



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: APRIL 7, 1993
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE
WEEK ENDING MARCH 26, 1993 and YUCCA MOUNTAIN SITE OFFICE
(YMSO) FIELD ACTIVITY REPORT FOR THE WEEKS ENDING MARCH 19 AND
MARCH 26, 1993

Please find enclosed the above-referenced reports. *see enclosed a shelf*
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 is the YMP SNL Monthly Highlights and
Status Report

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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
March 26, 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 five major tours this reporting period. They are making final preparations for the monthly general public open house and site tour scheduled for March 27, 1993.

On Job Package (JP) 92-3, UZ-16, the borehole has been secured with a locked cap. Reynolds Electrical & Engineering Co., Inc. (REECo), is rigging down the LM-300 drill rig and is preparing to mobilize and transport it to the next borehole, UZ-14. This should occur on or about March 29, 1993.

As of March 19, 1993, the depth cored at NRG-3 was 238.94 feet with the 5 1/2-inch Odex casing at 276 feet.

Remedial work has begun on Well H-5 with the pulling of the 1.9-inch tubing laid on the rack. REECo has unseated the Tam packer consisting of 96 joints of 2 7/8-inch tubing.

On JP 92-20, Exploratory Studies Facility (ESF) North Portal Pad and Facilities, REECo continues the following activities: excavation of Phase IV of the box cut, hauling of fill from Borrow Pit 1 to the ESF pad to obtain finished grade, and excavation of the north drainage channel.

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Sample Management Facility

A total of 270 boxes of core from UZ-16, NRG-6, and NRG-2 was laid out for the U.S. Geological Survey (USGS), Sandia National Laboratories (SNL), and Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O).

Processing of core from NRG-3 continued.

Processing of specimens from UZ-16, NRG-6, and NRG-2 continued for USGS, SNL, and Los Alamos National Laboratory (Los Alamos).

A total of 233 feet of core drilled in UE25 NRG-3 was logged and sampled.

The preliminary Drill Hole Wash geologic cross section that portrays subsurface geology and expected static water levels for USW UZ-14 has been completed.

Drill hole data from USW G-1 and USW H-1 are being studied to provide estimates of where perched water may be encountered in USW UZ-14.

Regulatory Interactions

Issue Resolution

Resolution of comments on the Calcite-Silica paper is still underway.

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

A teleconference was held on March 19, 1993, to discuss distribution of the MGDS AO, Revision 2, within the Office of Systems and Compliance (RW-30) and the Yucca Mountain Site Characterization Project Office (YMPO) and format changes to streamline the document. Reviewers have been identified, and a briefing will be held this week to discuss the use of InfoSTREAMS in the U.S. Department of Energy (DOE) MGDS AO review.

Technical Analysis

The Technical Analysis Branch staff participated in a scoping meeting on the process to address and resolve technical issues for the Nuclear Waste Technical Review Board (NWTRB) Full Board Meeting in April 1993. The staff participated in the Committee for the Advancement of Science in Yucca Mountain Project (CASY) Symposium on Repository Thermal Loads in Denver, Colorado, March 24-25, 1993; and

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in a Performance Assessment Information Exchange with the USGS principal investigators in Denver on March 26, 1993. The purpose of the Information Exchange is to integrate currently available site and laboratory data into the analyses for the next integration of Total System Performance Assessment (TSPA), and to look toward future products that might be incorporated in future integrations.

ESF Task Force Activities

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

Award Tunnel Boring Machine (TBM) Contract	April 1993
Start Excavating TBM Launch Chamber	April 2, 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 8.3.1.2.2.4, Revision 1, "Characterization of the Yucca Mountain Unsaturated Zone in the ESF."

STUDY PLAN BREAKDOWN

In Screening Review	0
In YMPO Review	3
Awaiting Comment Resolution	13
Awaiting Author Revision	4
In YMPO Verification Audit	3
Preparing to Submit or Awaiting YMPO Approval	1
Awaiting Submission to the NRC	1
NRC Phase 1 Review	17
NRC Acceptance	39
Total	81

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	7
Total SPs Submitted for Review	81

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State of Nevada Comments Status:

Received Comments from the State of Nevada	18
Responses Transmitted to the State of Nevada	12

NRC Comments Status:

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

B. Project Planning and Control

The February 1993 cost and schedule performance report booklets were distributed for Project Manager Carl Gertz, the Division Directors, project work breakdown structure (WBS) element managers, and CRWMS M&O functional managers.

The prototype schedule for UZ-14 was coordinated and produced.

Correspondence to the participants was prepared delineating their approved Capital Equipment list for fiscal year (FY) 1993. The participants are requested to create Planning and Control System summary accounts for their approved Capital. The Cost/Schedule Change Requests were prepared for the participants reflecting the referenced change.

C. Quality Assurance (QA) Implementation

Surveillance 93-016 of the CRWMS M&O/TRW Design Activities is in progress. This surveillance is being performed as a result of the CRWMS M&O/TRW Audit YMP 93-07. Observers from the NRC, State of Nevada, and Office of Civilian Radioactive Waste Management (OCRWM) Office of Quality Assurance (OQA) are present.

A meeting was held with the OQA Director, Yucca Mountain Quality Assurance Division (YMQAD) Director, and key support staff to discuss use of the Requirements Traceability Network for the Quality Assurance Requirements and Description (QARD) Matrix. Discussions included the process for verifying input and providing matrix information to NRC.

The YMQAD program staff met with Robert Barton to discuss the QARD transition. The meeting focused on coordination of necessary procedure revisions to ensure that established deadlines are maintained.

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The YMQAD staff has prepared preliminary FY 1994 QA participant budget splits.

Preparation of Technical Directives to participant organizations is being finalized. As written, the Technical Directives instruct participants to develop or maintain QA programs as appropriate.

Implementation

The letter identifying review comments and recommendations on the ESF Starter Tunnel CRWMS M&O Determination of Importance Evaluations package was transmitted to YMPO.

The Assessment Team Classification of Items Management Plan is being revised to reflect ongoing and planned activities until Administrative Procedure 6.17Q is canceled.

D. Public Outreach and Institutional Activities

The Yucca Mountain Lecture Series, "Nuclear Energy: How Did We Get Here, and Where Are We Going?" was presented by Donald Williams, Hope College, Michigan, on March 21, 1993, in Beatty, Nevada, and on March 23, 1993, in Las Vegas, Nevada. The total attendance at these presentations was approximately 70 people.

Richard Arnold, a consultant, gave Native American Indian cultural presentations to 500 members of the Frontier Girl Scouts Council on March 20, 1993, and to 30 members of the Brownies Troop 562 and Juniors Troop 362 on March 24, 1993, in Las Vegas.

Effie Harle, Technical and Management Support Services (T&MSS), was a judge on March 20, 1993, in California at the San Onofre Nuclear Generating Stations's Student Open House for students from the Capistrano Unified School District's kindergarten through eighth grade INVENT AMERICA competition. The nuclear challenges for INVENT AMERICA included such topics as the following:

"How can the ordinary municipal 'dump' be improved?"

"What performance criteria should be required of facilities handling hazardous material?"

"How to improve ocean water intake and discharge systems."

The YMP sponsored a YMP Critical Thinking teacher workshop in Las Vegas on March 22 and 25, 1993. The workshop, offered through the YMP Educational Program, provided ten teachers from the Clark County School District (CCSD) with 16 hours of classroom lecture and activities which will earn them one hour of Professional Development credit from the CCSD. Presentations given at the workshop included

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"Nuclear Power and Waste Management," by Dr. Donald Williams, Hope College, Michigan; "Environmental and Cultural Issues," by Kent Wirtz and Gregory Fasano, T&MSS, and Richard Arnold, Executive Director of the Las Vegas Indian Center; and "Geology and Hydrology," by April Gil and Claudia Newbury, YMPO. The group will tour Yucca Mountain, Nevada, on March 27, 1993.

John Hartley, T&MSS, provided educational "Yucca Mountain Johnny" presentations to 120 students at Derfelt Elementary School on March 22, 1993, and to 100 students at Vail Pittman Elementary School on March 25, 1993, in Las Vegas.

A tour to Yucca Mountain was conducted on March 23, 1993, for Dave Rossin, President, American Nuclear Society (ANS), and Guy Arlotto of the NRC and two guests. A. C. Robison, YMPO, gave a general overview to the group. A tour to Yucca Mountain was also conducted on March 24, 1993, for 120 students from Thurman White Middle School. Todd Kaish, CRWMS M&O, gave an educational introduction to nuclear energy pretour briefing to the students.

Several general project overviews were given this week: Gregory Fasano gave a general overview to 45 students at Henderson Community College on March 23, 1993, in Henderson, Nevada. He also gave a general overview to 30 members of the Reserve Officers Association on March 26, 1993, in Las Vegas. Ken Beall, T&MSS, provided a general overview to 30 students at Texas Tech University in Lubbock, Texas, on March 23, 1993. Pete Carmack, T&MSS, gave a general overview to 25 members of the Pahrump Lion's Club on March 24, 1993, in Pahrump, Nevada.

Jeanne Cooper, YMPO, gave a geology presentation to students at Orr Junior High School on March 26, 1993, in Las Vegas.

Institutional and External Affairs staff developed an advertisement to be used for the April 1993 Yucca Mountain Lecture Series and for flyers for the March 1993 Public Open House tour of Yucca Mountain. An advertisement was also developed for YMP's first Family Day event to be held April 4, 1993.

II. ANALYSIS & VERIFICATION DIVISION

A presentation was provided at the 1993 Northeast/Midwest Annual Student Regional Conference on March 27, 1993, in Troy, New York. The topic of the presentation was "Characterization of Yucca Mountain: A Step in the Development of a Waste Disposal System."

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The staff attended the Advisory Committee on Nuclear Waste (ACNW) meeting March 24-25, 1993, in Bethesda, Maryland. Items of interest to OCRWM included the following: NRC comments on proposed Environmental Protection Agency standards for transuranic and High-Level Waste (HLW) Disposal (40 CFR Part 191), rulemaking proposed amendments to 10 CFR Part 60 clarifying requirements for assessment of Siting Criteria, an future plans regarding acceptable methods for the formal elicitation and use of expert judgment in the repository licensing process.

The staff attended the DOE meeting on Guidelines for the Use of Probabilistic Seismic Hazard Curves at DOE sites on March 26, 1993, in Vienna, Virginia. They also attended the CASY Symposium March 24-25, 1993, and the YMPO TSPA Information Exchange concentrating on hydrology issues and data collection at USGS on March 26, 1993, both in Denver.

The staff participated in the Geochemistry Integration Team teleconference on March 22, 1993. The strategy for the Colloid Workshop sponsored by YMPO and Los Alamos was discussed.

Review of the Defense Waste Processing Facility Waste Compliance Plan against Office of Environmental Restoration and Waste Management Waste Acceptance Product Specifications was completed. Comments are due to Argonne National Laboratory on March 24, 1993.

III. GENERAL INFORMATION ITEMS

CRWMS M&O

The staff began organizing 50 percent review efforts for ESF packages 1b and 2. Identification of review team members and preparation of review plans began.

Lawrence Livermore National Laboratory

Regarding WBS 1.2.2.2.2, Hydrologic Properties of the Waste Package Environment, the experiment continued to determine the effect of fracture surface coatings on the imbibition of water into the matrix. Eight Topopah Spring Tuff samples machined from outcrops from Busted Butte were prepared for this purpose. Preliminary results indicate that fracture surface coatings decrease the water imbibition rate into the matrix by a factor of 0.15 to 3×10^{-5} , depending on the coating thickness. These findings agree with results obtained by the University of New Mexico and SNL (1992) on Tiva Canyon and Paintbrush Tuff samples. The mineralogy of the coating material and the pore size distribution in the coating layers will be determined.

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Los Alamos

Steve Chipera is running tests using the Idaho National Engineering Laboratory microdiffractometer to determine minimum usable sample size; this determination is extremely important because Los Alamos has numerous samples of fractures that are less than 1 milligram in weight.

David Vaniman and Steve Chipera hand carried clay samples from the portal at the north ramp ESF starter tunnel to Los Alamos; the largest of these samples is being processed for mineralogical and chemical analysis.

A Los Alamos report, "Status Report on ESF-Related Prototype Testing (LA-12411-SR)," by Ronald Oliver and Hemendra Kalia was distributed.

Diane Hyer made a presentation to the Institutional Outreach group at DOE on a science education program developed by Los Alamos called SWOOPE (Students Watching Over Our Planet Earth).

SNL

With the approval and issuance of QA Implementing Procedures 20-1, "Technical Procedures," and 20-2, "Scientific Notebooks," SNL has accomplished a significant revision in the way QA is addressed in the conduct of scientific investigations. At once, these procedures implement QA controls as provided for in the new QARD, and also allow those controls to be readily integrated into routine scientific methodology.

T&MSS

T&MSS QA conducted an audit of Science Applications International Corporation's Environmental Services Division in San Diego, California. A report is being prepared to support their use as a vendor of calibration services for the environmental monitoring program. A revision to the Qualified Suppliers List is forthcoming.

The QARD transition effort continues with the completion of the first group of procedure revisions. Work is in progress according to the schedule for the second group. The Requirements Traceability Network (RTN) is the data base used for tracking and tracing implementation of the QARD. The RTN is satisfying the operational needs for a quality requirements for tracking system.

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USGS

The water level was measured in Well UZ-16 and appeared to drop about 14 feet in a four-day period. Access to the well for another measurement was denied, but personnel will attempt to gain access to the well as quickly as possible to verify this data.

Unsaturated zone staff began collecting gas chemistry data from Boreholes USW UZ-6 and USW UZ-6s, and from Neutron Boreholes N-71, N-72, N-73, N-74, N-75, N-76, N-93, N-94, and N-95, for the gas phase circulation study.

The U.S. Bureau of Reclamation staff completed additional geologic mapping at the north ramp portal with mapping down to an elevation of 3,696 feet. Three horizontal and three vertical traceline surveys, as well as plan-view mapping and stereo photography, were completed. Fracture orientations match those of NRG-1. Northwest-trending high-angle shear zones have been encountered in the excavation. Samples have been collected for Los Alamos investigators.

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 2,	YMP Monthly Management Review	Las Vegas, NV	C. Gertz
Friday, April 30	CWRMS M&O Program Review	Las Vegas, NV	C. Gertz
C. <u>Internal and DOE Nevada Field Office (DOE/NV) Meetings</u>			
Wednesday, March 24	DOE/NV Managers Monthly 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>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>			
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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
E. <u>NWTRB Interactions</u> (Continued)			
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
F. <u>ACNW Interactions</u>			
Wednesday-Thursday, April 28-29	ACNW 53rd Meeting (P)	Bethesda, MD	A. Gil
Wednesday-Thursday, May 19-20	ACNW 54th Meeting (P)	Bethesda, MD	A. Gil
Wednesday-Thursday, June 23-24	ACNW 55th Meeting (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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>ACNW Interactions</u> (Continued)			
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, March 29	Sandy Valley Elementary	Sandy Valley, NV	J. Cooper
Monday, March 29	Burkholder Junior High School	Henderson, NV	K. Wirtz
Monday, March 29	Walter Bradkin Elementary	Las Vegas, NV	R. Arnold
Wednesday, March 31	Henderson Community College	Henderson, NV	G. Fasano
Friday, April 2	Joe Mackey Sixth Grade Center	Las Vegas, NV	A. Gil
Sunday, April 4	Yucca Mountain Information Office Family Day	Las Vegas, NV	T. Kaish
Saturday, April 10	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Monday, April 12	Cactus Water & Energy Conservation Society	Las Vegas, NV	P. Standish
Tuesday, April 13	Orr Junior High School	Las Vegas, NV	W. Wilson
Tuesday, April 13	Sandy Valley Elementary	Sandy Valley, NV	A. Gil
Thursday, April 15	Teamsters Local 14	Las Vegas, NV	K. Beall

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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 15	Sandy Valley Elementary	Sandy Valley, NV	J. Blink
Thursday, April 15	ANS/American Society of Mechanical Engineers	New York, NY	C. Gertz
Thursday, April 15	Fay Herron Elementary	North Las Vegas, NV	J. Hartley
Friday, April 16	Mt. Charleston Elementary	Mt. Charleston, NV	J. Cooper
Friday, April 16	Tonopah Elementary	Tonopah, NV	J. Blink
Monday, April 19	Charlotte Hill Elementary School	Meadow Valley, NV	J. Blink
Monday, April 19	Orr Junior High School	Las Vegas, NV	A. Gil
Thursday, April 22	DOE 20th Annual Science Now	Las Vegas, NV	A. Robison
Saturday, April 24	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Tuesday, April 27	Ruthe Deskin Elementary	North Las Vegas, NV	R. Arnold
Thursday, April 29	Booker Sixth Grade Center	TBD	K.. Ostler
Friday, April 30	Mt. Charleston Elementary	Mt. Charleston, NV	T. Geer
Saturday, May 1	President's Tea of the Sunrise Council (PTA)	TBD	E. Harle A. Gil

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Tuesday, May 4	Underground Structures, Colorado School of Mines	Golden, CO	C. Gertz
Saturday, May 8	Girl Scouts	Las Vegas, NV	T. Pysto
Saturday, May 8	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Tuesday, May 11	Lomie Heard Elementary	Las Vegas, NV	R. Arnold
Wednesday, May 19	International Right of Way Association	Las Vegas, NV	G. Fasano
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
Tuesday- Friday, August 17-20	Second International Mixed Waste Symposium	Baltimore, MD	C. Gertz
Monday- Wednesday, September 27-29	Industrial & Engineering Chemistry Division Symposium	Atlanta, GA	C. Gertz

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<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u>		
Saturday, March 27	Public Open House (P)	Las Vegas, NV
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
Saturday, April 24	Earth Day/Earth Fair	Las Vegas, NV
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
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Saturday, September 25	Public Open House (P)	Las Vegas, NV

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u>		
Saturday, March 27	Public Open House (P)	Various Escorts
Monday, March 29	Eureka/White Pine Counties	TBD
Wednesday, March 31	Local Talk Show Hosts	S. Patrick
Wednesday, March 31	Greenpeace	TBD
Thursday, April 1	Orr Junior High School	TBD
Thursday, April 1	French Rad Waste Regulatory Agency Representatives	TBD
Tuesday, April 6	Desert Newcomers	TBD
Tuesday, April 6	Barry Gale and Andrew Gray, DOE/HQ	TBD
Wednesday, April 7	Mineral County	TBD
Tuesday, April 13	Kenny Guinn Junior High School	TBD
Friday, April 16	Our Lady of Las Vegas	TBD
Friday, April 16	University of Nevada, Reno- Mackey School of Mines	M. Powell
Monday, April 19	NWTRB	TBD

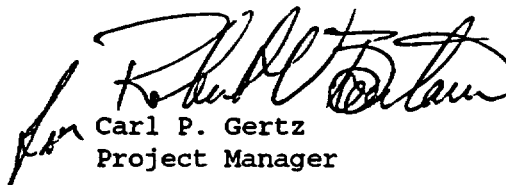
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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Tuesday, April 20	Round Mountain High School	TBD
Friday, April 23	OCRWM Field Test Teachers	TBD
Saturday, April 24	Public Open House (P)	Various Escorts
Monday, April 26	HLW Conference	TBD
Monday, April 26	Hydrology Field Trip	A. Flint
Tuesday, April 27	HLW Conference Spouses	TBD
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
Wednesday, May 19	Public Open House (P)	Various Escorts
Saturday, June 19	Public Open House (P)	Various Escorts

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
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-3368


for Carl P. Gertz
Project Manager



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

WBS: 1.2.7.3
QA: N/A

APR 01 1993

Carl P. Gertz, Project Manager, YMP, NV

YUCCA MOUNTAIN SITE OFFICE (YMSO) FIELD ACTIVITY REPORT

The following are the significant field activities for the weeks ending March 19, 1993 and March 26, 1993:

1. Field Operations Center, (YMSO)

A. Management and Administration

- a. The Site manager and FOC staff participated in and provided operational and logistical support to several tours conducted during this period. These were: National Congress of American Indians; Gabbs School; UNLV Engineering Students; Dave Rossin; Thurman White Middle School; Norman Rasmussen; MIT; LLNL; Public Open House.
- b. The Site Manager prepared and issued two Letter of Work Authorization for REEC Co. These were: (a) Removing Stuck Packer from well USW H-5, and (b) Refurbishment of the Road to USW UZ-14 Drill Pad.
- c. Provide operations, administrative, and security support to the Yucca Mountain Site Manager and his DOE staff.
- d. Provided operational and administrative support for site characterization activities in the field.
- e. Provided administrative support for issuing vehicles, first aid kits, fire extinguisher, and other necessary equipment to personnel performing field duty.
- f. Prepared and transmitted daily operations reports to NORSOC, and the biweekly reports to HQ OCRWM.
- g. Prepared photo support budget presentation.
- h. Provided input to Building 4015 Evacuation Plan.
- i. Completed paper for sole source justification on VARS.

- j. Prepared mid-year photographic support analysis to justify request for addition funding for FY93.
- k. Edited and copied video tape to be used in display at HQ; processed several photo enlargements for this display.
- l. Made preparations to take video and stills on the LM-300 move to UZ-14.
- m. The Bullfrog Planning Commission continuing with development of data base for Facilities Management Program.
- n. Met with and briefed M&O Vienna Safety personnel doing "white paper" on stairwell damage and life safety codes.
- o. Coordinated still photography and videotaping of ESF North Portal from nine different locations.
- p. Participated in 2-day demonstration of epoxy/grout rock bolt emplacement and pull test.
- q. Held meeting with USBR, LANL and RSN to discuss logistics and staffing for starter tunnel coverage.
- r. Met with USBR on several issues involving the photogrammetric task.

B. Project Safety and health, (DOE/SAIC)

- a. One staff member taught the New Miner Training class for the Project Training Department.
- b. Began draft implementing line procedure "DOE Employee Safety and Health Program."
- c. Began initial phase of REECO functional appraisal.
- d. Advised M&O Construction management on Mine Rescue Team Requirements.
- e. Completed six surveillance: ESF rock face, USGS Installation top of Yucca Mountain; and new ICE House building in Area 25, LANL work at the Cinder Cone; USGS Installation top of Yucca Mountain; and Well J-13 area.
- f. Research state requirements for Blaster certification.

- g. Completed monthly fire extinguisher inspection of Building 4015.
- h. Performed initial investigation of fire alarm in Building 4215.
- i. On March 15, completed the IHFOS review of the proposals for the Tunnel Boring Machine.
- j. Conducted review of Health Hazard Analysis for the LM-300, Joy Rig, CME-850 and the ESF.
- k. Conducted air sampling of filter cleaning process at Subdock.
- l. Reviewed Underground Blasting Safety Procedure.
- m. Conducted air sampling for welding fumes and noise levels for USGS and R-MAD welding shop.
- n. Coordinated equipment and sampling technique efforts for Lithium Bromide tracer testing.
- o. Evaluated MSDS for epoxy demonstrated for underground use. Use of this epoxy is not recommended. Managers of REECo Construction and Control Departments are in agreement with not using this epoxy.
- p. Supported ongoing tours.
- q. Occurrence Reports - two waiting for FM Signature.
 - 1. REECo - 10 outstanding: 2 awaiting FM Signature; 4 rejected (09/22/92, 03/18/93 and 2 on 03/22/93); and 4 - 10 day notification 912/28/92; 2/16/93; 03/15/93; and 03/18/93).
 - 2. SAIC - 2 outstanding: 2 awaiting PM Signature.

2. Raytheon Services Nevada, (RSN)

A. Field Support

- a. Geologic mapping survey of Ghost Dance Fault Phase II is scheduled for April 1993.
- b. GSF test pits surveyed. Calculations and plotting remain. Survey of booster pump station test pits complete. Survey and calculations of percolation test boreholes are complete.

- c. Survey for Geologic Mapping of North Portal Box Cut, Phase III, is complete, calculations remain. Phase IV mapping is scheduled.
- d. Re-survey of trenches CF1 and T8 complete. Calculations remain.
- e. Topo of UZ-14 drill pad is scheduled.
- f. As-built survey of NRG-3 is scheduled.
- g. Survey of NRG-2A borehole and grid north stake complete. Calculations remain.
- h. Completed Topo of NRG-6 facilities for future grounding plans.
- i. Issued nineteen (19) Work Initiations in support of on-going and up-coming job packages.
- j. Field Engineering continues to provide support to JP: 91-9 Rev. 3; 92-2; 92-5; 92-8; 92-12; 92-19; 93-01 and 92-20.
- k. Field Engineering continues to check Trench 14, JP 91-2, daily to insure suitability for operations.
- l. Survey and calculations complete for NRG-2 Drill Pad as-built.
- m. Survey grades for UZ-1 pad are complete. Calculations remain.
- n. Re-surveyed Drill Pad corners, alignment and north grid stake on NRG-3.

B. Quality Control

- a. Continued verification activities on NRG-3 borehole coring and reaming utilizing the CME-850 drill rig.
- b. Started verification activities on USW H-5 borehole cleanout and packer replacement.
- c. Completed verification activities on UZ-16 for direction survey, video camera and caliper survey.
- d. Completed verification activities on NRG-6 for video camera and caliper survey.

3. Sample Management Facility, (SMF/SAIC)

- a. Completed prognoses on SRG-1, SRG-5 and NRG-2a.
- b. Completed processing and shipped 39 specimens from NRG-6 and NRG-2 for SNL.
- c. Continued work on geophysical cross section including UZ-14 to determine subsurface geological conditions.
- d. Completed processing 23 specimens for UZ-16 for LANL.
- e. Completed processing cuttings from UZN-61 and UZN-62.
- f. Continued processing cuttings from UZ-16.
- g. Completed core logging and sampling of UE25 UZ-16. Total depth 1686'.
- h. Completed core logging and sampling of USW N-62. Total depth 60'.
- i. Constructing Northwest-Southwest oriented geologic cross section along Drill Hole Wash. Cross sections include planned holes USW-UZ-14 and UE25 NRG-5.
- j. Laid out 100 boxes of core for view.

4. YMP Hydrologic Research Facility, (USGS)

The following activities were accomplished by USGS staff:

- a. Monitor tracer gas injection, gas sampling (evacuation of hole, packer installation, gas sampling, etc.), and run magnetic logs at UZ-16.
- b. Test bowenration station equipment at HRF. Prepare equipment for G-2 testing.
- c. Conducted gas sampling work at selected boreholes.
- d. Continue logging of Midway Valley Trenches.
- e. Continued Geodetic leveling studies.
- f. Select samples and conduct logging at SMF.
- g. Cleaning exposures and mapping trenches at Busted Butte and Crater Flats.

- h. Calibrate Well WT-2, and conduct water level measurements.
- i. Oversee tubing and packer at well H-5 being removed and reinstalled.
- j. Conduct geochemical mapping.
- k. Surficial deposits mapping of Yucca Wash and Upper Windy Wash.
- l. Complete mapping of Quaternary Fault Strip.
- m. Attend MASHA training for North Ramp Mapping.
- n. Worked on programs used for testing and verifying sensor output in the Calibration Laboratory.
- o. Continue cleaning exposures and mapping of Trench 14.
- p. Conduct fault mapping and evaluate Quaternary faults at Yucca Mountain.
- q. Participating in YMPO sponsored tour of P-Tunnel and Yucca Mountain for NAGREA Project.
- r. Equipment construction for Air-K testing conducted.
- s. "Wet Cycle" measurement of soil gas concentrations; collection of soils, soil gases and soil moisture for stable isotope studies; and installation of permanent probes for on-going soil gas and near-surface infiltration monitoring.
- t. Installation of CC/IC Data Acquisition System and oversee UE-25 US-16 work.
- u. Collecting precipitation data in Yucca Mountain Area.
- v. Geodetic leveling studies conducted.
- w. Samples selected and logging conducted.
- x. Cleaning exposures and mapping trenches conducted at Busted Butte and Crater Flats.
- y. Assess progress in mapping Ghost Dance Fault and obtain lithostratigraphic contact photos for HLWMC presentation.

5. Reynolds Electrical and Engineering Co., Inc., (REECO)

Activities conducted during week ending March 19, 1993:

A. Drilling

- a. JP 92-3, UZ-16 ran various water level measurements; laying down core and dual-wall drill pipe; preparing to demobilize.
- b. JP 93-11, pulled 1.9" tubing out of hole; pulled USGS air tubing and 3/16" wire line and transducer out of hole; unseated TAM International Packer, started pulling 2 7/8" tubing.
- c. JP 93-01, UE 25 NRG-3, cored to 238.94 feet; drove 5 1/2" casing to 132.96 feet.

B. Logistics

- a. Continued requisitioning supplies, materials, and services for YMP Field Operations Center.
- b. Supported tours during the week.
- c. Supported construction efforts in Area 25.

C. Construction

- a. JP 92-20, ESF North Portal Pad and Facilities....REECO continued fill work at ESF pad; continued excavation of drainage channel; began installing rockbolts at Phase IV boxcut; completed finish grading of rock storage pad.

Activities conducted during week ending March 26, 1993:

A. Drilling

- a. JP 92-3, UZ-16, rigged down preparing to move to UZ-14.
- b. JP 93-11, pulled 2 7/8" tubing. Ran and set new dual-element packer at 2760.16 feet. Re-ran 1.9" monitor string. Rigging down.
- c. JP 93-01, UE 25 NRG-3, cored to 248.67 feet; drove 5-1/2" casing to 200.16 feet. Pulled 5 1/2" casing, reran and drove to 250.88 feet.

B. Logistics

- a. Continued requisitioning supplies, materials, and services for YMP Field Operations Center.
- b. Supported tours during week. Completed preparations for Open House Tour scheduled 03/27.
- c. Supported construction efforts in Area 25.

C. Construction

- a. JP 92-20, ESF North Portal Pad and Facilities....REECO continued excavation of North drainage channel; continued screening rip-rap; completed piping for temporary mine water; wiring up temporary distribution panel to generator; completed installation of Liner at the Rock Storage pad; continued installation of Rockbolts and wiremesh at the ESF boxcut Phase IV.

6. Los Alamos National Laboratory, (LANL)

- a. Continued monitoring construction activities at the North Portal Boxcut; providing support and coordination for the final phase of mapping; and review of TPPs, JPs and work plans covering the scientific activity scheduled for the ESF North Ramp starter tunnel.
- b. Excavation of the boxcut completed.
- c. Final phase of the geological mapping of the boxcut high wall and wing walls completed.
- d. Attended a meeting initiating the reviews of TPPs, JPs and work plans for Construction Monitoring, Perched-Water, and Underground Geologic Mapping as related to the ESF North Ramp starter tunnel.

7. Documents and Records Center, (CRWMS M&O)

Activities during week ending March 19, 1993:

Work Programs

YMP/WP/93-11 Rev.0, "USW H-5, Additional Work Activities."

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a. FCRs

FCR 93/192, Rev. 0, "Addition of Testing Requirements for
6" RTRP"
FCR 93/193, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"
FCR 93/194, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"
FCR 93/195, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"
FCR 93/196, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"
FCR 93/197, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"
FCR 93/198, Rev. 0, "Addition of Appurtenances to Existing
6" RTRP"

b. Reproduction

10,427 pages copied.
715 drawings copied.

c. Documents Issued

1,080 controlled documents.
475 FCRs
32 WPs
10 SPECS
563 DWGs

d. DTAR logoffs

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Activities during week ending March 26, 1993:

a. Received and Issued to following Controlled Documents:

FCRs

FCR 93/189, Rev. 0, "Gravel Surfacing Plasticity Index."
FCR 93/229, Rev. 0, "Addition of Test Pits to Soil and
Rock Phase II Excavations."
FCR 93/119, Rev. 0, "Revise Compaction Requirements for
Test Pits and Trenches."
FCR 93/232, Rev. 0, "Drilling and Blasting (Subsurface)
Spec. 02313 add Note 1.03D."
FCR 93/230, Rev. 0, "Change Points of Contact and Correct
Typographic Error."

FCR 93/173, Rev. 0, "Use of Fiber Reinforced Shotcrete for Starter Tunnel Initial Ground Support and Modification of Shotcrete Specification Section 03361 Rev. 1."
 FCR 93/226, Rev. 0, "Changes to the Rockbolts and Accessories Specification."
 FCR 93/227, Rev. 0, "Modification of Specification YMP-02501-SP09 Sect. 05170."
 FCR 93/238, Rev. 0, "Changes to Highwall Rock Support Drawing to Incorporate Installation of Cement Grouted Rockbolts."

b. Reproduction

10,408 pages copied.
 503 drawings copied.

c. Documents Issued

682 Controlled documents
 562 FCRs
 120 DWGs
 462 Information copies

d. DTAR logoffs

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8. Field Training, (SAIC)

- a. GET 1.1 (GERT) Training was conducted. A total of 39 people attended.
- b. GET 1.2, 1.3, and 1.4 Training was conducted. A total of 14 people attended.
- c. 7 GET 1.5 exams were administered. All examines passed.
- d. New Miner Training was conducted. A total of 44 people attended.
- e. Standard First Aid training conducted. A total of 35 people attended.

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- f. Radiological Control Technician Testing conducted. A total of 11 took the testing.

Winfred A. Wilson

Winfred A. Wilson
Site Manager

YMP:WAW-93/88

cc:

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