Department of Energy
Office of Science
Washington, DC 20585

Office of the Director

November 18, 2004

Dr. Keith O. Hodgson
Director, Stanford Synchrotron Radiation Laboratory
Department of Chemistry
Stanford University
Stanford, CA 94305

Dear Dr. Hodgson: Keith

The William R. Wiley Environmental Molecular Sciences Laboratory (EMSL), which is located at the Pacific Northwest National Laboratory (PNNL) in Richland, Washington, is the premier national scientific user facility within the Office of Biological & Environmental Research (OBER). The initial DOE investment in over 100 leading-edge instrumentation and computational capabilities for molecular-level environmental research within EMSL exceeded $100 million. Since opening in October 1997, the number of EMSL users has increased from approximately 700 to 2500 annually. The scientific success of the facility, the increasing cost of operations and the need to refresh cutting edge instrumentation necessitates an examination of the vision, structure and operation of this important facility. The current vision of EMSL as the "premier science facility of BER" requires focus to guide resource investments and to identify future avenues of emphasis within the context of projected flat funding across BER programs.

By this letter, I am charging the BERAC to provide advice to the Office of Science on the mission, operation and future plans of EMSL. I would like a review panel to consider and evaluate the following issues:

- Does the relationship and management structure among EMSL, PNNL and ERSD foster the highest quality of science at EMSL?
- Is the science conducted at EMSL cutting edge? If so, is it appropriate for a BER-supported user facility?
- Is EMSL appropriately structured to support a full range of DOE and national science research priorities?
- Is the user model for allocating resources for all EMSL facilities appropriate? Does EMSL attract the best mix of users?
- Could changes be made to increase the impact of EMSL on DOE science goals?
- Given a flat budget for ERSD, what priority should EMSL have within the Division's portfolio?

- Does the EMSL have a well-defined plan to refresh capital equipment, and is it appropriate? What short- and long-term strategies should be considered in this context? Does EMSL appropriately manage the acquisition, use and retirement of instruments?
- How does EMSL manage general user access to equipment purchased with non-ERSD funds? How does this impact EMSL operation as an ERSD-supported user facility?

I request that BERAC report on its findings and recommendations at its Fall 2005 meeting.

Sincerely,

Raymond L. Orbach
Director