



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

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TO: Joseph Holonich, Director, HLPD, M/S 4 H 3
FROM: Sr. On-Site Licensing Representatives Office, Las Vegas
DATE: MAY 3, 1993
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE
WEEK ENDING APRIL 16 and 23, 1993

Please find enclosed the above-referenced reports.

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
Enclosures 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

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
APRIL 16, 1993

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

A. Site Characterization Planning

Field Operations

The Site Manager and Field Operations Center (FOC) staff participated in and provided logistical support for three major tours this reporting period. The FOC staff is making final preparations for the next general public open house and site tour scheduled for April 24, 1993.

Regarding Job Package (JP) 93-03, Reynolds Electrical & Engineering Co., Inc. (REECO), began the excavation for the access road and pad for NRG-5.

It is anticipated that JP 93-03A will be signed off by the respective Division Directors and the Notice to Proceed signed by Project Manager Carl Gertz and submitted to the Site Manager during this week. This will be for the drilling of Borehole NRG-5.

On JP 92-20, North Portal Pad and Facilities, REECO continues hauling fill to the pad, working on the north drainage channel and grouting the rock bolts in the box cut. On April 8, 1993, at approximately 3:30 p.m., REECO detonated the first small blast to smooth the uneven box cut surfaces.

REECO completed the removal of a steel tape stuck in Borehole UZW WT-7. All equipment has been returned to the subdock area.

On JP 92-17, UZ-14 drilling with the LM-300 drill rig, REECO is mobilizing and setting up equipment. It is planned to start drilling on or about April 13, 1993. The planned depth of this hole is 2000 feet.

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Sample Management Facility

Large blocks of densely-welded Topopah Springs Tuff were located. This site may have the potential to become a source of rock for the Colorado School of Mines.

A major quality assurance (QA) audit of all Drilling Support (DS) and Sample Management (SM) procedures was held April 5-9, 1993. No Corrective Action Requests (CAR) were issued against activities in DS and SM areas.

A draft of the Exploratory Studies Facility (ESF) Sampling Plan for North Ramp Tunnel is being modified per Los Alamos National Laboratory (Los Alamos) requests.

Completed prognoses on UE25 NRG-4.

Completed processing NRG-3 core.

Completed processing 70 specimens for the U.S. Geological Survey (USGS).

Approximately 220 boxes were laid out for the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O), Sandia National Laboratories (SNL), and USGS principal investigators.

Regulatory InteractionsIssue Resolution

The next meeting of the Issue Resolution Steering Group is planned for April 15, 1993, from 8 a.m. to 12 noon. Topics will include a status of all issues, implementation of lessons learned from work on the Erosion Topical Report, and a status of Site Characterization Analysis open items.

Mined Geologic Disposal System (MGDS) Annotated Outline (AO)

Comments have been sent to the U.S. Department of Energy (DOE)/Headquarters (HQ) via InfoSTREAMS on Revision 2 of the MGDS AO. A comment resolution meeting is scheduled April 14, 1993. The Yucca Mountain Site Characterization Project Office staff will be participating via telecon.

Technical Analysis

The performance assessment management staff prepared briefing material for the Nuclear Waste Technical Review Board Full Board Meeting in Reno, Nevada, April 21-22, 1993; worked on budget allocation for fiscal year (FY) 1994; and continued review of the process for evaluation of waste isolation and test interference effects of testing and construction activities.

Work continued on revision of the report of the RIP model review exercise and on the second iteration of total system performance assessment (TSPA 2). Three waste isolation analyses are in progress this week. Requests for these analyses continue to arrive with retroactive deadlines. The generic analysis for road and drill pad construction, due at the end of April 1993, may ease this concern somewhat. The performance assessment staff met with the Los Alamos staff to define solubility and retardation data for TSPA 2, conducted supporting calculations for classification analyses of ESF design packages; and continued evaluation of the thermal loading studies data set.

Geochemistry management staff participated in a meeting of the International Program Coordination Group and attended a workshop in chlorine-36 geochemistry. Technical data management staff continue revision of data management procedures to comply with the new Quality Assurance Requirements Document (QARD).

ESF Task Force Activities

The 50 percent management and technical review of Package 1B began on April 12, 1993. The following milestones represent the near-term plan for ESF activities:

Award Tunnel Boring Machine (TBM) Contract	May 3, 1993
Award Subcontract for Underground Construction	June 1993

Site Characterization Plan (SCP)/Study Plan (SP) Status

The U.S. Nuclear Regulatory Commission (NRC) completed Phase I review of SP 8.3.1.3.4.2, "Biological Sorption and Transport." One ESF revision has been submitted to YMPO: SP 8.3.1.2.2.6, Revision 1, "Characterization of Gas-Phase Movement in the Unsaturated Zone."

STUDY PLAN BREAKDOWN

In Screening Review	1
In YMPO Review	3
Awaiting Comment Resolution	12
Awaiting Author Revision	2
In YMPO Verification Audit	6
Preparing to Submit or Awaiting YMPO Approval	1
Awaiting Submission to the NRC	1
NRC Phase 1 Review	15
NRC Acceptance	41
Total	82

SCP/SP Status:

Total SPs Assigned to Cover 106 Studies	104
SPs Not Yet Submitted for Review	36
SPs Submitted for Initial Review	68
Revised SPs Submitted for Review	6
Revised ESF SPs Submitted for Review	8
Total SPs Submitted for Review	82

State of Nevada Comments Status:

Received Comments from the State of Nevada	19
Responses Transmitted to the State of Nevada	14

NRC Comments Status:

Received Comments from NRC	19
Responses Transmitted from OGD to DOE/HQ	18

B. Project Planning and Control

The participant Planning and Control System (PACS) cost/schedule status data for March 1993 was received and uploaded from the participant work stations to PACS. The new data was calculated through the PACS rollup in all participant data bases. The participant data was combined in the central PACS project-level data base.

The Planning and Scheduling Account Variance Analysis Reports (VAR01) and Cost Performance Reports were produced and distributed to the participants.

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Interviewing was completed of potential users for the Division Directors work station currently being developed.

The Variance Analysis Report "At Completion" was modified to reflect current FY data.

The staff assisted participants in replanning work breakdown structure (WBS) 1.2.6.2.2.5 to lower levels. They supported Ronald Oliver, Los Alamos, with schedules and information for the Consolidated Sampling Job Package.

The staff developed, coordinated, and obtained approvals for NRG-5 drilling and test schedules.

C. QA Implementation

The YMPO Audit YMP-93-09 was completed on April 9, 1993. As a result of the audit, four CARs were issued as follows:

1. Personnel at the site were using different forms than those required by the Branch Technical Procedures.
2. Readiness Review for construction and construction support activities for the ESF (Package 1A) was not documented in accordance with requirements of implementing procedures.
3. An "at risk" Interim Change Notice was issued which did not contain information required by the implementing procedure. Additionally, it was allowed to remain in effect six months beyond the allotted time frame.
4. The CRWMS M&O/TRW does not have objective evidence that Security Archives, Inc., has been qualified to store one of a kind records.

The Yucca Mountain Quality Assurance Division staff performed QA reviews of 28 Technical Directives before Project Manager approval. They also developed QARD (RW-0333) training session (draft) material and updated the QARD requirements matrix baseline.

Determination of Importance and Grading Enhancement

Quality (Q) List and Q-List Procedure Development

Implementation

Revision of the Q-List continues to incorporate the YMPO approved results from the ESF Starter Tunnel Drill and Blast Section Determination of Importance Evaluation (DIE).

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The results of the Assessment Team (AT) review of the Starter Tunnel Steel Arch DIE were discussed at the AT weekly meeting on April 14, 1993, and are being transmitted to YMPO for review and approval.

The AT is reviewing two Raytheon Services Nevada classification analyses on surface-based testing construction activities.

D. Public Outreach and Institutional Activities

Two school tours to Yucca Mountain were conducted. These included a tour on April 13, 1993, for 120 students from Kenny Guinn Junior High School and a tour on April 14, 1993, for 120 students from Orr Junior High School.

Three special group tours to Yucca Mountain were conducted, including a tour on April 15, 1993, for 20 Project Property Administrators; a tour on April 16, 1993, for 40 guests of Our Lady of Las Vegas; and another tour on April 16, 1993, for 20 guests from the University of Nevada Reno - Mackay School of Mines.

James Blink, Lawrence Livermore National Laboratory (LLNL), gave several educational presentations this week. These included a presentation on fission, fusion, and radioactivity to 150 students at Valley High School on April 12, 1993, in Las Vegas, Nevada; a general science presentation to 40 students at Burkholder Middle School on April 13, 1993, in Henderson, Nevada; and a general science/energy presentation to 100 students at Tonopah Elementary School on April 16, 1993, in Tonopah, Nevada. James Blink and Effie Harle, Technical and Management Support Services (T&MSS), also gave a general science presentation to 100 students at Sandy Valley Elementary School on April 15, 1993, in Sandy Valley, Nevada.

The YMP presented a check to Gene Butler, Clark County School District (CCSD), on April 15, 1993, for support of the CCSD 1993 Science Fair. The check was presented at the Science Fair Awards Reception. Awards were presented to student winners from Nevada elementary, middle, and high schools. The two top winners from the high school division will receive all-expense paid trips to the National Science Bowl Competition.

Carl Gertz gave a general project overview presentation to 100 members of the American Nuclear Society and the American Society of Mechanical Engineers on April 15, 1993, in New York, New York.

Paul Standish, T&MSS, gave two general project overview presentations. These included a presentation on April 12, 1993, to 35 members of the Cactus, Water and Energy Conservation Society in Las Vegas and a presentation on April 15, 1993, to 35 members of Centel Telephone Company in Las Vegas. Another general project overview presentation was given by Kenton Beall, T&MSS, to 35 members of the Teamsters Local 14 on April 15, 1993, in Las Vegas.

Todd Kaish, CRWMS M&O, gave an introduction to nuclear energy presentation to 63 students at George Harris Elementary School on April 15, 1993, in Las Vegas.

John Hartley, T&MSS, gave two "Yucca Mountain Johnny" presentations this week. One was to 20 teachers at the REECo Teacher Partnership Workshop on April 12, 1993, in Las Vegas, and the other was to 45 students at Fay Herron Elementary School on April 15, 1993, in Las Vegas.

Jeanne Cooper, YMPO, gave an educational volcano/earth presentation to 30 students at Mt. Charleston Elementary School on April 16, 1993, in Las Vegas.

The Yucca Mountain Public exhibit will be displaying at the Clark County Fair in Logandale, Nevada, April 15-18, 1993.

Institutional and External Affairs (IEA) and YMPO staff met with Nye County officials on April 12, 1993, in Las Vegas to discuss Payments-Equal-to-Taxes and Nye County interactions.

The IEA staff developed two exhibits: one depicting new work at Yucca Mountain which will be at the Yucca Mountain Information Office in Las Vegas. The other, depicting environmental and cultural resource programs related to site characterization at Yucca Mountain, was sent to Williamsburg, Virginia, to support a request by B&W Nuclear Technologies.

The IEA staff attended the Nevada Test Site Contractors' Association meeting in Las Vegas on April 13, 1993. They also attended and assisted with preparation of a presentation given by YMPO staff at the meeting of the State/Local Government Planning Group on April 13, 1993, in Henderson.

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II. ANALYSIS & VERIFICATION DIVISION

The Technical Review Group (TRG) review was initiated on Defense Waste Processing Facility Waste Qualification Reports Volumes 2, 5, 6, 8, and 9 reflecting the new Office of Environmental Restoration and Waste Management, Waste Acceptance Product Specifications. Comments are due to Argonne National Laboratory by April 22, 1993, in preparation for the TRG meeting April 27-29, 1993, in Washington D.C.

The staff completed RW-20 review of the Monitored Retrievable Storage AO Plans on (a) Transportation Physical Protection, and (b) Material Control and Accountability. Comments are due on April 14, 1993.

Self Assessment of selected portions of the Office of Civilian Radioactive Waste Management (OCRWM) Program for Business Management Review was initiated. The Self Assessment is scheduled to begin on April 13, 1993.

The staff participated in the 50 percent design review of ESF Design Package 1b April 12-16, 1993, in Las Vegas. The staff participated in the Engineered Barrier System Workshop Planning Meeting in Las Vegas on April 13, 1993. Also, they participated in the Multi-Purpose Canister (MPC) Implementation Team Meeting on the status of the MPC in Las Vegas on April 14, 1993.

MGDS

The staff reviewed and provided comments on the "Report to Congress on the Adequacy of Spent Fuel and High-Level Radioactive Waste Management Plans for Future Waste Generation."

Input was provided on the tunnel diameter study.

The staff attended the SP Coordinators meeting in Las Vegas regarding new format.

The Draft Repository Program Convergence paper was submitted for review.

Occurrence Reporting Processing System

Data was compiled for a wallet size telephone list.

The staff participated in a discussion with Vincent Iorii, YMPO, and James Frank, CRWMS M&O, regarding purchase of emergency communications equipment.

The twice-weekly report was prepared.

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III. GENERAL INFORMATION ITEMS

CRWMS M&O

Completed line drilling on April 6, 1993, for first round of center drift at face of Starter Tunnel. Also, on April 8, 1993, drilled and blasted one trim round at face of Starter Tunnel.

Attended the DOE MPC integration meeting in Washington, D.C. The conceptual design options were briefed. The primary large MPC is to have a capacity of 24 PWR assemblies. It has been pointed out that this number is pushing the limits for repository. A more conservative approach is recommended. MPC development status was presented on April 8, 1993, to the Program Review Authority.

Organized and conducted a meeting to brief Participant Study Plan Coordinators on Revision 6 of Administrative Procedure 1.10Q. The procedure has been revised to conform with the new Level of Detail Agreement with the Nuclear Regulatory Commission for the preparation and review of study plans.

LLNL

Regarding WBS 1.2.2.2 (Waste Package Environment), the Preliminary Near Field Environment Report, Volume I and II, was approved by YMPO and will soon be available as an LLNL report. This completes Milestone T359.

Los Alamos

David Vaniman reported that clay separations were made from a representative sample of the upper Paintbrush nonwelded zone in USW G-4 at a depth of 159 feet. The staff will compare these clays mineralogically and chemically with those formed in alluvium and in shallower fractures at Yucca Mountain to investigate how they were formed and how their constituents were transported during the clay-formation process.

June Fabryka-Martin sponsored a three-day workshop in Las Vegas entitled "Chloride and Chloride-36 Studies in the Arid Southwest." Alan Flint, USGS, and scientists from seven other organizations that are pursuing infiltration studies for non-YMP programs attended the workshop.

Ines Triay reported that experiments to describe neptunium sorption onto tuff minerals in J-13 and UE-25p #1 water at high temperatures, 60 degrees Celsius (C), were completed. Previous studies had been performed at ambient temperatures, 25 degrees C.

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SNL

The staff initiated fielding of the construction monitoring 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." The construction blasting seismometer and geophones were located on the pad near the North Portal. Recordings of peak particle velocity and seismic wave forms were made for the first blast conducted on April 9, 1993. As construction proceeds, the geophones will be moved closer to the portal area to record the seismic response in the rock around the portal.

Analyses to support the design of the North Ramp are continuing. The first analysis will evaluate the thermal loading on the North Ramp from a potential repository. For this analysis, initial thermal loadings of 57, 80, and 100 kW/acre are being considered. Calculations for the 57 and 80 kW/acre have been completed and reported in SAND92-0589. The results for the 100 kW/acre case will be completed this month. These results will then feed an evaluation of the structural stability of the ramp at various locations along its length. This second set of analyses will use rock structure and estimated properties based on data from the NRG holes. SNL is currently developing core logs and rock quality indices to be used for the estimation of rock-mass properties for the analyses. The third analyses is evaluating the loading on the North Ramp that would result from a seismic event (earthquake or underground nuclear explosion). The analysis will estimate the static and dynamic loading on various sections of the North Ramp based on an assumed 0.75g acceleration. The results of these analyses will provide input to the 90 percent design package.

T&MSS

T&MSS is preparing for an internal audit of the portion of its QA program dealing with Organization and Program.

USGS

To support geologic mapping of the ESF, initial blasting to prepare for the launch chamber excavation was completed. The underground mapping crew observed excavation in preparation for mapping operations. Training of additional mapping staff is in progress to support around the clock excavation.

Work began vacuuming borehole UE25 UZ-16 and monitoring sulfur hexafluoride concentration. Vacuuming will continue until background of in situ gases at selected intervals for the gaseous phase studies will begin using a packer system.

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An obstruction to access tubing to well USW WT-7 was cleared by the drilling crew. The tubing had been blocked by a section of steel tape. The dirty well screen was replaced. The tubing at Well USW H-5 was replaced due to excessive corrosion and possible leakage.

IV. 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.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
A. <u>DOE/HQ Meetings</u>			
No significant meetings.			
B. <u>CRWMS M&O/DOE Meetings</u>			
Friday, April 30	CRWMS M&O Program Review	Las Vegas, NV	C. Gertz
C. <u>Internal and DOE Nevada Operations Office (DOE/NV) Meetings</u>			
Wednesday, April 21	DOE/NV Monthly Program Review	Las Vegas, NV	C. Gertz
Friday, May 7	Technical Project Officers' Meeting	Las Vegas, NV	C. Gertz
Friday, May 7	Planning & Budget	Las Vegas, NV	C. Gertz
D. <u>NRC Interactions</u>			
Monday, May 3	Management Meeting on Topical Report (P)	Las Vegas, NV	T. Bjerstedt
Monday, May 17	Technical Exchange - Program Planning and Integration (P)	Video- Conference	L. Desell T. Bjerstedt
Tuesday, May 18	Technical Exchange - OCRWM Technical Baseline Documents (P)	Video- Conference	L. Desell 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)			
Tuesday- Wednesday, May 25-26	NRC Site Visit (P)	Las Vegas, NV	T. Bjerstedt
Monday, June 7	NRC Management Meeting for Interactions Scheduling (P)	Las Vegas, NV	T. Bjerstedt
Tuesday, June 8	Technical Exchange - Geophysics Integration (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, June 9	Technical Exchange - Volcanism (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, July 28	Technical Exchange - ESF Title II Design (P)	TBD	T. Bjerstedt
E. <u>NWTRB Interactions</u>			
Monday April 19	NWTRB Environment and Public Health Panel - Site Tour (P)	Las Vegas, NV	J. Cooper
Wednesday- Thursday, April 21-22	NWTRB Full Board Meeting (P)	Reno, NV	J. Cooper
May TBD	NWTRB Environment and Public Health Panel (P)	Las Vegas, NV	J. Cooper
Tuesday- Saturday, June 1-12	NWTRB International Trip	TBD	J. Cooper
Monday- Thursday, July 12-15	NWTRB Full Board Meeting (P)	Denver, CO	J. Cooper
Tuesday- Friday, October 19-22	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Cooper

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>Advisory Committee on Nuclear Waste (ACNW) Interactions</u>			
Wednesday- Thursday, May 19-20	ACNW 54th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, July 21-22	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, August 25-26	ACNW 57th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, September 22-23	ACNW 58th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 59th Meeting (P)	Las Vegas, NV	A. Gil
Monday- Tuesday, November 22-23	ACNW 60th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, December 15-16	ACNW 61st Meeting (P)	TBD	A. Gil

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u>			
Monday, April 19	Charlotte Hill Elementary School	Las Vegas, NV	J. Blink
Monday, April 19	Orr Junior High School	Las Vegas, NV	A. Gil
Tuesday, April 20	Burkholder Middle School	Henderson, NV	K. Olsson T. Pysto
Wednesday, April 21	Pahrump Lion's Club	Pahrump, NV	P. Carmack

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Thursday, April 22	DOE 20th Annual Science Now	Las Vegas, NV	A. Robison
Thursday, April 22	UNLV Environmental Studies	Las Vegas, NV	J. Peck
Saturday, April 24	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Sunday, April 25	Yucca Mountain Lecture Series (P)	Pahrump, NV	R. Arnold
Monday, April 26	OCRWM Fellowship Student Conference	Las Vegas, NV	C. Gertz
Monday, April 26	U.S./Canada Bilateral Conference	Las Vegas, NV	C. Gertz
Monday, April 26	REECO Teacher Partnership Workshop	Las Vegas, NV	R. Arnold T. Bjerstedt
Tuesday, April 27	Yucca Mountain Lecture Series (P)	Las Vegas, NV	R. Arnold
Tuesday, April 27	Little Skull Mountain Plenary	Las Vegas, NV	C. Gertz
Wednesday, April 28	Ruthe Deskin Elementary	North Las Vegas, NV	R. Arnold
Thursday, April 29	Orr Junior High School	Las Vegas, NV	R. Arnold
Thursday, April 29	High-Level Waste (HLW) Conference	Las Vegas, NV	C. Gertz
Friday, April 30	Twin Lakes Elementary	Las Vegas, NV	T. Kaish
Friday, April 30	Mt. Charleston Elementary	Mt. Charleston, NV	T. Geer

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Friday, April 30	Child Haven	Las Vegas, NV	R. Arnold
Tuesday, May 4	Underground Structures, Colorado School of Mines	Golden, CO	C. Gertz
Wednesday, May 5	University of Washington	Seattle, WA	P. Standish
Thursday, May 6	Nevada Power Company	Las Vegas, NV	C. Gertz
Thursday- Friday, May 6-7	Roy Martin Middle School	Las Vegas, NV	A. Gil
Saturday, May 8	Girl Scouts	Las Vegas, NV	D. Rakestraw J. Brandt
Saturday, May 8	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Monday, May 10	Mt. Charleston Elementary	Mt. Charleston, NV	A. Gil
Tuesday, May 11	Lomie Heard Elementary	Las Vegas, NV	R. Arnold
Friday, May 14	Orr Junior High School	Las Vegas, NV	A. King
Saturday, May 15	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Monday, May 17	Green Valley Kiwanis Club	Henderson, NV	A. Robison
Monday, May 17	Conference of Radiation Control Program Directors	San Francisco, CA	C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Wednesday, May 19	International Right of Way Association	Las Vegas, NV	G. Fasano
Wednesday, May 19	Sunrise Acres	Las Vegas, NV	K. Grassmeier
Friday, May 21	Burkholder Junior High School	Las Vegas, NV	J. Blink
Saturday, May 22	President's Tea of the Sunrise Council (PTA)	Henderson, NV	E. Harle A. Gil
Sunday, May 23	Yucca Mountain Lecture Series (P)	Beatty, NV	J. Weigand
Tuesday, May 25	Yucca Mountain Lecture Series (P)	Las Vegas, NV	J. Weigand
Wednesday, May 26	Sandy Valley Elementary	Sandy Valley, NV	J. Cooper
Thursday, May 27	American Business Women's Association	Las Vegas, NV	J. Younker B. Reilly
Monday, June 14	Rapid Excavation & Tunneling Conference	Boston, MA	C. Gertz
Wednesday, June 16	Palo Verde Generating Station	Phoenix, AZ	G. Fasano E. Harle
Sunday, June 20	Vanishing Desert Greater Opportunity Group	Las Vegas, NV	A. Gil
Sunday, June 20	Yucca Mountain Lecture Series (P)	Pahrump, NV	W. Dixon
Tuesday, June 22	Yucca Mountain Lecture Series (P)	Las Vegas, NV	W. Dixon
Wednesday, July 7	University of California, Santa Barbara	TBD	C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
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G. State and Public Interactions (Continued)

Monday, August 2	U.S. Council on Energy Awareness Energy Information Centers	Chicago, IL	C. Gertz
Tuesday, August 17	1993 American Institute of Chemical Engineers Summer National Meeting	Seattle, WA	C. Gertz
Tuesday- Friday, August 17-20	Second International Mixed Waste Symposium	Baltimore, MD	C. Gertz
Friday, September 10	Public Gas Service Gas Company	TBD	C. Gertz
Sunday, September 26	Children's Discovery Museum	Las Vegas, NV	R. Arnold
Monday- Wednesday, September 27-29	Industrial & Engineering Chemistry Division Symposium	Atlanta, GA	C. Gertz
Monday- Friday, November 15-19	American Nuclear Society	San Francisco, CA	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>
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H. Exhibits Scheduled

Thursday- Sunday, April 15-18	Clark County Fair (P)	Logandale, NV
Sunday- Wednesday, April 18-21	B&W Fuel Company Industry Conference	Williamsburg, VA
Saturday, April 24	Public Open House (P)	Las Vegas, NV

<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u> (Continued)		
Saturday, April 24	Earth Day/Earth Fair	Las Vegas, NV
Sunday, April 25	Earth Day (P)	Las Vegas, NV
Sunday- Wednesday, April 25-28	American Association of Petroleum Geologists	New Orleans, LA
Monday- Friday, April 26-30	International High-Level Radioactive Waste Management Conference	Las Vegas, NV
Tuesday, May 4	American Nuclear Energy Council	Washington, DC
Monday, May 10	Public Update Meeting (P)	Beatty, NV
Tuesday, May 11	Public Update Meeting (P)	Las Vegas, NV
Thursday, May 13	Public Update Meeting (P)	Reno, NV
Sunday- Tuesday, May 16-18	USCEA	St. Petersburg, FL
Wednesday, May 19	Public Open House (P)	Las Vegas, NV
Wednesday- Friday, May 19-21	Geological Society of America 1993 Combined Cordilleran & Rocky Mountain Section Meeting	Reno, NV
Saturday, June 19	Public Open House (P)	Las Vegas, NV

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<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u> (Continued)		
Saturday, July 24	Public Open House (P)	Las Vegas, NV
Friday- Saturday, August 20-21	Home Show (P)	Las Vegas, NV
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Tuesday- Monday, August 24-30	Nevada State Fair Reno (P)	Reno, NV
Thursday- Tuesday, September 2-7	Elko Fair (P)	Elko, 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>
I. <u>Tours Scheduled</u>		
Monday, April 19	NWTRB	W. Dixon J. Cooper
Tuesday, April 20	Round Mountain High School	TBD

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Wednesday, April 21	TRW Employees	R. Cameron
Friday, April 23	OCRWM Field Test Teachers	TBD
Saturday, April 24	Public Open House (P)	Various Escorts
Monday, April 26	HLW Conference	TBD
Monday, April 26	Hydrology Field Trip	A. Flint
Tuesday, April 27	HLW Conference Spouses	TBD
Thursday, April 29	Lander County	C. Binzer
Saturday, May 1	Teacher Workshop and Occidental College	M. Powell A. Gil
Monday May 3	Institute of Shaft Drilling Technology	TBD
Wednesday, May 5	USGS Headquarters	B. Craig
Thursday, May 6	Pahrump Junior High	TBD
Monday, May 10	Los Alamos	TBD
Monday, May 10	DOE Contractor Classification Officers Meeting	TBD
Friday, May 14	National Association of Regulatory Utility Commissioners	TBD

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Wednesday, May 19	Public Open House (P)	Various Escorts
Saturday, June 19	Public Open House (P)	Various Escorts
Monday, June 21	Girl Scouts Wider Opportunity Program	TBD
Saturday, July 24	Public Open House (P)	Various Escorts
Tuesday, August 17	Senior Tripsters	TBD
Saturday, August 21	Public Open House (P)	Various Escorts
Saturday, September 25	Public Open House (P)	Various Escorts

YMP:VFI-3778


 Carl P. Gertz
 Project Manager



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

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
APRIL 23, 1993

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

A. Site Characterization Planning

Field Operations

The Site Manager and Field Operations Center staff participated in and provided logistical support for six major tours this reporting period.

The Site Manager received the Notice to Proceed for Job Package (JP) 92-03A regarding the drilling and testing of Borehole NRG-5. The JP authorization letter was signed on April 20, 1993.

Drilling activities continue on UZ-14 with the LM-300 drill rig. As of April 15, 1993, the five inch core was at a depth of 30.5 feet with the five and one half inch Odex casing for the ream hole drawn to a depth of 26.61 feet. The planned depth of this borehole is 2,000 feet.

On Borehole NRG-5, Reynolds Electrical & Engineering Co., Inc. (REECO), is rigging up the Joy 1 drill rig and associated equipment. Pursuant to receipt of the field control copy of the JP and authorization letter, REECO is scheduled for double-shift operations. The crews will be working from 8 a.m. to 12 a.m.

An average of one blast per day is completed starting with last week. The most recent blast was on April 19, 1993, at 7:45 a.m. As of April 18, 1993, crews have been working around the clock on the Exploratory Studies Facility (ESF).

Sample Management Facility

A total of 79 core boxes from UE25 UZ-16 and 75 core boxes from USW NRG-6 were laid out for the Core Party.

The Sample Overview Committee meeting was supported on April 14, 1993.

Three boxes of specimens from UE25 UZ-16, UE25 C-1, UE25 C-2, UE25 C-3, and UE25 B-14 were shipped to the U.S. Geological Survey (USGS) for examination.

Regulatory Interactions

Christopher Henkel, Edison Electric Institute (EEI), and three EEI consultants met with Charles Smith and the YMPO staff to discuss draft responses to the last EEI report on YMP.

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Mined Geologic Disposal System (MGDS) Annotated Outline (20)

The U.S. Department of Energy (DOE) comments on MGDS AO, Revision 2, have been transmitted to the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O). These comments will be distributed to MGDS AO authors for resolution. The comment resolution meeting is scheduled for April 29, 1993.

Advisory Committee on Nuclear Waste (ACNW) Interactions

The ACNW will be meeting May 19-20, 1993; topics for discussion will include preparation of DOE study plans (SP) and semi-annual site characterization progress reports (PR). The Yucca Mountain Site Characterization Project Office (YMPO) is coordinating presentations for this meeting.

Technical Analysis

Technical Analysis Branch and CRWMS M&O staffs participated in the Nuclear Waste Technical Review Board (NWTRB) Full Board Meeting on infiltration, climate change, and resolution of technical issues in Reno, Nevada, April 21-22, 1993.

The staff participated in a teacher training workshop using DOE's high school curriculum on nuclear energy and waste issues. The DOE and CRWMS M&O staffs supported the 50 percent design review for ESF Design Packages 1B and 2.

The CRWMS M&O staff continued work on several waste isolation analyses and are reviewing a list of 20 analyses for ESF work, which will be needed before the end of the fiscal year (FY). Work continues on resolving Site Characterization Analysis and other U.S. Nuclear Regulatory Commission (NRC) comments, and on the review of thermal loading studies. Work on the second total system performance assessment continued with followup action to the geochemical parameter meeting last week, and development of approaches to modeling the effects of the transient heat pulse from the spent fuel using the Repository Integration Program code.

ESF Task Force Activities

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 currently underway. Design continues on both packages for 90 percent reviews scheduled for July and August 1993.

Construction

Excavation continues on the Tunnel Boring Machine (TBM) Starter Tunnel at the North Portal. Operations have moved to a three-shift-per-day, five-day-per-week schedule, as of April 19, 1993.

Construction is continuing on drainage improvements to the North Portal access road and on the drainage channel around the North Portal pad.

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

Award TBM Contract	May 3, 1993
Award Subcontract for Underground Construction	June 1993
Begin 90 percent design review, Package 1B	July 19, 1993
Begin 90 percent design review, Package 2	August 11, 1993
Complete 60 meters of TBM Starter Tunnel	September 13, 1993

Site Characterization Plan (SCP)/SP Status

The NRC completed Phase I review of SP 8.3.1.2.2.2, Revision 1, "Water Movement Test," and SP 8.3.1.5.2.2, "Characterization of Future Regional Hydrology Due to Climate Changes." The NRC completed Phase II review of SP 8.3.1.2.1.4, "Regional Hydrologic System Synthesis and Modeling." Six SPs have been deleted from the system in response to the letter from Russ Dyer, YMPO, dated March 25, 1993. These SPs have been awaiting principal investigator revision in response to technical comments for more than one year.

STUDY PLAN BREAKDOWN

In Screening Review	0
In YMPO Review	4
Awaiting Comment Resolution	7
Awaiting Author Revision	0
In YMPO Verification Audit	7
Preparing to Submit or Awaiting YMPO Approval	1
Awaiting Submission to the NRC	1
NRC Phase 1 Review	12
NRC Acceptance	44
Total	76

SCP/SP Status:

Total SPs Assigned to Cover 106 Studies	104
SPs Not Yet Submitted for Review	42
SPs Submitted for Initial Review	62
Revised SPs Submitted for Review	6
Revised ESF SPs Submitted for Review	8
Total SPs Submitted for Review	76

State of Nevada Comments Status:

Received Comments from the State of Nevada	19
Responses Transmitted to the State of Nevada	15

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NRC Comments Status:

Received Comments from NRC	19
Responses Transmitted from OGD to DOE/ Headquarters (HQ)	18

B. Project Planning and Control

The FY 1993 Cost/Schedule Baseline Document, Revision 2, was submitted to Configuration Management for publication.

Review and coordination of March 1993 Variance Analysis Reports were completed.

The DOE management books for March 1993 Planning and Control System (PACS) cost and schedule status data were produced and distributed.

Version 3.2 of the PACS Participant Work Station software was released to the participants. The new release provides greater memory management capabilities and the new Data Analysis Report.

To support PACS users and customers, a new service voice mail (the PACS Hotline) was installed.

Assistance was provided to participants in the replanning of Work Breakdown Structure (WBS) 1.2.5.5, and the PACS WBS and Organization Breakdown Structure elements and managers were restructured.

The staff completed and submitted to DOE for approval, the NRG-2A and NRG-4 preliminary integrated schedule development.

The staff assisted Los Alamos National Laboratory (Los Alamos) in the restoration of their PACS Participant Work Station due to system crash. Because the participant had not made a backup of their data, the Project Control Support Division electronically sent Los Alamos a complete download of their data and various execution files to restore their PACS operations.

C. Quality Assurance (QA) Implementation

The Office of Civilian Radioactive Waste Management (OCRWM) Office of QA and Yucca Mountain QA Division staff met this week to finalize material for the Quality Assurance Requirements Document (QARD) training. This consolidated training preparation will provide for consistent training to the QARD throughout OCRWM. Training will be presented to the QA managers on April 26, 1993.

Preparations are ongoing for the project QA managers meeting scheduled for April 26, 1993. The meeting provides a forum for QA managers to discuss QA issues which impact their organization.

Technical directive reviews continue to be the primary effort within the program area. Support staff is working with line management to establish guidelines on what information should be included in technical directives.

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Determination of Importance and Grading Enhancement

Quality (Q) List and Q-List Procedure Development

Draft D of Implementing Line Procedure 1.3/Office of the Project Manager (YMP Matrix of Controls, Development, and Maintenance) has been accepted by reviewers and is in the Plans and Procedures Department (PPD) in preparation for approval.

Implementation

The Deputy Project Manager has verbally provided direction to incorporate the evaluation results for natural barriers determined from the Early Classification of Natural Barriers workshop, but to retain all natural barriers on the Q-List to ensure adequate control.

Revision of the Q-List continues; the YMPO approved results from the ESF Starter Tunnel Drill and Blast Section Determination of Importance Evaluation (DIE) are being incorporated.

The Assessment Team (AT) has provided comments from their review of the Starter Tunnel Steel Arch, Revision 1, DIE.

The AT has reviewed two Raytheon Services Nevada classification analyses on surface-based testing construction activities and provided comments to YMPO.

The revised AT Classification of Items Management Plan has been submitted to PPD to process and submit for review.

D. Public Outreach and Institutional Activities

Several educational presentations were given this week. James Blink, Lawrence Livermore National Laboratory (LLNL), gave a general science presentation to 160 students at Charlotte Hill Elementary School in Las Vegas, Nevada, on April 19, 1993; April V. Gil, YMPO, gave presentations on earthquakes and volcanoes to 150 students at Orr Junior High School in Las Vegas on April 19, 1993; Karen Olsson and Tom Pysto, both of Technical and Management Support Services (T&MSS), gave environmental presentations to 40 students at Burkholder Middle School in Henderson, Nevada, on April 20, 1993; and Todd Kaish, CRWMS M&O, gave presentations on electricity to 80 students from Will Beckley Elementary School in Las Vegas on April 21, 1993, and to 80 students from Myrtle Tate Elementary School in Las Vegas on April 22, 1993. The presentations by Todd Kaish were given at the Las Vegas Yucca Mountain Information Office (YMIO) when the students toured the YMIO as part of the fifth grade field trip program. The students from Beckley and Myrtle Tate Elementary Schools were also provided information on radiation, geology, hydrology, and the Native American exhibit by Institutional and External Affairs (IEA) staff.

General project overview presentations were provided by Max Powell, YMPO, to 200 top science students at DOE's 20th Annual Science Now in Las Vegas on April 22, 1993; and by Pete Carmack, T&MSS, to 25 members of the Pahrump Lions Club in Pahrump, Nevada, on April 21, 1993.

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J. Russell Dyer participated in a panel discussion for the Greater New Jerusalem Baptist Church and the Second Baptist Church on April 17, 1993, in Las Vegas. Other participants included William Andrews, a consultant, and State representatives Robert R. Loux and Steve Frischman. The discussion was open to the public, and approximately 35 people attended.

The UNR hosted Lake H. Barrett, Acting Director, OCRWM, at briefings and at a luncheon attended by several Deans and Vice-President and Provost Bob Hoover on April 21, 1993, in Reno.

The IEA staff attended the ESF Design Review Title II meeting in Las Vegas on April 19, 1993; attended the Nevada Commission on Nuclear Projects meeting in Henderson on April 23, 1993; and met with Patty Smith, Northern Nevada Nuclear Waste Study Committee, in Reno on April 20, 1993.

The IEA staff developed a new ESF exhibit for the Las Vegas YMIO which includes a physical model of the surface facilities at the North Portal and shows planned test areas at the Topopah Spring and Calico Hills levels. The exhibit presents photographs and a video of new work activities and computer animation of the planned underground ESF tunnels.

Several tours of Yucca Mountain, Nevada, were conducted this week. These included a tour for 40 guests of the NWTRB on April 19, 1993; for seven TRW Environmental Safety Systems, Inc., employees on April 21, 1993; and for 15 OCRWM Field Test Teachers on April 23, 1993.

The IEA staff accompanied Inyo County residents on a tour of the Nevada Test Site on April 23, 1993. Inyo County residents will also go on the Public Open House tour of Yucca Mountain on April 24, 1993.

The public newsletter, "Of Mountains and Science," was distributed in tandem with OCRWM's "Bulletin." The IEA staff did press proofs for the printing process.

The IEA staff participated in a debate about Yucca Mountain in Reno on April 21, 1993. Approximately 700 middle and high school students attended the debate. The debate was sponsored by Citizens Against Nuclear Waste in Nevada and was open to the public.

A customized display depicting YMP environmental programs was completed, shipped, and staffed by IEA for the B&W Nuclear Technologies Conference in Williamsburg, Virginia, April 18-21, 1993.

The IEA staff completed the newspaper advertisement to publicize the upcoming Public Update Meetings and May Speakers Bureau presentations. Also, they finalized arrangements and papers for the International High-Level Radioactive Waste Management (IHLRWM) Conference, to be held April 26-30, 1993, in Las Vegas.

II. ANALYSIS & VERIFICATION DIVISION

The staff participated in the NWTRB Environmental Field Trip to Yucca Mountain on April 19, 1993; in the NWTRB Full Board Meeting in Reno April 21-22, 1993; and in the 50 percent design review of ESF Design Package 2 April 19-30, 1993, in Las Vegas.

On April 19, 1993, the staff participated in the ~~Geochemistry~~ Integration Team teleconference. Final preparations for the ~~PR Business~~ Workshop to be held May 3-5, 1993, were discussed.

The staff assisted YMPO in the Self Assessment required for preparation for the PR Business Management Review April 19-22, 1993, in Las Vegas.

Reviews of the Defense Waste Processing Facility Waste Qualification Reports and West Valley Waste Compliance Plan were completed in preparation for the April 1993 Technical Review Group meeting.

The RW-20 evaluation of Hanford Tank Waste Remediation System Study Cost Estimates were completed.

III. GENERAL INFORMATION ITEMS

CRWMS M&O

The staff completed four preliminary DIE for the ESF Design Package 2, 50 percent design review including the following: underground conveyer system, North Ramp tunnel, underground power distribution system, and underground ventilation system.

LLNL

Regarding WBS 1.2.2.3.1.1 (Waste Form Testing - Spent Fuel), an analysis of the test matrix from Pacific Northwest Laboratories' (PNL) spent fuel dissolution tests shows a uranium dissolution dependence primarily on temperature and oxygen concentration. Carbonate concentration is less important. Existing data from LLNL's uranium oxide (UO₂) dissolution tests show a similar relationship. The data from PNL and LLNL show pH as an insignificant factor under the alkaline conditions of these test matrices. Dissolution data under acidic conditions should be different, if only because of solubility differences.

Los Alamos

David Vaniman completed sample preparation for neutron-activation analyses of 31 calcite samples and three clay samples. These samples were taken from drill cores USW G-1, USW GU-3/G-3, USW G-4, UE24 A-7, and UZ-16, as well as from the portal exposures at the North Ramp ESF Starter Tunnel.

Bruce Crowe reported that fully qualified potassium-argon age determinations were obtained from Lehigh University for basalt units of the Yucca Mountain region. The new data confirm the ages of 3.7 Ma for the basalt of Southeast Crater Flat and 1.0 Ma for the Quaternary basalt of Crater Flat.

Bruce Crowe reported that step heating data for lithic fragments in basalt of Lathrop Wells confirm that the lavas can be no older than 100 ka.

Sandia National Laboratories (SNL)

Drafts of two data reports assessing physical and hydrologic properties from systematic sampling of outcrops have been prepared. These data reports are a SNL/USGS collaborative effort. Data from these sampling studies are being used for geostatistical analyses of lateral variable of physical and hydrologic properties.

Preliminary information from the NRG-6 drill hole has been input to the Interactive Graphics ~~Definition~~ System Calma Modeling system to generate an updated contact between thermal/mechanical units TSw1 and TSw2 at the request of CRWMS M&O design engineers. This updated information provides important comparative information between historical estimates for the location of the potential repository/ESF and the newly emerging design specifications.

T&MSS

T&MSS QA is preparing for an external audit of Waters Manufacturing Company.

No OCRWM Corrective Action Requests are open against T&MSS at this time. No reports of significant conditions adverse to quality have been issued against T&MSS. Minor deficiency documents such as Nonconformance Reports are processed in a timely manner.

The programmatic actions necessary for implementation of the QARD are 25 percent complete.

USGS

The staff completed mapping of approximately 2.5 km² in Fortymile Canyon. Mappers also logged and described three measured sections contributing to geologic understanding of subunits of the rhyolite of the Calico Hills formation cropping out in Fortymile Canyon.

The staff revised the Request for Proposals and bid schedule for the seismic reflection survey to include current changes incorporating a phased approach to data acquisition. Priority will be placed on Bare Mountain, Crater Flat, and Yucca Wash. The technical procedure governing this work has passed technical review and is in final QA review.

Unsaturated zone staff installed automated gas sampling equipment at UZ-14, and coordinated perched water sampling with Los Alamos and the U.S. Bureau of Reclamation.

IV. 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 R. Magruder at (702) 794-7056, and Tours are coordinated by Carleen R. Hill at (702) 794-7375.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
A. <u>DOE/HO Meetings</u>			
Wednesday, May 5	Program Management Meeting	Washington, DC	C. Gertz
B. <u>CRWMS M&O/DOE Meetings</u>			
Friday, April 30	CRWMS M&O Program Review	Las Vegas, NV	C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<u>C. Internal and DOE Nevada Operations Office Meetings</u>			
Friday, May 7	Technical Project Officers' Meeting	Las Vegas, NV	C. Gertz
Friday, May 7	Planning & Budget	Las Vegas,	C. Gertz
<u>D. NRC Interactions</u>			
Monday, May 3	Management Meeting on Topical Report (P)	Las Vegas, NV	T. Bjerstedt
Monday, May 17	Technical Exchange - Program Planning and Integration (P)	Video- Conference	L. Desell T. Bjerstedt
Tuesday, May 18	Technical Exchange - OCRWM Technical Baseline Documents (P)	Video- Conference	L. Desell T. Bjerstedt
Tuesday- Wednesday, May 25-26	NRC Site Visit (P)	Las Vegas, NV	T. Bjerstedt
Monday, June 7	NRC Management Meeting for Interactions Scheduling (P)	Las Vegas, NV	T. Bjerstedt
Tuesday, June 8	Technical Exchange - Geophysics Integration (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, June 9	Technical Exchange - Volcanism (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, July 28	Technical Exchange - ESF Title II Design (P)	TBD	T. Bjerstedt
<u>E. NWTRB Interactions</u>			
Tuesday- Saturday, June 1-12	NWTRB International Trip	United Kingdom, France, Belgium	J. Cooper
Monday- Thursday, July 12-15	NWTRB Full Board Meeting (P)	Denver, CO	J. Cooper
Tuesday- Friday, October 19-22	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Cooper

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>WMPD Contact</u>
F. <u>ACNW Interactions</u>			
Wednesday- Thursday, May 19-20	ACNW 54th Meeting (P)	Bethesda, MD	A. Gil
Tuesday, July 20	ACNW Working Group on Engineered Barrier System (P)	TBD	A. Gil
Wednesday- Thursday, July 21-22	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, August 25-26	ACNW 57th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, September 22-23	ACNW 58th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 59th Meeting (P)	Las Vegas, NV	A. Gil
Monday- Tuesday, November 22-23	ACNW 60th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, December 15-16	ACNW 61st Meeting (P)	TBD	A. Gil
<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u>			
Sunday, April 25	Yucca Mountain Lecture Series (P)	Pahrump, NV	R. Arnold
Monday, April 26	Valley Electric Association	Beatty, NV	K. Beall
Monday, April 26	OCRWM Fellowship Student Conference	Las Vegas, NV	C. Gertz
Monday, April 26	U.S./Canada Bilateral Conference	Las Vegas, NV	C. Gertz
Monday, April 26	REECO Teacher Partnership Workshop	Las Vegas, NV	R. Arnold T. Bjerstedt
Tuesday, April 27	Yucca Mountain Lecture Series (P)	Las Vegas, NV	R. Arnold

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Tuesday, April 27	Little Skull Mountain Plenary Session	Las Vegas, NV	C. Gertz
Tuesday, April 27	Laura Dearing Elementary	Las Vegas, NV	T. Kaish
Wednesday, April 28	Ruthe Deskin Elementary	North Las Vegas, NV	R. Arnold
Wednesday, April 28	Helen Marie Smith Elementary	Las Vegas, NV	T. Kaish
Thursday, April 29	Orr Junior High School	Las Vegas, NV	R. Arnold
Thursday, April 29	IHLRWM Conference	Las Vegas, NV	C. Gertz
Thursday, April 29	John S. Park Elementary	Las Vegas, NV	T. Kaish
Friday, April 30	Twin Lakes Elementary	Las Vegas, NV	T. Kaish
Friday, April 30	Mt. Charleston Elementary	Mt. Charleston, NV	T. Geer
Friday, April 30	Child Haven	Las Vegas, NV	R. Arnold
Tuesday, May 4	Underground Structures, Colorado School of Mines	Golden, CO	C. Gertz
Tuesday, May 4	Harvey Dondero Elementary	Las Vegas, NV	T. Kaish
Wednesday, May 5	University of Washington	Seattle, WA	P. Standish
Thursday, May 6	Nevada Power Company	Las Vegas, NV	C. Gertz
Thursday, May 6	Twin Lakes Elementary	Las Vegas, NV	T. Kaish
Thursday- Friday, May 6-7	Roy Martin Middle School	Las Vegas, NV	A. Gil
Saturday, May 8	Girl Scouts	Las Vegas, NV	D. Rakestraw J. Brandt

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<u>Date</u>	<u>Event</u>	<u>Location</u>	
G. <u>State and Public Interactions</u> (Continued)			
Saturday, May 8	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Monday, May 10	Mt. Charleston Elementary	Mt. Charleston, NV	A. Gil
Tuesday, May 11	Lomie Heard Elementary	Las Vegas, NV	R. Arnold
Friday, May 14	Orr Junior High School	Las Vegas, NV	A. King
Saturday, May 15	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Monday, May 17	Green Valley Kiwanis Club	Henderson, NV	A. Robison
Monday, May 17	Conference of Radiation Control Program Directors	San Francisco, CA	C. Gertz
Wednesday, May 19	International Right of Way Association	Las Vegas, NV	G. Fasano
Wednesday, May 19	Sunrise Acres	Las Vegas, NV	K. Grassmeier
Friday, May 21	Burkholder Middle School	Las Vegas, NV	J. Blink
Saturday, May 22	President's Tea of the Sunrise Council (PTA)	Henderson, NV	E. Harle A. Gil
Sunday, May 23	Yucca Mountain Lecture Series (P)	Beatty, NV	J. Weigand
Tuesday, May 25	Yucca Mountain Lecture Series (P)	Las Vegas, NV	J. Weigand
Wednesday, May 26	Sandy Valley Elementary	Sandy Valley, NV	J. Cooper
Thursday, May 27	American Business Women's Association	Las Vegas, NV	J. Younker B. Reilly
Monday, June 14	Rapid Excavation & Tunneling Conference	Boston, MA	C. Gertz
Wednesday, June 16	Palo Verde Generating Station	Phoenix, AZ	G. Fasano E. Harle

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Sunday, June 20	Vanishing Desert Greater Opportunity Group	Las Vegas, NV	A. Gil
Sunday, June 20	Yucca Mountain Lecture Series (P)	Pahrump, NV	W. Dixon
Tuesday, June 22	Yucca Mountain Lecture Series (P)	Las Vegas, NV	W. Dixon
Wednesday, July 7	University of California, Santa Barbara	TBD	C. Gertz
Monday, August 2	U.S. Council on Energy Awareness (USCEA) Energy Information Centers	Chicago, IL	C. Gertz
Tuesday, August 17	1993 American Institute of Chemical Engineers Summer National Meeting	Seattle, WA	C. Gertz
Tuesday- Friday, August 17-20	Second International Mixed Waste Symposium	Baltimore, MD	C. Gertz
Friday, September 10	Public Gas Service Gas Company	TBD	C. Gertz
Sunday, September 26	Children's Discovery Museum	Las Vegas, NV	R. Arnold
Monday- Wednesday, September 27-29	Industrial & Engineering Chemistry Division Symposium	Atlanta, GA	C. Gertz
Monday- Friday, November 15-19	American Nuclear Society	San Francisco, CA	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u>		
Saturday, April 24	Public Open House (P)	Las Vegas, NV
Saturday, April 24	Earth Day/Earth Fair	Las Vegas, NV

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<u>Date</u>	<u>Event</u>	
H. <u>Exhibits Scheduled</u> (Continued)		
Sunday, April 25	Earth Day (P)	Las Vegas, NV
Sunday- Wednesday, April 25-28	American Association of Petroleum Geologists	New Orleans, LA
Monday- Friday, April 26-30	IHLRWM Conference	Las Vegas, NV
Tuesday, May 4	American Nuclear Energy Council	Washington, DC
Monday, May 10	Public Update Meeting (P)	Las Vegas, NV
Tuesday, May 11	Public Update Meeting (P)	Beatty, NV
Thursday, May 13	Public Update Meeting (P)	Reno, NV
Sunday- Tuesday, May 16-18	USCEA	St. Petersburg, FL
Wednesday, May 19	Public Open House (P)	Las Vegas, NV
Wednesday- Friday, May 19-21	Geological Society of America 1993 Combined Cordilleran & Rocky Mountain Section Meeting	Reno, NV
Saturday, June 19	Public Open House (P)	Las Vegas, NV
Saturday, July 24	Public Open House (P)	Las Vegas, NV
Friday- Saturday, August 20-21	Home Show (P)	Las Vegas, NV
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Tuesday- Monday, August 24-30	Nevada State Fair Reno (P)	Reno, NV
Thursday- Tuesday, September 2-7	Elko Fair (P)	Elko, NV

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<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u> (Continued)		
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>
I. <u>Tours Scheduled</u>		
Saturday, April 24	Public Open House (P)	Various Escorts
Monday, April 26	IHLRWM Conference	TBD
Monday, April 26	Hydrology Field Trip	A. Flint
Tuesday, April 27	IHLRWM Conference Spouses	TBD
Thursday, April 29	Lander County	C. Binzer
Saturday, May 1	Teacher Workshop and Occidental College	M. Powell A. Gil
Monday May 3	Institute of Shaft Drilling Technology	TBD
Wednesday, May 5	USGS Headquarters	R. Craig
Wednesday, Thursday, May 6	O'Callahan Middle School Pahrump Junior High	TBD TBD
Monday, May 10	Los Alamos	TBD
Monday, May 10	DOE Contractor Classification Officers Meeting	TBD

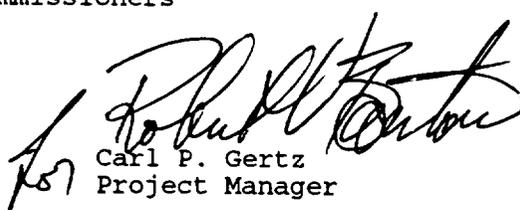
APR 28 1993

Lake H. Barrett

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Wednesday, May 19	Public Open House (P)	Various Escorts
Saturday, June 19	Public Open House (P)	Various Escorts
Monday, June 21	Girl Scouts Wider Opportunity Program	TBD
Saturday, July 24	Public Open House (P)	Various Escorts
Tuesday, August 17	Senior Tripsters	TBD
Saturday, August 21	Public Open House (P)	Various Escorts
Saturday, September 25	Public Open House (P)	Various Escorts
October TBD	National Association of Regulatory Utility Commissioners	TBD

YMP:VFI-3890


Carl P. Gertz
Project Manager