Statement of William F Brinkman
Director, Office of Science Designee
Senate Committee on Energy and Natural Resources
June 2, 2009

Chairman Bingaman, Senator Murkowski and distinguished members of the committee, it is an honor and privilege to appear before you as President Obama's nominee for Director of the Office of Science in the Department of Energy.

I want to thank President Obama for asking me to join his administration and Secretary Chu for his confidence in me to become part of the Department of Energy. I have followed Secretary Chu's career from the beginning and admire his intelligence and accomplishments. If confirmed, I would be proud to join him and the exceptional team that he is assembling to work tirelessly to advance the revolution in energy technologies, to understand nuclear technologies, and to continue basic scientific research in the 21st century.

The Office of Science, with its ten National Laboratories and broadly funded university research program, has been the source of many outstanding discoveries that have defined our current understanding of the most fundamental aspects of nature, have helped define the structure of the cosmos and have led to a deep understanding of many important materials. The National Laboratories have established facilities that have played crucial roles in characterizing both the basic constituents of nature, such as quarks and gluons, but also materials such as the high-temperature superconductors. The new development of an x-ray laser at SLAC National Accelerator Laboratory is just one more example of these accomplishments. The laboratories have also contributed to the technical advances in energy, nuclear security and nonproliferation. There are many more discoveries to be made, and I look forward to being a part of those discoveries.

I would bring to the Department decades of experience in managing scientific research in government, academia and the private sector. After graduating from the University of Missouri and spending a year as a National Science Foundation postdoctoral fellow at Oxford, I joined Bell Laboratories, where I spent most of my career. In the early days I was doing theoretical physics but soon began a career in management. I learned how to hire and support some of the best researchers in the field and to inspire them to greater accomplishments. This was truly an exciting time to be a part of what at that time was perhaps the best research institution in the world. Research at Bell Laboratories during my tenure led to two Nobel prizes, one of which was Secretary Chu's, and to a Japan Prize.

As the company began to split into smaller units it became imperative to drive toward applications, and I led a research organization in the 1990's that developed many of the components and systems used in optical communications today. In addition, we worked on semiconductor processing and wireless communications. We also started an internal venture organization that took orphaned technologies and formed new ventures. I believe that this experience will be highly valuable at the Office of Science, where I would seek to continue the tradition of strong fundamental research while at the same time working to apply that research to solving our energy problems.

In addition to working at Bell Labs, I have experience with supervising government research and with the national laboratory system. In the middle 1980s I served as vice president of research at Sandia National Laboratories. This was an opportunity to get first-hand knowledge of how our national laboratories

function. I am proud of the accomplishments during my time at Sandia, including the expansion of the computer science effort. This assignment, and the many laboratory advisory committees on which I subsequently have served, gives me insights into the true strengths of the DOE and its laboratory system.

Although the DOE has had many research successes and accomplishments, I believe that we can improve management, and the relationship between headquarters and the laboratories. If confirmed, I will strive to make the management as straightforward and effective as possible, recognizing the difficulty inherent in the unique, cutting edge projects that DOE takes on.

We must also improve science education of our youth. The importance of science and engineering education to our Nation's prosperity and security has been emphasized in numerous recent studies, for example, the recent "Rising Above the Gathering Storm" study by the National Academies of Science and Engineering. DOE's Office of Science, through its university and national laboratory programs, provides significant opportunities for students and young people that help attract young people to science, engineering and technology work.

Powerful nations have relied on new technologies to allow them to stay ahead in the world, and the history of the US has been no different. However, we now find a world in which science and technology is being pursued by many nations while the U.S. interest has seemed at times to have waned. I believe that President Obama is determined to change this situation and place a new emphasis on a strong scientific and technical enterprise. We are clearly confronted with difficult challenges whether in energy, nonproliferation or nuclear security. However, we must also advance our basic knowledge to explore the possibilities of new sources of energy such as magnetic fusion and fusion/fission and to discover new approaches to batteries and photocells. We must continue exploring what makes up our universe – what is dark matter and dark energy? Why is the universe expanding more rapidly? In materials we must find out what we can do with nanoengineered materials. They show great promise to change much of our lives, as have many materials advances before them.

In summary, if confirmed, I will bring to the Office of Science a commitment to scientific research and development that is based on many years of experience. My thanks to the chairman and members of the committee for giving me this opportunity to speak with you and, if confirmed, I will do my best to work with you and the rest of Congress to move forward on the issues discussed above.