



Materials  
Research  
Society

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June 12, 1998

Dr. Michael Bell, Chief  
Performance Assessment & HLW Integration Branch  
U.S. Nuclear Regulatory Commission  
Washington DC 20555

Dear Dr. Bell:

As discussed with you by Dr. Joon H. Lee of Duke Engineering & Services during the International High-Level Radioactive Waste Management Conference in Las Vegas, the Materials Research Society would like to request support by NRC of the upcoming Materials Research Society 22nd Annual Symposium on the Scientific Basis for Nuclear Waste Management, which will be held in Boston on November 30<sup>th</sup>-December 4<sup>th</sup>, 1998. Dr. Lee and Dr. David J. Wronkiewicz of the University of Missouri at Rolla will be co-chairpersons of the Symposium. The specific funding proposal is enclosed.

As you are aware, the NRC has participated actively in this international Symposium through membership in organizing committees, selection, review and presentation of technical papers, editing the proceedings, and financial support. Funding from sources such as the NRC enhances the quality of the meeting and the proceedings. Without this funding, some of the papers would not be presented, and some of the scientists from disadvantaged countries such as the former Soviet Union could not attend.

The Symposium proceedings cover extensive publications related to all aspects of nuclear waste disposal, including waste containment materials, radionuclide speciation and sorption, engineered barrier performance, flow and transport, site characterization, natural analogs, and performance assessment. The scientific community broadly accepts these independent scientific results, which were presented at the Annual Meeting, peer-reviewed and published by the Symposium. We believe the Symposium Proceeding volumes have provided a defensible peer reviewed record as a basis for the NRC's regulatory and licensing actions for the nation's nuclear waste repository development project. The Symposium will continue to provide immeasurable benefit in compiling new as well as an extensive record of peer-reviewed scientific data in support of the NRC mission.

In return for monetary assistance in the past, the NRC has been provided with copies of the proceedings. We are grateful for this support, and your help in the past was a major factor in making the meetings a success.

Attachment

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If you need additional information or have any administrative questions, please contact Donna Gillespie, MRS Symposium Funding Administrator. Technical questions may be addressed to Drs. Lee or Wronkiewicz. Thank you for your consideration of this proposal.

Sincerely,

*Robert H. Pachavis*

Robert H. Pachavis

Enclosure

cc: Dr. Joon H. Lee  
Dr. David J. Wronkiewicz  
Dr. Dieter A. Knecht

Proposal for Support of  
Materials Research Society  
**Symposium QQ: Scientific Basis for Nuclear Waste Management XXII**

1998 MRS Fall Meeting - Boston, Massachusetts  
November 30 - December 4, 1998

**Prepared for**  
Dr. Michael Bell, Chief  
Performance Assessment & HLW Integration Branch  
U.S. Nuclear Regulatory Commission  
Washington DC 20555

**Submitted by**  
Materials Research Society  
506 Keystone Drive  
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**Principal Investigator**  
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Requesting Funding: \$10,000.00

Requested Start Date: 1 October 1998

Requested Duration: 12 Months

Authorized Representative

*Robert H. Pachavis*

Robert H. Pachavis, Director of Finance and Administration  
Materials Research Society

## **Scientific Basis for Nuclear Waste Management XXII**

**Materials Research Society 1998 Fall Meeting**

**November 30<sup>th</sup> to December 4<sup>th</sup>, 1998**

**Boston, Massachusetts, USA**

Safe and effective management of nuclear waste provides a broad range of challenges in materials sciences. Waste processing, waste form and engineered barrier properties, interactions between engineered and geological systems, radiation effects, chemistry and transport of waste species, and long-term predictions of repository performance are challenging scientific problems facing modern society. The 22nd annual MRS symposium on the Scientific Basis for Nuclear Waste Management solicits papers in areas related to the topics listed below.

- Waste form processing
- Waste package materials
- Radionuclide solubility and speciation
- Transuranic geochemistry
- Groundwater flow and reactive transport
- Waste form corrosion
- Fissile material stabilization and dispositioning
- Radiation effects
- Microbial processes in geologic repositories
- Repository site characterization
- Mixed toxic and radioactive waste processing
- Natural analog studies
- Near-field materials and processes
- Performance assessment
- Spent fuel, glass, ceramic, and cement waste form characteristics

To emphasize the relationship between performance assessment calculations and the scientific data generated by each of the disciplines, an international panel discussion for the performance assessment session, and a panel discussion for the results of the total system performance assessment-viability assessment (TSPA-VA) of the Yucca Mountain Project are planned. Internationally renowned researchers and field project managers will also be invited to present their experiences and views on a number of areas in nuclear waste management.

### **Symposium Organizers**

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## **Summary Paragraph for Federal Grant Proposals**

Organizers who choose to run topical symposia in the forum provided by meetings of the Materials Research Society may at their discretion plan to incur expenses beyond those normally covered by the Society. Such expenses frequently include support of travel, living expenses and/or registration for invited participants, the cost of preparing and mailing advertisements for the individual symposium, and organizer expenses incurred in communicating with participants and traveling to planning meetings. The specific expenses to be covered by the proceeds of this grant proposal are detailed in the accompanying budget statement. The Materials Research Society requires adherence to the following procedures for funded symposia at its meetings:

1. The Materials Research Society must be the Grantee Institution
2. The Director of Finance and Administration of the Materials Research Society, Robert H. Pachavis, must be named as the Principal Investigator
3. The proposed symposium budget must be approved by the Society's Meeting Chairs responsible for the meeting in question
4. Individual expenditures against the grant must be approved by the Society's Meeting Chairs responsible for the meeting in question
5. The organizer must assure the Society that implicit in the estimate of the uses to which the funds will be applied is a 10% contingency to cover unanticipated symposium expenses as the need arises

Should any portion of the funds reserved as a 10% contingency cushion remain unexpended after all symposium obligations have been discharged, those funds will be applied by the Society to further defray administrative costs borne by the Society in direct support of the symposium. The Materials Research Society will provide the grantor a complete financial accounting with any outstanding amounts due to the Society. The final written technical report of the proceedings of the symposium is the responsibility of the Co-Principal Investigators who are the symposium organizers.

**Budget for Scientific Basis for Nuclear Waste Management Symposium**

**Anticipated Expenses**

1)	Symposium Organizers Conference Planning	\$ 2,000.00
2)	Proceedings Preparation [editorial and secretarial assistance, postage]	\$ 5,000.00
3)	Conference Fees for Invited Speakers [6 @ \$300.00]	\$ 1,800.00
4)	Travel for Invited Speakers	\$ 1,200.00
	Total Expenses	\$10,000.00

**Anticipated Revenue**

Nuclear Regulatory Commission	\$10,000.00
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