



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

Reply to:

301 E. Stewart Ave., #203  
Las Vegas, NV 89101

TO: Joseph Holonich, Director, HLPD, M/S 4 H 3

FROM: Paul T. Prestholt and John W. Gilray  
Sr. On-Site Licensing Representatives

DATE: August 10, 1992

SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE  
WEEK ENDING JULY 31, 1992

Please find enclosed the above-referenced report.

There is nothing requiring specific management attention in  
the report.

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

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9208170122 920810  
PDR WASTE  
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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

**AUG 04 1992**

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

OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE WEEK ENDING  
JULY 31, 1992

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

**A. Site Characterization Planning**

**Field Operations**

The authorization to proceed on Job Package (JP) 92.12, Quaternary Faulting, was received July 29, 1992.

The estimate received from Reynolds Electrical & Engineering Co., Inc. (REECo), to repair the damage and upgrade the Field Operations Center (FOC) building is \$950K. The building code issues concerning life safety and operational are currently being evaluated in order to prepare a phased approach package for repairing the FOC. The costs related to these issues will be delivered by August 3, 1992.

On July 28, 1992, at approximately 3:15 p.m., drill pipe (9-5/8" O.D.) was being pulled out of the hole at UE-25 UZ-16 by the LM 300 drill rig crew. After unscrewing a joint of pipe, the wrong drilling control lever was actuated and the remaining 17 joints of drill string fell 50 feet to the bottom of the hole (382 feet). Recovery activities have commenced. The initial estimate of damage is \$25K.

The work authorization on JP 91.9, phase two, drilling of 12 neutron access boreholes, was signed July 29, 1992.

On JP 92-3, UZ-16, LM-300, REECo cored to a depth of 318 feet, and reamed to a depth of 288 feet.

**Sample Management Facility**

Continued recovery of core and cuttings from UE25 UZ-16.

Laid out 761 boxes of existing core for examination by Los Alamos National Laboratory (Los Alamos) and U.S. Bureau of Reclamation.

AUG 04 1992

Completed preparations for drilling USW UZN-63.

Completed preliminary Geologic Cross Section of Exile Hill.

Exploratory Studies Facility (ESF) Task Force Activities

The Independent Technical Review began on July 27, 1992, and will conclude on August 14, 1992. Overall it covers: 186 drawings, 45 analyses, and 115 specifications.

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

One new SP, 8.3.1.17.4.5, "Detachment Faults at or Proximal to Yucca Mountain," was approved by the Yucca Mountain Site Characterization Project Office (YMPO).

STUDY PLAN BREAKDOWN

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In Screening Review .....	0
In YMPO and U.S. Department of Energy/ Headquarters (DOE/HQ) Review .....	0
Awaiting Comment Resolution .....	12
Awaiting Author Revision .....	5
In YMPO/HQ Verification Audit .....	7
Preparing to Submit or Awaiting YMPO Approval .....	4
Awaiting Submission to the U.S. Nuclear Regulatory Commission (NRC) .....	1
NRC Phase 1 Review .....	14
NRC Acceptance .....	27
Total .....	70

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SCP/SP Status:

Total SPs Assigned to Cover 106 Studies .....	103
SPs Not Yet Submitted for Review .....	39
SPs Submitted for Initial Review .....	64
Revised SPs Submitted for Review .....	6
Total SPs Submitted for Review .....	70

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State of Nevada Comments Status:

Received Comments from the State of Nevada .....	10
Responses Transmitted to the State of Nevada .....	8

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NRC Comments Status:

Received Comments from NRC .....	14
Responses Transmitted from OGD to DOE/HQ .....	6

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AUG 04 1992.

## B. Project Planning and Control

Areas discussed at the Mission 2001 Schedule Integration Meetings were: Systems and Performance Assessment - Work Breakdown Structure (WBS) 1.2.1; Site - WBS 1.2.3; and Regulatory and Environmental - WBS 1.2.5. In attendance were representatives from the U.S. Geological Survey (USGS), Sandia National Laboratories (SNL), Los Alamos, Lawrence Livermore National Laboratory (LLNL), Technical and Management Support Services, Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O), REECo, Raytheon Services Nevada, and DOE.

Received additional Mission 2001 planning data from participants and uploaded the data to central participant data bases. Combined participant data to formulate the project-level data base.

Produced the project-level Cost Plan that reflects the most current status of the Mission 2001 replanning exercise.

## C. Quality Assurance Implementation

### Determination of Importance and Grading Enhancement

#### Continuation of Existing Process

The transition from the old process to the new continues.

#### Quality (Q) List and Q-List Procedure Development

SNL progress in their Items Important to Waste Isolation and Items Important to Safety activities continues. Development of Quality Management Procedure (QMP) 05-03 (procedure application guidance) continues. Administrative Procedure (AP) 6.17Q training preparations continue, with emphasis on applicable training to the new Assessment Team (AT) and support staff. Training preparations for the new QMP 05-03 are on hold until the draft procedure is completed.

#### Management Control (MC) List and Procedure Development

The MC List Plan will be formally transmitted to YMPO next week, with a request for their acceptance. Implementing documents, based on the List Plan, are being conceptualized. Effort continues on comment resolution to the proposed AP 5.40 (MC List Procedure). Work on proposed AP 5.41 (MC Grading Procedure) and training preparations for both AP 5.40 and AP 5.41 are on hold until AP 5.40 is complete.

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Implementation

The new AT met on July 29, 1992, to begin development of operating procedures. Comments from the review of the AP 6.17Q, Revision 1, implementation plan have been resolved and the plan is being prepared for approval.

D. Public Outreach and Institutional Activities

Vicki Best (YMPO) presented an environmental briefing on July 27, 1992, in Las Vegas, Nevada, to members of the World Affairs Council. The two men in attendance were from Czechoslovakia and Iceland.

The Yucca Mountain Lecture Series, "Climate in Southern Nevada," was presented by Alan Flint (USGS), at the Las Vegas Yucca Mountain Information Office on July 28, 1992, and in Beatty, Nevada, on July 30, 1992.

A tour to Yucca Mountain, Nevada, was conducted on July 29, 1992, for approximately seven guests from the Las Vegas Review-Journal editorial board. Carl Gertz, Project Manager, gave a YMP overview presentation prior to the tour.

The Nevada Department of Transportation Railroad Safety Meeting was held in Sparks, Nevada, July 28-29, 1992. William Andrews gave a transportation overview presentation to the 5th Biannual Statewide Association of America Railroads Conference on July 29, 1992. Approximately 200 railroad safety personnel attended the conference. In addition, William Andrews also staffed a table top exhibit on transportation at the conference.

Institutional and External Affairs (IEA) and CRWMS M&O staff accompanied the staffs of Mineral County, Nevada, and Churchill County, Nevada, on a tour of the Oconee Nuclear Power Plant, July 29-31, 1992, in Clemson, South Carolina.

IEA staff accompanied the representatives of the following Nevada counties: White Pine, Clark, and Nye, at a meeting with John Bartlett, Director, Office of Civilian Radioactive Waste Management (OCRWM), in Washington, D.C., on July 29, 1992. White Pine officials also toured the Calvert Cliffs Nuclear Plant in Baltimore, Maryland.

Richard Arnold gave a presentation on Native American culture to the Frontier Girl Scouts of America on July 29, 1992, in Las Vegas, Nevada. Approximately 60 Girl Scouts, ranging in ages from 6-13, attended.

AUG 04 1992

A tour to Yucca Mountain, Nevada, was conducted on July 31, 1992, for approximately nine guests from the United Kingdom Radioactive Waste Management Advisory Committee Study Team. Jeanne Cooper (YMPO) gave a YMP overview presentation prior to the tour.

## II. ANALYSIS & VERIFICATION DIVISION

Completed verification review under AP 1.10Q procedure for Study Plan: Characterization of the Yucca Mountain Quaternary Regional Hydrology.

Briefed OCRWM management on status of Convergence Task activity July 27 and 29, 1992, in Washington, D.C. Conducted workshop on preliminary plan that resulted from the Convergence Task Activities, on July 30, 1992, held in Denver, Colorado.

Participated in Independent Technical Review of 90 percent complete ESF Design Package 1A, July 27-31, 1992, in Las Vegas, Nevada.

Attended an Advisory Committee on Nuclear Waste meeting on review of the NRC staff position on repository thermal loads, July 29, 1992, in Bethesda, Maryland.

Participated in the Technical Review Group meeting to discuss comments on West Valley Waste Compliance Plan and Defense Waste Processing Facility Waste Qualification Report, July 29-31, 1992, in Seattle, Washington.

Attended the U.S. National Committee on Tunneling Technology Symposium on Underground Construction Safety for the Superconducting Super Collider, July 28-30, 1992, in Desoto, Texas.

## III. GENERAL INFORMATION ITEMS

### YMPO

A "What-If" analysis was completed for several restricted spending scenarios for fiscal year 1993.

### CRWMS M&O

The preliminary draft of the Annotated Outline for the Advanced Conceptual Design was completed and reviewed within the Mined Geologic Disposal System Development, System Engineering and Integration (SEI) organization. As a result of this review, a need was identified to decompose the Engineered Barrier System requirements to lower levels. This decomposition was performed and consensus agreement was reached within the SEI organization regarding the details. The next step is to work with participants on this topic.

AUG 04 1992

SNL

A rough draft on a study of thermal effects on instrumentation, produced to make recommendations for the ESF thermal tests, was written. The study lists what instrumentation is needed and why it is needed, matches this list with available off-the-shelf instrumentation, and details new technologies that may be able to fill the gaps where no commercial instrumentation is available.

Los Alamos

The staff participated in Mission 2001 schedule integration and supported Integrated Test Evaluation.

LLNL

Scoping calculations for in situ heater tests in Busted Butte and the ESF were started. The calculated tests have three 4.6m square drifts (12.8m spacing) with seven 1.5m square horizontal heaters (4.57m long, spaced at 5.49m intervals), each running at 5.5, 6.3, 8.25, 12.38, or 22 kW.

USGS

The surface-water run-off monitoring project reports that stream flow sites located on the Nevada Test Site recorded no run-off during May or June 1992.

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 handled by the Speakers Bureau; contact Theresa Hirsch at (702) 794-7759 for additional information. Exhibits are handled by Kevin Rohrer at (702) 794-7769, and tours are handled 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>			
Canceled Friday, August 7	Program Management Meeting	Las Vegas, NV	C. Gertz
B. <u>CRWMS M&amp;O/DOE Meetings</u>			
No significant new meetings.			

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>C. <u>Internal and DOE/NV Meetings</u></b>			
No significant new meetings.			
<b>D. <u>NRC Interactions</u></b>			
Tuesday, August 25	Technical Exchange - Resolution of Volcanism Related Concerns	Video- Conference	T. Bjerstedt
Thursday- Friday, September 17-18	Technical Exchange - Midway Valley and Site Visit	LV/NTS/YM	T. Bjerstedt
Tuesday, September 29	Technical Exchange - Functional Analysis of 10 CFR 60	San Antonio, TX	T. Bjerstedt
Thursday, October 29	Technical Exchange - Total System Performance Assessment	Albuquerque, NM	T. Bjerstedt
Tuesday, November 17	Technical Exchange - Volcanism	Rockville, MD	T. Bjerstedt
Wednesday, November 18	Interaction Planning Meeting	Rockville, MD	T. Bjerstedt
<b>E. <u>NWTRB Interactions (P)</u></b>			
Tuesday- Wednesday, October 13-14	NWTRB Full Board Meeting	Las Vegas, NV	A. Simmons
Thursday- Friday, October 15-16	NWTRB Panel on SG&G	Las Vegas, NV	A. Simmons
<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>F. <u>State and Public Interactions</u></b>			
Monday, August 3	Radioactive Waste Panel Discussion	Las Vegas, NV	C. Gertz



<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>F. <u>State and Public Interactions (Continued)</u></b>			
Wednesday, August 5	UNLV Alumni Center	Las Vegas, NV	C. Gertz G. Milligan
Thursday, August 6	Rotary Club of Las Vegas	Las Vegas, NV	C. Gertz
Monday, August 31	Nuclear Information & Records Management Association Symposium	San Francisco, CA	C. Gertz
Thursday, September 3	American Business Women's Association	Las Vegas, NV	C. Gertz
Monday, September 14	Daughters of the American Revolution Group	Las Vegas, NV	R. Arnold
Thursday, September 17	American Nuclear Society	Lynchburg, VA	C. Gertz
Friday, September 18	Las Vegas Board of Realtors	Las Vegas, NV	A. Robison
Monday, September 21	Emerging Technologies for Hazardous Waste Management	Atlanta, GA	C. Gertz
Tuesday, September 29	American Institute of Professional Geologists	Lake Tahoe, NV	J. Younker
Wednesday, October 7	North American Tunneling Conference	Boston, MA	C. Gertz
Thursday, October 8	Massachusetts Institute of Technology (MIT)	Cambridge, MA	C. Gertz
Thursday, October 22	LV Chamber of Commerce	Las Vegas, NV	C. Gertz
Friday, October 30	Colorado School of Mines	Golden, CO	C. Gertz

AUG 04 1992

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>G. <u>Exhibits Scheduled</u></b>		
Wednesday-Sunday, August 12-16	Nevada State Fair	Reno, NV
Thursday-Saturday, August 20-22	Nevada League of Cities	Winnemucca, NV
Saturday, August 22	Public Open House (P)	Las Vegas, NV
Friday-Sunday, September 18-20	Home Show	Las Vegas, NV
Friday-Sunday, September 18-20	Pahrump Harvest Festival	Pahrump, NV
Saturday, September 26	Public Open House (P)	Las Vegas, NV
Sunday-Wednesday, September 27-30	American Institute of Professional Geologists	Lake Tahoe, NV
Friday-Sunday, October 2-11	Jaycees State Fair	Las Vegas, NV
Monday-Friday, October 5-9	Association of Engineering Geologists	Long Beach, CA
<u>Date</u>	<u>Event</u>	<u>Escorts</u>
<b>H. <u>Tours Scheduled</u></b>		
Saturday, August 22	Public Open House (P)	Various Escorts
Saturday, September 26	Public Open House (P)	Various Escorts

AUG 04 1992

<u>Date</u>	<u>Event</u>	<u>Escorts</u>
H. <u>Tours Scheduled</u> (Continued)		
Thursday, October 8	Realtor Association	TBD
Tuesday, October 13	Senior Tripsters	TBD
Saturday, October 17	Public Open House (P)	Various Escorts
Wednesday, November 18	Public Open House (P)	Various Escorts
Saturday, December 12	Public Open House (P)	Various Escorts

YMP:VFI-4742

*Michael Blane*  
for Carl P. Gertz  
Project Manager



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

Reply to:

301 E. Stewart Ave., #203  
Las Vegas, NV 89101

TO: Joseph Holonich, Director, HLPD, M/S 4 H 3

FROM: Paul T. Prestholt and John W. Gilray  
Sr. On-Site Licensing Representatives

DATE: August 10, 1992

SUBJECT: OFFICE OF GEOLOGIC DISPOSAL (OGD) WEEKLY HIGHLIGHTS FOR THE  
WEEK ENDING JULY 31, 1992

Please find enclosed the above-referenced report.

There is nothing requiring specific management attention in  
the report.

nan

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

NOTE TO CHARLOTTE: Also enclosed is the Daily Operations Report; NRC  
Interactions Report; Field Test Coordinator's Report

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25 pp.

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

WBS 1.2.3.5  
QA: N/A

AUG 03 1992

Carl H. Johnson, State of Nevada, Carson City, NV  
Phillip Niedzielski-Eichner, Nye County, Chantilly, VA  
Dennis A. Bechtel, Clark County, Las Vegas, NV  
Albert C. Douglas, City of Las Vegas, Las Vegas, NV  
~~Paul J. Prescott~~, NRC, Las Vegas, NV

DAILY OPERATIONS REPORTS AND WEEKLY INTERACTIONS REPORT

Enclosed for your information are copies of the Daily Operations Reports for Yucca Mountain Site Characterization Project drill hole UE-25 UZ16 (enclosure 1). These reports were prepared by Raytheon Services Nevada and cover July 20-24, 1992.

A copy of the weekly U.S. Nuclear Regulatory Commission Interactions Report (enclosure 2) is enclosed for your information. It includes a section providing the status of boreholes, trenches, and test pits.

A copy of the field test coordinator's report (enclosure 3) summarizing activities of the previous week and a forecast of the activities planned for the current week is also included for your information.

If you need additional information regarding these reports, please contact Uel S. Clanton at (702) 794-7943.

  
Russell Dyer, Director  
Regulatory & Site Evaluation Division

RSED:USC-4701

Enclosures:

1. Daily Operations Reports
2. NRC Interactions Report
3. Field Test Coordinator's Report

**RAYTHEON SERVICES NEVADA**  
**DAILY OPERATIONS REPORT**  
**YUCCA MOUNTAIN PROJECT**

Report Time: 7:30

Date: July 27, 1992

Page: 1 of 1

Job Package No.: 92-03

Station: UE-25 UZ16

Drill Rig: LM300

Activity: Pull out of hole with core bit.

Objectives: 1) Mobilize drill rig. 2) Continuous core/drive sample from ground level to 50' minimum.  
3) Vacuum drill 22 inch hole and set 16" OD casing to total depth. 4) Cement casing to surface. 5) Continuously core and ream to 1663'. 6) Prepare final location and elevation survey. 7) Install wellhead box

**REPORT FOR: July 24, 1992 (Rig Day 42)**

<b>HOURS FROM - TO</b>	<b>OPERATIONS DESCRIPTION</b>
0800 - 0818	Service Rig and Equipment.
0818 - 0928	Resume ream cycle #45.
0928 - 1010	Repair hydraulic line on Haz Vac.
1010 - 1044	Obtain inclination survey at 335'. (3/4 degree).
1044 - 1117	Complete ream cycle #45 from 318.64' - 348.65'. (84 mins)
1117 - 1200	Trip in hole with core rods and bit # L9, serial #2s24190. Rig up to core.
1200 - 1230	Lunch.
1230 - 1302	Core run #61 from 348.66' - 353.28' ( 7 min), 1.0' Rec.
1302 - 1322	Core run #62 from 353.28' - 356.82' ( 5 min), 2.0' Rec.
1322 - 1345	Core run #63 from 356.82' - 360.06' ( 6 min), 1.8' Rec.
1345 - 1411	Core run #64 from 360.06' - 364.77' ( 9 min), 3.2' Rec.
1411 - 1437	Core run #65 from 364.77' - 368.84' ( 8 min), 1.4' Rec.
1437 - 1527	Core run #66 from 368.84' - 375.61' (28 min), 3.3' Rec.
1527 - 1555	Core run #67 from 375.61' - 378.77' (17 min), 2.7' Rec.
1555 - 1615	Pull out of hole with core rods.
1615 - 1630	Shut down and secure rig.

**CORING:** Average air rate 378 SCFM.  
Average vacuum rate 1068 SCFM.

**REAMING:** Average air rate 1165 SCFM.  
Average vacuum rate 1375 SCFM.

<b>Ending Depth:</b>	<b>Cored 378.77'</b>	<b>Reamed 348.65'</b>	<b>Drilled 0</b>
<b>Daily Footage:</b>	<b>Cored 30.11'</b>	<b>Reamed 28.72'</b>	<b>Drilled 0</b>

**Drilling Rep:** Neal Walker, REECO

**A/E Rep:** James E. Anthony and David Putnam, RSN

**Personnel On Site:** 2-RSN; 10-REECO; 2-USGS; 4-SMF; 1-DOE; 6-Visitors.

**Field Report Prepared By:** James E. Anthony

**Office Report Prepared By:** James E. Anthony

RAYTHEON SERVICES NEVADA  
**DAILY OPERATIONS REPORT**  
YUCCA MOUNTAIN PROJECT

Report Time: 7:30  
Date: July 24, 1992  
Page: 1 of 1

Job Package No.: 92-03

Station: UE-25 UZ16

Drill Rig: LM300

Activity: Reaming

Objectives: 1) Mobilize drill rig. 2) Continuous core/drive sample from ground level to 50' minimum. 3) Vacuum drill 22 inch hole and set 16" OD casing to total depth. 4) Cement casing to surface. 5) Continuously core and ream to 1663'. 6) Prepare final location and elevation survey. 7) Install wellhead box

**REPORT FOR: July 23, 1992 (Rig Day 41)**

HOURS FROM - TO	OPERATIONS DESCRIPTION
0800 - 0830	Service Rig and Equipment.
0830 - 1001	Resume ream cycle #44
1001 - 1112	Disconnect Haz Vac unit. Dump drill cuttings. Reconnect Haz Vac.
1112 - 1200	Resume ream cycle #44
1200 - 1230	Lunch.
1230 - 1252	Complete ream cycle # 44 from 288.62' to 318.64' (122 min).
1252 - 1332	Trip in hole with core bit #LB, serial #L96594. Rig up to core.
1332 - 1358	Core run #57 from 318.64' - 328.57' (11 min), 8.6' Rec.
1358 - 1422	Core run #58 from 328.57' - 334.02' (9 min), 4.2' Rec.
1422 - 1458	Core run #59 from 334.02' - 343.91' (14 min), 4.3' Rec.
1458 - 1525	Core run #60 from 343.91' - 348.66' (2 min), 0.0' Rec.
1525 - 1605	Remove coring head and rig up to pull out of hole with core rods. Run core barrel and attempt to retrieve core, no success. Pull out of hole with core rods, rig up to ream.
1605 - 1615	Begin ream cycle #45 at 318.62'. Stop @ 319.93'
1615 - 1630	Shut down and secure rig.

**CORING:** Average air rate 572 SCFM.  
Average vacuum rate 1107 SCFM.

**REAMING:** Average air rate 1179 SCFM.  
Average vacuum rate 1213 SCFM.

Ending Depth:	Cored 348.66'	Reamed 319.93'	Drilled 0
Daily Footage:	Cored 30.02'	Reamed 30.93'	Drilled 0

Drilling Rep: Neal Walker, REECO

A/E Rep: James E. Anthony and Richard W. Wright, RSN

Personnel On Site: 2-RSN; 10-REECO; 2-USGS; 4-SMF; 2-DOE; 12-Visitors.

Field Report Prepared By: James E. Anthony

Office Report Prepared By: James E. Anthony

RAYTHEON SERVICES NEVADA  
**DAILY OPERATIONS REPORT**  
YUCCA MOUNTAIN PROJECT

Report Time: 7:30  
Date: July 23, 1992  
Page: 1 of 1

Job Package No.: 92-03

Station: UE-25 UZ16

Drill Rig: LM300

Activity: Reaming

Objectives: 1) Mobilize drill rig. 2) Continuous core/drive sample from ground level to 50' minimum. 3) Vacuum drill 22 inch hole and set 16" OD casing to total depth. 4) Cement casing to surface. 5) Continuously core and ream to 1663'. 6) Prepare final location and elevation survey. 7) Install wellhead box

**REPORT FOR: July 22, 1992 (Rig Day 40)**

HOURS FROM - TO	OPERATIONS DESCRIPTION
0800 - 0830	Service Rig and Equipment.
0830 - 0945	Resume ream cycle #43
0945 - 1036	Take survey @ 278', 45 minutes (3/4 degrees), Retake survey @ 278', 50 minutes, (0.833 degrees)
1036 - 1058	Complete ream cycle from 258.60' - 288.62'. ( 151 min.)
1058 - 1151	Trip in hole with core rods. Rig up to core.
1151 - 1224	Core run #52 from 288.62' - 298.21' (11 min), 9.6' Rec.
1224 - 1254	Lunch.
1254 - 1346	Core run #53 from 298.21' - 308.32' (24 min), 10.1' Rec.
1346 - 1426	Core run #54 from 308.32' - 314.12' (15 min), 4.4' Rec.
1426 - 1454	Core run #55 from 314.12' - 315.42' (7 min), 1.3' Rec.
1454 - 1512	Core run #56 from 315.24' - 318.64' ( 11 min), 3.2' Rec.
1512 - 1612	Pull out of hole with core bit, rig up to ream.
1612 - 1614	Begin ream cycle #44 at 288.62'. Stop @ 289.00'
1614 - 1630	Shut down to clean sample catcher and secure rig.

CORING: Average air rate 540 SCFM.  
Average vacuum rate 1141 SCFM.

REAMING: Average air rate 1144 SCFM.  
Average vacuum rate 1346 SCFM.

Ending Depth:	Cored 318.64'	Reamed 289.00'	Drilled 0
Daily Footage:	Cored 30.02'	Reamed 22.00'	Drilled 0

Drilling Rep: Neal Walker, REECO

A/E Rep: James E. Anthony and Richard W. Wright, RSN

Personnel On Site: 2-RSN; 10-REECO; 3-USGS; 5-SMF; 1-DOE; 13-Visitors.

Field Report Prepared By: James E. Anthony

Office Report Prepared By: Richard W. Wright



RAYTHEON SERVICES NEVADA  
**DAILY OPERATIONS REPORT**  
YUCCA MOUNTAIN PROJECT

Report Time: 7:30

Date: July 22, 1992

Page: 1 of 1

Job Package No.: 92-03

Station: UE-25 UZ16

Drill Rig: LM300

Activity: Reaming

Objectives: 1) Mobilize drill rig. 2) Continuous core/drive sample from ground level to 50' minimum. 3) Vacuum drill 22 inch hole and set 16" OD casing to total depth. 4) Cement casing to surface. 5) Continuously core and ream to 1663'. 6) Prepare final location and elevation survey. 7) Install wellhead box

**REPORT FOR: July 21, 1992 (Rig Day 39)**

HOURS FROM - TO	OPERATIONS DESCRIPTION
0800 - 0830	Service Rig and Equipment.
0830 - 1115	Change thermostats on Haz Vac. Install valve on air processor meter unit. Fabricate and install brace for valve and air line of air processor meter unit.
1115 - 1200	Resume ream cycle #42. Complete ream cycle at 258.60'. (221 mins)
1200 - 1230	Lunch.
1230 - 1309	Rig up to core. Trip in hole with core bit #L8, serial #L96594.
1309 - 1332	Core run #49 from 258.80' - 268.63' (9 min), 9.8' Rec.
1332 - 1408	Core run #50 from 268.63' - 278.45' (14 min), 9.8' Rec.
1408 - 1445	Core run #51 from 278.45' - 288.62' (22 min), 10.2' Rec.
1445 - 1524	Pull out of hole with core bit, rig up to ream.
1524 - 1615	Begin ream cycle #43 at 258.60'. Took samples from 262.7' to 263.7'.
1615 - 1630	Shut down and secure rig.

**CORING:** Average air rate 438 SCFM.  
Average vacuum rate 1176 SCFM.

**REAMING:** Average air rate 1144 SCFM.  
Average vacuum rate 1346 SCFM.

Ending Depth:	Cored 288.62'	Reamed 267.00'	Drilled 0
Daily Footage:	Cored 29.82'	Reamed 12.29'	Drilled 0

Drilling Rep: Richard Sowards, REECO

A/E Rep: James E. Anthony, RSN

Personnel On Site: 2-RSN; 10-REECO; 3-USGS; 5-SMF; 1-DOE; 13-Visitors.

Field Report Prepared By: James E. Anthony

Office Report Prepared By: James E. Anthony

**RAYTHEON SERVICES NEVADA**  
**DAILY OPERATIONS REPORT**  
**YUCCA MOUNTAIN PROJECT**

Report Time: 7:30  
Date: July 21, 1992  
Page: 1 of 1

Job Package No.: 92-03  
Station: UE-25 UZ16  
Drill Rig: LM300  
Activity: Reaming

Objectives: 1) Mobilize drill rig. 2) Continuous core/drive sample from ground level to 50' minimum. 3) Vacuum drill 22 inch hole and set 16" OD casing to total depth. 4) Cement casing to surface. 5) Continuously core and ream to 1663'. 6) Prepare final location and elevation survey. 7) Install wellhead box

**REPORT FOR: July 20, 1992 (Rig Day 38)**

HOURS FROM - TO	OPERATIONS DESCRIPTION
0800 - 0830	Safety meeting
0830 - 0900	Service start up rig and equipment.
0900 - 0923	Core run #47 from 247.67' - 257.94' ( 8 min.), 9.9' Rec
0923 - 0941	Core run #48 from 257.94' - 258.80' ( 4 min.), 0.86' Rec
0941 - 1017	Pull out of hole with core rods, rig up to ream.
1017 - 1200	Ream cycle #42 from 218.54' Took samples for SMF from 219.00' to 220.00', 231.00' to 232.00', and 250.3' to 251.3'.
1200 - 1230	Lunch.
1230 - 1322	Resume ream cycle #42
1322 - 1438	Blockage detected in vacuum return lines. Check dual wall drill pipe, swivel head, and line in derrick. Blockage located and cleared in derrick connection.
1438 - 1616	Resume ream cycle #42. Ream to 257.41'.
1616 - 1630	Shut down and secure rig.

**CORING:** Average air rate 304 SCFM.  
Average vacuum rate 1200 SCFM.

**REAMING:** Average air rate 1162 SCFM.  
Average vacuum rate 1200 SCFM.

Ending Depth:	Cored 258.80'	Reamed 257.41'	Drilled 0
Daily Footage:	Cored 11.13'	Reamed 36.17'	Drilled 0

Drilling Rep: Richard Sowards, REECO  
A/E Rep: James E. Anthony, RSN  
Personnel On Site: 3-RSN; 10-REECO; 3-USGS; 5-SMF; 2-SAIC, 10-VISITORS

Field Report Prepared By: James E. Anthony  
Office Report Prepared By: Richard W. Wright

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WEEKLY INTERACTIONS CALENDAR

STATUS OF DOE NWTRB, ACNW, AND NRC MEETINGS FOR WEEK ENDING 7/24/92

<u>DATE/LOC.</u>	<u>TOPIC</u>	<u>TECHNICAL LEAD (SUPPORT)</u>	<u>CONTACT (SUPPORT)</u>	<u>PARTICIPANT (SUPPORT)</u>	<u>COMMENTS</u>
7/22/92 Bethesda, MD	NRC TE: Three- Bucket Approach	Boak (Pahwa-M&O)	Bjerstedt (LeRoy-M&O)	M&O SNL PNL	Discussed NRC's proposed Three- Bucket Approach by examining implementation of trial examples.
7/23/92 Rockville, MD	NRC meeting: 5/7-8/86 Agreement on Format and Content of Yucca Mountain Study Plans	Crawley (Rogers-M&O)	Bjerstedt (LeRoy-M&O)	M&O	Renegotiated the DOE/NRC agreement on study plans.
7/30-31/92 Bethesda, MD	ACNW 45th Meeting		Cooper (LeRoy-M&O)		Agenda TBD.
8/25/92 Video- Conference	NRC TE: Resolution of Volcanism- related concerns	Cooper (Jerez-M&O)	Bjerstedt (LeRoy-M&O)	M&O LANL	Discuss DOE approach as identified in NRC staff reviews of SCP 8.3.1.8.1.1 and 8.3.1.8.5.1.

BOLD INDICATES REVISIONS AND NEW INFORMATION

# WEEKLY INTERACTIONS CALENDAR

## STATUS OF DOE NWTRB, ACNW, AND NRC MEETINGS FOR WEEK ENDING 7/24/92

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9/16-17/92 LV/NTS/YM	NRC TE: Midway Valley	Sullivan (Statton-M&O)	Bjerstedt (LeRoy-M&O)	M&O USGS	Discuss Study Plan 8.3.1.17.4.2, preliminary results, and plans for future work, and Tour Midway Valley.
9/24-25/92 Bethesda, MD	ACNW 46th Meeting		Cooper (LeRoy-M&O)		Agenda TBD.
9/29/92 San Antonio, TX	NRC TE: CNWRA Functional Analysis of 10CFR60		Bjerstedt (LeRoy-M&O)	M&O	Discuss CNWRA activities related to systems engineering.
10/13-14/92 Las Vegas, NV	NWTRB Full Board		Simmons	M&O	Agenda TBD.
10/15-16/92 Las Vegas, NV	NWTRB Panel on SG&G		Simmons		Volcanism - Agenda TBD.
10/20/92 Las Vegas, NV	ACNW VG on Human Intrusion		Cooper (LeRoy-M&O)		Discuss methodologies for assessment of potential for natural resources at YM, and relationship between such resources and potential for human intrusion.

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## STATUS OF DOE NWTRB, ACNW, AND NRC MEETINGS FOR WEEK ENDING 7/24/92

<u>DATE/LOC.</u>	<u>TOPIC</u>	<u>TECHNICAL LEAD (SUPPORT)</u>	<u>CONTACT (SUPPORT)</u>	<u>PARTICIPANT (SUPPORT)</u>	<u>COMMENTS</u>
10/21-23/92 Las Vegas, NV	ACNW 47th Meeting		Cooper (LeRoy-M&O)		Agenda TBD.
10/27/92 Albuquerque, NM	WIPP Roundtable discussion - NRC observation	Boak (Van Luik-M&O)	Bjerstedt (LeRoy-M&O)	M&O SNL PNL	NRC staff observe interaction between YMPO PA and WIPP PA.
10/28/92 Carlsbad, NM	Tour of WIPP Site	Boak (Van Luik-M&O)	Bjerstedt (LeRoy-M&O)	M&O	
10/29/92 Albuquerque, NM	NRC TE: Total System Performance Assessment	Boak (Pahwa-M&O)	Bjerstedt (LeRoy-M&O)	M&O SNL PNL	Discuss methods and results of DOE PACE, TSPA, and NRC IPA.
11/17/92 Rockville, MD	NRC TE: Volcanism	Cooper (Jerez-M&O)	Bjerstedt (LeRoy-M&O)	TESS M&O LANL	Discuss DOE volcanism studies as detailed in LANL report.
11/18/92 Bethesda, MD	ACNW WG Climate		Cooper (LeRoy-M&O)		Discuss the potential for climate changes in Southern Basin and Range and the impact on natural processes affecting PA of potential repository at YM. Original scheduled 11/19/91, this has been rescheduled from 4/22/92.

INDICATES REVISIONS AND NEW INFORMATION

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11/18/92 Rockville, MD	Interaction Planning Meeting	Bjerstedt (LeRoy-M&O)	Bjerstedt (LeRoy-M&O)	M&O	Discuss/plan DOE/NRC interactions for first half 1993.
11/19-20/92 Bethesda, MD	ACNW 48th Meeting		Cooper (LeRoy-M&O)		Agenda TBD
12/16/92 Bethesda, MD	ACNW WG on PA - Phase 2 HLW Interactive PA by NRC	Boak (Van Luik-M&O)	Cooper (LeRoy-M&O)	M&O SNL	Will discuss progress of Phase 2 PA effort. Also will hear briefing from DOE on status of TSPA.
12/17-18/92 Bethesda, MD	ACNW 49th Meeting		Cooper (LeRoy-M&O)		Agenda TBD

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# WEEKLY INTERACTIONS CALENDAR

## DRILLING, TRENCHING, AND TEST PIT ACTIVITIES 7/17/92

<u>DESIGNATION</u>	<u>PLANNED START DATE</u>	<u>PLANNED END DATE</u>	<u>BACKFILL DATE</u>	<u>YMPO SITE CONTACT</u>	<u>COMMENTS</u>
Midway Valley Trench No. 5	5/26/92	6/5/92	11/92	Sullivan	Evaluate potential for faulting (if any) near prospective ESF surface facilities. Planned backfill during ESF Pad Construction.
Midway Valley Trench No. 4	6/8/92	6/9/92	TBD	Sullivan	Deepen trench to study Paint Brush Canyon fault splay.
Midway Valley Trench No. 14D	6/10/92	6/12/92	TBD	Sullivan	Evaluate Bow Ridge fault at Exile Hill.
Midway Valley Trench No. 6	6/16/92	6/17/92	TBD	Sullivan	Improve and deepen exposures adjacent to Midway Valley Trench No. 5.
Midway Valley Soil Test Pits	6/24/92	6/30/92	TBD	Sullivan	Twenty-eight (28) pits throughout Midway Valley to provide soils descriptions to better define relative ages of deposits.

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**WEEKLY INTERACTIONS CALENDAR**

**DRILLING, TRENCHING, AND TEST PIT ACTIVITIES  
7/17/92**

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Soil and Rock Properties Test <pits (Phase III)	8/3/92	10/31/92	TBD	Williams	Execute 41 test pits for engineering properties of planned roads, one each fields, and concrete aggregate sources. Data for design of ESF.
Fran Ridge Test Pit No. 1	8/10/92	8/31/92	N/A	Girdley	Bedrock excavation in Topopah by controlled blasting. Fracture network mapping will be undertaken.
Lathrop Wells Volcanic Center Soil Test and Sample Collection	9/92	TBD	TBD	Cooper	Continue examination of soil development on volcanic rocks to test results of chronology studies. Collect samples of volcanic rocks for petrology studies.
Unsaturated Zone Borehole No. 16	5/27/92	10/14/92	N/A	Long	Unsaturated zone site characterization and vertical seismic profiling.

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Nantron-Access Boreholes Phase II (12 boreholes)	8/3/92	TBD	N/A	Girdley	Core taken from these holes will be used by USGS for determination of moisture content and to construct tritium profiles.
Busted Butte Pavement Study	8/4/92	TBD	TBD	Sullivan	Map any expression of Quaternary faulting in the exposures at Busted Butte.

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

WBS 1.2.3  
QA: N/A

JUL 28 1992

J. Russell Dyer, YMP, NV  
Winfred A. Wilson, YMP, Mercury, NV, M/S 717

FIELD TEST COORDINATOR'S REPORT FOR THE WEEK ENDING JULY 24, 1992: USW UZ-16  
BOREHOLE (JOB PACKAGES 92-3, 92-4)

Scope of Activity: A borehole approximately 1700 feet in depth will be drilled using the LM-300 drilling system. The primary purpose of the hole will be for vertical seismic profile testing, although other tests such as air permeability, hydrogeochemistry, and matrix hydrologic properties are also being planned. Drilling is scheduled from May through December 1992, following pad construction in March 1992.

Week 22 Activities: A total of 131.1 feet of core was taken at UZ-16 this week and the borehole was deepened from 188.51 feet to 348.65 feet. The final core depth was 378.77 feet. Inclination surveys of 0.8 degrees and 0.75 degrees at 278 feet and 333 feet respectively indicated that the borehole was progressing as expected. Some minor delays associated with core jamming and equipment maintenance had no significant impact on schedule.

Sampling this week reached the Topopah Springs upper lithophysal unit. Coring will continue in this interval next week. If you have any questions, please contact me at 794-7503.

Roy C. Long  
Site Investigations Branch  
Regulatory & Site Evaluation Division

RSED:RCL-4677