

The Regents of the University of California

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

March 14, 2001

The Committee on Oversight of the Department of Energy Laboratories met on the above date at the James E. West Alumni Center, Los Angeles campus.

Members present: Regents Atkinson, Bustamante, Davies, S. Johnson, Miura, Montoya, Moores, and Preuss

In attendance: Regents Bagley, Connerly, Fong, Hopkinson, O. Johnson, Kohn, Kozberg, Lansing, Lee, Marcus, Parsky, and Sayles, Regents-designate T. Davis, Morrison, and Seymour, Faculty Representatives Cowan and Viswanathan, Secretary Trivette, General Counsel Holst, Provost King, Senior Vice President Mullinix, Vice Presidents Broome, Drake, Gomes, and Gurtner, Chancellors Berdahl, Bishop, Cicerone, Dynes, Orbach, Vanderhoef, and Yang, Executive Vice Chancellor Simpson representing Chancellor Greenwood, Vice Chancellor Erickson representing Chancellor Tomlinson-Keasey, and Recording Secretary Bryan

The meeting convened at 11:40 a.m. with Committee Chair Miura presiding.

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

Upon motion duly made and seconded, the minutes of the meeting of January 18, 2001 were approved.

2. **ANNUAL REPORT OF THE PRESIDENT'S COUNCIL ON THE DEPARTMENT OF ENERGY LABORATORIES**

Mr. William Friend, chairman of the President's Council on the Department of Energy Laboratories, reported that The Regents' approval of continuing the contracts to manage the laboratories was greatly appreciated by both laboratory and Department of Energy staff. He recalled that collectively the laboratories have an annual budget of about \$3.2 billion and employ 18,000 University scientists and staff and 4,000 contract workers. The laboratories bring strength to the scientific and technological breadth of the nation. He highlighted some of their capabilities and discussed what the Council does to enhance their contributions.

The Council and its panels are actively engaged on a variety of issues. The Science and Technology Panel, which produces an annual report for The Regents, is responsible for the assessment of the laboratories' core performance, as required by the contract with the Department of Energy. He reported that the laboratories continue to perform

research that, in the opinion of the Council, ranges from excellent to outstanding. The National Security Panel works to ensure that the Livermore and Los Alamos laboratories are meeting their national security responsibilities. The other three panels support individual areas of activities at each laboratory and are important in maintaining standards of performance. These include the Environmental Safety and Health Panel, which reported that all three laboratories received positive reviews from the Department of Energy and this year all completed their implementation of Integrated Safety Management, a new DOE requirement. The second functional panel is the National Security Panel, which is chaired by a retired chief of Naval Intelligence and whose membership includes retired senior officials of the Central Intelligence Agency, the FBI, and experts on cyber-security. This panel has addressed security problems at the Los Alamos laboratory. The Project Management Panel attacks generic issues of project management as well as becomes involved with specific issues associated with each current major project.

Mr. Friend reported that the Department of Energy had formed the National Nuclear Security Agency (NNSA), which has purview over the Livermore and Los Alamos laboratories, while the Lawrence Berkeley laboratory remains under the auspices of the Office of Science. NNSA is headed by General John Gordon, who has met with President Atkinson a number of times and who visits the laboratories frequently.

The new contract extended the University's management of the Livermore and Los Alamos laboratories to 2005. Mr. Friend predicted that, under the tenure of General Gordon, there will be an increased emphasis on performance and meeting objectives. The University has undertaken a search for a Vice President for Laboratory Management to increase the University's oversight capabilities.

Mr. Friend recalled that the central mission of the Los Alamos and Livermore laboratories is stockpile stewardship. The Council is working with the laboratories and NNSA to develop an integrated strategy for that function. As this program evolves, the laboratories will need new tools and an improved understanding of the physics involved in the long-term performance of the stockpile. Every year, the laboratory directors are charged with certifying to the President of the United States that the stockpile can be relied upon. The laboratories have launched an accelerated computing effort to study the behavior of weapons. Livermore conducted four subcritical tests at the Nevada Test Site using confinement vessels that enable reuse of the weapons storage alcoves. Los Alamos has been working with proton radiography for producing images of thicker, heavier objects. Although remarkable, the laboratories' great computers continue to require upgrading in order to certify weapons as they age or are remanufactured and to maintain the laboratories as cutting-edge environments capable of attracting the brightest employees.

The Los Alamos laboratory has been asked to recapture, through research and development, and to recreate the technical ability to fabricate and certify the core plutonium pits that go into nuclear weapons. These were formerly manufactured and

maintained at Rocky Flats in Colorado, which is no longer in operation. Mr. Friend reported that the National Security Panel and the Project Management Panel are focused on this area, and also on projects such as the Dual Axis Radiographic Hydrodynamics facility, which is managed from Los Alamos but receives support from Livermore and Berkeley, and the National Ignition Facility.

Mr. Friend observed that the contributions of the laboratories go beyond national defense. He recalled that the Lawrence Berkeley laboratory sponsors the tri-laboratory collaboration for the Joint Genome Institute, which has had a significant role in the sequencing of the human genome. The institute completed its first task, to identify Chromosomes 5, 16, and 19, with a high level of accuracy. Other areas that have made important news include Lawrence Berkeley's Advanced Light Source, which caters to a wide family of users. Its emphasis is on crystallography, which allows high-resolution imaging of complex protein structures. Also, the Berkeley laboratory's new computing facility in Oakland will be the most powerful unclassified computing facility in the world. Another example of the laboratories' far-reaching endeavors is a proposal at Berkeley to create a supernova probe satellite. At Livermore, the Center for Accelerator Mass Spectrometry is a magnet for biological research and is an NIH research resource. Livermore also is at the forefront of medical technologies. It is in partnerships with the private sector to produce a new implantable device that monitors glucose levels in diabetics. It continues its partnerships with the computer chip industry to develop more powerful computing capability. The Los Alamos laboratory is developing technology to enable the rapid and accurate identification of new bacteria and a new high-temperature superconducting tape.

Mr. Friend recalled the challenges posed by the wildfire at the Los Alamos laboratory. He noted that Director Browne and the support of the University community were much appreciated by the people at the laboratory and the community at large. With the support of the Council, the laboratory is working on a major long-term facilities renewal plan.

Mr. Friend reported that the retention and recruitment of key staff continue to be among the Council's greatest concerns. Ways are being sought to mitigate those aspects that tend to hinder progress. He stressed the importance of ensuring that laboratory researchers are not cut off from the international scientific community and that there is effective security that is supportive of national security programs. The University brings many qualities to the management of the laboratories that are important in this area – qualities such as respect from employees and the community, scientific quality and independence, respect for the individual, and stability during turbulent times.

Regent Preuss asked what makes a scientific project appropriate for focus by the laboratories. Mr. Friend declared that no area of research is inappropriate for pursuit and study. Peer review within individual scientific disciplines sets the priorities. About half of the funding at the Los Alamos and Livermore laboratories is dedicated to research in areas affecting national security, but nearly every aspect of scientific research impinges on those areas – from matters such as the handling of pesticides and

germs to the ability to forecast the weather. President Atkinson noted, as an example of such research, that the computing group at Livermore has established an algorithm that will enable high-definition digital television signals to occupy the same channel that carries analog programs for television. Although this advance is actually a by-product of their research, it will change the course of progress toward the use of high-definition television. Regent Preuss recalled that research on atomic weapons had produced technology that has advanced cancer treatment.

Regent Hopkinson noted the Los Alamos laboratory's high ratings in all areas overseen by the Council. She asked whether morale had improved in the past year. Mr. Friend reiterated that morale was boosted by renewal of the management contracts. He reported that the FBI eventually was required to modify its methods in conjunction with its investigation of the Wen Ho Lee matter. Its aggressive tactics generated fear and intimidated employees, and the style of the investigators hurt the laboratory's ability to attract new people. He believed that there is a much better balance of science and security at the weapons laboratories now.

Chairman Johnson recalled that the laboratories will be losing a large number of talented employees to retirement. She asked whether any policy formulation could assist in recruitment and retention efforts. Mr. Friend responded that he would consider the question and provide an answer. He believed that the Regents' continued support of the activities of the laboratories and their visits were of primary importance. Los Alamos in particular needs continued reinforcement in order to recover from events of the past year. There is a competitive market for computer specialists, and employees are leaving for higher salaries than the laboratory can pay. The University administration also needs to continue active support and outreach. Chancellor Dynes, Vice Chair of the Council, commented that the University's association with the laboratories is what draws most employees, who are free to collaborate with their colleagues at the other laboratories and on the campuses.

Regent Lee asked for assurance that every possible step has been taken to prevent race from being a factor in targeting laboratory employees. He pointed out that the field of computer science contains a high percentage of minorities. Mr. Friend believed that the culture of the laboratories is such that racial profiling is unlikely to occur. He believed that any profiling connected with the Wen Ho Lee case came from outside the laboratory. He assured the Regents that every effort is being made to heal the wounds caused by the investigation and to enhance the work environment for all employees.

President Atkinson remarked that the past two years have been incredibly difficult for the laboratories. He was gratified that the laboratories and the University have managed to address their many challenges successfully.

The meeting adjourned at 12:20 p.m.

Attest:

Secretary