

University of California Regents' Meeting
Update on Department of Energy Laboratories
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Thank you, Mr. Chairman. Vice President Foley just provided an update on the Lawrence Berkeley National Laboratory. I will speak about the Los Alamos and Livermore National Laboratories.

Livermore is facing a \$280 million funding shortfall this fiscal year resulting from:

- \$50 million of inflationary cost increases
- \$100 million in reduced federal funding due to National Nuclear Security Administration (NNSA) budget reductions
- \$86 million in increases related to the new contract. This is mostly due to increased costs for retirement and health benefits, compared to those provided by the University when it was the contractor
- \$44 million in increased management fees and expenses

The last two items were directly due to the requirement in the RFP that the new contractor be a private corporation.

To accommodate the funding's shortfall, the Lab has reduced both operational and labor costs. Since the majority of its budget is related to labor costs, the Lab was compelled to reduce its workforce by 2,000 employees over a 2-year period.

- 981 positions have been reduced by attrition, by not filling selective job vacancies, and by voluntary employee separations.
- 500 employees have been laid off from the supplemental labor and flexible-term workforce. These are temporary and contract employees.
- 535 layoffs will occur from the career workforce. 180 of these are scientists and engineers being laid-off due to the \$100 million budget reduction from NNSA.

The Lab has provided extensive human resources assistance to all the employees who are being laid off.

At the same time, Livermore is also improving the efficiency of its operations to enable the Lab to meet its science and technology and national security missions in a more effective and efficient manner. Improvements are being made in financial systems, facilities management, information technology, energy efficiency, travel and procurement. The Lab reduced expenditures by \$20 million last fiscal year and anticipates \$40 million in reduced expenditures this fiscal year.

In the past few days, the media have reported on a DOE security audit that occurred at Livermore in March and April. The reporting has suggested that there are significant problems with the Lab's security system.

I would like to provide some context to help you interpret what you may have read. However, because the Lab's security

systems are classified, I can only provide limited information in this public meeting.

- The federal audit team spent seven weeks at the Lab reviewing cyber security; the protective force; as well as physical, information and personnel security. These reviews are very tough and are designed to test security to the point of failure.
- At no time were nuclear or sensitive information at risk.
- Eight areas were tested: Four were rated as achieving “effective performance” and four were rated as needing improvement.
- The audit included a “force on force” simulation, in which federal security forces attack the Lab. The attackers are given advantages to stress the security system and identify vulnerabilities. In this case, the attackers were given tremendous insider knowledge, site access, facility information, communications advantages, and personnel advantages that would be very improbable in a real-world scenario.

- The initial report, which is still in draft, identified “very positive” findings as well as areas that need “immediate attention.” The Lab, assisted by the corporate partners in the Livermore LLC, took immediate actions to ensure improved safety and security of special nuclear materials on site. The Lab and the corporate partners are also working closely with the NNSA on corrective actions.
- DOE will finalize its report later this month. The report will be classified.

This has been a challenging time for Livermore. George Miller has done a commendable job under very difficult circumstances in making the changes needed to position the Lab for the future.

Similarly, the employees have done a remarkable job focusing on the mission of the Lab and meeting the milestones set by DOE and Congress. For example,

- The National Ignition Facility is 95% complete. Construction will be finished and the laser will be operational in March 2009. Initial ignition experiments will begin in 2010. Even though the facility has not been completed, it is already the highest energy laser in the world, having achieved a Megajoule of infrared laser energy.
- Livermore's Blue Gene computer was recently declared the world's fastest super computer. Using this computer, Lab and IBM scientists won the Gordon Bell Prize for an unclassified materials science simulation.
- Lab scientists are developing an instrument that can simultaneously detect explosive materials as well as biological and chemical agents. It is designed to greatly improve airport security.
- Climate scientists performed a 400 year global ocean-and-atmosphere climate simulation with vastly improved surface wind and sea-surface temperature modeling.

- And one, that may not enthrall us – a Livermore scientist discovered that 10% of the body's fat cells die each year. Unfortunately, the same number of new fat cells are produced each year to replace them.

Los Alamos has been committed to improving its safety performance. It reduced its accident rate by 25 percent last fiscal year and has already achieved a further 18 percent reduction this fiscal year.

- In the past 18 months, the Lab has reduced its physical footprint by more than 500,000 square feet toward the goal of eliminating 2 million square feet of facilities.
- A focus on efficiencies has resulted in reducing facilities maintenance costs by 11 percent and reducing procurement spending on equipment services, supplies and travel by 24 percent.

Livermore has been following these accomplishments closely and is implementing lessons learned from Los Alamos since Los Alamos had a head start in adapting to the new contract.

Los Alamos is also producing remarkable scientific and programmatic results:

- I mentioned that Livermore currently has the fastest supercomputer in the world. However, the Los Alamos Roadrunner supercomputer is on track to achieve sustained performance at twice the computational speed of Livermore's Blue Gene computer by early this summer. Its goal is petaflop performance, meaning 1,000 trillion calculations per second.
- The Dual Axis Radiographic Hydrotest Facility just completed its second imaging axis and has already exceeded its performance requirements only two weeks after its commissioning. It will greatly enhance the diagnostics capability underpinning the stockpile stewardship certification program.

- The Lab is developing an antibody mimic that would prevent the anthrax bacterium's production of its deadly toxin.
- And, Los Alamos scientists will soon field-test a prototype MRI instrument to perform airport screenings to determine whether fluids taken aboard airplanes pose possible threats.

The two Lab Directors, Mike Anastasio and George Miller, have provided three classified briefings to give Regents greater knowledge about the two Labs' nuclear weapons and national security programs. Mike and George are the most experienced and knowledgeable people in the world. They described what the Labs do to assure the President of the United States that the nuclear stockpile is safe, reliable and effective. They described how the Labs are increasing their understanding of weapons science through the use of computer simulations and experiments to test current models and theories. They described how the mission of the Labs are

scheduled to evolve. And they described how the Reliable Replacement Warhead program would improve safety, security, reliability without nuclear testing and also reduce the environmental impact of the nuclear stockpile.

We have scheduled two more briefings for June 19 and September 9. These are extraordinary opportunities that will prepare you to better fulfill your role as Regents with oversight responsibilities for Livermore and Los Alamos. If you have a Q security clearance, I encourage you to attend one of these briefings. You can let Regent Pattiz, Bob Foley or me know if you are interested in attending.