

The Regents of the University of California

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

September 16, 1999

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, Bustamante, S. Johnson, Khachigian, Leach, Montoya, Preuss, and Vining; Advisory member Miura

In attendance: Regents Connerly, O. Johnson, Kozberg, Lee, Nakashima, Pannor, Parsky, Sayles, and Taylor, Regent-designate Kohn, Faculty Representatives Coleman and Cowan, Secretary Trivette, General Counsel Holst, Assistant Treasurer Young, Provost King, Senior Vice President Kennedy, Vice Presidents Broome, Darling, Gurtner, Hershman, and Hopper, Chancellors Berdahl, Bishop, Carnesale, Dynes, Greenwood, Orbach, Vanderhoef, and Yang, Executive Vice Chancellor Lillyman representing Chancellor Cicerone, Laboratory Directors Browne and Tarter, and Recording Secretary Bryan

The meeting convened at 2:35 p.m. with Committee Chair Leach presiding.

1. REPORT ON DOE LABORATORY PERFORMANCE-BASED MANAGEMENT

Senior Vice President Kennedy summarized the steps being taken to strengthen the University's management of the Department of Energy laboratories. He reported that the UC President's Council on the National Laboratories will be strengthened so as to bring the same level of expertise in security and management matters that it provides in science and technology. These actions include the following:

- Augmenting the Council's membership and structure to provide permanent and active oversight of security activities at the laboratories.
- Recruiting outstanding national figures with strong security expertise to serve on the Council.
- Recruiting individuals with large-project management skills that complement the scientific expertise on the Council to assist the Council in its oversight of projects such as the National Ignition Facility.
- Recruiting a new chairman for the Council who will bring both depth and balance to security and other areas of the Council's work.

Mr. Kennedy reported that President Atkinson has asked the Council to prepare a report on the progress the laboratories have made in implementing Secretary Richardson's increased security initiatives. Mr. John Ahearne, a member of the Council and the former Chairman of the Nuclear Regulatory Commission, is leading the Council's review, which is in its final stages. The findings from the review will be presented to the Board.

Mr. Kennedy discussed some details of the administrative actions that will be taken to strengthen the University's role in security at the laboratories. Recruitment has been completed for a new position to add security expertise to the University's laboratory administration office. In addition, Provost King is examining ways in which the expertise and resources on the campuses can be useful to the laboratories in the rapidly evolving field of computer security.

Issues came to light recently regarding the schedule and cost of the National Ignition Facility, a major laser project being constructed at the Livermore laboratory with the Department of Energy. Mr. Kennedy reported that the University is engaged actively in this issue and is supporting Secretary Richardson's improvement initiative for the project. President Atkinson has asked the President's Council to conduct a review of the project, with Director Tarter's participation.

Mr. Kennedy recalled that the University and the Los Alamos laboratory have responded to Secretary Richardson's request to take action against two Los Alamos laboratory employees and one former employee in connection with their role in the government's investigation of alleged espionage at the laboratory. Director Browne and President Atkinson were guided in these disciplinary actions by the findings of a distinguished panel of experts: General Andrew Goodpaster, Admiral Robert Wertheim, and Edward Frieman, Director Emeritus of the Scripps Institute of Oceanography and former Director of the DOE Office in Energy Research. These actions were announced to the public without disclosing the identities of the individuals. It is hoped that this aspect of the security issue is now closed.

Mr. Kennedy recalled that in 1992, as a key initiative under the management contract, the University developed a new approach to the oversight of administration and operations at the national laboratories. That approach drove a major change in the Department of Energy's traditional compliance audit mode of oversight, resulting in the elimination of hundreds of annual DOE audits and reviews. The initiative in performance-based management has resulted in improved science at the laboratories, reduced costs, and higher DOE annual ratings for the University. At the core of this initiative is the adapting of American industry management tools to the national laboratory environment and the establishment of a partnership for performance among the DOE, the laboratories, and the University.

Assistant Vice President Van Ness reported that the performance-based system, which has been in effect for seven years, has resulted in significant improvement across the

business and operations spectrum at each laboratory. This spectrum includes finance, procurement, environmental safety and health, and other areas. The performance-based management system was developed and has been implemented by hundreds of laboratory DOE and University employees in a partnership characterized by joint teams and management forums. Although the results have been good, not all errors or problems have been eliminated. He noted that isolated events are often seen by observers as characterizing the overall management of the organization. He hoped to present a broader context.

Mr. Van Ness reported that there have been fundamental management changes since 1992. Although the laboratories' science was viewed as world class, their administrative and operational management was seen as below standard. There were three key elements in the strategy to improve the situation. The first was the 1992 contract itself, which contained some new features:

- It required the establishment of the laboratory administration office at the Office of the President. It provided performance measures for assessing the management improvement progress at the laboratories. It anticipated and encouraged a closer working relationship between the Department of Energy, the laboratories, and the University.
- It added the concept of performance-based management in response to worldwide competition on quality and cost since the 1970s. The building of a partnership was planned between the Department of Energy, the laboratories, and the University to implement the performance-based management system with a goal of bringing administrative and operational management to the levels of excellence seen in scientific areas.

The initiative was begun with seven key objectives:

- To improve the institutional support to science at the laboratories.
- To achieve management excellence.
- To build a partnership for performance.
- To use performance-based management as a cornerstone to establish a high-quality culture and to drive improvement.
- To cut the cost of operations, optimizing the dollars dedicated to science.
- To strengthen UC oversight, permitting the DOE to become more focused in its own oversight.

- To integrate UC assessments and improvement processes with DOE's requirements, eliminating the need for separate reviews and audits.

Mr. Van Ness reported that the DOE's annual average ratings for the three UC-managed laboratories over the past six years placed science and technology in the high Excellent range in 1993 and rated them even more highly this year. The administrative and operations management rating, however, was at the border of Good and Marginal. The application of performance-based management resulted in a remarkable and sustained improvement which has resulted in a high Excellent rating. Over the same period, the cost of operations was reduced by as much as \$150 million per year. There was also improvement in formerly Unsatisfactory systems. In 1993, the Lawrence Livermore National Laboratory's procurement system and the Los Alamos National Laboratory's property systems were disapproved by the DOE. Currently, these operations are recognized as the best systems of their kind in the entire DOE complex. In environmental safety and health and the Livermore property management system there was also marked improvement.

These improvements helped provide more dollars for science. Mr. Van Ness reported that Livermore's workforce management from July 1996 to March 1998 was able to remove over 500 non-scientific jobs by streamlining its business and operational systems, eliminating unnecessary work, and adapting best practices from industry, and to add 200 new scientific positions. A similar picture exists for Los Alamos. In 1995, 32.5 percent of Livermore's overall operating costs were for indirect support. That percentage was reduced to 24 over the next four years and the savings reinvested in scientific programs. Since 1997, a portion of those savings has been used to upgrade the infrastructure. The total annual savings for Livermore were about \$80 million. The DOE has commended these improvements.

Committee Chair Leach asked what areas still need attention. Mr. Van Ness responded that his office hopes to help find a solution to security problems at the national laboratories and is focusing on Y2K preparation.

Regent Lee asked how performance data compare to that of laboratories such as Sandia and Oak Ridge. Mr. Van Ness reported that UC laboratories are at the top of the list in terms of progress during the past six years. Committee Chair Leach suggested circulating that comparative data to the Regents.

Regent Bustamante requested that future presentations always provide written background in order to prepare the Regents to ask informed questions. He hoped that the performance data that establish by contract whether the University is managing the laboratories properly, regardless of the progress, will make it possible for the University's supporters to state that fact with confidence.

Regent Bustamante asked when the new head of the President's Council on the National Laboratories would be appointed. President Atkinson responded that it should be very

soon and that he would inform him within the week about any progress. He noted that a security officer has been employed to advise the Office of the President on security issues. He will be the functional manager who will work directly with the heads of safeguard and security at Livermore and Los Alamos and with their counterparts on the DOE operations office as well as at its headquarters.

At the request of Regent Bustamante, President Atkinson indicated that he would arrange for a full briefing by Office of the President staff on the laboratory issues under discussion so that Regent Bustamante and his staff in Sacramento could become greater advocates for the University's continued management of the DOE laboratories.

[For speakers' comments, refer to the minutes of the September 16 morning session of the Committee of the Whole.]

2. **UPDATE ON SECURITY ISSUES AT THE DEPARTMENT OF ENERGY LABORATORIES**

Director Browne presented an update on security issues at Los Alamos National Laboratory. He mentioned that the case of suspected espionage that instigated the heightened interest in security at the laboratory is still under investigation by the Federal Bureau of Investigation and the Department of Justice. The laboratory is providing technical assistance in the case with respect to evidence. He reported that for the last two years significant progress has been made in achieving goals set by Secretary Richardson. He noted that there are three DOE ratings on security: Satisfactory, Marginal, and Unsatisfactory. In 1997, Los Alamos was Unsatisfactory in certain areas, and in 1998, it was Marginal. A recent audit of its performance rated it as Satisfactory in areas that were rated Marginal or Unsatisfactory in the past. In the control and accountability of nuclear materials, the DOE ranked it as having achieved the best performance within the DOE complex. The overall rating has not been made public, but Director Browne reported that feedback has been positive and complimentary.

Mr. Browne noted that being guided by the University's policies regarding employee discipline proved to be extremely valuable in dealing with three laboratory employees who were censured in connection with security matters. He reported that a proposal to use polygraphs to screen nuclear weapons scientists is causing anxiety among Los Alamos employees. He believed that there are fundamental issues that should be resolved before any polygraph program is initiated. Also, there are large numbers of foreign visitors and assignees to the laboratory who will be affected by legislation that would put a moratorium on visitors from sensitive countries such as India, Iran, Pakistan, and Iraq. The FBI, DOE, and CIA would be required to certify that the laboratory's programs are adequate before the moratorium could be lifted. The visitors already present who have received background checks would be allowed to stay, however. Many of these visitors are students from American universities who have expressed an interest in becoming citizens. He noted that Secretary Richardson has formed a task force on racial profiling to address issues such as improved

communications with the community and training managers and employees concerning handling foreign visitors. Permanent resident alien employees are treated as citizens under U.S. employment law but as foreigners under security laws. Someone who has been in the country trying to become a citizen must get annual background checks. It is hoped that the Secretary's task force can iron out some of the difficulties they face.

Director Tarter reported that security issues may be broken into three categories: physical, computer, and personnel. In the area of physical security, the primary issues at the Livermore laboratory have been two-fold; how it rates as far as materials control and accountability and how well it has created forces to protect special nuclear materials. Those areas have been judged Unsatisfactory in the past. Measures have been put in place that have resulted in a Satisfactory rating in materials control. Fifty guards have been hired and trained with a view to achieving a rating of Satisfactory in the area of protecting materials by the end of the year. He reported that computer security is the hardest to assure. A working group comprised of members of UC's three DOE laboratories and intelligence agencies is trying to assess the right measures to take in order to make the laboratories more secure. He believed measures must be found that enhance security at a reasonable price. The focus within the classified computer networks is to make it impossible to move information to any normal electronic media. The classified network would become self-contained, with no communication links to the outside world. A major issue concerning the unclassified networks is developing improved firewalls to sense intrusion and respond to it. A set of measures has been developed that are under review.

Mr. Tarter commented that the laboratories moved to a personnel security system called L-clearances, which requires less extensive background checks, as a cost-saving measure. The move has caused confusion about individual access and is not a popular choice among laboratory directors, who preferred the full Q-clearance profile. He noted that the Livermore laboratory underwent recently a review by the new counterintelligence apparatus within the Department of Energy and that he expected its results would be positive.

Regent Montoya asked about computer security at the Los Alamos laboratory. Director Browne reported that firewalls were put in place a year ago for the laboratory's 20,000 unclassified computers. There are issues still to be addressed that will require the augmentation of hardware and software. These countermeasures are expected to be ongoing.

Regent Bustamante asked to receive the Directors' presentations in writing. Acknowledging that standards for computer security are undergoing renewal, he asked where the laboratories were ranked compared to other laboratories prior to new standards' being established. Mr. Browne responded that at the time of the alleged espionage by a Chinese scientist, a system approved by DOE was in place, although DOE had recommended in 1994 that Los Alamos make certain changes to its configuration. Those changes were made in 1995, and a major shift in classified

computer security happened then also. In response to a question Regent Bustamante asked about security rankings, Mr. Tarter commented that only the Sandia National Laboratory and possibly the National Security Administration bear comparison to the Los Alamos and Livermore laboratories in terms of facilities with major computer systems that deal with classified information. Regent Bustamante asked whether after the 1995 corrections were made the UC-managed laboratories were judged to be best of class. Mr. Tarter believed that among institutions that do large-scale computing, UC's laboratories were best of class, but he believed that a more useful measure would be to judge them using a standard not relative to other laboratories but relative to vulnerability.

Regent Bustamante inquired about the seemingly mild discipline given to the three Los Alamos employees for not upholding security standards relative to the espionage case. President Atkinson noted that Secretary Richardson had taken issue with the degree of punishment in one of the cases. Director Browne reviewed the case with the DOE, and it was determined that the discipline should be more severe. He believed that the justification was not present for firing or demoting any of the three employees. President Atkinson noted that, from a group of 19 across the DOE complex who were identified as having breached security standards, the only people disciplined were the three Los Alamos employees. Committee Chair Leach noted that President Atkinson appointed a panel of three objective outsiders to review the available information. That panel found insufficient evidence for severe disciplinary measures. Notwithstanding its findings, President Atkinson authorized stronger action in the one case.

Regent Leach encouraged the Laboratory Directors to continue to give security at the laboratories the highest priority.

The meeting adjourned at 3:40 p.m.

Attest:

Secretary