

ACSCOLI iLinc Meeting, 12/17, Notes

Present: John Birely, Todd Giedt, Clare Yu, Dan Simmons, Jim Chalfant, John Birely, Mary Croughan, Michael Todd, Michael Colvin, Eugene Haller, Steve Beckwith, Bob Anderson, Bob Van Ness, Anita Gursahani, Bruce Darling, Bill Eklund, and Jean-Bernard Minster (UCPB).

I. Chair's Remarks – Chair Simmons did not make any remarks.

II. UCOP Briefing

- DOE Performance Assessments: Department of Energy completed assessment of the National Labs. All three performed sufficiently that all contracts were extended by one year. BNL received high marks—increased mark on contractor leaders, stewardship of the laboratory, and increase in environment, health and safety. Grades are translated into fee of the % of the total available fee (\$31M from the two LLC labs; \$1M from last year):
 - i. LBNL: 94%
 - ii. LLNL: 88%
 - iii. LANL: 84%
- Secretary Chu has declared salary freeze for DoE and all contractors (start date is January 1st). This will apply to the three national labs (this will last for two fiscal years). LBNL gave its recommendations for lab employees (except six senior lab officers) and have implemented them already. One of the questions is whether UC will go ahead and grant them because these increases were already approved.
- The budget environment, which had been very strong (ERA funding), is coming to a close. Curtailment of federal funding is in the works. The NNSA has been scheduled for an increase over the next ten years (\$85B) however.
- Advisory Board to the Secretary of Energy has been appointed. Bill Perry has been selected to this Board. Bill was a member of the LLC Board(s) of Directors, and will step down from the LLC Board (effective 8/1/2010). The LLC Labs are currently looking for replacement for Bill Perry on the LLC Boards. The second person is Norm Augustine; he was co-chair of the LBNL Advisory Board. The other co-chair is Provost Larry Pitts. Norm will stay on this advisory board. Craig Albert will be replacing Scott Olglesby on the LLC Board. Sid Drell is the new chair of the Mission Committee on the LLC Board.
- NNSA Agenda:
 - i. Budget: As NNSA will be the only entity that is getting a substantial increase, the concern is that any failure of performance by the national labs will be seen as an excuse to cut NNSA's budget in the near-term future.
 - ii. Pensions: Both labs are beginning a process to increase pension contributions. LANL began last April. The LLC Board approved a second round of increases. LANL will be putting \$170M into their pension, and employees

will be increasing their contributions to 4% and perhaps as high as 8% next year. LLNL is in the planning stages and will come out in the spring with the proposed level of new employee contributions. LLNL is very close to 100% funded now.

- National Lab Director's Council: Two of the three Lab Directors will be serving on this executive committee.

III. Lab Issues Briefing

- National Academy of Sciences Study: In brief, the study will look at five specific aspects of the Labs: 1) the quality of scientific research (energy, basic science, nonproliferation); 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/management; and 5) the Labs' relationship(s) with other national agencies. The study will be conducting in two parts – science and management sections (first part). There is nothing definitive about who will be on the study and what they will be doing. It will hopefully start soon.
- START Treaty: It was signed by the Russian/U.S. heads of state in April 2010, and it was submitted to the Senate in May, which is currently debating it. It commits to deep reductions in nuclear weapons and delivery vehicles (e.g., limits the number of accountable strategic weapons; it retains the Triad; demoting ICBMs to one warhead per missile). However, it is light on verification; it is questionable on strategic defense and prompt global strike (attacking with a conventional warhead); and there are counting rules that could prove to be problematic. It must be ratified by both the Senate and Russian Parliament. In September 2010, the Foreign Relations Committee voted to approve the treaty by 14 to 4.

IV. LLNL Briefing

- Open Campus/Hertz Hall (LLNL and Sandia): The Open Campus would be located outside the traditional security areas. This will provide for more interactions between UC faculty and students and Lab scientists. It will also provide for more interaction with the external community. It will build on existing programs (e.g., combustion research facility, high performance computing, national ignition facility). The current state of development is that a master plan and market study has been completed; 2.5M sq. ft. is the intended 30-year build-out with 3,000 staff. Two \$10M GPP buildings have been requested and the appropriate approvals have been granted. Anywhere from \$1M to \$5M of infrastructure funds from the two labs will be invested annually. There is still some controversy over Hertz Hall however. In October, UCD inspected the facility to rebase line it under the lease for compliance (health safety/environment). UCD is now making its own cost/benefit assessment to come into compliance by 2025 on whether to renew the lease.

- Concern over Performance Measures of the National Ignition Facility (NIF): NIF had a spectacular year. NIF's National Ignition Campaign (NIC) was successful, and NIF met all of its Level 1 and Level 2 milestones. One of the Level 1 milestones was to begin integrated ignition experiments, which was completed in September 2010. Nonetheless, poor communication led to a significant misunderstanding over the National Ignition Campaign. It was rumored that the NIC was going to attempt actual ignition (energy outcome would be equal or greater than the input energy of the laser). Program documents were spotty, which contributed to the miscommunication, which extended into congressional testimony in front of the conference committee. That said, actual ignition will probably happen in the next 12-18 months. While there are still some technical issues that need to be addressed before ignition can happen, they can probably be resolved over the next 12-18 months. The main milestone for 2011-12 is the development/establishment of an ignition platform. While LLNL paid a small penalty (for NIF) in its performance review, it did not stop it from getting a positive score in this review.
- Joint Faculty Appointments: (Anita Gursahani) At LLNL, the IUTs and IPAs were replaced with new mechanisms – PRNT. There are nine individuals taking part in this program. Researchers from the campuses are also at LLNL; the Lab is counting these people right now. Defining the various agreement types is now going on as well. Vice President Beckwith also noted that he is targeting a portion of the Lab Fees to bring some researchers to the campuses. The most recent development in this area concerns the DoE itself, which has focused on these collaborations as an enhanced technology transfer model.
ACTION: Anita Gursahani will send a matrix of the various institutes to Chair Simmons.
- LLNL Infrastructure: LLNL would like to broaden its mission and budget with indirect funding to support infrastructure. Currently, LLNL is funded at about \$1.75M with staff at 6,600, but plans to grow its budget by \$250M to \$2B and expand its staff to 8,000. It was also mentioned that indirect cost recovery for all of the labs is very large.

V. LBNL Briefing

- Second Campus: LBNL will soon be releasing a quote for a second campus. The current campus is only 202 acres; future growth is constrained. There are three elements in the determination of a second campus: 1) Facilitation of future scientific programs; 2) ability to take on additional research that can benefit UC; and 3) LBNL needs approximately 200,000 square feet. Key lab space is currently off-campus. In the first phase, LBNL would consolidate all of its off-site leases into one location. The second campus also must only be between a 20 to 25 minute drive away from the main campus; it must be close to public transport; have potential for low-cost utilities;

and not have environmental/safety issues. LBNL is currently looking at communities that would be welcoming. The RSQ will be going out shortly by the first week in January 2011 with a desire to go before the Regents by September 2011 for a final site. The plan is to make the eventual second campus available for Phase 1 occupancy by 2015 (current lease terms are the main driver in this timeline).

- Next Generation Light Source (NGLS): The NGLS would be a follow-on to Stanford's LCNS. The objective is to image space, time, and energy with chemical specificity. However, this is not yet an approved construction activity. The key issues are science, cost, cost controls, and location. Thus far, the project has been supported by internal lab funds. LBNL Director Alisivatos has personally led development for the science case, and the project has been brought into the Office of Science. There may be advantages for putting it somewhere else, but it could also be located on the main campus. It would be the next big user facility for LBNL.
- Deep Underground Engineering Facility (DUSEL): This deep underground research facility is being developed in a South Dakota abandoned mine, so that research experiments would be shielded from cosmic rays. DUSEL is being designed to research dark matter, neutrinos, and anti-matter. As originally proposed, the NSF (\$500M) would provide infrastructure monies of \$500M, while the DoE would provide approximately \$660M. LBNL has a leadership role in the development of DUSEL. The National Science Board declined a NSF request for \$29M to cover operating cost after monies from the State of South Dakota runs out in May 2011. This is a sea change in the role of the NSF in research facilities. Currently, there is controversy over whether the NSF or the DoE should operate DUSEL. While this is a delay, it is not considered a game-stopper, and alternatives are being examined currently. A write-up is available in the December 17, 2010 issue of "Science".

VI. LANL Briefing

- Plutonium Pits Production Report: President Yudof's report stated (in his 3rd annual report) that LANL built a total of six pits last year, with four being of sufficient quality to add to the national stockpile. LANL plans to build four more in fiscal year 2010. 27 pits have been built in the last four years. The next phase is high-surety pit production.
- Actinide Science (R&D strategy): LANL is tasked with being the national center in this type of this research. They have published both an R&D and implantation plans for actinide science. They are trying to transform the Los Alamos strategy into a national strategy. The international response has been positive as well. Will eventually have 26 laboratories. It is fast becoming a national and international strategy. A number of facilities are involved in actinide science. The CMR facility, which was built in the 1950s and is no longer sustainable, is involved in actinide science, but does not make any pits. This facility is being replaced with a project

called CMR Replacement (CMRR). The CMRR comprises two facilities (radiological lab and the CMR Nuclear facility). The latter is more controversial. No pits will be built in the CMR Nuclear Facility, but it will have important research capability and functions. While there have been reports of high cost, the facility is only at the 45% design level, so any estimates are premature and highly uncertain. The best cost is nowhere near what is being reported in the media. This facility will be facilitated by the expanded NSA budget mentioned earlier.

- MARIE: LANL's proposal for MARIE has made considerable progress. The heart of this is the Los Alamos Neutron Science Center (LANSCE). The purpose of MARIE is to control materials in extreme conditions, as seen in weapons and/or nuclear reactors. LANL is working an acquisition strategy within DoE, but Secretary Chu has not encouraged a mission needs statement yet because he wants to see the priorities of his undersecretaries first.

VII. January ACSCOLI Meeting Agenda

Chair Simmons remarked that the January meeting will be held at UCOP. It may be wise to focus on LANL in January. The other issue is the next round of proposals for the Lab Fee Competition, as well as the use of some of this money for collaboration with the campuses. It was proposed that Terry Wallace be invited by video or phone conference to specifically discuss UC faculty members working at LANL. Invite Nan Sauer with respect to the institutes.