The Regents of the University of California

COMMITTEE ON OVERSIGHT OF THE DEPARTMENT OF ENERGY LABORATORIES
March 19, 2008

The Committee on Oversight of the Department of Energy Laboratories met on the above date at UCSF–Mission Bay Community Center, San Francisco.

Members present: Regents Blum, Bugay, Dynes, Marcus, Pattiz, and Varner; Advisory members Scorza and Brown

In attendance: Regents Allen, Brewer, De La Peña, Garamendi, Gould, Hopkinson, Hotchkis, Island, Kozberg, Lozano, O'Connell, Schilling, and Wachter, Regents-designate Cole and Shewmake, Faculty Representative Croughan, Secretary and Chief of Staff Griffiths, Associate Secretary Shaw, General Counsel Robinson, Chief Investment Officer Berggren, Chief Compliance and Audit Officer Vacca, Provost Hume, Executive Vice Presidents Darling and Lapp, Vice Presidents Beckwith, Broome, Dooley, Foley, Lenz, and Sakaki, Chancellors Birgeneau, Bishop, Block, Blumenthal, Fox, Kang, Vanderhoef, and Yang, Acting Chancellor Grey, and Recording Secretary Bryan

The meeting convened at 9:40 a.m. with Committee Chair Pattiz presiding.

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

Upon motion duly made and seconded, the minutes of the meeting of January 17, 2008 were approved.

2. **UPDATE ON THE DEPARTMENT OF ENERGY LABORATORIES**

Vice President Foley reported that the Department of Energy (DOE) recently announced its annual performance assessment of the Lawrence Berkeley National Laboratory (LBNL). The DOE's assessment included an initial determination of whether to implement the contract's award term provision. The DOE site manager concluded that, based on performance, the University had earned 94 percent of its maximum fee under the contract and that the University is eligible for a three-year extension of its contract. The actual extension will occur when the DOE has concluded its review of any contract requirements that needed to be included in the prime contract and the University has had a chance to examine these and agree to the changes. The review is expected to be completed in time for the Regents to authorize any required changes at the May meeting.

Mr. Foley reported on significant research developments at LBNL. He noted that the laboratory is a major player in nanoscience. It announced recently the development of a new technique to harness energy, through the use of silicon nanowires, which is now lost as heat

during the production of electricity. The far-ranging potential of this technology includes DOE's hydrogen fuel cell powered Freedom Car. Also, an LBNL scientist with colleagues from a General Motors research and development center has reported a breakthrough in understanding why, when structures made of metal get smaller, they get stronger. New technologies permit scientists to see and record events in these tiny structures that are under stress and to measure the changes at the nanoscale level. In another area, scientists at the laboratory and UC Berkeley are using the laboratory's Advanced Light Source x-ray beams to obtain high-resolution, 3-D crystallography images of DNA and observe how specific enzymes cause changes in its structure. Through the observation of how specific enzymes react to new drugs, this technology will aid in the development of anti-bacterial and anti-cancer drugs.

Mr. Foley reported that Mr. Vern Paxon, a member of the LBNL Advanced Computing for Science Department, has been awarded the Association for Computing Machinery's Grace Hopper Award for his work in measuring and characterizing the internet. The award is presented to the outstanding young computer professional of the year, who is selected on the basis of a single, recent major technical or service contribution.

The laboratory is also making important contributions in breast cancer research. Ms. Terumi Kohwi-Shigematsu, a scientist in the Life Sciences Division, and her colleagues discovered that SATB1, a nuclear protein well known for its crucial role in regulating the immune system, is an essential contributing factor in the most aggressive forms of breast cancer. The discovery has profound implications for prognosis and possible new treatments for cancer's most malignant forms.

Finally, Mr. Foley reported that, in collaboration with Sandia National Laboratories, LBNL has developed nuclear technology to monitor activities inside a nuclear reactor remotely. The detector is reliable, resistant to tampering, and can be left alone for up to a year – characteristics which make it ideal as a monitoring device for organizations like the International Atomic Energy Agency, which is charged with enforcing anti-proliferation agreements.

Vice President Foley commented that he had cited these accomplishments and honors to emphasize the Berkeley laboratory's continuing contributions in developing science in many areas of importance to the nation.

3. **UPDATE ON BOARD OF GOVERNORS ACTIVITIES FOR LOS ALAMOS NATIONAL SECURITY, LLC AND LAWRENCE LIVERMORE NATIONAL SECURITY, LLC**

Committee Chair Pattiz reported that the LLCs – Los Alamos National Security (LANS) and Lawrence Livermore National Security (LLNS) – of the national laboratories were conducting an ongoing dialogue with respect to the University's relationship with the laboratories going forward. Referring to an issue raised recently by Faculty Representative Brown concerning what was perceived as a lack of information available about the specifics of the University's management contract, Committee Chair Pattiz recalled that during the bidding process all related information was widely available and was discussed with many constituencies, including the faculty. The University is in a relationship with private sector partners because that was the structure demanded by the Department of Energy (DOE) if the University were to continue its role at the laboratories. The laboratories' scientific achievements have never been questioned, but, because of problems with laboratory administration, the DOE and others within the government determined the necessity of bringing in private sector partners with more expertise in the operation and administration of areas excluding the scientific mission in order to make sure the laboratories functioned at an optimal level with complete safety, security, and efficiency. He acknowledged the importance of continuing to ask pertinent questions that generate discussion about the University's position. He recommended strongly that, in order to familiarize themselves with the issues and the University's role, Regents who have security clearances visit the laboratories and receive classified briefings from the laboratory directors on laboratory activities and projects of major importance.

Committee Chair Pattiz reported that, in February, LANS and LLNS met with senior management at the DOE and the National Nuclear Security Administration (NNSA). The LANS Board of Governors delivered its first annual report to the DOE Secretary, setting out the accomplishments of operations within the first year and providing numerous examples of improvements that had taken place under the new contract. The DOE's response to the report was very positive. The workforce reduction and restructuring activities have been completed, and efforts have turned to addressing the challenges of redeploying the workforce to best accomplish the mission. He noted that the NNSA selected the Los Alamos laboratory as the preferred alternative site for plutonium research development and manufacturing, as part of the national plan to transform the nuclear complex to be more responsive to future and emerging threats.

Committee Chair Pattiz turned to activities at the Livermore laboratory. He reported that, due to significant reductions in federal funding and increased costs associated with the requirements of the new contract, the laboratory expects a decrease of about $280 million from its FY 2007 budget of $1.6 billion. The laboratory won two federal consortium awards for excellence in technology transfer – only one of six federal government laboratories and research centers to receive multiple honors – and five awards in 2007 for developing

technology considered to be among the top 100 industrial inventions worldwide. He emphasized that the laboratory operates in a wide variety of areas that are essential to the future not only of California but of the planet. In support of science and math education, LLNL awarded three gifts of $25,000 to the Livermore and Tracy school districts and matched $1 million in donations to the laboratory's home campaign, an annual charitable drive that benefits more than 400 local nonprofit agencies.

In closing, Committee Chair Pattiz provided some observations about the governing boards and relationships among their industrial partners. The boards are comprised of six executive committee members – three from UC and three from the partners. In addition, six independent governors have been chosen for their unique knowledge and skill in key areas. He reported that the members are well informed and active participants. There is a spirit of cooperation, and the members take their roles very seriously. He stressed that the selection of the laboratory director is one of the University's most important contributions to the partnership. Although discussion will continue with respect to the University's ongoing role, its dedication to supporting important scientific research is unquestionable.

Regent Garamendi acknowledged that the laboratories produce extraordinary science and research, much having nothing to do with nuclear arms. Noting the University's fundamental management role in the LLCs, he opined that if there are future breaches in security or other problems, the University likely will be held accountable. Committee Chair Pattiz took issue with this view, believing that the LLCs' oversight role had protected the University to a degree from being blamed for any lapses.

Regent Garamendi recalled that one source of the University's income is the fees it receives for managing the DOE laboratories. He asked to know the specific financial benefit to the University for its role. Also, he expressed concern about the University's inability to terminate the contractual relationship. Vice President Foley acknowledged that this was a constraint not imposed in the previous contract, but he noted that the DOE may extend the contract unilaterally for as few as 7 years or as many as 20 years, based on the management performance of the LLCs. Committee Chair Pattiz agreed to forward to Regent Garamendi specific information about the fees the University receives through the contract.

Committee Chair Pattiz noted that prior to the creation of the LLCs, it was his understanding that the University did not receive a large amount of funds for its association with the laboratories. Currently, more funds are being made available to operate the LLCs. He expressed his desire that those fees should be used for general University purposes to assist the University during its fiscal challenges. Vice President Foley added that the University receives roughly twice the amount of fees currently than under the previous contracts, adding that through the efforts of former Regent Parsky and Committee Chair Pattiz, there has been strong pressure to ensure that the funds are spent almost entirely on research and development.

Regent Garamendi turned his attention to the Los Alamos laboratory's role in the production of nuclear weapons and its involvement with pit manufacturing, asking a number of questions about developments in that area. Vice President Foley reported that nuclear weapons trigger components are referred to as pits. The Los Alamos laboratory has been selected as their principal production site. He recalled that there have been initiatives in the last few years to create or build a new facility to produce pits, but fiscal realities have sidelined these. Currently, the laboratory has a limited capability that replicates the capability at the Rocky Flats site, now closed. Last year the laboratory produced about 10 pits. It is expected to produce 6-to-10 annually in future years. The members of the LLC have discussed the importance of ensuring that projects that the laboratory may be asked to undertake in the future will not have an adverse impact on the science and technology that is its focus. The University's interest in the laboratories is the preservation and development of that science and technology.

Regent Garamendi asked about changes in the employment status of laboratory workers brought about by formation of the LLCs. Vice President Foley confirmed that employees at the Livermore and Los Alamos laboratories are no longer UC employees; they are employees of the LLCs. Regent Garamendi opined that this fact called into question whether the University's interest could any longer be seen solely as in the development of science and technology. He requested further information about the flow of funds from the LLCs to the University. Committee Chair Pattiz believed that the University's participation on the board and its responsibility for hiring laboratory directors indicate a closer link than was being implied. President Dynes agreed, noting that the University's responsibility to recruit laboratory directors adds significantly to its role. Furthermore, the science and technology that are the heart and soul of the laboratories' work, including in classified areas, are overseen almost daily by UC. He opined that it is better to be inside the tent than outside.

Chairman Blum supported President Dynes' comment, stressing that it was his opinion that the University should retain the contract with the laboratories because the University is an ethical institution that can safeguard the program. The University is providing a very important role, not only for science and mankind, but in protection of what needs to advance in terms of ridding the world of nuclear weapons.

Vice President Foley recalled that the decision to compete for the laboratory management contracts had been made collectively, based on the determination that the University's participation was in the best interest of the nation. Executive Vice President Darling advised considering the roles of both the Livermore and Los Alamos laboratories when contemplating the reasons for this decision. He reported that the DOE proposes to transfer over the next seven years all plutonium operations from the Livermore laboratory to the Los Alamos laboratory, which is better equipped to handle plutonium. That plan proposes an increase in pit production. In past years, when the University operated the laboratory, the University had determined that a production rate of 50 pits per year at Los Alamos would be an acceptable level, based on an analysis by the President's Council. Regent studies by

the LLCs have found that a rate of up to 80 pits per year would not affect the research and development nature of the laboratory. He noted that Congress must fund any proposal to increase pit production. Chairman Blum opined that no new pit facility will receive funding in the foreseeable future.

Regent Allen expressed concern about the possibility of increased pit production. He advocated assessing the value of the current mission and supported the idea of using the University's involvement to develop a step by step reduction in the nuclear threat. At his request, Committee Chair Pattiz agreed to schedule further discussion about pit manufacturing levels but believed that, before such discussion takes place, as many Regents as possible should obtain more information on the issue in order to produce a unified stance going forward. He reiterated that the University's involvement with the laboratories turns on whether there is a mission worth accomplishing. Committee Chair Pattiz recommended an article written by former Secretaries of State George Schultz and Henry Kissinger and others that discussed a nuclear-free world through a step-by-step process for reducing the nuclear threat, noting that such an argument would not be in accordance with the University's walking away from a contract with the laboratories. He strongly applauded those working at the laboratories who are carrying out a valuable service to the state, nation, and world.

Regent Hopkinson noted that she recently availed herself of the opportunity to have a briefing on the laboratories. She asserted that in order to make the decisions that Regents will face, it is extremely important to have the briefings, and strongly encouraged other Regents to do so.

Vice President Foley commented that it is not the role of the laboratories to make policy; such authority rests with U.S. elected officials. The role of the laboratories is to provide technical expertise in response to carrying out the missions that are assigned to them.

Regent Garamendi continued to express concern about the University's involvement with the DOE laboratories, particularly in light of the proposal to increase weapons components manufacturing. Committee Chair Pattiz believed it would be helpful for him to visit the laboratories and receive private briefings from the directors in order to secure definitive answers to his many questions.

Regent Lozano informed the Committee that, based on recent discussions with Regents and others about laboratory management contract issues, she and Committee Chair Pattiz had decided to prepare a briefing document, in order to create a standard base of knowledge for Regents, that outlines the particulars of the management contracts and the exact relationships among the management team members and with the Department of Energy.

The meeting adjourned at 10:35 a.m.

Attest:

Secretary and Chief of Staff