



Department of Energy

Washington, DC 20585

July 19, 2002

Professor Geraldine L. Richmond
Department of Chemistry
University of Oregon
Eugene, OR 97403-1253

Dear Geri:

I very much appreciate your willingness to serve another term as Chair of the Basic Energy Sciences Advisory Committee (BESAC). After meeting with you in person this spring and further reviewing the activities of the Committee during your BESAC tenure, I look forward to your continued leadership and to the activities of the Committee in the coming year.

Currently, there are two activities that I would like BESAC to address.

1. The August 10, 1999, charge to BESAC requested that a Committee of Visitors (COV) assess the program management of major elements of the Basic Energy Sciences (BES) program every three to four years. The COV review of the chemical sciences activities held in January 2002 resulted in many improvements to the review process. Consistent with the 1999 charge, I would like BESAC to conduct a COV review of the activities within the Materials Sciences and Engineering Division. A report to BESAC should be planned for the summer or fall 2003 BESAC meeting.
2. Next, I would like BESAC to assess short-pulse, short-wavelength, high-intensity light sources. BESAC and other groups internationally have identified high-intensity, coherent hard x rays (8- 20 keV or higher) as the most exciting probe for innovative science. For this reason, we have started design of the Linac Coherent Light Source (LCLS) at Stanford, which will provide a source of high-intensity, coherent x rays at 0.15 nanometer. Europe and Japan are planning high intensity, 0.1-nanometer sources. The assessment should include a survey of the types of sources currently being proposed, the projected scientific impact of each, and the relative importance of each for the scientific programs of BES. I expect that this assessment will provide the foundation for establishing our long-term roadmap for x-ray science.

As always, you should develop the detailed tasks needed to meet the charges through discussions with the selected chairs of the subpanels and the Director of BES.



I appreciate your continued efforts and successful leadership of this Committee. I look forward to the July 22-23, 2002, meeting and to the future activities of the Committee.

sincerely,

A handwritten signature in cursive script, appearing to read 'Ray', is positioned above the typed name.

Raymond L. Orbach
Direct'or
Office of Science

cc: P. M. Dehmer, SC-10
S. Long, SC-10