



A-0297 LPR- (6)
WM-10(2), WM-11(2)
WM-16(2)
PDR- (1)
Lawrence Livermore National Laboratory

NUCLEAR SYSTEMS SAFETY PROGRAM

L-1967

January 5, 1987

Mr. Michael E. Blackford
Project Officer, MS-623ss
Geotechnical Branch (WMGT)
Division of Waste Management, NMSS
Office of Nuclear Materials Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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WM-RES
Record File
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WM Project 10, 11, 16
Docket No.

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Distribution:

Blackford

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SUBJECT: Monthly Management Letter Report No. 5
Progress for the Month of December 1987
NRC FIN A0297
Technical Assistance in the Identification and
Evaluation of Seismo-Tectonic Issues Related to
Repository Site Characterization Plans

Dear Mr. Blackford:

This is our Monthly Management Letter Report No. 5 under the subject
NRC FIN Number A0297.

1. PROGRESS - DECEMBER 1986

General:

In accordance with the NRC task letter dated 31 October 1986, we
accomplished our review of the final draft report entitled "Survey of
Geophysical Techniques for Site Characterization in Basalt, Salt, and
Tuff," prepared by the Weston Geophysical Corporation, and submitted our
review letter report on it on 20 November 1986. In that letter report, we
did not include a critical evaluation of the subject draft report dealing
with seismic reflection surveys heretofore done in the Yucca Mountain Area.

During the reporting period, Norm Burkhard (our LLNL expert on
seismic reflection surveys) returned from other assignments and contributed
recently to our review task for the subject draft report in comparison with
the U.S. Geological Survey's Open-File-Report No. 83-912, entitled "An
Evaluation of Seismic Reflection Studies in the Yucca Mountain Area, Nevada
Test Site". Burkhard's letter report is presently in preparation.
Briefly, Burkhard's opinion is that while the conclusions reached in both
reports are valid for the traditional long arrays, seismic reflection
surveys cannot be written off as an unsuitable technique until arrays more
suitable to the geologic and topographic conditions at Yucca Mountain are
tried. It seems that the "stack array" concept may yield more useful data.
Burkhard's full letter report will be submitted in the next reporting
period.

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BWIP:

A draft proposal has been prepared by D. Burton Slemmons for low-sun angle photography and other remote sensing studies of the Yakima Fold Belt. Slemmons will make his presentation of this proposal and discussions on it on Tuesday, 13 January 1987 for NRC staff in Silver Spring, MD.

NNWSI:

In accordance with the NRC task letter dated 23 September 1986 and also in close coordination with Ms. C. Abrams, we are presently developing a volcanic hazards assessment for the NNWSI site, Yucca Mountain, Nevada vicinity. We expect to complete this task work by the next reporting period.

On December 9, 1986, Nancy Walker, Bert Slemmons and Larry McKague presented a poster paper entitled "Remote Sensing Analysis of Southern Walker Lane" at the 1986 Fall Meeting of the American Geophysical Union, given in conjunction with a symposium on the southwestern Nevada Volcanic Field. The symposium dealt mainly with the petrology and geochemistry of the Mesozoic high silica volcanic rocks, with some discussions about roles of magma mixing and fractional crystallization. Walker et al's paper was well-received and invited then to be published in a special issue of the Journal of Geophysical Research (in 1987).

SALTS:

No new progress was made during this reporting period.

2. PLANS FOR NEXT MONTH

The state of in-situ stresses at the BWIP site is of significant factor in our work under goals of the A0297 project. We need to examine this subject closely prior to our review and evaluation of the BWIP SCP report and update. Similarly, for the NNWSI site, we need to examine borehole elongation and its relation to tectonic stresses at the NNWSI site and its vicinity.

We will prepare a list of potential reports that LLNL will likely produce (under the A0297 contract) during FY87.

The project coordination, along with our presentation of a draft proposal on low-sun angle photography and other remote sensing studies of the Yakima Fold Belt, is scheduled for 13-14 January 1987.

3. ESTIMATED PROJECT FINANCIAL STATUS

See ATTACHMENT A. The Attachment A will become available in late January 1987. We will submit it when it becomes available.


4. LIST OF CONSULTANTS/SUBCONTRACTORS


D. B. Slemmons and Associates

Richard W. Galster
Charles (Rus) Purcell
Robert J. Wright

5. PROJECT CONCERNS

A workable budget for FY87 needs to be developed.


Dae H. (Danny) Chung
Project Leader


Garth E. Cummings
NSSP Program Leader

cc: K. Anderson, LLNL/NSSP
W. J. Gallagher, DOE/SAN
E. Davis, NRC/NMSS
J. M. Johnson, LLNL/NSSP
P. S. Justus, NRC/WMGT
J. S. Trapp, NRC/WMGT

ATTACHMENT A

ESTIMATED PROJECT FINANCIAL STATUS:*

Nov-86

FIN A0297

Summary

Cost Analysis:*	Nov-86	Year to Date
I Direct Staff Effort (FTE's)	1.1	0.7 **
II Direct Labor Costs	6,800	8,441
Material & Services	102	102
ADP Support	0	0
Subcontracts	0	0
Travel Expenses	0	0
Indirect Labor Costs	6,093	7,564
Other (Recharge)	276	339
Other (FY86 Year End Adj.)	0	0
General & Administrative	508	508
Total Costs	13,778	16,954
Liens		0
Total Costs & Liens		16,954
Percentage of Available Funds		25.0%

III Funding Status

Prior Year Carryover	FY 1986 Projected Funding Level	FY 1987 Funds Rec'd to Date	FY 1987 Funding Bal. Needed
68	418	250	100

Funding Figures given in thousands.

* Note: These figures are for cost analysis only, and may differ slightly from final billing figures.

** FTE average.