



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

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TO: John J. Linehan, Director, HLPD
Division of High-Level Waste Management, M/S 4-H-3

FROM: Paul T. Prestholt, Sr. On-Site Licensing Representative

DATE: July 12, 1989

SUBJECT: WEEKLY ACTIVITY REPORT, PROTOTYPE TESTING

Please find enclosed the above-referenced report received in this office, i.e., weeks ending June 11 and June 18, 1989.

PTP:nan
Enclosure

cc: Carl Johnson
Agency for Nuclear Projects
Nuclear Waste Project Office
Capitol Complex
Carson City, Nevada 89710

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WEEKLY ACTIVITY REPORT
PROTOTYPE TESTING
Week Ending - June 11, 1989

ACCOMPLISHMENTS

- LLNL - Engineered Barrier: The cool down measurements are continuing in the Rock Mechanics incline.
- USGS - Cross Hole: Modification to equipment is continuing at USGS, Denver (packers and instrumentation). There is no NTS activity at this time.
- Wet and Dry Drilling: Data collection is continuing on the test holes located in the U12g12 drift and the laser drift.
 - Drill Hole Instrumentation: Data collection is continuing on the two test holes located near the end of the U12g12 drift.
 - Optimal Rubble Size: Criteria letter addendum to include the alcove mining portion of the Controlled Blasting test was submitted to Los Alamos.
 - Blast effects: There was no NTS activity during this reporting period.
 - Excavation Effects: There was no NTS activity during this reporting period.
 - Perched Water: Continued HQ coring in the Laser Drift to a total depth of 103.4 feet. This should complete drilling requirement for the Perched Water Test (Hole U12G-PW #3). Total footage for this reporting period is 34 feet. Core recovery for this reporting period is 90%. Total core recovery is 93.9%. The core continues to be broken up. The longest piece is 1.4 feet.
 - Controlled Blasting: The PI is continuing preparation for this test at USBR, Denver.
 - In-Situ Stress: Ex hole drilled to a total depth of 36.1 feet. A 6 inch tricone bit is being used to drill through the rubble zones. A TV camera is being run into the Ex hole to determine the locations of rubble zones. To date, camera indicates the rock is very fractured with virtually no competent rock for overcoring. Total Ex footage this reporting period is 11.5 feet. Core recovery for the Ex hole was 100%, but the core was too broken up to be used. Six inch diameter hole depth using the rock bit is 35.7 feet.
 - Intact Fracture: There was no NTS activity during this reporting period.

LANL - Diffusion Test: Test monitoring continues in DH#2 in the CFE 3 and 4 drift, and DH#3 in the experiment drift.

SNL - Thermal Stress: There was no NTS activity during this reporting period.

PLANNED WORK:

LLNL - Engineered Barrier: LLNL personnel will continue to monitor cool down measurements. Coring of the instrument package holes is tentatively scheduled to begin on July 10, 1989.

- USGS - Mapping: Fran Ridge mapping will commence as soon as Yucca Mountain Project authorization is obtained.
- Cross Hole: Preparation for G-Tunnel work is in progress, and tentatively is schedule to begin on October 2, 1989.
- Intact Fracture: Phase II work is scheduled to begin on July 10, 1989. Attend the Kick-off meeting for the Controlled Blasting test series on June 14, 1989.
- Drill Hole Instrumentation: No work other than data collection is scheduled.
- Wet and Dry Drilling: No work other than data collection is scheduled.
- In-situ Stress: Continue collection of core samples in the Demonstration drift.
- Controlled Blasting: Preparation to begin the Controlled Blasting Test is in progress. Attend the Kick-off meeting for the Controlled Blasting test series on June 14, 1989.
- Blast effects: Attend Kick-off meeting for the Controlled Blasting test series on June 14, 1989. Testing is scheduled to begin on August 21, 1989.
- Excavation Effects: Attend Kick-off meeting for the Controlled Blasting test series on June 14, 1989. Testing is scheduled to begin on September 14, 1989.
- Perched Water: Continue drilling NQ hole to total depth. Begin instrumentation of Perched Water holes.

- LANL - Diffusion: Continue monitoring DH #2, and DH #3. Develop a draft test installation coring procedure. Planning instrument panel movement to allow access for the Intact Fracture drilling near DH #2.

- SNL - Thermal Stress: Being preparing for test, which is scheduled to begin after October 1, 1989.

PROBLEMS AND ISSUES:

None

EXPENDITURES

.Prototype Testing:	Work Days Remain	<u>78</u>	Expended	<u>69</u> %
.REECO: Current Week-Prototype Testing	\$	11,347	Year to Date	\$320,833
Current Week-G-Tunnel Operation	\$	17,947	Year to Date	\$723,232
.H&N: Current Week-Prototype Testing	\$	7,676	Year to Date	\$199,760
.F&S: Current Week-Prototype Testing	\$	*	Year to Date	\$ *

*Information not available at the time of this report.

WEEKLY ACTIVITY REPORT
PROTOTYPE TESTING
Week Ending - June 18, 1989

ACCOMPLISHMENTS

- LLNL - Engineered Barrier: The cool down measurements are continuing in the Rock Mechanics incline.
- USGS - Cross Hole: Modification to equipment is continuing at USGS, Denver (packers and instrumentation). There is no NTS activity at this time.
 - Wet and Dry Drilling: Data collection is continuing on the test holes located in the G-Tunnel. U12g12 drift and laser drift.
 - Drill Hole Instrumentation: Data collection is continuing on the two test holes located near the end of the U12g12 drift.
 - Blast effects: A Controlled Blasting Test Series Kick-off meeting was held on June 14, 1989.
 - Excavation Effects: A Controlled Blasting Test Series Kick-off meeting was held on June 14, 1989.
 - Perched Water: Total depth of perched water hole #3 is 103.4 feet, drilled by the HQ coring method. Core recovery for this hole was 90%, and the core is broken up pretty badly. The largest pieces of core are 1.5 - 2 feet. The drillers spent a good portion of this reporting period cleaning the hole, as a rubble zone developed at a depth of 30 feet.
 - Controlled Blasting: The PI is continuing preparation for this test at USBR, Denver. A Controlled Blasting Test Series Kick-off meeting was held June 14, 1989.
 - In-Situ Stress: Hole is drilled to a total depth of 47.3 feet using ex hole for logging fractures with TV camera, and using a 6 inch rack bit is being used to drill through the fracture areas. Since this concept has been initiated, no core has been recovered. The PI and REECO drilling personnel are using different combinations of bits and drill steel to find an optimum solution to drilling a 6 inch overcore in the welded tuff.
 - Intact Fracture: A Kick-off meeting was held on June 14, 1989.
- LANL - Diffusion Test: Test monitoring continues in DH#2 in the CFE 3 and 4 drift, and DH#3 in the experiment drift. The instrument panel for DH #2 was relocated to accommodate planned Intact Fracture drill.
- SNL - Thermal Stress: There was no NTS activity during this reporting period.

PLANNED WORK:

- LLNL - Engineered Barrier: LLNL personnel will continue to monitor cool down measurements. Coring of the instrument package holes is tentatively scheduled to begin on August 14, 1989.
- USGS - Mapping: Fran Ridge mapping will commence as soon as Yucca Mountain Project authorization is obtained.

- Cross Hole: Preparation for G-Tunnel work is in progress, and tentatively is schedule to begin on October 2, 1989.
 - Intact Fracture: Phase II work is scheduled to begin on July 10, 1989.
 - Drill Hole Instrumentation: No work other than data collection is scheduled.
 - Wet and Dry Drilling: No work other than data collection is scheduled.
 - In-situ Stress: Continue collection of core samples in the Demonstration drift.
 - Controlled Blasting: Preparation to begin the Controlled Blasting Test is in progress.
 - Blast effects: Testing is scheduled to begin on August 21, 1989.
 - Excavation Effects: Testing is scheduled to begin on September 14, 1989.
 - Perched Water: Continue drilling NQ hole to total depth. Begin instrumentation of Perched Water holes.
- LANL - Diffusion: Continue monitoring DH #2, and DH #3. Develop a draft test installation coring procedure.
- SNL - Thermal Stress: Being preparing for test, which is scheduled to begin after October 1, 1989.

PROBLEMS AND ISSUES:

None

EXPENDITURES

.Prototype Testing:	Work Days Remain	<u>73</u>	Expended	<u>71</u> %
.REECO: Current Week-Prototype Testing	\$	16,765	Year to Date	\$337,597
Current Week-G-Tunnel Operation	\$	14,054	Year to Date	\$737,286
.H&N: Current Week-Prototype Testing	\$	4,888	Year to Date	\$204,648
.F&S: Current Week-Prototype Testing	\$	*	Year to Date	\$ *

*Information not available at the time of this report.