monday, September 13	Entergy Energy Corporation	Las Vegas, NV	TBD
Sunday, September 26	Children's Discovery Museum	Las Vegas, NV	R. Arnold
Monday, September 27	1993 I&EC Division Symposium	Atlanta, GA	TBD

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
H. <u>State and Public Interactions</u> (Continued)			
Monday, November 15	ANS	San Francisco, TB CA	
Sunday, February 27, 1994	Waste Management Symposia	Tucson, AZ	TBD
Sunday, March 20, 1994	Risk Management Quarterly Association	San Diego, CA	TBD
<u>Date</u>	<u>Event</u>	<u>Location</u>	
I. <u>Exhibits Scheduled</u>			
Saturday, July 24	Public Open House (P)	Las Vegas, NV	
Friday- Sunday, August 20-22	Home Show (P)	Las Vegas, NV	
Saturday, August 21	Public Open House (P)	Las Vegas, NV	
Tuesday- Monday, August 24-30	Nevada State Fair (P)	Reno, NV	
Thursday- Tuesday, September 2-7	Elko County Fair (P)	Elko, NV	
Thursday- Tuesday, September 2-7	Tri-County Fair (P)	Bishop, CA	
Wednesday- Friday, September 15-17	Nevada League of Cities	Henderson, NV	
Friday- Sunday, September 17-19	Harvest Day Festival (P)	Pahrump, NV	
Saturday, September 25	Public Open House (P)	Las Vegas, NV	
Tuesday- Saturday, September 28- October 2	Nevada Library Association	Elko, NV	

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<u>Date</u>	<u>Event</u>	<u>Location</u>
I. <u>Exhibits Scheduled</u> (Continued)		
Friday-Monday, October 1-11	Jaycee State Fair (P)	Las Vegas, NV
Saturday, November 6	Boy Scouts Expo	Las Vegas, NV

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. <u>Tours Scheduled</u>		
Friday, July 16	International Safeguards Group	D. Kessel
Friday, July 23	ENRESA Spain	R. Levich/ M. Voegelé
Saturday, July 24	Public Open House (P)	Various Escorts
Thursday, July 29	State of Minnesota Department of Public Service	TBD
Thursday, August 5	OCRWM Communicators Meeting	B. Crowe/ M. Wadkins
Friday, August 6	Military Order of Laos	P. Carmack
Thursday, August 12	New York Power Authority	TBD
Tuesday, August 17	American Nuclear Energy Council	TBD
Saturday, August 21	Public Open House (P)	Various Escorts
Monday, September 13	Senior Tripsters	TBD
Monday, September 20	Waste Package Development Workshop	R. Fish
Saturday, September 25	Public Open House (P)	Various Escorts
Tuesday, September 28	Southern Nevada Chevron Retirees Association	TBD

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
J. <u>Tours Scheduled</u> (Continued)		
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 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

YMP:RVB-5076


for Carl P. Gertz
Project Manager