



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

**DEC 04 1995**

Dennis R. Williams, YMSCO, NV  
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**FIELD TEST COORDINATION REPORT FOR THE WEEK ENDING DECEMBER 1, 1995**  
(SCPB: N/A)

Enclosure 2 lists site characterization field activities that are currently active. Many of these are ongoing monitoring and mapping activities; therefore, only those activities having significant status change are addressed below.

**BOREHOLE USW SD-12**

Backfilling (grouting and stemming) around the instrument string was completed this week as planned. The instruments will be used to monitor in-situ pneumatic characteristics in selected stratigraphic intervals.

**C-HOLE COMPLEX TESTING**

No testing was performed this week. Preparatory work for tracer testing will begin next week and actual testing is anticipated to start by mid-December, 1995.

**EXPLORATORY STUDIES FACILITY**

The tunnel boring machine (TBM) continued excavation of the Main (North-South) Drift this week. As of 8 a.m., Friday, December 1, 1995, the TBM had reached approximate station 31+17.4 meters. Data collection in support of construction monitoring continues. Geologic mapping and sampling were completed to approximate station 30+30 meters. Preliminary tunnel stratigraphy identified to date is summarized in Enclosure 1.

Hydrochemistry testing continued in the first borehole in Alcove #2.

110069

YMP-5

951211026B 951204  
PDR WASTE  
WM-11 PDR

NH03 1/1  
102.8  
WM-11

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**MISCELLANEOUS ACTIVITIES**

A gravity survey was performed by Lawrence Berkeley National Laboratory geophysicists in the vicinity of Borehole WT-7 in Dune Wash. Results of the survey are to be used to aid further definition of the Dune Wash fault.

If you have any questions, please contact either W. Arch Girdley at 794-1934 or Drew H. Coleman at 295-7926.



W. Arch Girdley  
Team Leader for Field  
Test Coordination

AMSP:WAG-671

Enclosures:

1. Tunnel Stratigraphy
2. Site Characterization Field  
Activities in Progress

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cc w/encls:

J. G. Jones, HQ (RW-5.1) FORS  
C. J. Henkel, NEI, Washington, DC  
R. W. Craig, USGS, Las Vegas, NV  
C. J. Glenn, NRC, Las Vegas, NV  
L. S. Costin, M&O, Albuquerque, NM, M/S 1325  
N. Z. Elkins, M&O, Las Vegas, NV  
M. M. Mapa, M&O, Las Vegas, NV  
R. E. Smith, M&O, Las Vegas, NV  
L. J. Evans, M&O, Las Vegas, NV  
J. H. Peck, M&O, Las Vegas, NV  
C. L. Lugo, M&O, Las Vegas, NV  
S. C. Smith, M&O, Las Vegas, NV  
J. L. Woodruff, M&O, Las Vegas, NV  
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J. L. Svoboda, PSDO/REECO, Las Vegas, NV  
A. C. Williams, YMQAD, NV  
W. R. Dixon, YMSCO, NV  
R. C. Long, YMSCO, NV  
J. T. Sullivan, YMSCO, NV  
M. C. Tynan, YMSCO, NV  
J. T. Gardiner, YMSCO, NV  
R. S. Waters, YMSCO, NV  
J. R. Summerson, YMSCO, NV

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# PRELIMINARY ESF NORTH RAMP STRATIGRAPHY

## STRATIGRAPHY

## STATION

Tiva Canyon crystal poor upper lithophysal zone	0+00 to 0+99.5m
Tiva Canyon crystal poor middle nonlithophysal zone	0+99.5 to 1+90m
Tiva Canyon crystal poor lower lithophysal zone	1+90 to 1+99.5m
Bow Ridge fault zone	1+99.5 to 2+02m
Ranier Mesa	None
Pre-Ranier Mesa tuff	2+02 to 2+63.5m
Tuff "X"	2+63.5 to 3+33m
Pre-Tuff "X"	3+37 to 3+49.5m
Tiva Canyon vitric zone	3+49.5 to 3+59.5m
Tiva Canyon crystal rich nonlithophysal zone	3+59.5 to 4+34m
Tiva Canyon crystal rich lithophysal zone	4+34 to 4+39m
Tiva Canyon crystal poor upper lithophysal zone	4+39 to 5+53m
Tiva Canyon crystal poor middle nonlithophysal zone	5+53 to 5+87m
Tiva Canyon crystal poor lower lithophysal zone	5+87 to 6+17m
Tiva Canyon crystal poor lower nonlithophysal zone	6+17 to 7+77m
Tiva Canyon crystal poor vitric zone	7+77 to 8+69m
Pre-Tiva Canyon bedded tuffs	8+69 to 8+72.5m
Yucca Mountain Tuff	8+72.5 to 8+73.5m
Pre-Yucca Mountain bedded tuffs	8+73.5 to 9+12m
Pah Canyon Tuff	9+12 to 10+20m
Pre-Pah Canyon bedded tuffs	10+20 to 10+51.5m
Topopah Spring Tuff crystal rich vitric zone	10+51.5 to 12+00m
Topopah Spring crystal rich nonlithophysal zone	12+00 to 17+17m

Topopah Spring crystal rich lithophysal zone

17+17 to 17+97m

Topopah Spring crystal poor upper lithophysal zone

17+97m to 27+20m

Topopah Spring crystal poor middle nonlithophysal zone (Tsw2?)

27+20m to face

**Notes:** All stations given are referenced to the right springline unless otherwise noted. Stratigraphy is based on preliminary reports by United States Bureau of Reclamation mappers and is subject to revision.

\* This contact has not been verified by the USGS.

# Site Characterization Field Activities in Progress

<u>SCP ACTIVITY</u>	<u>TITLE</u>	<u>ACTIVITY</u>
8.3.1.3.2.1	Mineralogy, Petrology, and Rock Chemistry of Transport Pathways	ESF Sampling, Borehole Sampling
8.3.1.3.2.2	Mineralogic and Geochemical Alteration	ESF Sampling, Borehole Sampling
8.3.1.4.2.2	Structural Features Within Site Area	Surface & ESF Mapping
8.3.1.8.5.1	Characterization of Volcanic Features	Test Pits, Trenching
8.3.1.14.2	Soil and Rock Properties of Potential Location of Surface Facilities	Trenching, Ramp Exploration Holes, SD Holes
8.3.1.17.4.2	Location and Recency of Faulting Near Prospective Surface Facilities	Trench Logging
8.3.1.17.4.3	Quaternary Faulting Within 100 km of Yucca Mtn.	Surface Mapping
8.3.1.17.4.4	Quaternary Faulting in NE-Trending Fault Zones	Surface Mapping
8.3.1.17.4.6	Quaternary Faulting Within Site Area	Trench Logging
8.3.1.2.1.1	Precipitation and Meteorological Monitoring for Regional Hydrology	Ongoing Measurements
8.3.1.2.1.2	Runoff and Streamflow	Ongoing Measurements

## Site Characterization Field Activities in Progress continued

<u>SCP ACTIVITY</u>	<u>TITLE</u>	<u>ACTIVITY</u>
8.3.1.4.2.1	Characterization of Vertical/Lateral Distribution of Stratigraphic Units in Site Area	Core Logging (all boreholes), surface geophysical surveys
8.3.1.2.1.3	Regional Groundwater Flow System	Ongoing monitoring
8.3.1.2.2.1	Unsaturated Zone Infiltration	Logging of neutron-access holes; ponding tests
8.3.1.2.2.2	Water Movement Tracer Tests	Cl <sup>36</sup> measurements (SBT drillholes, ESF)
8.3.1.2.2.3	Percolation in the Unsaturated Zone	UZ drilling/testing
8.3.1.2.2.4	Characterization of Unsaturated Zone (ESF)	Hydrochemistry/Radial Boreholes testing
8.3.1.2.2.6	Gaseous Phase Movement in the Unsaturated Zone	UZ drilling/testing
8.3.1.2.2.7	Unsaturated Zone Hydrochemistry (SBT)	UZ drilling/testing
8.3.1.2.3.1	Site Saturated Zone Groundwater Flow System	Ongoing monitoring, C-well testing
8.3.1.2.3.2	Saturated Zone Hydrochemistry	Ongoing monitoring

# Site Characterization Field Activities in Progress continued

8.3.1.4.3.1	Systematic Acquisition of Site Specific Subsurface Information	Drilling USW SD-7 and USW SD-12
8.3.1.15.1.8	In Situ Design verification	Construction monitoring/testing
8.3.4.2.4.4	Engineered Barrier System Field Test	Preparation of Fran Ridge Test Block