

The Regents of the University of California

**COMMITTEE ON OVERSIGHT OF THE
DEPARTMENT OF ENERGY LABORATORIES**

July 18, 2001

The Committee on Oversight of the Department of Energy Laboratories met on the above date at UCSF–Laurel Heights, San Francisco.

Members present: Regents Atkinson, Davies, S. Johnson, Marcus, Montoya, Moores, Morrison, Preuss, Sayles, and Seymour

In attendance: Regents Bagley, T. Davis, Hopkinson, O. Johnson, Kozberg, Lansing, and Lee, Regent-designate Sainick, Faculty Representatives Cowan and Viswanathan, Secretary Trivette, General Counsel Holst, Provost King, Senior Vice Presidents Darling and Mullinix, Vice Presidents Broome, Drake, and Gurtner, Chancellors Berdahl, Carnesale, Dynes, Greenwood, Orbach, Vanderhoef, and Yang, Vice Chancellor Bainton representing Chancellor Bishop, Laboratory Director Browne, and Recording Secretary Bryan

The meeting convened at 12:25 p.m. with Committee Chair Moores presiding.

1. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of March 14, 2001 were approved.

2. **ANNUAL REPORT ON THE LOS ALAMOS NATIONAL LABORATORY**

Director Browne presented a status report on the Los Alamos National Laboratory in the aftermath of two trying years. He commented that the events of those years, which included the federal investigation of a Chinese scientist, the misplacement of hard drives containing classified information, and a devastating fire, shook the institution and damaged its reputation. He reported that, in order to determine the laboratory's future direction, he had engaged its employees in developing a vision for 2001 that emphasizes the laboratory's role of serving the nation both in its basic research and national security capacities in order to enhance people's lives and make the world a better place.

The laboratory's core mission is to ensure the safety and reliability of the country's nuclear weapons deterrent. Its secondary mission is to reduce the global threat of weapons of mass destruction. The capabilities involved in following those missions are used to solve other national problems related to energy, the environment, infrastructure, and health security. Director Browne commented that ensuring the nuclear deterrent without nuclear testing is a challenge that the Los Alamos and

Lawrence Livermore laboratories have been presented with by the country and which they have been meeting successfully for the past nine years, but he believed that there is no guarantee that they can continue to meet it forever, given the technical problems associated with highly complex nuclear weapons. The laboratory continues to work on developing the underlying science that will make it possible annually to certify to the President of the United States that the stockpile is safe and reliable without nuclear testing.

Mr. Browne reported that the tools being developed to enhance stockpile stewardship include very sophisticated equipment such as DARHT, the dual axis radiographic hydrotest facility. Also, along with the Lawrence Livermore laboratory, the Los Alamos laboratory is developing some of the fastest supercomputers in the world in its large facility, the Los Alamos Neutron Science Center, which has hundreds of users throughout the University and national laboratory community who conduct both basic and applied research there. The facility is also used for collaborative research among University of California campuses.

Mr. Browne noted that the Los Alamos laboratory helps ensure the nation's security by developing and applying technical capabilities to an array of threats that emerged after the Cold War. He reported that the laboratory's research on the human genome program has provided a basis for advances in the study of biological weapons. As an example of the laboratory's work in this field, he noted that, although it was known that Russia had one of the largest biological weapons programs ever assembled, few details about it were available. After the collapse of the Soviet Union, the Los Alamos laboratory obtained some tissue samples taken from Russian workers who had been reported as having died of anthrax they had contracted from cattle. Laboratory analysis subsequently proved that they died from a manmade strain of anthrax that was released accidentally in a biological weapons manufacturing plant. When confronted later with this evidence, the Russians admitted to the presence of the plant and the accident.

Mr. Browne reported that, in addition to the laboratory's mission-related research, it conducts basic and applied research in many areas in order to provide technical solutions to problems affecting global security and to respond to national needs. Its collaboration with the Lawrence Livermore National Laboratory and Lawrence Berkeley National Laboratory on the Joint Genome Institute has resulted in advances in bioscience that have enhanced the understanding of the function and structure of molecules. Also, because of its experience with modeling nuclear weapons, the Los Alamos laboratory is working with a consortium that is creating models and simulations of the national infrastructure with the goal of improving the ability of policymakers to respond to crises and to plan for changes in major complex systems. Another of its projects is to increase the efficiency of the nation's energy supply through the use of materials such as superconducting tape.

Mr. Browne noted that the laboratory has been recognized for a variety of scientific achievements and has received three *R&D Magazine* "100 awards" in 2001 for technical accomplishments that show the most promise for commercialization. He commented that its scientists are finding it challenging to be part of the national and international scientific community in the aftermath of the security incidents of the past year. He believed that it was in the best interests of the nation to keep the laboratory open to visiting foreign nationals and to the free exchange of ideas and information.

Mr. Browne reported on the status of improvements in operations related to laboratory safety and security. He noted that since he became director, lost workday cases have declined from four per 200,000 hours of work to one, which places the laboratory among the best in class. The integrated safeguards and security model that was put in place a year and a half ago has been adopted by the new National Nuclear Security Administration as the model for its complex. The laboratory's materials control and accountability levels were rated "best in complex" by the Department of Energy, and the laboratory received passing marks on all of its security audits. He reported that, in order to address one of the laboratory's greatest challenges, he had begun a comprehensive examination of threats to cybersecurity throughout the complex.

Mr. Browne noted that in his first few months on the job John McTague, Vice President for Laboratory Administration, has contributed to the success of the laboratory's performance improvement initiatives. The laboratory is moving toward closer relationships with the Office of the President, the National Nuclear Security Administration, and the other national laboratories. Mr. Browne believed that it is important to demonstrate institutional discipline and focus in order to meet the goals of the new laboratory contract between the University and the DOE.

The director then gave an update on the aftermath of the Cerro Grande fire, which burned one-third of the laboratory's property and did over \$300 million in damage. He reported that the 400 homes that were lost are being rebuilt and that there is an aerial program to reseed laboratory and community land. A flood retention structure has been put in place on laboratory land to prevent damage from seasonal rainfall.

Mr. Browne recalled that one of his major thrusts upon becoming director was to revitalize the laboratory's 50-year-old infrastructure. He reported that he has produced an institutional model to show the Department of Energy how the site will be developed. The DARHT facility is almost operational, and the acre-long Strategic Computing Complex, which will house a computer capable of 30 trillion operations per second, will be completed in 2002. Next to it will be the Nonproliferation and International Security Center, with a completion date of 2004. He reported that the site model covers the next 20 years.

Concerning workforce diversity, Mr. Browne reported that for the first time women and minorities make up the majority of the laboratory's workforce and that there has been an increase in women and minorities in top management positions and in

technical staff. At the same time, however, there is concern about the age distribution of the workforce. The average age among all employees is 48, but it is 54 among employees working in fields related to nuclear weapons stewardship. It is expected that over the next five years 800 to 1,000 people will retire. He observed that maintaining a healthy postdoctorate program is vital to the recruitment of scientists and engineers. The laboratory is focusing on attracting employees in the early stages in their careers.

Mr. Browne believed that the quality of work life is a critical issue for laboratory employees. An environment must be created and maintained in which all employees can contribute and develop to their full potential. He reported that, as part of his focus on enhancing the laboratory environment, he has been working with the Pacific Islander community and has put together a career enhancement task force to deal with their concerns.

The laboratory makes an effort to reach out to its neighboring communities and pueblos. It received help in this effort from the University and from Regents who visited northern New Mexico in October 2000. Community feedback indicated that there was widespread appreciation and that the visit enhanced the University's visibility in the area. Mr. Browne noted that the creation in 1997 of the Los Alamos National Laboratory Foundation has also had a positive effect on community relations. The foundation gives grants to local communities and provides scholarships for New Mexican students through a program created by Los Alamos employees who contribute to it from their paychecks. He believed that the University's assistance in the aftermath of the fire also had demonstrated to the community that it was interested in their welfare.

Director Browne believed that, although the institution had been shaken by the events of the past two years, morale is improving, employees are rededicating themselves to their work, and the infrastructure is being revitalized. He hoped the University's management of the laboratory would continue well into the future.

Regent Montoya noted that recently the University announced several actions to help address healthcare needs, including substance abuse, in northern New Mexico's Rio Arriba County. Under an agreement with the Rio Arriba Family Care Network and the County, the University will provide academic and professional services at no cost through its Los Angeles and San Francisco campuses, the Office of the President, the Los Alamos National Laboratory Foundation, and the Los Alamos National Laboratory.

Regent Hopkinson asked whether recruiting top-quality employees is a challenge. Mr. Browne responded that recruiting was more challenging before the economy declined. He reported that Asian American employees did not leave during the Wen Ho Lee investigation and that the recruitment of Asian American students is nearly back to its pre-1999 level. He credited outreach by the laboratory community for this

success. Regent Lee expressed his relief that the Wen Ho Lee situation was over, but Mr. Browne noted that the government has not officially concluded the case.

Regent Marcus recalled having heard that the majority of young scientists working in this country are foreign born and trained and that the United States is not producing the same level of scientists as in previous generations. Mr. Browne confirmed that 50 percent of graduate programs across the country are made up of foreign nationals. It is of particular concern that students are not choosing to study science and engineering. Through its outreach program, the laboratory is trying to get students in northern New Mexico interested in science and engineering as possible careers by exposing them at earlier stages in their development to laboratory scientists and illustrating to them that they have the potential to be successful in these two fields.

Chairman S. Johnson complimented Director Browne for the job he has done in the past two years and the good will he has secured from the community. She recalled that a group of tribal business and community leaders took it upon themselves to visit Washington, D.C. and lobbied effectively on behalf of extending the University's contract for managing the laboratory.

Chairman Johnson recalled that there had been a question as to whether penalties for accidents and noncompliance under the laboratory management contract would be subject to payment in virtual or real dollars. Assistant Vice President Sudduth reported that reauthorization of the Price Anderson Act, which addresses whether nonprofits should pay penalties in the same way that for-profit contractors do, is before Congress and that no action has been taken. He believed that it was likely that nonprofits would be subject to actual penalties to a certain monetary degree that could be capped to the degree that the contract receives a fee.

The meeting adjourned at 1:00 p.m.

Attest:

Secretary