



Department of Energy
Office of Science
Washington, DC 20585

Office of the Director

August 30, 2010

Dr. Gary Stacey
Associate Director, National Soybean Biotechnology Center
Department of Microbiology and Molecular Immunology
University of Missouri
271E Christopher S. Bond Life Sciences Center
Columbia, MO 65211

Dear Dr. Stacey:

The Biological and Environmental Research (BER) program within the U.S. Department of Energy (DOE) supports the operation of the Atmospheric Radiation Measurement (ARM) Climate Research Facility (ACRF), a national scientific user facility. The ACRF operates field research sites around the world that support global and climate change research. Five primary locations—the Southern Great Plains centered in Oklahoma; Darwin, Australia; Manus, Papua New Guinea; Nauru; and the North Slope of Alaska, plus aircraft and two portable ARM Mobile Facilities, are instrumented to collect high quality atmospheric and surface measurements to address climate change science questions. The facility has approximately 900 scientific users annually.

Scientists use the ACRF data to study the effects of solar and terrestrial radiant energy, aerosols, clouds, and the Earth's climate. The facility also supports interdisciplinary research involving hydrology, ecology, and weather forecasting. As part of this effort, ACRF staff process and enhance base measurements to create new data streams called value-added products. Software tools are then provided to help users work with and analyze these products.

The facility management is coordinated by the Infrastructure Management Board, a team of managers for the following activities: Technical Coordination Office, Operations, Archive, and the Aerial Facility. These managers oversee facility activities and utilize the expertise of six other DOE national laboratories for specific aspects of the ACRF. This unique partnership contributes to the DOE mission to provide for the energy security of the nation. This mission includes understanding climate impacts of current and future energy production and developing solutions as part of a sound energy strategy.

To ensure that the ACRF is meeting its mission and is being operated and managed in an efficient manner, BER periodically conducts a peer review of ACRF's operations and plans. By this letter, I am charging the BERAC to provide advice to the Office of Science on the mission, operation, and future plans of the ACRF. I would like the review panel to consider and evaluate the following issues:



- Is the use of the ARM Climate Research Facility resources making a significant impact in climate change science?
- Does ACRF adequately support the science objectives of the DOE Atmospheric Systems Research program and the general scientific user community? If so, is it appropriate for a BER-supported user facility?
- Is the user model for allocating resources for all ACRF capabilities appropriate? Does ACRF attract the best mix of users?
- Could changes be made to increase the impact of ACRF on DOE science goals?
- Are the ACRF and participating laboratory management roles and responsibilities effectively carried out and coordinated?
- Is ACRF management effectively setting priorities, tracking progress, and resolving problems that impact facility operations?
- Are there adequate resources to accomplish the BER mission at ACRF in the current budget scenario? Are ACRF processes for allocating and managing BER resources (personnel and funds) appropriate?
- Is there an ongoing program of self-assessment or external benchmarking aimed at continuously improving ACRF management and operations?

I request the BERAC report on its findings and recommendations at its spring 2011 meeting.

Sincerely,

A handwritten signature in black ink, appearing to read 'W. F. Brinkman', with a stylized flourish at the end.

W. F. Brinkman
Director, Office of Science

cc: Anna Palmisano
David Thomassen
Gary Geernaert
Wanda Ferrell