

ACADEMIC COUNCIL SPECIAL COMMITTEE ON LAB ISSUES ANNUAL REPORT 2016-17

TO THE MEMBERS OF THE ACADEMIC COUNCIL:

The Academic Council Special Committee on Lab Issues (ACSCOLI) was established by the Academic Council to provide broad-based Senate oversight of UC's relationship with the National Laboratories – Los Alamos National Laboratory (LANL), Lawrence Livermore National Laboratory (LLNL), and Lawrence Berkeley National Laboratory (LBNL, also called the Berkeley Lab). ACSCOLI advises the President and Regents on general policies relating to the National Laboratories, which includes the dispersal of UC's share of net fee monies, policies that affect the lab science management, and the quality of science being performed at the labs. ACSCOLI is also concerned with evaluating the benefits of UC's continued participation in the management of the labs, and has been charged by the Academic Council with stimulating closer connections between the labs, faculty, and students.

ACSCOLI held two in-person meetings and one teleconference in 2016-17.

National Labs Overview

UC is the prime contractor for the management and operation of Lawrence Berkeley National Laboratory (LBNL). The University is also a partner in the Lawrence Livermore National Security, LLC (LLNS) that manages Lawrence Livermore National Laboratory (LLNL), and a partner in Los Alamos National Security, LLC (LANS), that manages Los Alamos National Laboratory (LANL). LLNS and LANS are overseen by the National Nuclear Security Administration (NNSA), an agency within the U.S. Department of Energy.

General Updates from the Office of National Laboratories

1. Funding

LANL and LLNL receive most of their funding from DOE/NNSA, with the Office of Science, Energy Offices, Department of Justice, Homeland Security, and Department of Defense making up most of the remainder. The budget is expected to remain stable or even increase under the new administration. LBNL, however, gets most of its funding from the Office of Science, which may see cuts in the upcoming federal budget. The lab has been preparing scenarios for potential budget decreases.

2. Department of Energy and LBNL Contract

Under new Secretary of Energy Rick Perry, the DOE has announced it will continue to focus on the efficiency and streamlining processes that began under former Secretary Ernest Moniz. The DOE has begun a process to simplify and restructure its contracts to achieve more flexibility and reduce the burden on the national laboratories by eliminating government-approval requirements for minor expenses.

A new contract framework was successfully piloted at Stanford's SLAC lab and will most likely be implemented next at LBNL, where it will be tested to find out if it works with a more complex, multi-program lab. To help with the transition to the new contract responsibilities at LBNL, a former senior official from the DOE who helped develop the contract for SLAC has

been hired as a consultant. The university sees a big benefit in not having to seek government approval in areas – such as salaries – where it has no interest.

3. Staff hiring, retention, and morale

In the past year, there has been a large amount of hiring at the labs for positions in science and engineering. Retention is more of an issue than recruiting, often due to location. Lawrence Livermore loses computer and IT professionals to nearby Silicon Valley. The morale of lab workers at Los Alamos, which has been an issue of concern for ACSCOLI in the past, seems to vary depending on length of employment and whether an employee is in a management or top leadership position. Newer employees (about 25 percent of the workforce) who were never employed under sole-UC management (and had no UC pension expectations) tend to have better morale. Some higher-level managers might be worried about their jobs in a transition but UC is trying to alleviate fears and has removed the positions that directly report to key personnel from the pool of jobs that would be at risk.

4. Safety

Safety issues at LANL and the Berkeley Lab in the past couple of years have spurred the formation of cross-lab “communities of practice” in which groups share best practices for management, personal accountability, and improving communication. Training efforts have been implemented in conjunction with the unions, and the Berkeley Lab is working to make workplace safety part of the culture.

5. LANL Nuclear Waste

Waste disposition has restarted after an incident at the waste isolation pilot plant (WIPP) at Los Alamos in 2014. The lab is now confident about safety, and the project should be completed by fall, 2017, when another contractor will take over the remediation contract.

6. Plutonium Pits

Due to a shutdown, there has been no plutonium pit production at LANL in the past three years, but after a readiness assessment the lab is gearing up to get started again. Some ACSCOLI members question UC’s involvement in the maintenance and potential production of nuclear weapons, but Los Alamos is the only national lab that does it now. Arguments have been made for separating production from research & development, but although they are different types of activities requiring differing expertise, the proximity of production facilities to researchers may serve to enhance the research.

7. Major building projects

A large building project at the Berkeley lab was delayed slightly and costs have been higher than expected. The lab is doing some remediation of an area called Old Town that has original buildings that will enable the development of a new building site.

Los Alamos had to pay an \$11 million settlement to the state government for going over budget on a project. The building budgets are apparently too low and the relatively remote location is a problem. David McCallan from UC’s Office of the National Labs has been the site liaison for the last 1.5 years, which has involved spending time at the lab, participating in reviews, and otherwise bringing UC into the picture.

8. Lab Performance Evaluations

Each year, the three national laboratories are assessed on their performance through a set of performance objectives/categories to determine how much of the DOE-NNSA management fee will be earned, and whether the laboratory contract will be extended for another year. The grades were good this year, with a 94% at LBNL and 90% aggregate at LANL and LLNL.

Los Alamos National Laboratory Contract Expiration

The current contract for the Los Alamos National Laboratory is scheduled to expire in September 2018. The NNSA released a draft RFP in July, 2017, to obtain industry feedback; the final RFP is expected in September, 2017.

Throughout the year, committee members discussed methods for informing the faculty about the LANL contract and a potential bid process. Ideas for communicating with faculty included sending ACSCOLI updates to Academic Council, inviting Kim Budil, UC's Vice President for the National Laboratories, to Academic Council meetings, and providing news and information at the divisional level. Many faculty members are interested in the work of the labs and concerned about the lab's involvement in building and maintaining nuclear weapons. ACSCOLI members stressed the importance of providing accurate and factual information.

Meanwhile, the Office of the National Laboratories is preparing for UC's bid for the new contract.

White Paper from Office of the National Laboratories

ACSCOLI reviewed a draft white paper on UC-Laboratory relations from the Office of the National Laboratories. Written by Vice President Kim Budil at the request of ACSCOLI and the University Committee on Research Policy (UCORP), the paper was meant to inform faculty about UC's long history with the labs as well as describe the status of the current relationship and the work of the labs. ACSCOLI members provided feedback to VP Budil, including adding greater emphasis on the science and research aspects of the labs, and the involvement of graduate students and post-docs as important elements of the relationship.

UC Lab Fees Research Program

Funding for the UC Lab Fees Research Program ([LFRP](#)) comes from the net fee income that UC receives for managing the Lawrence Livermore and Los Alamos National Labs. In November, 2016, the LFRP staff announced the four winners of the 2017 funding grants that are worth a combined \$13.5 million over three years. The four collaborative projects focused on targeted areas of research that were selected to leverage UC-national lab synergy: biological applications of advanced computing, high energy density science, and mesoscale materials science. Four UC graduate students were also selected to receive the in-residence graduate fellowship awards.

This year's approach to the Lab Fees Research Program mirrors last year's, with three new thematic areas – climate science, national security through social sciences, and cybersecurity – that are of value to UC and the national labs, part of UC's public service mission, and complementary to the areas targeted last year. Thematic workshops in each targeted area were held in May with the support of the Vice Chancellors of Research. The approximately \$15

million available for the collaborative awards will most likely be divided into four awards, depending on the proposals. The maximum request is \$4 million, and all grants pay the full federal indirect costs.

There is also funding set aside this year for up to four graduate fellowship awards. Last year, twenty full proposals were submitted, with six very strong contenders and four that rose to the top. Many applicants came from Davis and Merced, possibly due to the campus locations in relation to LLNL.

Future of ACSCOLI

In advance of its 2018 sunset date, the Academic Council voted on May 24, 2017, to extend ACSCOLI's term by 10 years, to May 2028. ACSCOLI's charter was adjusted accordingly and approved by the Academic Council on July 26, 2017.

Representation

As Chair of ACSCOLI, Jim Chalfant served on the LBNL Contract Assurance Council. Member Ram Seshadri served on behalf of Chair Chalfant on the LBNL Advisory Board.

Acknowledgements

ACSCOLI wishes to acknowledge the contributions of its principal consultants: Kimberly Budil Vice President of the Office of the National Laboratories; Mary Croughan, Executive Director of the Research Grants Programs Office; and Kathleen Erwin, Director of the UC Research Initiatives. UC Davis Professor Robert Powell serves as Executive Committee Governor to the Lawrence Livermore National Security, LLC (LLNS) and Los Alamos National Security LLC, (LANS) Boards of Governors and is a recurring guest of the committee. Powell also chairs the LLCs' Science and Technology Committee.

Respectfully submitted,

2016-17 ACSCOLI members:

Jim Chalfant, Chair (Academic Council Chair)
Shane White, Vice Chair (Academic Council Vice Chair)
J. Daniel Hare, Academic Senate Past Chair, 2015-16
Bernard Sadoulet, UCPB Chair
Jeffrey Richman, UCORP Vice Chair
Steven Glaser, UCB
Darrell D.E. Long, UCSC
Thomas H. Morton, UCR
Ivan Schuller, UCSD
Susannah Scott, UCSB
Ram Seshadri, UCSB
Joanne Miller, Academic Senate Committee Analyst