

April 13, 2010 ACSCOLI Teleconference Notes

Present: Phil Goldstone (LANL), Tomas Diaz de la Rubia (LLNL), John Knezovich (LLNL) Bob Powell, Dan Simmons, Henry Powell, Mike Colvin, Bob Powell, Clare Yu, Ron Nelson, Mary Croughan, Bill Eklund, Bruce Darling, Steve Beckwith, Elaine Stamman, John Birely, and Todd Giedt

I. Chair's Announcements/General Discussion

July 7, 2010 ACSCOLI Meeting: The ACSCOLI meeting on July 7 will be held at LBNL.

Open Campus/Hertz Hall: Representatives from LLNL, UCOP and UC Davis held a general meeting on 4/12/10 regarding the Open Campus; Hertz Hall was one of the discussion items, which is located on LLNL and is leased to UC Davis. While little discussion took place on Hertz Hall itself, it is part of a broader discussion of strategy and purpose of the Open Campus—both parties agree that there are opportunities to use it much better and more efficiently than it is being used now. The kinds of activities that could be housed at Hertz Hall were also discussed (e.g., climate research, high-end computational activities, and cyber security research); Barry Kline/VP Steve Beckwith will identify key faculty/personnel from UC Davis/UCOP to move this discussion forward. Overall, it was noted that the Hertz Hall issue should not be viewed as an impediment in the process. Finally, LLNL will be submitting a Design Options Report to the DOE and NNSA within the next couple of weeks.

Joint Appointments: Chair Simmons inquired about joint appointment process. VP Beckwith said that he wanted to see this process more fully investigated, but noted that there are already some UC/LLNL joint appointments, but this could be expanded. EVP Darling added that most of the campuses do not have the funding to recruit new faculty at this time, especially the necessary start-up funds, which are usually significant. If the Labs could put up additional funding, then this could facilitate new recruitment. While these discussions have not moved forward at this time, this issue will be placed on the next Council of Chancellors meeting agenda and the July 7 ACSCOLI agenda (putting this issue on an COVC agenda is also a possibility, but more information is needed on how much money the Labs can actually put up). Logistics issues are also important—e.g., the location of faculty member's lab, and how/where will they teach. For example, joint appointments have worked so well at LBNL precisely because it is so close to UCB. While it is clear that joint appointments for Merced and UCD faculty are possible due to their proximity to LLNL, other more remote campuses, such as UCI, UCLA, and UCR, must also be included in these discussions. These conversations should include ways in which Lab personnel can engage with campus faculty in research, teaching, and other forms of collaboration. Joint research institutes should be seen as one successful model (some do have instructional components). Consultant Bill Eklund cautioned that patent issues must be carefully considered however.

II. UC Lab Partnership Risk/Benefit Status Report

PRESENTATION: John Knezovich delivered the enclosed presentation, “*UC and LLNL: A Rich Partnership that Enhances the University’s Role in Research, Education and Public Service,*” which describes the current relationship between the Labs and the UC campuses with respect to collaboration in research and instruction. He noted that much of the pedigree of the Labs is due to its association with UC; many distinctive labs within the National Labs were established by UC faculty—the Radiation Laboratory at LBNL,(1931) by UCB Professor Lawrence, the Los Alamos Scientific Laboratory (1943) by UCB Professor Oppenheimer, and the Livermore Radiation Laboratory (1952) by UCB Professor Lawrence. In addition, a large number of UC faculty play an important role in reviewing LLNL programs and ensuring science and technology (S&T) excellence. UC is also well represented in the number of joint appointments and advanced degrees held by LLNL scientists and engineers (34% of LLNL postdocs have UC PhDs and 19 LLNL scientists and engineers hold adjunct UC faculty appointments). One example of a joint appointment is the National Ignition Facility Professorship at UCLA.

A significant fraction of LLNL’s internal R&D resources is invested in projects with UC collaborators (218 projects totaling > \$100M), but the amount of money that actually goes to the campuses is a small fraction of this). LLNL also has significant collaborations with non-UC Universities (mostly computational centers); the top ten institutional recipients of LLNL subcontracts include the University of Illinois, Stanford University, the University of Chicago, the University of Utah, the California Institute of Technology, Texas A&M, MIT, the University of Arizona, CSU Chico, and Oregon State University. However, the collective value of subcontracts with collaborators is split equally with UC and non-UC institutions. LLNL scientists and engineers also co-author publications with researchers from all ten UC campuses (these are not dependent on funds). LLNL also has significant collaborations with non-UC Universities, but collaborations with UC campuses deliver more “bang for their buck” when compared to non-UC institutions. Many LLNL scientists and engineers — senior researchers, mid-career staff, and postdocs — have become UC faculty; and LLNL scientists and engineers also have taken faculty and leadership roles at non-UC universities. The creation of S&T “Centers of Excellence” have also been very important in facilitating collaboration (e.g., the NSF Center for Adaptive Optics at UCSC, NSF Center for Biophotonics at UCD, the UCD/LLNL Integrated Cancer Program, and the Center for Accelerator Mass Spectrometry at LLNL).

Other examples of collaboration include LLNL’s support for the founding of UC Merced, and the Edward Teller Education Center, which was founded through collaboration with UCOP and UC Davis, and advances K-12 science education and teacher professional development through programs linked to LLNL’s science & engineering missions (100 teachers per year visit LLNL through the Teacher Research Academy). Examples of outreach & service include “Science on Saturday,” sponsorship of the Tri-Valley Science & Engineering Fair and the Expanding Your Horizons Conference, MathCounts, MESA. Emerging opportunities for greater LLNL/UC

collaboration include the Livermore Valley Open Campus, the National Ignition Facility, high-performance computing, the UC/Lab Fee Research Program, and the Professional Research & Teaching (PR&T) Leave Program, which enables Lab scientists & engineers to spend up to a year on a UC campus.

DISCUSSION: Chair Simmons remarked that there had been a lot of controversy over foreign nationals' access to computing facilities at the Labs. John responded that it is true that foreign nationals from sensitive countries (e.g., China, Russia) have to go through more paperwork and red tape, but there are a number of these "sensitive" foreign nationals working at the Labs. This issue has also improved over the past 3-4 years. A recent report to the LANS/LLNS Board of Governors concluded that the current approach at the Labs is a good balance between security and research expertise. Another myth is that all of the research/publications from the labs are classified; this is not true. Basic science is all open research; indeed, classified science demands that the open science collaborations remain open. Regarding the hard money/soft money issue, as a Government Owned/Contractor Operated (GOCO) entity, LLNL staff are supported by congressionally appropriated programs, as well as by a variety of grants and contracts. Staff effort is directly charged to project and program accounts. There was also some discussion about replicating what is done with respect to joint appointments at the Oakridge facility in Tennessee. Chair Simmons suggested the following next steps: 1) Creation of a template of existing UC/Lab interactions in order to better evaluate the areas in need of expansion (or contraction) in the area of collaborations; 2) replication of the tables of LANL publications and joint appointments (similar to the ones in the LLNL presentation); and 3) incorporation of additional data from LANL and the Lab Management's white paper, and use these data to locate areas where collaborations should be expanded. With respect to the joint appointment issue, it was noted that the University Committee on Academic Personnel (UCAP) will eventually need to be consulted. Towards the facilitation of these goals, ACSCOLI agreed to form a joint task force to look into collaboration between UC faculty and LANL, LBNL, and LLNL; its charge includes the tasks articulated above. The membership of this task force is ACSCOLI Chair Simmons, Bob Powell, Provost Larry Pitts, EVP Bruce Darling, VP Steve Beckwith, Nan Sauer (LANL), and John Knezovich (LLNL).

ACTION: 1) Resend Laboratory Management's white paper, "UC and the National Laboratories: Benefits to the Nation, The Labs and the University"; 2) Schedule first meeting of the UC Faculty/Lab Collaboration Task Force before the May 12 ACSCOLI meeting.

III. Nuclear National Security Policy Status

ISSUE: EVP Darling noted that the START treaty has unified the Obama Administration in the direction where nuclear strategy should go, especially with regard to the National Labs. It was also recently publicly acknowledged that the Labs have been neglected in recent years, and \$1.6B was recently transferred to NNSA from the Defense Department. Consultants reminded members that the Labs have a central place in non-proliferation activities. With respect to

President Obama's nuclear security summit in Washington D.C. that is taking place this week, consultant John Birely said this is something that has transcended many Presidential administrations, and represents not only a pledge, but also a work plan going forward. There will be ratification hearings for the START treaty, as well as for the Comprehensive Nuclear Test Ban Treaty (CTBT) – both require a two-thirds majority). The Lab directors will likely be called to testify for the CTBT and possibly for START.

DISCUSSION: Consultant Birely remarked that the Nonproliferation Treaty (NPT) Review Conference in May will take on a much more cooperative atmosphere than has been the case in the past. Once countries sign onto the NPT, they state that they will behave within the boundaries of the NPT (e.g., nuclear nonproliferation) even though they are not technically bound by international law. With respect to the START treaty, some experts have said that the Russians will not have to give up anything because their systems are so out-of-date, and that they are already within the bounds of the treaty. Counting rules are also important in this treaty. Although the limit on deployed strategic warheads will be set at 1,550, each strategic bomber will count as one warhead even though it can carry multiple warheads as part of its payload. Consultant Birely also cautioned that it will not be easily to get this ratified, but added that if it is indeed ratified, the reductions will force the Labs to play a better game in terms of stockpile stewardship. It is very clear that in order to get START ratified, one will never get the necessary Republican votes if there is not modernization of the nuclear enterprise and the nuclear stockpile.