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LPDR- Wm-10 (2)  
Wm-11 (2)  
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United States Department of the Interior

DOCKET CONTROL CENTER

BUREAU OF MINES  
2401 E STREET, NW.  
WASHINGTON, D.C. 20241

'87 AUG -4 P3:48

July 28, 1987

U.S. Nuclear Regulatory Commission  
Division of Contracts  
Washington, DC 20555

Attn: Cindy Fleenor  
Technical Assistant Contracts Branch

Subject: Quarterly Progress Report - April-June 1987, Interagency Agreement  
Number NRC-02-80-075, "Technical Assistance for Assessment of  
Repository Siting and Design"

Dear Ms. Fleenor:

Enclosed is our Twenty-seventh quarterly progress report on the subject  
interagency agreement for the period April 1, 1987 through June 30, 1987. This  
is in accordance with Article 1, Number 3.1 Reporting Requirements.

Sincerely,

*Earle B. Amey*

Earle B. Amey  
Staff Engineer, Division of Health  
and Safety Technology

Enclosure

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87222703	WM Record File: B6934
WM Project: WM-10,11,16	LPDR w/encl
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WM-RES WM Record File <i>B6934</i> <i>BOM</i>	WM Project <i>10,11,16</i> Docket No. _____ PDR <input checked="" type="checkbox"/> XLPRD <input checked="" type="checkbox"/> <i>(B,A,S)</i>
Distribution: <i>MikTinsky</i>	<i>Joan-ticket</i>
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Quarterly Progress Report  
April - June 1987

Progress

Activities for Denver Research Center (DRC) and Spokane Research Center (SRC) personnel during this quarter were associated with Task Order 001 and FIN B 6934, "Rock Support in Underground Geologic Repositories". Progress continued on all subtasks, with the completion of preliminary drafts of "Comparative Studies of Rock Support Systems for a High Level Nuclear Waste Geologic Repository in Tuff and in Basalt." The draft reports were delivered for internal review in May. Candidate ground support systems have been reviewed along with thermal and mechanical parameters that have been identified for support system materials and repository host rocks. In addition, the potential effects of high repository temperatures on the performance of candidate ground support systems have been addressed. Finally, support system deficiencies have been identified and research recommendations have been formulated to address these deficiencies. A preliminary draft of the companion study in Salt was also completed and is scheduled for internal review during the first quarter of FY 1988.

On June 16th, SRC personnel prepared a draft response to NRC's letter (Robert E. Browning) that provided an opinion from the Bureau on the feasibility of drilling shafts and constructing a repository in the cohasset flow at the Hanford site.

A final report for contract J0156004, Grouting Efficiency in Vertical Shafts, was received in January and accepted by the Technical Project Officer (TPO) from the Pittsburgh Research Center (PRC). The contractor and TPO have requested from the respective publishers permission to include copyrighted information in the final report. The final report cannot be submitted to the NTIS until all release forms are obtained. Hopefully, all release forms will be obtained by the end of the next quarter.

### Travel

In April, two DRC personnel attended a NRC/DOE meeting to review the proposed changes regarding the Exploratory Shaft Facility for the Nevada Nuclear Waste Storage Investigation Project in Las Vegas, Nevada. In addition, one mining engineer from DRC attended the Institute of Shaft Drilling Technology Annual (May) Meeting in Las Vegas.

On May 19th and 20th, two SRC personnel and one from DRC met with NRC at their headquarters office in Silver Spring, MD for a briefing on the results of the the high-temperature support projects for the Hanford and Nevada sites.

### Future Work

Future work under this interagency agreement will remain focused on the Bureau's study of rock support in three media, i.e. basalt, tuff, and salt, for the selection of a site for characterization.

**Financial Status FIN B-6934**

The following summary of expenditures is provided for the period covering April 1, through June 30, 1987:

<u>Cost Component</u>	<u>Current Obligations</u>	<u>Cummulative Expenditures from Start of Agreement</u>
Personnel	\$ 47,360	\$768,877
Travel	4,366	49,603
Transportation	-0-	306
Other (assessment for Bureau Admin. Sys.)	33,765	128,699
	<hr/>	<hr/>
	\$ 85,491	\$947,485
 Balance Remaining:	 \$ 2,415	

**Distribution:**

**Mr. David H. Tiktinsky**  
**Project Manager, MS 623-SS**  
**High Level Waste Branch-MMSS**  
**U. S. Nuclear Regulatory Commission**  
**Washington, DC 20555**

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**Chief, Engineering Branch (1)** ✓  
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