UNIVERSITY OF CALIFORNIA **ACADEMIC SENATE**

ACADEMIC COUNCIL SPECIAL COMMITTEE ON LABORATORY ISSUES

MEETING NOTES – JANUARY 29, 2010

Present: Mary Croughan, Bill Powell, Michael Colvin (T), Daniel Simmons, Harry Tom, Gregory Miller, Todd Giedt, Eugene Haller, Michael Todd, Harry Powell, Clare Yu (T), Peter Krapp, John Birely, Jim Hirahara, Stephen Beckwith, Bill Eklund, Robert Van Ness, Bruce Darling, and Elaine Stamann.

I. Chair's Announcements

Chair Simmons did not have any announcements.

II. Hertz Hall

ISSUE: Chair Simmons noted that the LLNL/Sandia "open campus" is approximately 90% of the way there in terms of its development. He added that he has not heard that any of the educational components will change; it is more of a physical revamping than a programmatic change. That said, there is still the outstanding issue of Hertz Hall, which UC Davis leases.

DISCUSSION: The UCORP chair briefed members on the history and current status of UCD's relationship with Hertz Hall at LLNL; he is not sure to what extent UCD faculty are aware of the open campus issue. In 2000, the UCD Department of Applied Sciences was still located at Hertz Hall (but the relationship between LLNL and the department had already broken down by this point). Around this time, LLNL made the decision to stop supporting graduate students at Hertz Hall. Davis subsequently pulled all of its faculty members out of Hertz Hall (with the exception of David Wong), and bought out the other half of their contracts. He recounted that at the December ACSCOLI meeting, consultants noted that UC had already violated its contract with LLNL, thereby surrendering Hertz Hall, which indicates some kind of a communication breakdown. A related issue concerns the fact that one of the buildings adjacent to Hertz Hall was built with student fees. The UCORP member described the Senate's interests as the following: 1) The remaining faculty member (David Wong) should be taken care of; and 2) the University may want to make future use of Hertz Hall. Recently, the Davis Division passed a resolution asking the Divisional Chair to write a letter to Chair Simmons, but he has not done so. The Chair's letter would have said that UCD has maintained the lease contract and 2) that UCD intends to use it for programmatic and educational purposes (David Wong's lab and NIF).

ACTION: Chair Simmons/Vice Chair Powell will try to arrange a meeting UC Davis interested parties.

III. NAS Review of the National Security Laboratories

ISSUE: The National Authorization Act calls for an examination of the costs associated with the new contracts for LANL and LLNL by the National Academy of Sciences (NAS). The Senate expanded this study to include the management and operation of all of the national weapons labs, and the final legislation places the focus on the maintenance of quality at the Labs. In brief, the study will look at five specific aspects of the Labs: 1) the quality of scientific research; 2) the quality of engineering work; 3) the criteria of conclusions; 4) any relationship(s) between the current quality of the Labs and the contracts; and 5) the Labs' relationship(s) with other national agencies. The final report is due on January 1, 2011, and is expected to be unclassified.

DISCUSSION: Chair Simmons noted that this started out as a look at the new contractual arrangements at the National Labs, but was expanded to look at the quality of the science being performed. ACSCOLI needs to 1) be in contact with the review committee and invite them to an ACSCOLI meeting; and 2) convey its impressions of Laboratory management. On that last point, President Yudof has expressed the view that UC's Laboratory management structure may be too large. There may also be differing viewpoints on the value of the National Labs to UC within UOCP. For example, Laboratory Management's recent whitepaper on this subject tries to make the case that UC manages the Labs in order to serve the public interest and provide a benefit to the Nation. On the other hand, President Yudof may be more interested in what UC receives from its management of the Labs.

At the last S&T meeting, there was a briefing on the impact of the transition at the Labs associated with the new contracts. Dan suggested that a comparison needs to be done on how the Labs functioned previously and how they function under the new contracts. Chair Simmons also mentioned that some staff at the Labs (LLNL and LBNL) are simply waiting out the economy in the Bay Area. Once it improves, they may choose to leave. There will be a long transition where expectations have to change. Vice Chair Powell made a similar observation that the Labs are under-resourced by about $100M from the time before the contracts, but he added that most people were still excited by the science. He added that the morale problems at LLNL may be related to a lack of appreciation of mentor-type programs by the leadership. Overall, members believe that the NAS review may be effective in helping the Labs overcome some of their current problems.

IV. Update on Items from the December 14, 2009 Meeting

A. LLNL/Sandia Open Campus

ISSUE: Consultant John Birely noted that an infrastructure investment request of approximately $20M has been made with some receptiveness in Washington DC. While there have been some discussions on resolving the issue of Hertz Hall, progress has been very slow. Consultant Bill Eklund observed that if the Open Campus is successful, it will make LLNL a very attractive site for campus-lab interactions. He said that the general

bureaucracy is a real problem. Even though there is an institute at LANL, it does have its own bureaucratic problems.

DISCUSSION: The UCORP representative reiterated the following faculty interests in this matter: 1) UC Davis still has ten or more years on the Hertz Hall lease; 2) the well-being of the remaining UCD faculty member; and 3) UC's physical foothold at LLNL. He also remarked that a large swathe of real estate will be apportioned to the open campus. With that in mind, it seems counter-intuitive to begin by ousting UC from the open campus. Consultant Bill Eklund said that some of the legal issues include: 1) The facility does not meet ES&H requirements; and 2) there may be some clean-up liabilities that the University has at the end of the lease.

B. Modification of the LANL's Personnel System – *Consultant Jim Hirahara*

ISSUE: This modification was largely driven by the NNSA through a provision in the contract to move toward a more structured compensation classification system. In the past (e.g., before the new contracts), LANL used a maturity curve to establish compensation levels for scientists and engineers (S&Es). This is no longer used, because it is no longer a good measure on how one should compensate professionals. In addition to the maturity curve, LANL also used to prepare a unique job description for each employee. In sum, this created difficulties in justifying pay levels due to a lack of benchmarks, and hampered transferring people between programs (and justifying pay in these transfers). It also hampered career planning on the part of individual employees. In 2007, a working group was put together, which initially focused on administrative support. This group looked at 30 companies (labs, research companies, etc.), and came up with a framework for implementation for the support staff. Although the same concept was following for the S&Es, it proved to be a little more complicated. For the S&Es the working group looked at project/program managers and the R&D staff. In phase II (2008), two working groups were assigned to work on the classification of the technical staff members (TSMs). They initially looked at using the classification of function, but that was viewed as being far too rigid. Another possibility was grouping TSMs into functional categories (e.g., physicists, physical scientists, chemical scientists, etc.). However, this did not give the group enough flexibility. In the end, a more generic grouping was agreed upon—scientists, engineers, and managers. On the R&D side, they agreed upon classification schemed included science, engineering, and management. The recommendations from the working group are now being implemented.

DISCUSSION: One member remarked on the disconnect between the old "Lab Fellows" group and the new classification system. Now there are much fewer people in the sixth step; many of the former Lab Fellows are now stuck in the fourth position on the ladder, which creates a morale problem. For the TSMs, they cannot move to the top until the top steps are vacated. Consultants replied that the Lab Fellows were distinguished by their

accomplishments—the new model recognizes that there are top steps in all of the categories. How the positions are allocated between the steps is really a question of budget. Chair Simmons asked how people move up? Consultants responded that it is a competitive process in which internal staff are allowed to compete for jobs with external candidates. Raises are generally handled through position reclassifications.

C. Campus/Lab Collaboration Update: EVP Steven Beckwith reported that ORGS is preparing for a new Labs Fee competition (about $20M will be available). In addition to this competition, ORGS also funded the LANL institutes. In the future, ORGS will design a competition where these institutes can compete but along with other entities. EVP Bruce Darling also passed out Laboratory Management's paper, *UC and the National Laboratories: Benefits to the Nation, The Labs and the University*, and invited members to submit comments on it.

D. NAS Study of the Nuclear Security Laboratories: Consultant Birely remarked that while this study is in the works, it is having trouble both in getting a final contract signed and in finalizing its membership. He noted that the Defense Authorization Act stipulates that the review committee needs to be set up within 60 days of enactment of the act. The Department of Energy (DoE) is currently getting itself up-to-speed, but it will not meet this deadline. This study falls under the responsibility of Steven Koonin, Undersecretary of Science at the DoE.

V. Structure of the Laboratory Management Office – *Consultant Bill Eklund*

REPORT: The governance of LANL and LLNL are facilitated through the respective limited liability companies (LLCs) of LANS and LLNS respectively, which accommodates the commercial objectives of the private partners, as well as the research and public service missions of the University. In general, UC retains responsibility for the science, while Bechtel is responsible for the operational management of the Labs. UC has the fiduciary duties to the LLCs and to the other members; the UC Governors are responsible for fulfilling these obligations. Within these LLCs, Bechtel and UC are 50% owners; there is also a profit-sharing arrangement. The other partners include BWX Technologies and Washington Group International; Battelle is a subcontractor for LLNL only. The partners are not protected from financial loss, but would share any such loss according to the 50/50 capital interest. The formula for the distribution of the Lab fee is renegotiated every year, but generally places a 60% weight on the science and a 40% weight on operations.[1] These LLCs are managed by a Board of Governors, which includes an Executive Committee for each LLC that are essentially identical in structure and function. On each Executive Committee, there are six Governors (UC appoints three including the Chair, and Bechtel appoints three including the Vice Chair). The Chair has tie-breaking authority and is currently Norm Pattiz. The other Governors are advisory to the

[1] The DoE has tried to increase the weight on operations to make it more of a 50/50 split.

Executive Committee and do not have voting rights. There are seven standing Board Committees, whose function is to advise the Executive Committee. These are the Mission Committee, Science and Technology Committee (S&T), Nominations and Compensation Committee (N&C), Ethics and Audit Committee (E&A), Laboratory and Business Operations Committee (B&O), Weapons Complex Integration Committee (NWIC), and the Safeguards and Security Committee (S&S). The respective Lab Directors are both employees of the LLC as well as the LLC President, and have the responsibility to report on state of the nuclear stockpile annually. The LLC offices are embedded within each Lab and provide staffing services to the Lab Director the Board of Governors.

VI. Structure of the Laboratory Management Office – *EVP Bruce Darling*

REPORT: The UCOP Laboratory Management Office (LMO) was established in 1991, and is responsible for oversight of LANL, LBNL, and LLNL. The LMO has a budget of $3.4M. The LMO is comprised of 12 full-time and one part-time staff members. Elaine Stamman, who is the Director of Assessment of the Laboratory Programs, works with John Birely and Glenn Mara, Associate Vice President for Programs, on the programmatic side. Bob Van Ness, Associate Vice President for Operations and Administration, takes responsibility for operations. Ronald Nelson, the Executive Director for Contracts and Administration is responsible for closing out all three contracts, contract administration, and oversees the fee aspects of what UC earns on the three Labs, and manages the budget for the office. J. F. (Buck) Koonce, the Deputy Associate Vice President for Operations, is responsible for safeguards and security, nuclear operations and security. Jim Hirahara, the Executive Director for Business & Finance is the LMO's financial expert. Ann Willoughby, who is the Director of Performance Management and Integration, manages the calendar, develops the presentation materials, and monitors the action lists, among other duties.

In short, the LMO ensures that the University carries out its responsibilities with respect to the National Labs that it manages. An important part of its responsibilities is ensuring that University leadership is informed about what is going on with the National Labs. Towards that end, there is guidance from three advisory groups: The Laboratory Management Council, the LBNL Contract Assurance Council, and the LBNL Advisory Board. The Laboratory Management Council, which meets monthly, is chaired by EVP Darling and staffed by the LMO, and serves as UCOP's senior management forum on the Labs; it focuses on the integrated operations and the integrity of systems at the Labs. The LBNL Contract Assurance Council, which also meets monthly, advises the EVP on LBNL issues needing management attention and assures that work performed at LBNL is in compliance with the LBNL contract. The LBNL Advisory Board, which was created under the new LBNL prime contract, reports to the President and provides advice on the scientific and operational aspects of LBNL. It it also charged with the following functions: 1) Evaluating and making recommendations on the overall direction of LBNL's scientific programs, UC governance of LBNL management, and the effectiveness of

LBNL and UC contract assurance functions; and 2) commenting on the vision and strategy of LBNL, its leadership effectiveness, the quality of its scientific staff, and the efficiency, effectiveness, and safe conduct of its operations.

In the last year, the LMO was the principle author on the ways that the DoE could reform its operations; as well as producing the paper, *UC and the National Laboratories: Benefits to the Nation, The Labs and the University*. It continues to make sure The Regents are briefed on Lab issues, and it worked closely with the LBNL on its stimulus funding. The LMO has also been working very hard to increase collaboration between the Labs and the University. For example, it has been trying to involve the Hass School of Business at Berkeley to develop leadership programs at LBNL and LNLL, as well as trying to get UC law schools involved with Lab issues (e.g., international treaties and contracts).

DISCUSSION: Members were interested in the three Labs' performance reviews. EVP Darling reported that LBNL earned an A- for science and technology and a B- for operations, thereby gaining a one-year contract extension (for a total of 10 years). It earned 94% of its total performance fee ($4.23M). LLNL was rated "outstanding" in science and technology, and received 88% of the fee ($47.2M). For LANL, it received an "outstanding" in science and technology and a "good" in operations, thereby receiving 90% of the fee ($72.1M). Regents approved $33M in fee expenditures, and UC received $30.5M in net fees.

It was also asked if there should be an ACSCOLI representative on the Lab Management Council. Members were also interested if the LMO was doing things for the LLCs that they should actually be doing for themselves. EVP Darling responded that the LMO does provide expertise and support for the L&C committees, but explained that this is what is necessary for UC's oversight of the management contract. Members remarked that it could be argued that UC is bearing too much of the cost, but the University is also enriched in this area by taking on this responsibility. Finally, members said that ACSCOLI may want to have an expert on international law included in its membership. Towards that end, Chair Simmons made a request for nominations. (Subsequent to the meeting Chair Simmons was invited to participate in meetings of the Lab Management Council.)

VII. LANS/LLNL Board of Governors Update – *Bruce Darling*

REPORT: EVP Darling reported that the three Labs are in a nice spot in terms of national priorities (e.g., alternate energy, RF funding). The President may impose a 10% increase in the budget for the nuclear weapons complex; recent editorials (Biden, etc.) seem to support this. Funding is going up for stewardship even as we move closer towards nuclear nonproliferation. This was also echoed in the President's State of the State address. He also reported that NIF is proceeding along nicely (see distribution), and LANL has completed a second axis of DART.

DISCUSSION: Chair Simmons said that the nuclear test ban actually stimulated the growth in these stewardship programs, computers with advanced computational abilities, and the NIF. UC was instrumental in putting this system of analysis 14 years ago, which has now matured. He added that the Labs are trying to reconfigure themselves from weapons labs to national/global security labs; assessing explosions in other countries is part of this work. Advances in other scientific areas, such as seismology, also come out of this work. Global climate circulation models, which were started with basic research into a "nuclear winter", are now quite advanced.

VIII. LBNL's Business System – E-buy – *Guest Jeffrey Fernandez, LBNL CFO*

REPORT: The E-Buy system came into being because LBNL needed a new business model to support the commitment under Contract 31 to save $30M in supply chain costs over five years through improved business processes and infrastructure. Key elements in its cost-saving strategy included strategic sourcing, an electronic ordering system, source-to-pay integration, streamlined logistics, and disbursement modernization. However, LBNL faced a number of challenges in reaching this goal: 1) The Elements of supply chain were not integrated; 2) there were too many ways to buy low value goods; 3) there was excessive maverick buying; 4) no user-friendly electronic ordering system; 5) labor intensive invoice processing; and 6) the lack of reliable institutional controls. The E-Buy system offered the following advantages over the then current system: 1) An electronic ordering system that direct connects users (punch out) to supplier e-catalogs; 2) designed and built in-house on the Peoplesoft FMS platform; an user-friendly gateway to buying strategically sourced materiel – an Amazon-like experience; and an infrastructure for supply chain integration. For users, it 1) provides one simple, consistent way of buying common commodities & supplies; 2) empowers them to make their own buys directly from contract suppliers, bypassing Procurement; 3) reduces procurement burden, procure-to-pay time and internal processing costs for over 50% of lab procurement actions; and 4) assures reasonable & consistent institutional controls. The system was facilitated through an oversight committee, council & project team; strategic sourcing/communication plan; planned contract deployment; and a partnership with end-users and suppliers. At this time, it is projected that after five years, LBNL will have saved $30M. In addition, LBNL has saved 1/3 in labor (21 FTE reduction in Procurement), as well as a 2/3 price reduction and a 25% reduction in requestor procurement effort.

IX. **Commission on the Future of UC and the Research Strategies Working Group** – *Mary Croughan and Consultant John Birely*

The Research Strategies Working Group has created four groups to execute its charge:

- *Mission*: This group is charged with developing a statement of the purpose, mission and the core principles that define the UC Research Enterprise. Professor Croughan added that this group is concerned with defining (or re-defining) UC's research mission and principles. For example, UC's recent policy of furloughs and instructional days indicates that the University prioritizes teaching first and research second.

- *Internal Research Funding and Management*: This group is investigating the need and scope of a strategic plan for internal UC research funds. This includes collaborations with the Labs, as well as inter-campus research. One key question is how this is incentivized, especially in the Humanities. This group is also examining not only the ways in which the Humanities and Social Sciences subsidize most of the research that is done in the hard sciences, but also the magnitude of this subsidization. Professor Croughan felt that this subsidization is in the range of 10-12%. A white paper will be produced in this area, along with another one on indirect costs.
- *Research Barriers, Incentives, and Support*: This group is investigating the top systemwide barriers or challenges that researchers in UC face, and provide recommendations for improvement, and identify successful incentives or support programs for UC researchers.
- *Funding Model for Research*: This group is interested in developing a fuller model and understanding of the full costs of UC research and how it is funded, and identifying short and long-term strategies for improvement. In particular, this group is looking at Federal money, industry partnerships, with a key question being what can be done to bring in additional funding for research? Another idea is to centrally negotiate indirect cost rates for the campuses. Vice Chair Powell remarked that with respect to the Humanities, there is a book culture where the creative scholarship is driven by the individual. Encouraging incentives, rather than disincentives, for interdisciplinary research is a good idea, but these things seem to go in cycles and is somewhat generational. That said, it was noted that the Labs are generally ahead in terms of interdisciplinary and collaborative projects. Professor Croughan added that the recommendations that come out of this group will indeed be somewhat discipline-specific.