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NATIONAL RESEARCH COUNCIL

COMMISSION ON ENGINEERING AND TECHNICAL SYSTEMS

WM DOCKET CONTROL CENTER
Constitution Avenue Washington, D. C. 20418

U.S. NATIONAL COMMITTEE
FOR ROCK MECHANICS

'87 JUL 30 A10:01

OFFICE LOCATION:
JOSEPH HENRY BUILDING
21ST STREET AND
PENNSYLVANIA AVENUE, N.W.
(202) 334-3137

July 27, 1987

Mr. Mysore Nataraja
Division of Waste Management
Nuclear Regulatory Commission
7915 Eastern Ave., Rm 272
Silver Spring, MD 20910

Dear Mr. Nataraja:

The U.S. National Committee for Rock Mechanics is pleased to submit the attached activities report for the period April 1, 1987 to June 30, 1987 as required under Articles II and III of U.S. Bureau of Mines contract GO 167020.

Sincerely,

Lynne F. Cramer

Lynne F. Cramer, P.E.
Director

Enclosure

cy: Dinesh Gupta

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U.S. NATIONAL COMMITTEE FOR ROCK MECHANICS

Activities Report

April 1 - June 30, 1987

This report covers the activities of the U.S. National Committee for Rock Mechanics from April 1, 1987 through June 30, 1987, under provisions of the U.S. Bureau of Mines Contract GO 178014. It is submitted pursuant to the provisions of Articles II and III of the contract.

FINANCIAL STATUS

The following is a summary of the status of funding for the U.S. National Committee for Rock Mechanics under the primary contract with the U.S. Bureau of Mines:

<u>Funding Agency</u>	<u>Funding Received</u>	<u>Funding Anticipated</u>	<u>Funding Not Anticipated</u>
Dept. of the Interior			
Bureau of Mines	\$20,000		3,000
Dept. of Energy			
Geothermal and Hydropower			12,000
Geologic Repositories	25,000		
High Energy Physics		20,000	
Dept. of Defense			
Air Force, Office of Sci. Research		24,000	
Fort Belvoir Res. and Devel. Center	10,000		2,000
Defense Nuclear Agency		25,000	
Nuclear Regulatory Commission	19,000		3,000
Bureau of Reclamation		22,000	
Subtotal	74,000	91,000	20,000
Total	\$185,000		

Expenses incurred through June 30, 1987, for the annual contract with the Bureau of Mines, are \$139,544.

Additional funding for the core activities of the USNC/RM is provided by the U.S. Army Corps of Engineers (\$15,000), which has been received, and the National Science Foundation (\$23,000).

U.S. SYMPOSIUM ON ROCK MECHANICS

The Committee sponsored and participated in the 28th U.S. Symposium on Rock Mechanics, June 29 through July 1, hosted by the University of Arizona in Tucson. The symposium was a great success with 435 registrants participating.

Bids to host the 30th U.S. Symposium were reviewed by the Panel on Domestic Activities. Bids were received from the University of West Virginia, the University of Alaska, the University of Washington, and Colorado School of Mines. On the recommendation of the panel, the committee voted to award the symposium to the University of West Virginia.

INTERNATIONAL SOCIETY FOR ROCK MECHANICS

The committee has played an active role in preparation for the 1987 International Congress on Rock Mechanics which will be held in Montreal August 30 to September 3. A panel reviewed and selected abstracts and papers contributed by the U.S. rock mechanics community. Fifteen papers from the U.S. will be published in the congress proceedings.

PANEL ACTIVITIES

The Panel on Domestic Activities coordinated the activities related to both the 28th and 29th symposia on rock mechanics. In addition, they reviewed the awards procedures currently used by the committee.

The Panel on International Activities is developing projects to encourage U.S. membership in the ISRM.

The Panel on the Annual Review of U.S. Progress in Rock Mechanics --Remote Characterization has met and prepared a draft document which is being reviewed by the committee.

The Subpanel on Awards reviewed published papers, and awards were presented at the symposium for outstanding Basic Research, Applied Research, Case History, and Student Research. They are:

Basic Research Award--"Damage Mechanics in the Post Failure Regime" by L.S. Costin.

Applied Research Award--"Field Relation Between Dikes and Joint Emplacement Processes and Paleostress Analysis" by P.T. Delaney, D.D. Pollard, J.I. Ziony, and E. McKee.

Case History Award--"Interpretation of a Long-Term In Situ Borehole Test in a Deep Salt Formation" by G. Fernandez and A.J. Hendron.

Student Award--"A Numerical Procedure for the Analysis of Steady State Flow in Systems of Finite Discontinuities" by A.R. Piggott.

In addition, special awards were presented to Dr. William Brace of the Massachusetts Institute of Technology for special recognition of outstanding contributions to the field of rock mechanics and to Dr. Leonard Obert for long and distinguished service in the field of rock mechanics.

PUBLICATIONS

The May issue of Rock Talk, the USNC/RM informal newsletter, was published.

The Annual Review of U.S. Progress in Rock Mechanics--Coupled Processes was published in May. A copy of the report is attached for your information.

FUTURE PLANS

The Executive Committee has under consideration two studies: Site Characterization Using Remote Means and Quality Assurance for Underground Projects.

SPECIAL STUDIES

The separately funded study for the Basalt Waste Isolation Project to provide a management overview of the geotechnical program for design and construction of a proposed nuclear waste repository in basalt is coming to completion. After completing the NRC review process, the report will be available in August.

The National Research Council is conducting a cross-institutional study of innovations in infrastructure and the USNC/RM has been requested to participate in this study.