



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: JANUARY 25, 1993
SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE
WEEKS ENDING JANUARY 8 AND JANUARY 15, 1993

Please find enclosed the above-referenced reports.

There is nothing requiring specific management attention in the reports.

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

JSP:nan
Enclosures as stated

290032

*NH03/11
102
WM-11*

9302020225 930125
PDR WASTE
WM-11 PDR



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

JAN 21 1993

Lake H. Barrett, Acting Director, Civilian Radioactive Waste Management,
HQ (RW-1) FORS

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
JANUARY 15, 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 two major tours this reporting period. They finalized preparations for the public open house and site tour scheduled for January 16, 1993. Approximately 220 guests are expected to attend.

Drilling continues with the CME-850 drill rig at NRG-2. As of January 13, 1993, Reynolds Electrical & Engineering Co., Inc. (REECo), had cored to a depth of 39.57 feet with the 5 1/2-inch casing down to 25.91 feet.

Drilling continues with Joy 1 rig at NRG-6. As of January 13, 1993, it was cored to a depth of 288.06 feet with the six-inch Odex casing down to 261.82 feet.

On Job Package (JP) 92-3, UZ-16, drilling continues with the LM-300 drill rig. The borehole has been cored to a depth of 1200.89 feet with the 12 1/2-inch casing at the same depth.

Regarding the borehole security program, REECo plugged four boreholes with cement to the surface and the holes have been abandoned. These boreholes are UE-25, RF-3, RF-3B, and RF-5.

On JP 92-19, NRG-2 Borehole, REECo bladed the access road to the site. They graded the areas for the equipment work pads and removed topsoil from the access road down to the hard pan.

JAN 21 1993

On JP-92-20, North Exploratory Studies Facility (ESF) Portal Pad and Ramp, REECo continued cut and fill at the pad. Excavation of the high wall and box cut has begun. REECo completed the removal and hauling of the topsoil and commenced excavation of the north side drainage ditch.

Sample Management Facility

No significant items to report.

Regulatory Interactions

Site Characterization Progress Report (PR)

PR 7 was approved by the Secretary of Energy on December 18, 1992. The camera-ready copy was provided by the Yucca Mountain Site Characterization Project Office (YMPO) to the U.S. Department of Energy (DOE)/Headquarters (HQ) on December 21, 1992. PR 7 was submitted for printing on December 31, 1992, and should be distributed during the third week of January 1993. This is almost three months ahead of the deadline of March 31, 1993.

Technical Analysis

Performance Assessment (PA) personnel participated in a Yucca Mountain/Waste Isolation Pilot Plant (WIPP) round table discussion of PA issues. The staff also participated in a meeting with the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O)/INTERA and Sandia National Laboratories (SNL) personnel to resolve remaining issues in the PA transition.

Environmental Field Programs

A Free Use Permit for the Fran Ridge gravel pit was received from the Bureau of Land Management on January 8, 1993. The permit allows the extraction of 400,000 cubic yards of sand and gravel necessary for construction of the ESF.

ESF Task Force Activities

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

Receive Tunnel Boring Machine (TBM) Vendor Proposals	February 9, 1993
Award Subcontract for Underground Construction	April 1993
Award TBM Contract	April 1993
Start Excavating TBM Launch Chamber	April 2, 1993

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

One SP was approved by YMPO this week: SP 8.3.1.2.2.4, Revision 1, "Characterization of the Yucca Mountain Unsaturated Zone Percolation ESF Study." The U.S. Nuclear Regulatory Commission (NRC) completed the Phase I review of SP 8.3.1.2.3.2, "Characterization of the Yucca Mountain Saturated Zone Hydrochemistry."

STUDY PLAN BREAKDOWN

In Screening Review	0
In YMPO and DOE/HQ Review	7
Awaiting Comment Resolution	8
Awaiting Author Revision	3
In YMPO/HQ Verification Audit	6
Preparing to Submit or Awaiting YMPO Approval	3
Awaiting Submission to the NRC	1
NRC Phase 1 Review	21
NRC Acceptance	30
Total	79

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	5
Revised ESF SPs Submitted for Review	6
Total SPs Submitted for Review	9

State of Nevada Comments Status:

Received Comments from the State of Nevada	13
Responses Transmitted to the State of Nevada	10

NRC Comments Status:

Received Comments from NRC	17
Responses Transmitted from OGD to DOE/HQ	16

Critical ESF SP Status:

As indicated above, SP 8.3.1.2.2.4, Revision 1, was approved by YMPO; submission to the NRC is pending.

JAN 21 1993

B. Project Planning and Control

The participant Planning and Control System (PACS) cost/schedule status data for December 1992 was received. The status was uploaded from the participant workstations to PACS and 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 Work Breakdown Structure and Planning and Scheduling Account status and Cost Performance Reports were produced and distributed to the participants.

Compiling of participant Technical Direction Letters was completed.

C. Quality Assurance ImplementationDetermination of Importance and Grading Enhancement (DIGE)Management Control List and Procedure Development

The YMPO has been notified that Task 314 of the DIGE Management Plan (YMP/92-1) to develop a process/approach for tracking and maintenance of requirements has been completed. YMPO was provided with a plan which documents this process entitled, "Requirements Identification and Implementation Tracking Plan," Revision 0, YMP/92-39.

Implementation

Preparations by the Assessment Team (AT) and AT support staff are on schedule to conduct the Early Classification of Natural Barriers workshop January 19-21, 1993.

A phase-out approach for cancellation of Administrative Procedure 6.17Q, Classification of Items Important to Safety and Waste Isolation, is being drafted for AT review.

The AT is assessing possible Probabilistic Risk Assessment efforts as part of classification of the Engineered Barrier System.

D. Public Outreach and Institutional Activities

The Institutional and External Affairs (IEA) staff attended the Secretary of Energy's Advisory Board task force meeting in Washington, D.C., on January 8, 1993.

A tour to Yucca Mountain, Nevada, was conducted on January 9, 1993, for Andrew Kadek, Chief Executive Officer of Yankee Atomic. Carl Gertz, Project Manager, gave a pretour briefing. Tours to Yucca Mountain were also conducted on January 13, 1993, for 10 guests of the Inspector General's Office, and on January 14, 1993, for five guests of Fluor Daniel.

JAN 21 1993

Carl Gertz and the YMP staff gave a project overview briefing to the Inspector General in Las Vegas, Nevada, on January 12, 1993. Eleven IG people were in attendance at the meeting.

The IEA staff gave a presentation to the Nye County Economic Task Force. They also responded to requests for information from rural county staff and coordinated legislative briefings for three Nevada legislators.

On January 9, 1993, Jean Younker, CRWMS M&O, gave a project overview to the West Las Vegas Women in Las Vegas; Paul Standish, Technical and Management Support Services (T&MSS), gave a presentation to the Community Radiation Monitors at the Las Vegas Yucca Mountain Information Office. The total attendance for these presentations was approximately 80 people.

Other general project overview presentations were provided by Thomas Geer, CRWMS M&O, to 25 guests of the Las Vegas Host Lions Club on January 11, 1993; by Gregory Fasano, T&MSS, to approximately 100 employees of the National Park Service in Death Valley, California, on January 12, 1993; and by April Gil, YMPO, to 30 members of the Association of Professional Mortgage Women in Las Vegas on January 13, 1993.

Educational presentations given in Las Vegas this week included hands-on activities in science, presented by James Blink, Lawrence Livermore National Laboratory (LLNL), to approximately 156 students at John S. Park Elementary School on January 12, 1993; presentations by April Gil to approximately 150 students at Marion Earl Elementary School January 12-13, 1993; and presentations on Native American Indian culture by Richard Arnold, a consultant, to 31 students of a third grade class at C. H. Decker Elementary School on January 13, 1993, and to 50 people at Archaeo Nevada on January 14, 1993.

Carl Gertz gave project overview presentations to two sections of the American Nuclear Society in Schenectady, New York, on January 13, 1993, and in Parsippany, New Jersey, on January 14, 1993. Approximately 100 people attended these presentations.

Thomas Bjerstedt, YMPO, participated in a mini-debate forum at Dayton High School in Dayton, Nevada, on January 15, 1993; and Robert Loux participated on behalf of the State of Nevada. Approximately 150 students attended the forum. There was a question and answer period following the debate. Thomas Bjerstedt also gave a general presentation to approximately 25 members of the Dayton Kiwanis Club on January 15, 1993.

JAN 21 1993

Presentations were provided to seven Massachusetts Institute of Technology Office of Civilian Radioactive Waste Management (OCRWM) Fellowship Students on January 15, 1993, in Las Vegas. David Stahl, CRWMS M&O, gave a presentation on the waste package and confirmation testing; Ardyth Simmons, YMPO, discussed geochemistry, fracture flow, zeolites, and geometry of fissures; and William Andrews, a consultant, gave a presentation on transportation.

Three hundred VHS copies of a five-minute video on 1992 Yucca Mountain Site Characterization Activities were completed this week. The video features surface testing such as the LM-300 drill rig, and the ESF groundbreaking and computer animation of the ESF tunnels.

The YMP General Exhibit will be set up in the Mineral County Library in Hawthorne, Nevada. It is being displayed in conjunction with the Rural Nevada Outreach program. The exhibit will remain on display for approximately three months.

The CRWMS M&O staff met on January 11, 1993, with Boy Scouts Representative Kerry Cutting of the North Star District, and on January 13, 1993, with other area Boy Scouts representatives. Plans are underway for a Boy Scouts encampment event supported by the YMP Educational Program.

II. ANALYSIS & VERIFICATION DIVISION

The staff participated in a WIPP tour on January 12, 1993, in Carlsbad, New Mexico, and attended the DOE round table discussion between OCRWM and WIPP project participants on January 13, 1993, in Albuquerque, New Mexico.

The staff attended the Technical Review Group comment consensus meeting on the Defense Waste Processing Facility Waste Qualification Report, Volume 1, January 12-15, 1993, in Augusta, Georgia. They participated in a comment resolution meeting on SP 8.3.1.15.1.8, Revision 0, "In-Situ Design Verification," January 12-13, 1993, in Las Vegas.

The final draft of the paper on the Glass Waste Acceptance Process for the International High-Level Radioactive Waste Management (IHLRWM) Conference was completed.

III. GENERAL INFORMATION ITEMS

CRWMS M&O

The first quarter fiscal year 1993 Data Catalog was delivered to YMPO.

LLNL

The staff hosted a meeting of hydrologists and managers from DOE, Lawrence Berkeley Laboratory (LBL), Los Alamos National Laboratory (Los Alamos), SNL, and CRWMS M&O. The group reviewed calculations by Thomas Buscheck, LLNL, and made plans to benchmark those calculations with other computer codes.

Los Alamos

Eight papers to be presented at the IHLRWM Conference in April 1993 were reviewed and approved by Los Alamos staff. The papers pertain to the following subjects: the caisson facility; sorption; fracture transport; calcite deposits in fractures; control of tracers, fluids, and materials; and ESF testing.

A Los Alamos report entitled, "A Summary and Discussion of Hydrologic Data from the Calico Hills Nonwelded Hydrologic Unit at Yucca Mountain, Nevada," was published.

The staff developed an agenda and initiated letters to technical participants for the Colloid Workshop which will be held May 3-5, 1993.

The erosion staff participated in a week-long comment resolution workshop for the Erosion Issue Topical Report.

SNL

Twenty-three papers for the IHLRWM Conference have been completed. Among the topics discussed in these papers are the following: geostatistical research on upscaling of physical properties and on the impact of deterministic geologic trends on spatial property variability; development of techniques for characterizing the impact of porosity on mechanical properties; chemical and hydrologic characterization for the reactive transport caisson experiment; development of laboratory techniques for testing geostatistical upscaling models; and recently completed experiments on the development and propagation of water infiltration fingers in dry and partially saturated fractures.

Work was initiated on cutting several blocks of partially-welded tuff for a series of unsaturated flow and dye-tracer experiments. Individual fractures will be cast for gravity-driven fingering experiments. Other segments of the block will be used for fracture/matrix interaction experiments.

Initiated discussions with the U.S. Geological Survey (USGS) staff to determine rock property testing needs for ramp design. These tests would be conducted on core being taken from the NRG holes. It is anticipated that a standard suite of rock properties tests will be conducted on several intervals of core and completed in time to provide input to design. Testing plans will be developed and finalized in the next few weeks.

JAN 21 1993

USGS

The U.S. Bureau of Reclamation work in the Tiva Canyon formation reveals that in the upper lithophysal zone cooling joints vary in orientation across the site, and not all cooling sets are orthogonal. This complexity includes even restricted tectonic subdivisions such as Fran Ridge.

The staff participated in the North Ramp Data meeting in Las Vegas hosted by the new CRWMS M&O ramp design team. Discussions included choice of geophysical logs, sequence of logging, and final locations of holes. The USGS staff discussed core and sample collection, and laboratory testing. The LBL staff described the utility and advantages of check-shot surveys in the NRG holes.

Results of gas sampling tests indicate the capability to independently verify psychrometer data to within 1 to 2 bars (plus or minus 0.1 percent of true relative humidity value).

Requisition documentation was completed for a five-year contract to build insulated instrument shelters to support surface-based borehole investigations.

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 are coordinated by Kevin Rohrer at (702) 794-7769, Public Update Meetings are coordinated by Joanna Magruder at (702) 794-7056, and tours are coordinated by Carleen Hill at (702) 794-7375 or Bradley Bush at (702) 794-5347.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
A. <u>DOE/HQ Meetings</u>			
Friday, January 15	Project Managers Meeting	Washington, DC	C. Gertz
Wednesday- Thursday, February 10-11	First OCRWM Quarterly NV Progress Review	Las Vegas,	C. Gertz

JAN 21 1993

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
B. <u>CRWMS M&O/DOE Meetings</u>			
Wednesday, January 27	CRWMS M&O Program Management Review	Vienna, VA	C. Gertz
C. <u>Internal and DOE/Nevada Field Office (NV) Meetings</u>			
Wednesday, January 20	DOE/NV Monthly Program Review	Las Vegas, NV	C. Gertz
Wednesday, January 20	Technical Project Officers Meeting	Las Vegas, NV	C. Gertz
Wednesday, January 20	Planning & Budget Meeting	Las Vegas, NV	C. Gertz
Tuesday, February 2	Performance Assessment Meeting	Las Vegas, NV	C. Gertz
D. <u>NRC Interactions</u>			
March TBD	NRC Site Visit (P)	Las Vegas, NV	T. Bjerstedt
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	T. Bjerstedt
Tuesday, May 18	Technical Exchange - OCRWM Technical Baseline Documents (P)	Video- Conference	T. Bjerstedt
Monday, June 7	NRC Management Meeting for Interactions Scheduling	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

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
D. <u>NRC Interactions</u> (Continued)			
Wednesday, July 28	Technical Exchange - ESF Title II Design (P)	TBD	T. Bjerstedt
E. <u>Nuclear Waste Technical Review Board (NWTRB) Interactions</u>			
Tuesday- Friday, April 20-23	NWTRB Full Board Meeting (P)	Reno, 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
F. <u>Advisory Committee on Nuclear Waste (ACNW) Interactions</u>			
Wednesday- Thursday, January 27-28	ACNW 50th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, February 24-25	ACNW 51st Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, March 24-25	ACNW 52nd Meeting (P)	TBD	A. Gil
Wednesday- Thursday, April 28-29	ACNW 53rd Meeting (P)	TBD	A. Gil
Wednesday- Thursday, May 19-20	ACNW 54th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, June 23-24	ACNW 55th Meeting (P)	TBD	A. Gil

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>ACNW Interactions (Continued)</u>			
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)	TBD	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>			
Saturday, January 16	Girl Scouts Troop 319	Las Vegas, NV	A. Gil
Saturday, January 16	Veterans of Foreign Wars	Tonopah, NV	G. Fasano
Tuesday, January 19	Southeast Valley Exchange Club	Henderson, NV	T. Kaish
Tuesday, January 19	Green Valley High School	Henderson, NV	R. Arnold
Wednesday, January 20	Brownies Troop 562	Las Vegas, NV	J. Hartley
Wednesday, January 20	Parson Elementary School	Las Vegas, NV	R. Arnold

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions (Continued)</u>			
Thursday, January 21	Breakfast Lion's Club	Las Vegas, NV	A. Robison
Thursday, January 21	North Las Vegas Chamber of Commerce	Las Vegas, NV	A. Robison
Friday, January 22	West Las Vegas Community Meeting	Las Vegas, NV	C. Gertz M. Voegele
Wednesday, January 27	Cub Scouts Pack 223	Las Vegas, NV	R. Arnold
Monday, February 1	Foreign Press Center	Las Vegas, NV	C. Gertz
Tuesday, February 2	Huffaker School	Reno, NV	J. Blink
Wednesday, February 3	Brownies Troop 562	Las Vegas, NV	J. Hartley
Wednesday- Thursday, February 3-4	Bijou Elementary School	Lake Tahoe, NV	J. Blink
Thursday, February 4	Scottish Rite Masons	Las Vegas, NV	P. Standish
Saturday, February 6	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Monday, February 8	Las Vegas Gem Club	Las Vegas, NV	R. Arnold
Wednesday, February 10	Martin Luther King, Jr. Elementary School	Las Vegas, NV	R. Arnold
Thursday, February 11	Chemehuevi District Round Table	Las Vegas, NV	R. Arnold
Tuesday, February 16	Construction Specification Institute	Las Vegas, NV	G. Fasano
Wednesday, February 17	Boulder City Rotary Club	Las Vegas, NV	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Thursday, February 18	Galena High School	Reno, NV	A. Gil
Friday, February 19	McQueen High School	Reno, NV	A. Gil
Saturday, February 20	Boy Scouts Geology Merit Badge Workshop	Las Vegas, NV	E. Harle
Tuesday, February 23	University of Iowa	Ames, IA	C. Gertz
Friday- Sunday, February 26-28	DOE Regional Science Bowl, University of Nevada, Las Vegas	Las Vegas, NV	E. Harle
Monday- Saturday, March 1-13	Jason Telepresence Project, Cheyenne High School	Las Vegas, NV	E. Harle
Tuesday, March 2	Waste Management '93	Tucson, AZ	C. Gertz B. Reilly
Saturday, March 6	Cadet Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Saturday, March 13	Cadet Girl Scouts Field Trip	Las Vegas, NV	E. Harle
Wednesday, March 17	Nevada Environmental Health Association	Las Vegas, NV	G. Fasano
Tuesday- Wednesday, March 23-24	Henderson Community College	Las Vegas, NV	M. Powell
Saturday, April 10	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Saturday, April 24	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle

JAN 21 1993

<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	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Monday, June 14	Rapid Excavation & Tunneling Conference	Boston, MA	C. Gertz
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

<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u>		
Saturday, January 16	Public Open House (P)	Las Vegas, NV
Saturday, February 20	Public Open House (P)	Las Vegas, NV
Sunday- Thursday, February 28- March 4	Waste Management Symposia	Tucson, AZ
Saturday, March 27	Public Open House (P)	Las Vegas, NV

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u>		
Saturday, January 16	Public Open House (P)	Various Escorts
Friday, January 19	Sacramento Bee	S. Patrick

JAN 21 1993

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Wednesday, January 20	Tonopah Middle School	TBD
Thursday, January 21	Savannah River	TBD
Friday, January 22	Nevada Nuclear Waste Study Committee Advisory Board	TBD
Monday, January 25	Japan Electric Power	P. Cloke
Thursday, January 28	Joe Mackey Sixth Grade Center	TBD
Wednesday, February 3	Green Valley High School	TBD
Wednesday, February 3	Foreign Press	S. Patrick
Thursday, February 11	Booker Sixth Grade Center	TBD
Saturday, February 20	Public Open House (P)	Various Escorts
Wednesday, February 24	Tonopah Middle School	TBD
Thursday, February 25	Senior Tripsters	TBD
Friday, March 5	Waste Management '93	TBD
Thursday, March 11	Meadows School	TBD
Thursday, March 18	Gabs School	TBD
Wednesday, March 24	Thurman White Middle School	TBD

JAN 21 1993

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Saturday, March 27	Public Open House (P)	Various Escorts
Thursday, April 1	Orr Junior High School	TBD
Monday, April 19	Hydrology Field Trip	A. Flint
Tuesday, April 20	Round Mountain High School	TBD
Saturday, April 24	Public Open House (P)	Various Escorts
Monday, April 26	High-Level Waste Conference	TBD
Thursday, May 6	Pahrump Junior High	TBD
Wednesday, May 19	Public Open House (P)	Various Escorts
Monday, June 21	Girl Scouts Wider Opportunity Program	TBD
Tuesday, August 17	Senior Tripsters	TBD

YMP:VFI-1945

for Maxwell Blanchard
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 1.2.9.2
QA: N/A

JAN 15 1993

John W. Bartlett, Director, Civilian Radioactive Waste Management,
HQ (RW-1) FORS

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING
JANUARY 8, 1993

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

A. Site Characterization Planning

Field Operations

During the holiday season, no tours were scheduled. Andrew Kadek, Chief Executive Officer (CEO) of Yankee Atomic, will tour the site on January 9, 1993. The Site Manager and Field Operations Center (FOC) staff will provide support for the tour. The FOC staff is finalizing preparations for the next general public open house and site tour scheduled for January 16, 1993.

The CME-850 drill rig is being used at UE25 RF-3. Reynolds Electrical & Engineering Co., Inc. (REECo) is performing fishing operations for a dropped core rod at this location.

Job Package (JP) 92-19 (NRG-2 Access Road, Pad, and Borehole) has been authorized for construction. On January 4, 1993, REECo began blading the access road to the site and grading the area for the equipment work pads.

Regarding JP 92-20, North Exploratory Studies Facility (ESF) Portal Pad and Ramp, REECo is continuing the cut and fill work for the pad in the area of the box cut. They are also continuing with ditch work and grading on the access road.

Sample Management Facility (SMF)

Processing of core and cuttings from UE25 UZ-16 and USW UZN-61 continued. Processing of core from USW NRG-6 also continued. Preparations began for drilling on UE25 NRG-2. The severed coring tools and 7 feet of core from UE25 UZ-16 were successfully recovered. Modifications to the SMF processing area began.

Site Investigations

As of January 6, 1993, the UZ-16 borehole had been cored to a depth of 1197 feet and reamed to a depth of 1176 feet. The broken core barrel was successfully removed from the borehole and the

JAN 15 1993

core rod was laid down for inspection following fishing operations. The core rod will be replaced with a heavier wall core rod and new core barrel. Coring and reaming operations are anticipated to be resumed by January 8, 1993, following this replacement.

As of January 6, 1993, the NRG-6 borehole had been cored to a depth of 200 feet and reamed to a depth of 169 feet. Very low core recovery was experienced in the last 10 feet of coring (only 2.1 feet recovered) in the bedded tuff section. Different air circulation rates and coring techniques/equipment are being used in an attempt to increase recovery in this poorly welded section of volcanic tuff.

Regulatory Interactions

Issue Resolution

The comment consolidation meeting for review of the Erosion Topical Report was held on January 4, 1993. The report is currently being revised to incorporate comments resulting from the review.

A paper for the International High-Level Radioactive Waste Management Conference entitled, "Progress on the U.S. Department of Energy's Issue Resolution Process: A Status Report," has completed review at the U.S. Department of Energy (DOE); comments have been responded to, and will be resolved this week.

The Issue Resolution Steering Group will meet January 15, 1993, in Las Vegas, Nevada, in the small DOE conference room.

Advisory Committee on Nuclear Waste (ACNW) Interactions

The next full committee meeting will be held January 27-28, 1993, in Bethesda, Maryland. No working group is planned for January 1993.

Site Characterization Progress Report (PR)

The camera-ready copy of PR 7 was sent to DOE/Headquarters (HQ) on December 21, 1992; distribution is expected in early January 1993.

ESF Task Force Activities

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

Receive Tunnel Boring Machine (TBM) Vendor Proposals	February 9, 1993
Award Subcontract for Underground Construction	March 1993
Award TBM Contract	April 1993
Start Excavating TBM Launch Chamber	April 2, 1993

JAN 15 1993

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

No SPs were approved by the Yucca Mountain Site Characterization project Office (YMPO) this week.

STUDY PLAN BREAKDOWN

In Screening Review	0
In YMPO and DOE/HQ Review	7
Awaiting Comment Resolution	8
Awaiting Author Revision	3
In YMPO/HQ Verification Audit	7
Preparing to Submit or Awaiting YMPO Approval	3
Awaiting Submission to the U.S. Nuclear Regulatory Commission (NRC)	1
NRC Phase 1 Review	21
NRC Acceptance	29
Total	79

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	5
Revised ESF SPs Submitted for Review	6
Total SPs Submitted for Review	79

State of Nevada Comments Status:

Received Comments from the State of Nevada.....	13
Responses Transmitted to the State of Nevada	10

NRC Comments Status:

Received Comments from NRC	17
Responses Transmitted from OGD to DOE/HQ	16

Critical ESF SP Status:

Comment verification is complete on SP 8.3.1.2.2.4, "Characterization of the Yucca Mountain Unsaturated Zone Percolation ESF Study." YMPO approval is pending a change to the Site Characterization Program Baseline.

SP 8.3.1.4.2.2, Revision 2, "Characterization of Structural Features Within the Site Area," was transmitted to NRC on January 6, 1993.

JAN 15 1993

B. Project Planning and Control

No significant items to report.

C. Quality Assurance ImplementationDetermination of Importance and Grading EnhancementImplementation

The Assessment Team (AT) is initiating an Early Classification of Natural Barriers (ECNB) effort using technical experts from YMPO organizations. The experts will participate in a workshop scheduled for January 19-21, 1993, at which existing quantitative basis information will be used to determine the classifications.

The Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O) is developing a plan to expand and refine the results of the ECNB effort by additional quantitative assessments and determinations.

Scoping continues on the phase-out plan for Administrative Procedure 6.17, Classification of Items Important to Safety and Waste Isolation.

Evaluation of the ongoing surface-based testing activity test planning package and JP was completed and presented to the AT.

D. Public Outreach and Institutional Activities

Carl Gertz, Project Manager, gave an overview of the YMP on Quintin Jordan's talk show on KKVV Christian Radio in Las Vegas on January 3, 1993. Ed Watson, a West Las Vegas community leader, also spoke. The topic of discussion was "Why Nevada's elected officials should be asking for benefits while the site characterization studies are taking place."

Carl Gertz provided a technical presentation on Mission 2001 to the Nuclear Waste Technical Review Board (NWTRB) on January 6, 1993, in Arlington, Virginia.

On January 7, 1993, Paul Standish, Technical and Management Support Services, gave a general overview at the Nye County Task Force Meeting in Pahrump, Nevada; Carl Gertz gave a general overview to the Nevada Development Authority in Las Vegas.

Institutional and External Affairs (IEA) staff prepared talking points and accompanied the YMPO staff to a televised town hall meeting on KLAS-TV, Channel 8, on January 5, 1993, in Las Vegas.

The IEA staff prepared and distributed a community calendar press release. They also produced a newspaper advertisement for the monthly Yucca Mountain Speakers Series. The first advertisement will run on January 10, 1993.

JAN 15 1993

The IEA staff continued discussions with Nevada legislators to schedule tours of Yucca Mountain, Nevada. They also continued making arrangements for representatives of the rural counties to tour the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

On January 4, 1993, the IEA staff met with Joyce Woodhouse, Clark County School District, and Judi Schumacher, Raytheon Services Nevada, to plan for the Jason Telepresence broadcast, scheduled for March 1-12, 1993.

Two planning meetings were held at the Las Vegas Yucca Mountain Information Office on January 5, 1993: a Jason planning meeting; and a planning meeting for the Regional Science Bowl, which is scheduled for February 27-28, 1993.

A. C. Robison, YMPO, conducted briefings for three Nevada legislators January 6-7, 1993.

II. ANALYSIS & VERIFICATION DIVISION

The staff attended the NWTB Full Board Meeting January 5-6, 1993, in Arlington. Topics discussed included the Multipurpose Canister and Mission 2001.

The staff reviewed the Office of Civilian Radioactive Waste Management (OCRWM) transition briefing papers. Particular attention was focused on site characterization and NWTB responses.

III. GENERAL INFORMATION ITEMS

CRWMS M&O

A briefing on Technical Data Management (TDM) was presented to the Configuration Management (CM) task force. The result was a definition of the TDM and CM working interface.

Lawrence Livermore National Laboratory

Hydrothermal calculations which include the saturated zone (SZ) have been conducted for the SCP Conceptual Design Report reference case of 57 kW/acre, 10-year-old spent fuel with burnup of 33,000 MWD/MTIHM. The repository horizon peak temperature is 100.3 degrees Celsius (C) at 95 years and the time above boiling is 666 years. These results are similar to those which consider the SZ surface to be isothermal (peak temperature of 100 degrees C at 94 years, and boiling for 553 years). The peak water table temperature rise of 30 degrees C occurs at 4140 years, with no temperature rise in the first 500 years and most of the increase occurring between 1000 and 2000 years. At 20,000 years, the water table heating is still 20 degrees C, and the temperature rise one-third of the way into the nonwelded zeolitized

JAN 15 1993

Calico Hills unit is 21 degrees C (its maximum of 45 degrees C occurs at 1635 years). These calculations also show that, for vertically connected fractures, condensate drainage can persist all the way to the water table.

U.S. Geological Survey (USGS)

Preliminary core logs for USW UZN-53, USW UZN-54, and USW UZN-55 were compiled by USGS. Several unit identifications are tentative until hand samples or thin sections can be examined, since all core from neutron holes are archived in Lexan (plastic) tubes. These logs will be compared to the hydrologic parameters determined by a USGS Hydrologic Investigations Program unsaturated zone study and will advance an understanding of the correlations between lithologic and hydrologic units.

Preliminary logging of core from UZ-16 was recorded to 1170 feet. The contact between the vitrophyre and lower partially welded tuff in the Topopah Spring Member is at 1165 feet.

A poster and extended abstract, "Characterizing Yucca Mountain, Nevada, by Geophysical Methods," was presented at the American Geophysical Union meetings in San Francisco, California. The poster consists of new regional gravity and merged aeromagnetic maps of the Yucca Mountain area, seismic refraction profiles through Yucca Mountain, and lists of advantages and unresolved issues to storing radioactive waste in Yucca Mountain.

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 are coordinated by Kevin Rohrer at (702) 794-7769, Public Update Meetings are coordinated by Joanna Magruder at (702) 794-7056, and tours are coordinated by Carleen Hill at (702) 794-7375 or Bradley Bush at (702) 794-5347.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
A. <u>DOE/HQ Meetings</u>			
Friday, January 15	Program Management Meeting	Washington, DC	C. Gertz
Wednesday- Thursday, February 10-11	First OCRWM Quarterly Progress Review	Las Vegas, NV	C. Gertz

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<u>B. CRWMS M&O/DOE Meetings</u>			
Wednesday, January 27	CRWMS M&O Program Management Review	Vienna, VA	C. Gertz
<u>C. Internal and DOE/Nevada Field Office (NV) Meetings</u>			
Wednesday, January 20	DOE/NV Monthly Program Review	Las Vegas, NV	C. Gertz
Wednesday, January 20	Technical Project Officers Meeting	Las Vegas, NV	C. Gertz
Wednesday, January 20	Planning & Budget Meeting	Las Vegas, NV	C. Gertz
<u>D. NRC Interactions</u>			
March TBD	NRC Site Visit (P)	Las Vegas, NV	T. Bjerstedt
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	T. Bjerstedt
Tuesday, May 18	Technical Exchange - OCRWM Technical Baseline Documents (P)	Video- Conference	T. Bjerstedt
Monday, June 7	NRC Management for Interactions Scheduling Meeting	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

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<u>E. NWTRB Interactions</u>			
February or March TBD	NWTRB HG&G Panel Meeting (P)	TBD	J. Cooper
Tuesday- Friday, April 20-23	NWTRB Full Board Meeting (P)	Reno, 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>F. ACNW Interactions</u>			
Wednesday- Thursday, January 27-28	ACNW 50th Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, February 24-25	ACNW 51st Meeting (P)	Bethesda, MD	A. Gil
Wednesday- Thursday, March 24-25	ACNW 52nd Meeting (P)	TBD	A. Gil
Wednesday- Thursday, April 28-29	ACNW 53rd Meeting (P)	TBD	A. Gil
Wednesday- Thursday, May 19-20	ACNW 54th Meeting (P)	TBD	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

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
F. <u>ACNW Interactions (Continued)</u>			
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)	TBD	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, January 11	Las Vegas Host Lions Club	Las Vegas, NV	T. Geer
Tuesday, January 12	Inspector General Briefing	Las Vegas, NV	C. Gertz
Tuesday, January 12	National Park Service Employees	Death Valley, CA	TBD
Tuesday, January 12	John S. Park Elementary School	Las Vegas, NV	J. Blink
Tuesday- Wednesday, January 12-13	Marion Earl Elementary School	Las Vegas, NV	A. Gil
Wednesday, January 13	C. H. Decker Elementary School	Las Vegas, NV	R. Arnold
Wednesday, January 13	Association of Professional Mortgage Women	Las Vegas, NV	J. Blink
Wednesday, January 13	American Nuclear Society (ANS)	Schenectady, NY	C. Gertz

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Thursday, January 14	ANS	Parsippany, NJ	C. Gertz
Thursday, January 14	Archaeo Nevada	Las Vegas, NV	R. Arnold
Thursday, January 14	Breakfast Lion's Club	Las Vegas, NV	TBD
Friday, January 15	Massachusetts Institute of Technology OCRWM Fellowship Students	Las Vegas, NV	D. Stahl A. Simmons B. Andrews
Friday, January 15	Dayton High School	Dayton, NV	T. Bjerstedt
Saturday, January 16	Girl Scouts Troop 319	Las Vegas, NV	A. Gil
Saturday, January 16	Veterans of Foreign Wars	Tonopah, NV	G. Fasano
Wednesday, January 20	Brownies Troop 562	Las Vegas, NV	J. Hartley
Thursday, January 21	Breakfast Lion's Club	Las Vegas, NV	A. Robison
Thursday, January 21	North Las Vegas Chamber of Commerce	Las Vegas, NV	A. Robison
Friday, January 22	West Las Vegas Community Meeting	Las Vegas, NV	C. Gertz M. Voegele
Wednesday, January 27	Cub Scouts Pack 223	Las Vegas, NV	R. Arnold
Monday, February 1	Foreign Press Center	Las Vegas, NV	C. Gertz
Tuesday, February 2	Huffaker School	Reno, NV	J. Blink
Wednesday- Thursday, February 3-4	Bijou Elementary School	Lake Tahoe, NV	J. Blink

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions (Continued)</u>			
Thursday, February 4	Scottish Rite Masons	Las Vegas, NV	P. Standish
Wednesday, February 10	Martin Luther King, Jr. Elementary School	Las Vegas, NV	R. Arnold
Thursday, February 11	Chemehuevi District Round Table	Las Vegas, NV	R. Arnold
Tuesday, February 16	Construction Specification Institute	Las Vegas, NV	G. Fasano
Tuesday, February 23	University of Iowa	Ames, IA	C. Gertz
Tuesday, March 2	Waste Management '93	Tucson, AZ	C. Gertz
Wednesday, March 17	Nevada Environmental Health Association	Las Vegas, NV	G. Fasano
Tuesday- Wednesday, March 23-24	Henderson Community College	Las Vegas, NV	M. Powell
Tuesday, May 4	Underground Structures Colorado School of Mines	Golden, CO	C. Gertz
Monday, June 14	Rapid Excavation & Tunneling Conference	TBD	C. Gertz
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
<u>Date</u>	<u>Event</u>	<u>Location</u>	

H. Exhibits Scheduled

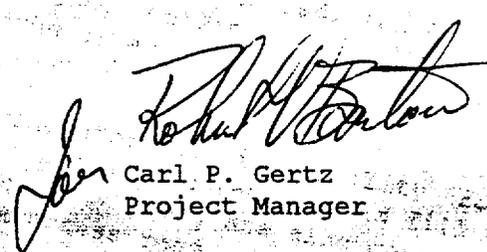
1993 schedule in development.

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
<u>I. Tours Scheduled</u>		
Saturday, January 9	Andrew Kadek CEO, Yankee Atomic	C. Gertz
Wednesday, January 13	Inspector General	TBD
Thursday, January 14	Fluor Daniel	TBD
Saturday, January 16	Public Open House (P)	Various Escorts
Wednesday, January 20	Tonopah Middle School	TBD
Friday, January 22	Nevada Nuclear Waste Study Committee Advisory Board	TBD
Monday, January 25	Japan Electric Power	P. Cloke
Thursday, January 28	Joe Mackey Sixth Grade Center	TBD
Wednesday, February 3	Green Valley High School	TBD
Wednesday, February 3	Foreign Press	S. Patrick
Thursday, February 11	Booker Sixth Grade Center	TBD
Saturday, February 20	Public Open House (P)	Various Escorts
Wednesday, February 24	Tonopah Middle School	TBD
Thursday, February 25	Senior Tripsters	TBD
Friday, March 5	Waste Management '93	TBD
Thursday, March 11	Meadows School	TBD

JAN 15 1993

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u> (Continued)		
Thursday, March 18	Gabs School	TBD
Wednesday, March 24	Thurman White Middle School	TBD
Saturday, March 27	Public Open House (P)	Various Escorts
Thursday, April 1	Orr Junior High School	TBD
Monday, April 19	Hydrology Field Trip	A. Flint
Tuesday, April 20	Round Mountain High School	TBD
Saturday, April 24	Public Open House (P)	Various Escorts
Monday, April 26	High-Level Waste Conference	TBD
Thursday, May 6	Pahrump Junior High	TBD
Wednesday, May 19	Public Open House (P)	Various Escorts
Monday, June 21	Girl Scouts Wider Opportunity Program	TBD
Tuesday, August 17	Senior Tripsters	TBD



Carl P. Gertz
Project Manager

YMP:VEI-1824