



United States Department of the Interior

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

May 4, 1984

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

WM Record File

B-6934

WM Project 10, 11, 16

Docket No. _____

PDR ☒

LPDR B, N, S

ATTN: Cindy Fleenor
Technical Assistance Contracts Branch

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TICKET

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(Return to WM, 623-SS)

SUBJECT: Quarterly Progress Report - January-March 1984, Interagency
Agreement Number NRC-02-80-075, "Technical Assistance for
Assessment of Repository Siting and Design"

Dear Mrs. Fleenor:

Enclosed is our fourteenth quarterly progress report on the subject interagency
agreement for the period January 1, 1984 through March 31, 1984. This is in
accordance with Article 1, Number 3.1-Reporting Requirements.

Sincerely,

Earle B. Amey

Earle B. Amey
Division of Health and
Safety Technology

Enclosure

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Quarterly Progress Report January-March 1984

Progress

At the request of the Nuclear Regulatory Commission (NRC), Risk Analysis personnel at the Spokane Research Center of the Bureau of Mines (BOM) reviewed the paper, "An Evaluation of Important Measures for Probabilistic Risk Analysis Applications." It was concluded that although the evaluation is complete, other non-deductive safety analysis methods such as preliminary hazards analysis and failure modes and effects analysis are expected to be used simultaneously.

BOM Dust Control and Ventilation personnel at the Pittsburgh Research Center reviewed contract report No. 3489 by Engineers International entitled, "Assessment of Retrieval Alternatives for the Geologic Disposal of Nuclear Waste." Their conclusions indicate that one of the significant problems expected is in pneumatically placing backfill in long horizontal boreholes.

A review of three reports was conducted by the Methane Control group of BOM's Pittsburgh Research Center concerning the potential methane hazard at BWIP. Their recommendation was to address the question--"Is the quantity of methane present at BWIP a sufficient hazard to justify NRC raising it as a potential problem or should the methane occurrence be noted as not of a major concern?"--after structured research recommended by the reports is conducted.

Travel

On January 24-26, 1984, Ernest Corp participated in a geomechanics data review meeting at Richland, WA. The purpose of the meeting was to review Rockwell Hanford's approach to rock mechanics design of a repository in basalt. The review covered full-scale heater tests, the jointed block test, hydrofracture testing, laboratory testing, and numerical modeling.

Future Work

Again, future work under the interagency agreement will remain focused on the review of site characterization reports with top priority given to assessing the state-of-the-art of large diameter horizontal nuclear waste emplacement holes. As noted in the quarterly financial report which follows, the majority of the personnel costs spent during the last two quarters is in response to this effort.

Financial Status

The following summary of expenditures is provided for the period covering January 1 through March 31, 1984:

| <u>Cost Component</u> | <u>Current Obligations</u> | <u>Cummulative Expenditures from Start of Agreement</u> |
|---|----------------------------|---|
| Personnel | \$48,295* | \$178,616 |
| Travel | 247 | 9,824 |
| Transportation | -0- | 306 |
| Other (Assessment for Bureau Admin. Sys.) | -0- | 82,500 |
| | <u>\$48,542</u> | <u>\$271,246</u> |
| | Balance Remaining | \$518,754 |

* The majority of personnel costs is a result of the major research task discussed under Future Work which is transmitted monthly under a separate cover.

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