



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: MAY 11, 1993  
SUBJECT: YUCCA MOUNTAIN SITE OFFICE (YMSO) FIELD ACTIVITY REPORT ENDING  
APRIL 23 AND APRIL 30, 1993; OFFICE OF GEOLOGIC DISPOSAL (OGD)  
WEEKLY HIGHLIGHTS FOR THE WEEK ENDING APRIL 30, 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

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

WBS: 1.2.7.3  
QA: N/A

**MAY 04 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 week ending April 23, 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: NWTRB; Round Mountain High School; TRW Employees; OCRWM Field Test Teachers; Public Open House.
- b. The Site Manager prepared and issued the Job Package (JP) Authorization Letter for JP 93-03A, Drilling and Testing of Borehole UE 25 NRG#5. This was pursuant to receipt of Notice to Proceed from the Project Manager.
- c. The Site Manager performed the 50% design review of the ESF Package IB. Comments submitted to CRWMS M&O.
- d. Provide operations, administrative, and security support to the Yucca Mountain Site Manager and his DOE staff.
- e. Provided operational and administrative support for site characterization activities in the field.
- f. Provided administrative support for issuing vehicles, first aid kits, fire extinguisher, and other necessary equipment to personnel performing field duty.
- g. Prepared and transmitted daily operations report to NORSOC, and the biweekly reports to HQ OCRWM.
- h. Prepared eighty-two (82) badge requests for site visitors and daily field work, including 2 foreign national requests.

- i. Provided duty officer support for ESF swing and graveyard shift operations.
- k. Processed eight (8) Work Order Requests.
- l. Continued planing for office reorganization within the FOC building.
- m. Purchased Van maintenance supplies for YMSO Logistics.
- n. Reviewed Job Package and Test Package for Starter Tunnel Sampling.
- o. Continued providing photographic coverage for ESF North Portal operations.
- p. The Bullfrog Planning Commission continuing with development of data base for Facilities Management Program.

**B. Project Safety & Health, (DOE/SAIC)**

- a. Assisted Training in conducting New Miner Safety training class.
- b. Reviewed and commented on the following:
  - 1. Draft Regulatory Guidance Document.
  - 2. New FOI, "FOC Emergency Management Plan."
  - 3. Sample Management Facility's building evacuation Plan.
- c. Continued internal audit on First Aid Kit Program.
- d. Continued REECO Safety & Health functional appraisal.
- e. Began review on 50% complete specifications for conveyer belt and ventilation system for North Portal Tunnel.
- f. Drafted ICN 1, for AP 6.12, Rev. 1, "Safety & Health Recordkeeping and Reporting Requirements, and sent approved Document Action Request to M&O Plans and Procedures group.
- g. Completed three surveillance: UZ-14; ESF Pad and North Portal; and New Trailer to be used and Change Room.
- h. Assisted in ESF Safety evaluation of rock bolting, shotcrete safety concerns.

- i. Assisted in evaluation of heat stress syndrome.
- j. Investigated vehicular accident at Exile Hill curve for YMP Project S&H Officer.
- k. Reviewed Site Design and Testing Requirements document, draft C, and sent acceptance to M&O.
- l. Drafted letters on "Vehicular Safety" and "ESF Access Requirements" for YMP S&H Officer.
- m. Conducted illumination survey at NRG-5, Joy #1 Drill Rig.
- n. Monitored gases and noise levels at North portal during blasting operations.
- o. Occurrence reports - three waiting for FM Signature.
  - 1. REECO - six outstanding: 3 awaiting FM Signature; 3 rejected (09/22/92 and 2 on 4/15/93.)
  - 2. SAIC - 2 outstanding: 2 initial notification (4/15/93 and 04/20/93.)

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. MTL tests are ongoing.
- c. Survey for Geologic Mapping of North Portal Box Cut, Phase III and IV are complete, calculations remain.
- d. Re-survey of trenches CF1 and T8 complete. Calculations remain.
- e. Field alignment of LM-300 rig completed.
- f. Survey and calculations of centerline profile for North Portal Box Cut Complete.
- g. Survey of Geophone locations for Construction monitoring is completed.

- h. Survey of NRG-5 drill pad and access road completed, calculations remain.
- i. Survey NRG-4 centerline complete, calculations remain.
- j. Issued six (6) Work Initiations in support of ongoing and upcoming job packages.
- k. Field Engineering continues to provide support to JP: 91-9 Rev. 3; 92-2; 92-5; 92-8; 92-12; 92-17; 93-03 and 92-20.
- l. Field Engineering continues to check Trench 14, JP 91-2, daily to ensure suitability for operations.
- m. Survey crew continuing work on the Area 25 Survey Control Net.
- n. Survey of Starter Tunnel, support is ongoing.

B. Quality Control

- a. Completed verification activities on NRG-5 Road and Pad Construction.
- b. Started verification activities on NRG-4 borehole utilizing the Joy #1 drill rig.
- c. Continued verification of activities on UZ-14 borehole, utilizing the LM-300 drill rig.
- d. Performed surveillance on Trenches in Stagecoach Road (SCR-T1, T2, T3) and Crater Flats (SCF-T1, CF-2, T8).
- e. Completed field verification plan FVP-93-034.1 for USW H-5 Additional Work Activities and sent records package to RSN Records Coordinator.

3. Sample Management Facility, (SMF/SAIC)

- a. Support drilling operations and continued processing core on UZ-14 and NRG-5.
- b. Removed approximately 60 core specimens for shipment to SNL and USGS.
- c. Laid out approximately 300 boxes of core from UZ-16, NRG-6, NRG-3, NRG-2, NRG-1 and RF-8 for PI examination.

4. ~~Geologic~~ Research Facility, (USGS)

The following activities were accomplished by USGS Staff:

- a. Examining drill core and monitoring soil gas probe array.
- b. Checking seismic sites in Yucca Mountain and Beatty areas.
- c. Mapping Ghost Dance Fault.
- d. Analyze fault-line scarp development at Yucca Mountain.
- e. Conducting geologic mapping in Midway Valley Trenches.
- f. Perform lithologic logging of UZ-16 and RF-8 cores, and meet with Geometrics' to discuss faulting and stratigraphy on west side of Exile Hill.
- g. Collecting QA data for geologic mapping and conducting surveys for geologic map of ESF North Ramp.
- h. Conduct photo documentation in raven Canyon, west of Amargosa Valley.
- i. Clean exposures and map trenches in Crater Flats.

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

A. Drilling

- a. JP 92-17, UZ-14, LM-300 drill rig, cored to 52.88 feet reamed to 52.88 feet. Drove 16 inch O.D. casing to 51.33 feet.
- b. JP 92-11, NRG-5, finished mobilizing rig and equipment. Drove 6 5/8 inch to 218.12 feet.

B. Logistics

- a. Continued requisitioning supplies, materials, and services for YMP Field Operations Center.
- b. Supported tours during the week. Made final preparations for Public Open House scheduled 04/24.
- c. Supported construction efforts in Area 25.

C. Construction

- a. JP 92-20, "ESF North Portal Pad and Facilities...REECO continued roadwork and drainage ditch work at topsoil and rock storage pad areas; completed line drilling North and South slashes for the top cut; applied shotcrete to the back and to the boxcut face around the line drill holes; cut down the ramp to allow excavation of the North Portal down to spring-line; and began preparing North ESF access road subgrade to receive aggregate base course.

6. Los Alamos National Laboratory, (LANL)

- a. Continued monitoring construction activities at the north portal box cut.
- b. M&O determined that shotcreting the crown was required to maintain safety, LANL, USBR, and Field Test Coordinator agreed with this and shotcreting was applied.
- c. Continue to obtain list of individuals available for shift work for the Field Test Coordinator.
- d. JFT Agapito Assoc. located geophones on ESF Pad, geophones recorded data from blasts and peak particle velocity was determined.

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

- a. Received and Issued the following Controlled Documents:

Job Packages

YMP/JP93-3A, Rev. 0, "Drilling and Testing of Borehole UE 25 NRG#5."

Testing Planning Packages: N/A

Specifications: N/A

Drawings: N/A

Work Programs: N/A

FCRs

- FCR 93/199, "Modify the List of 'Related Documents' to Agree with the Drawing."
- FCR 93/237, "Delete Superseded Drilling & Blasting Section" (Late Entry).
- FCR 93/236, "Water use in the Starter Tunnel for the North Ramp."
- FCR 93/257, "Prohibition of Large Storage in the Starter Tunnel."
- FCR 93/258, "Clarification of Documentation Requirements for Quality Affecting Work in Spec 09."
- FCR 93/259, "Addition of Gradient Requirements during Construction and Add Note to Include Blast Analysis."

- B. Reproduction: 9,361 pages copied.  
563 drawings copied.
- C. Documents Issued: 422 controlled documents
  - 344 FCR's
  - 25 DWG's
  - 0 WP's
  - 53 JP's233 information copies.
- D. DTAR logoffs: 427

8. Field Training, (SAIC)

- a. The General Employee Radiological Training. 32 people attended.
- b. Standard First Aid ...13 people attended and were certified.
- c. 4 GET 1.5 exams ere administered. All examines passed.
- d. Radiological Control Technician Testing conducted. A total of 9 took the testing.
- e. New Miner Training conducted for 13 people.

*Winfred A. Wilson*  
Winfred A. Wilson  
Site 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

**MAY 06 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 week ending April 30, 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: High-Level Waste Conference; USGS Hydrology Field Trip; Nuclear Regulatory Commission (NRC) Field Trip; High-Level Waste Conference Wives; Lander County; UNLV Teachers and Occidental College.
- b. The Site Manager prepared the Job Package (JP) Authorization Letter for JP 93-05, Drilling and Testing of Borehole NRG-2A.
- c. The Site Manager prepared and distributed the Weekly YMSO Field Activity Report to the Project Manager for week ending April 23, 1993.
- d. Provide operations, administrative, and security support to the Yucca Mountain Site Manager and his DOE staff.
- e. Provided operational and administrative support for site characterization activities in the field.
- f. Provided administrative support for issuing vehicles, first aid kits, fire extinguisher and other necessary equipment to personnel performing field duty.
- g. Prepared and transmitted daily operations reports to NORSOC, and the biweekly reports to HQ OCRWM.
- h. Prepared forty-five (45) badging request for site visitors and daily field work, including 2 foreign national requests.

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- i. Provided duty officer support for ESF swing and graveyard shift operations.
  - j. Processed ten (10) Work Order Requests.
  - k. Continued planning for office reorganization within the FOC building.
  - l. Issued one Field Operating Permit (93-009), JP 93-05, concerning drilling at NRG-2A.
  - m. Conducted special photo mission to support DOE/USGS regarding Stop Work at ESF.
  - n. Continued providing round the clock photographic coverage for ESF North Portal operations.
  - o. Prepared script and footage for April Field Activities video report.
  - p. The Site manager reviewed and commented on the 50% design review of ESF Package 2. Comments submitted to CRWMS M&O.
  - q. The Bullfrog Planning Commission continuing with development of data base for Facilities Management Program.
- B. Project Safety & Health, (DOE/SAIC)**
- a. Continued audit on First Aid Kit Program.
  - b. Reviewed and commented on 50% design review for ventilation and conveyor belt system on ESF.
  - c. Researched and drafted letter to EDD requesting technical justification of roof support methods for Site Manager.
  - d. Continued REECo Safety & Health bulletin and distributed to participants.
  - e. Completed Seat Belt Safety bulletin and distributed to participants.
  - f. Continued heat stress syndrome evaluation in Bldg 4015 to determine if it has significant impact.

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- g. Completed two surveillance: UZ-14, SMF Trailer; and NRG-5, SMF Trailer.
- h. Occurrence Reports - three awaiting for FM Signature.
  - 1. REECo - six outstanding: 3 awaiting FM Signature; 3 rejected (09/22/92 and 2 on 4/15/93).
  - 2. SAIC - 2 outstanding: 1 initial notification (04/20/93); 1 10 day notification 904/29/93).

2. Raytheon Services Nevada, (RSN)

A. Field Support

- a. Geologic mapping survey of Ghost Dance Fault, Phase II is ongoing.
- 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. MTL tests are complete.
- c. Survey for Geologic Mapping of North Portal Box Cut, Phase III and IV are complete, calculations remain.
- d. Re-survey of trenches CF1 and T8 complete. Calculations remain.
- e. Environmental survey of Batch Plant is complete.
- f. Starter Tunnel survey is ongoing.
- g. Survey of Geophone locations for Construction monitoring is completed.
- h. Survey NRG-5 drill pad and access road completed, calculations remain.
- i. Survey NRG-4 centerline complete, calculations remain.
- j. Issued six (6) Work Initiations in support of ongoing and upcoming job packages.
- k. Field Engineering continues to provide support to JP: 91-9 Rev 3; 92-2; 92-5; 92-8; 92-12; 92-17; 93-03 and 92-20.
- l. Field Engineering continues to check Trench 14, JP 91-2 daily to insure suitability for operations.

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- m. Survey crew continuing work on the Area 25 Survey Control Net.
- n. Survey of Starter Tunnel, support is ongoing.

B. Quality Control

- a. Continued verification activities on NRG-5 borehole utilizing the Joy #1 drill rig.
- b. Continued verification of activities on UZ-14 borehole, utilizing the LM-300 drill rig.
- c. Performed surveillance on Trenches in Stagecoach Road (SCR-T1, T2, T3) and Crater Flats (SCF-T1, CF-2, T-8).

3. Sample Management Facility, (SMF/SAIC)

- a. Support drilling operations and continued processing core on UZ-14 and NRG-5.
- b. Removed approximately 25 core specimens for shipment to LANL and USGS.
- c. Laid out approximately 142 boxes of core from UZ-16, NRG-6, NRG-3, and NRG-1 for PI examinations.

4. YMP Hydrologic Research Facility, (USGS)

The following activities were accomplished by USGS staff:

- a. Examining drill core and monitoring soil gas probe array.
- b. Collecting data and calibrate equipment at seismic sites on the Ranch.
- c. Mapping Ghost Dance Fault in the area of Antler Ridge.
- d. Logging of Trench SCR-T1 and escort DRI and EG&G for seismic refraction lines on Windy Wash Fault.
- e. Conducting geologic mapping in Midway Valley Trenches.
- f. Conducting overflights of Yucca Mountain and surrounding areas for Laser Mapping and Surveying.
- g. Collecting QA data for geologic mapping and conducting surveys for geologic map of ESF North Ramp.

- h. Performing field work in ~~Rock~~ Valley.
- i. Clean exposures and map trenches in Crater Flats.
- j. Collecting water flow data and water level measurement.
- k. Collecting soil moisture samples from several neutron holes where shallow soil tensiometer are.

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

A. Drilling

- a. JP 92-17, UZ-14, LM 300 drill rig, finished cementing 16" casing to surface, reamed to 91.00 feet.
- b. JP 92-11, NRG-5,, hammered 5 7/8" hole to 517 feet. Ran 5" protective string of casing to 525.82 feet, hammered 3 7/8" hole to 669.97 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 preparing subgrade and placing aggregate base course at the access road; continued placing bedding material and common fill at 48" RCP at access road; drilled, loaded & shot rounds NP-PD-008, NP-PD-009, NP-PD-010, and NP-PD-011; REECO "shot" 6 fibercret test panels; supported mappers.

6. Los Alamos National Laboratory, (LANL)

- a. Continued monitoring construction activities at the north portal box cut.
- b. Continue to blast in Starter Tunnel. Mapping, photography and surveying continue. Shotcreting of crown commenced right after mapping.

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- c. Continue to obtain list of individuals ~~available~~ for shift work for the Field Test Coordinator.
- d. PI's placed their geophones, geophones recorded data from blasts and peak particle velocity was determined.

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

Received and Issued the following Controlled Documents:

a. FCRs

- FCR 93/302, "Culvert Installation Clarification."
- FCR 93/303, "Changes to Riprap Properties."
- FCR 93/251, "Excavation Note to be added to Drawings."
- FCR 93/314, "Clarification for Scope and Scoping Documents."
- FCR 93/306, "Drainage Channel Repair."

b. Reproduction

6,490 pages copied  
1,036 drawings copied

c. Documents Issued

261 controlled documents  
- 261 FCR's  
- 0 DWG's  
- 0 WP's  
- 0 JP's  
0 information copies

d. DTAR Logoffs

187

8. Field Training, (SAIC)

- a. Two (2) people attended the General Employee Radiological Training.
- b. 12 GET 1.5 exams were administered. All examines passed.
- c. Radiological Control Technician Testing conducted. A total of 9 took the testing.

d. Two (2) people attended General Employee Training.

*Winfred A. Wilson*

Winfred A. Wilson  
Site Manager

YMP:WAW-93/113

cc:

R. M. Cameron, CRWMS M&O/YMSO, Mercury, NV  
M. D. Voegele, SAIC, Las Vegas, NV  
R. R. Schneider, SAIC/YMSO, Mercury, NV  
G. K. Beall, SAIC, Las Vegas, NV  
C. L. Lugo, SAIC, Las Vegas, NV  
E. M. Gardiner, SAIC, Las Vegas, NV  
C. J. Cotten, SAIC, Las Vegas, NV  
G. D. Milligan, SAIC/YMSO, Mercury, NV  
M. B. Blanchard, YMP, Las Vegas, NV  
J. R. Dyer, YMP, Las Vegas, NV  
S. B. Jones, Las Vegas, NV  
D. R. Williams, YMP, Las Vegas, NV  
J. T. Sullivan, YMP, Las Vegas, NV  
R. B. Baumeister, YMP/YMSO, Mercury, NV  
W. R. Tunnell, YMP/YMSO, Mercury, NV  
R. J. White, YMP/YMSO, Mercury, NV  
Phil Justus, NRC, Las Vegas, NV

bcc:

A. C. Bonk, REECO, Las Vegas, NV



**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

MAY 06 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  
APRIL 30, 1993 (SCP: N/A)

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

A. Site Characterization Planning

Field Operations

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

Work continues with double shifts from 8 a.m. to 12 a.m. at NRG-5 with the Joy 1 drill rig. Reynolds Electrical & Engineering Co., Inc. (REECo), has hammer-drilled to a depth of 365 feet with the Odex casing down to 217.82 feet. The completed depth of this borehole will be 950 feet.

Drilling activities continue with the LM-300 drill rig at UZ-14. REECo has set 16-inch surface casing to a depth of 51.3 feet as of April 23, 1993. Several open fractures were encountered which required the installation of 285.5 cubic feet of grout. The planned depth of this borehole is 2,000 feet.

On Job Package 92-20, North Portal Pad and Facilities, REECo continued road work and work at the drainage ditch at the rock storage and topsoil storage area. They began preparing the Exploratory Studies Facility (ESF) access road subgrade to receive the aggregate base (pea gravel). REECo has cut down the ramp to allow excavation of the North Portal down to the spring line. Shotcrete was applied to the back and to the box-cut face around the line drilling holes.

Sample Management Facility

UZ-14 was reamed down to 52.3 feet on April 23, 1993, and the surface casings were set to 51.3 feet. Drive core samples and cutting samples were collected.

Core and cuttings samples to 51.9 feet from USW UZ-14 were received and 66 cuttings samples to 365 feet for UE25 NRG-5 were received.

Approximately 60 core specimens were removed for shipment to Sandia National Laboratories and the U.S. Geological Survey (USGS). Approximately 300 boxes of core were laid out for examination by principal investigators from Boreholes USW UZ-16, UE25 NRG-6, UE25 NRG-3, UE25 NRG-2, UE25 NRG-1, and UE25 RF-8.

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Lake H. Barrett

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Regarding UE25 NRG-5, drilling on the night shift began on April 20, 1993. Two shifts drilled through April 23, 1993, reaching a depth of 365 feet.

One poster session and one paper were presented by technical staff members at the International High-Level Radioactive Waste Management (IHLRWM) Conference held at the Mirage Hotel & Casino in Las Vegas, Nevada, during the week of April 26, 1993.

Drilling operations were supported for USW UZ-14 and UE25 NRG-5. Processing of core from USW UZ-14 and UE25 NRG-5 continued.

#### Regulatory Interactions

Members of the Regulatory Interactions Branch attended some sessions of the IHLRWM Conference in Las Vegas.

#### Issue Resolution

The Issue Resolution Steering Group will be meeting on May 3, 1993, at 2 p.m. in the eleventh floor conference room of the Bank of America Center. The purpose of the meeting is to discuss results of the May 3, 1993, morning management meeting with the U.S. Nuclear Regulatory Commission (NRC) regarding topical reports.

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

Proposed resolution to comments made on the MGDS AO, Revision 2, has been transmitted to review coordinators via InfoSTREAMS. The comment resolution meeting is scheduled for April 29, 1993.

#### Advisory Committee on Nuclear Waste (ACNW) Interactions

The Yucca Mountain Site Characterization Project Office (YMPO) is preparing presentations on study plans (SP) and semiannual site characterization progress reports (PR) for the May 20, 1993, meeting of the ACNW.

#### Technical Analysis

The Technical Analysis Branch Chief participated in a teacher training briefing on the U.S. Department of Energy (DOE) curriculum "Science, Society, and America's Nuclear Waste" broadcast to 250 sites nationwide from Knoxville, Tennessee. The technical analysis and performance assessment (PA) staff participated in the IHLRWM Conference. The staff also participated in reviews of the Lawrence Livermore National Laboratory (LLNL) scientific investigation plan on the large block test and in the 50 percent design review for ESF Design Package 2.

Waste isolation evaluations for Well NRG-4 and for the C-Well program were completed and work continued on evaluations for tracers, fluids, and materials for Wells SRG-5 and SD-11. The saturated zone code SLAEM is being evaluated for use in future waste isolation evaluations. In addition, work continues on two corrective action report responses concerning the format of the title page of waste isolation evaluations performed by the Civilian Radioactive Waste Management System Management and Operating Contractor (CRWMS M&O).

Reports on the PA technical information exchanges and on the Repository Integration Program model test PA exercise were also completed and submitted for YMPO review.

ESF Task Force Activities

Design

The 50 percent management and independent technical reviews of Design Package 1B (Surface Facilities, North Portal) and Design Package 2 (North Ramp - Surface to Topopah Spring Level) are currently underway. Design continues on both packages for 90 percent reviews scheduled for July and August 1993.

Construction

Excavation continues on the Tunnel Boring Machine (TBM) Starter Tunnel at the North Portal. The pilot drift is in approximately 13 meters as of April 23, 1993. Construction is continuing on drainage improvements to the North Portal access road and on the drainage channel around the North Portal pad.

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

Award TBM Contract	May 15, 1993
Award Subcontract for Underground Construction	June 1993
Begin 90 percent design review, Package 1B	July 19, 1993
Begin 90 percent design review, Package 2	August 11, 1993
Complete 60 meters of TBM Starter Tunnel	September 15, 1993

Site Characterization Plan (SCP)/SP Status

The NRC completed Phase I review of SP 8.3.1.15.1.8, "In Situ Design Verification."

STUDY PLAN BREAKDOWN

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In Screening Review .....	0
In YMPO Review .....	4
Awaiting Comment Resolution .....	6
Awaiting Author Revision .....	0
In YMPO Verification Audit .....	8
Preparing to Submit or Awaiting YMPO Approval .....	1
Awaiting Submission to the NRC .....	1
NRC Phase 1 Review .....	11
NRC Acceptance .....	45
Total .....	76

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 SCP/SP Status:

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

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## State of Nevada Comments Status:

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

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## NRC Comments Status:

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

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B. Project Planning and Control

Formal revision of the four project-level administrative procedures (AP) related to the Planning and Control System was initiated.

Reconciliation was completed of the fiscal year (FY) 1993 Cost/Schedule Baseline (Budget) to the Approved Funding Plan.

C. Quality Assurance (QA) Implementation

The Yucca Mountain QA Division staff is conducting Surveillance 93-021 of REECo First Line Inspection Activities this week.

Determination of Importance and Grading EnhancementImplementation

The revision to the Q-List is being drafted to incorporate the results of the ESF Starter Tunnel Drill and Blast Section Determination of Importance Evaluation and to retain all natural barriers on the Q-List. This is per the Deputy Project Manager's review of Early Classification of Natural Barrier results.

The Assessment Team (AT) provided comments on the 50 percent design review of ESF Design Package 2.

The revised AT Classification of Items Management Plan has been submitted to the Plans and Procedures Department to process and submit for review.

The AT support staff continue to support efforts leading to phase-out of AP 6.17Q.

MAY 06 1993

Lake H. Barrett

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D. Public Outreach and Institutional Activities

The Yucca Mountain Lecture Series, "The Song of the Land," was presented by Richard Arnold, a consultant, on April 25, 1993, in Pahrump, Nevada, and on April 27, 1993, in Las Vegas. Approximately 60 people were in attendance. Richard Arnold gave Native American Indian Cultural presentations to 27 students at Whitney Elementary on April 27, 1993; to 130 students at Ruthe Deskin Elementary on April 28, 1993; and to 150 students at Orr Junior High School on April 29, 1993. Richard Arnold also gave a presentation on April 26, 1993, to 20 teachers for REECO's Teacher Partnership Workshop. Thomas Bjerstedt, YMPO, gave a separate geology presentation at this workshop.

There were several general YMP overviews given this week. Ella Jackson, REECO, gave a general overview presentation to 30 students at Helen C. Cannon Junior High School on April 29, 1993; Todd Kaish, CRWMS M&O, gave a general overview presentation to 90 students at Twin Lake Elementary on April 30, 1993; and Ken Beall, Science Applications International Corporation, gave a general overview to 100 members of the Valley Electric Association at their annual meeting in Beatty, Nevada, on April 24, 1993.

Several educational presentations were provided this week. Thomas Geer, CRWMS M&O, gave an energy presentation to 30 students at Mt. Charleston Elementary on April 30, 1993. Todd Kaish gave an electricity presentation to 140 students from Laura Dearing Elementary on April 27, 1993; Martin Rose and Effie Harle, both from Technical and Management Support Services, provided support. Todd Kaish gave an electricity presentation to 140 students from Helen Marie Smith Elementary on April 28, 1993.

Project Manager Carl Gertz gave a general overview with an emphasis on career opportunities to an audience of 50 at the Office of Civilian Radioactive Waste Management (OCRWM) Fellowship Student Conference on April 26, 1993.

Russell Dyer, YMPO, and Larry Engwall, CRWMS M&O, presented information on Little Skull Mountain to 500 people at the Little Skull Mountain Plenary Session on April 27, 1993.

The Twenty-Sixth Public Open House tour of Yucca Mountain, Nevada, was conducted on April 24, 1993, for approximately 300 people. Tour participants visited the Las Vegas Yucca Mountain Information Office, the FOC, two laboratories, the LM-300 drill rig, and the top of Yucca Mountain. Tour participants also drove through Midway Valley to view the ESF North Portal construction.

Four other tours of Yucca Mountain were conducted. These included two tours on April 26, 1993: one for 100 guests from the IHLRWM Conference and one for 40 guests on a Hydrology Field Trip. Tours were also conducted on April 27, 1993, for 13 spouses of guests from the IHLRWM Conference, and on April 29, 1993, for 15 guests from Lander County, Nevada. The Institutional and External Affairs (IEA) county representative staff accompanied the guests from Lander County.

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Exhibits were set up for Earth Day at the Earth Fair in Las Vegas April 24-25, 1993; at the American Association of Petroleum Geologists in New Orleans, Louisiana, April 25-28, 1993; and at the IHLRWM Conference April 26-30, 1993.

The IEA staff reedited into an unnarrated five-minute video new computer animation of the ESF North Portal pad and underground scenes from the ESF ramps including shots of a TBM.

The IEA staff developed a new work exhibit that shows the blasting and drilling for the TBM Starter Tunnel at the ESF as well as new work on the ESF.

Various IEA staff presented professional papers and attended the IHLRWM Conference on April 29, 1993.

On April 30, 1993, the IEA staff attended a meeting with Nye County officials in Las Vegas.

## II. ANALYSIS & VERIFICATION DIVISION

The staff attended the Appropriations Subcommittee hearing on Energy and Water Development on the OCRWM budget on April 27, 1993. They participated in the OCRWM Socioeconomics Committee Meeting on April 28, 1993, in Las Vegas; and in the Defense Waste Processing Facility and West Valley Demonstration Project Technical Review Group meeting April 27-29, 1993, in Washington, D.C.

The staff assisted YMPO in the self assessment required for preparation for the PR Business Management Review April 18-30, 1993, in Las Vegas.

### MGDS

A workshop was organized and a draft memorandum was prepared for DOE activities related to Section 801 of the Comprehensive National Energy Policy report.

Viewgraphs were prepared for the Section 801 Workshop and Alternative Program Strategies Workshop on April 28, 1993, in Las Vegas.

The staff prepared draft memorandum and organized a workshop for Review of Proposed Program Strategy for OCRWM.

Material was prepared for presentation at the IHLRWM Conference regarding the topic, Detachment Faulting and Regulatory Implication.

### Occurrence Reporting Process System (ORPS)

The staff attended the ORPS Training Seminar in Houston, Texas, the week of April 19, 1993.

## III. GENERAL INFORMATION ITEMS

### CRWMS M&O

Waste isolation evaluations were coordinated for the ESF Package 1A construction and Design Packages 1B and 2 for the 90 percent design review. The schedule for the remainder of the FY calls for approximately 20 evaluations with an additional 10 evaluations in early FY 1994.

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LLNL

Regarding Work Breakdown Structure 1.2.5.3.4 (Geologic and Engineering Materials Bibliography of Chemical Species - GEMBOCHS), three organic acids (formic, propanoic, and butanoic) were transferred to the auxiliary basis set of aqueous species in the SUPCRT92 and composite data subsets of GEMBOCHS. This transfer permits specification of the concentrations of these acids as input parameters for EQ3/6 calculations. A revised suite of thermodynamic datafiles (R19) was generated by DOOUT incorporating the aqueous-acid transfers.

Los Alamos National Laboratory (Los Alamos)

Julie Canepa and Anders Wistrom hosted Jens Isemo of the Office of Science and Technology of the Swedish Embassy, Washington, D.C. Julie Canepa presented an overview of the YMP and discussed current YMP research being conducted at Los Alamos.

Eight Los Alamos YMP staff members presented papers at the IHLRWM Conference. The topics included the following:

1. Calcite deposits in fractures at Yucca Mountain
2. Prioritization of ESF Testing and Integration with Design and Construction
3. Radionuclide Solubility and Speciation Studies for the Yucca Mountain Site Characterization Project
4. Aperture Characteristics, Saturated Fluid Flow, and Tracer Transport Calculations for a Natural Fracture
5. Dependence of Radionuclide Sorption on Sample Grinding, Surface Area, and Water Composition
6. Testing Models of Flow and Transport in Unsaturated Porous Media
7. Neptunium Retardation with Tuffs and Groundwaters from Yucca Mountain
8. Diffusion of Sorbing and Nonsorbing radionuclides in Tuff
9. Control of Tracers, Fluids, and Materials at the Yucca Mountain Site Characterization Project

USGS

The saturated zone hydrology staff began collecting water chemistry, soil chemistry, and biological data from additional playas and springs in the Yucca Mountain area. The collection trip will last about ten days with the first part of the trip concentrating on sites at the Nellis Bombing Range.

The saturated zone hydrology staff placed a small packer in the access tube to the lower interval of well USW H-5 so that fluid pressure, rather than water levels, can be monitored. This makes the well much more sensitive to short-term water-level fluctuations such as those caused by earthquakes. Well USW H-5 is now fully operational and has been returned to its former status.

IV. UPCOMING EVENTS CALENDAR

Please note that the usage of "(P)" in the calendar indicates that the event is open to the public. Educational presentations and State and Public Interactions are coordinated by the Speakers Bureau; contact Jacqueline Brandt at (702) 794-7896 or Theresa Hirsch at (702) 794-7759 for additional information. Exhibits and Public Update Meetings are coordinated by Joanna R. Magruder at (702) 794-7056, and Tours are coordinated by Carleen R. Hill at (702) 794-7375.

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
<b>A. <u>DOE/HO Meetings</u></b>			
Wednesday, May 5	Program Management Meeting	Washington, DC	C. Gertz
Tuesday- Wednesday, June 8-9	OCRWM Quarterly Program Review	Televideo	C. Gertz
<b>B. <u>CRWMS M&amp;O/DOE Meetings</u></b>			
Tuesday, May 25	CRWMS M&O Program Management Review	Vienna, VA	C. Gertz
Wednesday, June 30	CRWMS M&O Quarterly Integration Meeting	Televideo	C. Gertz
<b>C. <u>Internal and DOE Nevada Operations Office Meetings</u></b>			
Friday, May 7	Technical Project Officers' Meeting	Las Vegas, NV	C. Gertz
Friday, May 7	Planning & Budget Meeting	Las Vegas, NV	C. Gertz
<b>D. <u>NRC Interactions</u></b>			
Monday, May 3	Management Meeting on Topical Report (P)	Las Vegas, NV	T. Bjerstedt
TBD	Technical Exchange - Program Planning and Integration (P)	Video-Conference	L. Desell T. Bjerstedt
TBD	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

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<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>YMPO Contact</u>
D. <u>NRC Interactions</u> (Continued)			
Tuesday, June 8	Technical Exchange - Geophysics Integration (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, June 9	Technical Exchange - Volcanism (P)	Las Vegas, NV	T. Bjerstedt
Wednesday, July 28	Technical Exchange - ESF Title II Design (P)	TBD	T. Bjerstedt
E. <u>Nuclear Waste Technical Review Board (NWTRB) Interactions</u>			
Tuesday- Saturday, June 1-12	NWTRB International Trip	United Kingdom, France, Belgium	J. Cooper
Monday- Thursday, July 12-15	NWTRB Full Board Meeting (P)	Denver, CO	J. Cooper
Tuesday- Friday, October 19-22	NWTRB Full Board Meeting (P)	Las Vegas, NV	J. Cooper
F. <u>ACNW Interactions</u>			
Wednesday- Thursday, May 19-20	ACNW 54th Meeting (P)	Bethesda, MD	A. Gil
Tuesday, July 20	ACNW Working Group on Engineered Barrier System (P)	TBD	A. Gil
Wednesday- Thursday, July 21-22	ACNW 56th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, August 25-26	ACNW 57th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, September 22-23	ACNW 58th Meeting (P)	TBD	A. Gil
Wednesday- Thursday, October 27-28	ACNW 59th Meeting (P)	Las Vegas, NV	A. Gil

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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>			
Tuesday, May 4	Underground Structures, Colorado School of Mines	Golden, CO	C. Gertz
Tuesday, May 4	Harvey Dondero Elementary	Las Vegas, NV	T. Kaish J. Follette
Wednesday, May 5	University of Washington	Seattle, WA	P. Standish
Thursday, May 6	Nevada Power Company	Las Vegas, NV	C. Gertz
Thursday, May 6	Twin Lakes Elementary	Las Vegas, NV	T. Kaish P. Snyder
Thursday- Friday, May 6-7	Roy Martin Middle School	Las Vegas, NV	A. Gil
Saturday, May 8	Girl Scouts	Las Vegas, NV	D. Rakestraw
Saturday, May 8	Boy Scouts Atomic Energy Merit Badge Workshop	Las Vegas, NV	E. Harle
Monday, May 10	Mt. Charleston Elementary	Mt. Charleston, NV	A. Gil
Tuesday, May 11	Lomie Heard Elementary	Las Vegas, NV	R. Arnold
Tuesday, May 11	John S. Park Elementary	Las Vegas, NV	T. Kaish E. Harle
Friday, May 14	Orr Junior High School	Las Vegas, NV	A. King
Friday, May 14	Sandy Valley Elementary	Sandy Valley, NV	A. Gil

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
G. <u>State and Public Interactions</u> (Continued)			
Saturday, May 15	Girl Scouts Geology Workshop	Las Vegas, NV	E. Harle
Monday, May 17	Green Valley Kiwanis Club	Henderson, NV	A. Robison
Monday, May 17	Booker Sixth Grade Center	Las Vegas, NV	B. Schultz
Monday, May 17	Conference of Radiation Control Program Directors	San Francisco, CA	C. Gertz
Wednesday, May 19	International Right of Way Association	Las Vegas, NV	G. Fasano
Wednesday, May 19	Sunrise Acres	Las Vegas, NV	K. Grassmeier J. Brandt
Thursday, May 20	Martin Luther King School	Las Vegas, NV	J. Hartley
Friday, May 21	Burkholder Middle School	Las Vegas, NV	J. Blink
Saturday, May 22	President's Tea of the Sunrise Council (PTA)	Henderson, NV	E. Harle A. Gil
Sunday, May 23	Yucca Mountain Lecture Series (P)	Beatty, NV	J. Weigand
Tuesday, May 25	Pittman School	Las Vegas, NV	T. Kaish C. Tung
Tuesday, May 25	Yucca Mountain Lecture Series (P)	Las Vegas, NV	J. Weigand
Wednesday, May 26	Sandy Valley Elementary	Sandy Valley, NV	T. Kaish L. Anderson
Thursday, May 27	American Business Women's Association	Las Vegas, NV	J. Younker B. Reilly
Monday, June 14	Rapid Excavation & Tunneling Conference	Boston, MA	C. Gertz
Wednesday, June 16	Palo Verde Generating Station	Phoenix, AZ	G. Fasano E. Harle
Sunday, June 20	Vanishing Desert Greater Opportunity Group	Las Vegas, NV	A. Gil

<u>Date</u>	<u>Event</u>	<u>Location</u>	<u>Speaker</u>
<b>G. <u>State and Public Interactions</u> (Continued)</b>			
Sunday, June 20	Yucca Mountain Lecture Series (P)	Pahrump, NV	W. Dixon
Tuesday, June 22	Yucca Mountain Lecture Series (P)	Las Vegas, NV	W. Dixon
Friday, June 25	Diablo Canyon Nuclear Power Plant	Avila Beach, CA	G. Fasano
Wednesday, July 7	University of California, Santa Barbara	TBD	C. Gertz
Monday, August 2	U.S. Council on Energy Awareness (USCEA) Energy Information Centers	Chicago, IL	C. Gertz
Tuesday, August 17	1993 American Institute of Chemical Engineers Summer National Meeting	Seattle, WA	C. Gertz
Tuesday- Friday, August 17-20	Second International Mixed Waste Symposium	Baltimore, MD	C. Gertz
Friday, September 10	Public Gas Service Gas Company	TBD	C. Gertz
Sunday, September 26	Children's Discovery Museum	Las Vegas, NV	R. Arnold
Monday- Wednesday, September 27-29	Industrial & Engineering Chemistry Division Symposium	Atlanta, GA	C. Gertz
Monday- Friday, November 15-19	American Nuclear Society	San Francisco, CA	C. Gertz

<u>Date</u>	<u>Event</u>	<u>Location</u>
<b>H. <u>Exhibits Scheduled</u></b>		
Monday, May 10	Public Update Meeting (P)	Beatty, NV
Tuesday, May 11	Public Update Meeting (P)	Las Vegas, NV

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<u>Date</u>	<u>Event</u>	<u>Location</u>
H. <u>Exhibits Scheduled</u> (Continued)		
Thursday, May 13	Public Update Meeting (P)	Reno, NV
Sunday- Tuesday, May 16-18	USCEA	St. Petersburg, FL
Wednesday, May 19	Public Open House (P)	Las Vegas, NV
Wednesday- Friday, May 19-21	Geological Society of America 1993 Combined Cordilleran & Rocky Mountain Section Meeting	Reno, NV
Saturday, June 19	Public Open House (P)	Las Vegas, NV
Saturday, July 24	Public Open House (P)	Las Vegas, NV
Friday- Saturday, August 20-21	Home Show (P)	Las Vegas, NV
Saturday, August 21	Public Open House (P)	Las Vegas, NV
Tuesday- Monday, August 24-30	Nevada State Fair Reno (P)	Reno, NV
Thursday- Tuesday, September 2-7	Elko Fair (P)	Elko, NV
Saturday, September 25	Public Open House (P)	Las Vegas, NV
Tuesday- Saturday, September 28- October 2	Nevada Library Association	Elko, NV
Friday- Monday, October 1-11	Jaycee State Fair (P)	Las Vegas, NV
Saturday, November 6	Boy Scouts Expo	Las Vegas, NV

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<u>Date</u>	<u>Event</u>	<u>Escorts</u>
I. <u>Tours Scheduled</u>		
Saturday, May 1	Teacher Workshop and Occidental College	M. Powell A. Gil
Monday May 3	Institute of Shaft Drilling Technology	TBD
Wednesday, May 5	USGS Headquarters	R. Craig
Wednesday, May 5	O'Callahan Middle School	TBD
Thursday, May 6	Pahrump Junior High	TBD
Monday, May 10	Los Alamos	TBD
Monday, May 10	DOE Contractor Classification Officers Meeting	TBD
Wednesday, May 19	Public Open House (P)	Various Escorts
Saturday, June 19	Public Open House (P)	Various Escorts
Monday, June 21	Girl Scouts Wider Opportunity Program	TBD
Saturday, July 24	Public Open House (P)	Various Escorts
Tuesday, August 17	Senior Tripsters	TBD
Saturday, August 21	Public Open House (P)	Various Escorts
Saturday, September 25	Public Open House (P)	Various Escorts
October TBD	National Association of Regulatory Utility Commissioners	TBD

YMP:VFI-3970

*for*   
Carl P. Gertz  
Project Manager