

The Regents of the University of California

NATIONAL LABORATORIES COMMITTEE

January 18, 2022

The National Laboratories Committee met on the above date by teleconference meeting conducted in accordance with California Government Code §§ 11133.

Members present: Regents Cohen, Hernandez, Kounalakis, Reilly, and Sures; Ex officio members Drake and Estolano; Advisory members Horwitz, Powell, and Timmons; Chancellors Hawgood, Khosla, and Larive; Staff Advisor Lakireddy

In attendance: Regents Leib, Lott, and Zaragoza, Regent-designate Blas Pedral, Faculty Representative Cochran, Secretary and Chief of Staff Shaw, General Counsel Robinson, Provost Brown, Vice President Leasure, Chancellor Muñoz, and Recording Secretary Li

The meeting convened at 3:35 p.m. with Committee Chair Sures presiding.

1. **APPROVAL OF MINUTES OF PREVIOUS MEETING**

Upon motion duly made and seconded, the minutes of the meeting of November 16, 2021 were approved, Regents Drake, Estolano, Hernandez, Kounalakis, Reilly, and Sures voting “aye.”¹

2. **ANNUAL REPORT ON FISCAL YEAR 2021 NATIONAL LABORATORY PERFORMANCE RATINGS**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Vice President Leasure presented the National Laboratories’ performance ratings for federal fiscal year 2021. The University received ratings in December, but not all have been made publicly available. The U.S. Department of Energy (DOE) Office of Science awarded Lawrence Berkeley National Laboratory (LBNL) 94 percent of available earned fee as well as “A” and “A-” grades. LBNL was recognized for its contributions to COVID-19 research and for its response to the pandemic. The DOE lauded LBNL Director Michael Witherell for his leadership, viewed favorably UC’s oversight and governance of the Laboratory, and noted the continued strong relationship between LBNL and UC Berkeley. Issues of note for LBNL were related to the effectiveness of procurement in construction projects. UC received its latest five-year award term for LBNL in 2020, which would last until May 2025.

¹ Roll call vote required by the Bagley-Keene Open Meeting Act [Government Code § 11123(b)(1)(D)] for all meetings held by teleconference.

The National Nuclear Security Administration (NNSA) had not yet made public the performance evaluations for its sites, which included Lawrence Livermore National Laboratory (LLNL). The Laboratory received an earned fee of 94 percent and was the highest rated of the NNSA sites. LLNL was recognized for sustained excellence in science, technology, and engineering performance, such as the 1.3 MegaJoule result from last year's National Ignition Facility experiment; working with other government agencies; its COVID-19 research and pandemic response; and its collaboration with UC Merced on carbon nanotubes for drug delivery. NNSA noted no significant issues. Mr. Leasure noted LLNL's good performance in Director Kimberly Budil's first year of leadership.

Mr. Leasure stated that the rating for Los Alamos National Laboratory (LANL) had not yet been publicly posted but exceeded expectations. The Laboratory's FY 2021 earned fee was higher than it was in FY 2020. NNSA recognized LANL's sustained exceptional science, technology, and engineering performance; successes in global security, including cesium remediation, space projects, and counterproliferation efforts; work with other government agencies; and LANL's leadership during the pandemic. Issues that NNSA noted included conduct of operations, which the Laboratory has worked to correct, and project schedule challenges. It was estimated that the University would earn approximately \$27 million in fee income, but LLNS National Security LLC earned \$20.3 million and Triad National Security LLC earned \$11.5 million, for a total of \$31.8 million in net fee income.

3. **STATE OF THE LOS ALAMOS NATIONAL LABORATORY**

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Committee Chair Sures introduced Los Alamos National Laboratory (LANL) Director Thomas Mason, who has served as LANL Director since 2018 and as President of Triad National Security LLC. Previously, Director Mason led Oak Ridge National Laboratory and was a faculty member at the University of Toronto.

Director Mason began his remarks by noting the positive evaluation LANL received from the National Nuclear Security Administration (NNSA), and that LANL, connected with the University since its founding in 1943, was working hard to address challenges. LANL's recent contributions included the modeling of sea ice, an element of the climate system that influences global climate patterns, to understand potential tipping points. LANL also used modeling and simulation in its nuclear deterrence work. The Laboratory traced a melanoma-fighting compound to a microbe in Antarctica and was developing fuel cells powered by renewable energy. LANL led the Intermountain West Energy Sustainability and Transitions (I-WEST) Coalition, which aimed to transition the surrounding region to a carbon-neutral energy system. The previous week, LANL and Sandia National Laboratories formalized a memorandum of understanding (MOU) regarding hydrogen generation with the State of New Mexico, which had ample solar and wind resources but was economically dependent on fossil fuel. LANL was one of the largest employers and economic drivers in Northern New Mexico, hiring 1,277 employees in fiscal year 2021 for a total of 13,512 employees. LANL employees held 597 UC degrees, and 48 percent of

those working at the Laboratory were minority employees. LANL enjoyed strong, positive relationships with labor unions and signed 12 new labor contracts in the fall. The Laboratory's FY 2021 budget was \$4 billion, up from \$3.2 billion in FY 2020 and over \$1 billion in the last three years. This growth curve was driven by the current national security environment and the need for strong deterrents. LANL has directly or indirectly created about 24,000 jobs in New Mexico.

Director Mason shared LANL's research and operational responses to the COVID-19 pandemic. The Laboratory was well-positioned due to its history of researching infectious diseases since the 1970s, and it recognized the national security threat the pandemic posed. The modeling that LANL adapted from Ebola and H1N1 research for COVID-19 was now being used by State governments and the U.S. Centers for Disease Control and Protection. The Laboratory also partnered with the New Mexico Department of Health to better understand disease transmission in the region. In spring 2020, researcher Bette Korber identified a more transmissible COVID-19 variant from Italy and called for tracking the emergence of new variants. With regard to operations during the pandemic, many national security deliverables were not amenable to telework; classified or experimental work could not be done at home. As a result, LANL was the first NNSA site to provide onsite testing and vaccination of staff. The LANL work force was essentially 100 percent vaccinated, and those with exemptions were not currently able to work on site. Telework has become an option when onsite presence is not needed. In FY 2021, LANL hosted 1,290 students and about 459 postdoctoral researchers in semi-virtual programs.

In 2018, LANL established the Partnerships and Pipelines Office to develop degree programs in areas that the Laboratory needed. Some staff were pursuing a master's degree in mechanical and structural engineering at UC San Diego while waiting for their security clearances to be granted. This has become a model that the Laboratory was using in other disciplines. Other pipeline programs included a partnership with the New Mexico Building and Construction Trades Council and a collaboration for indigenous women interested in physics. Currently, over 130 postdoctoral researchers were from the University, many of whom had prior engagement with the UC National Laboratories, and 86 summer interns were from UC as well. Texas A&M University, a member of Triad National Security, LLC (Triad), and the University of New Mexico were also sources of postdoctoral researchers. Funding for the UC National Laboratory Fees Research Program was drawn in part from the fee that UC earned from managing LANL. The Office of the President (UCOP) was supporting the UC/Los Alamos Entrepreneurial Postdoctoral Fellowship Pilot Program, which helped postdoctoral researchers interested in commercializing their research and development. The Southern California Hub, a collaboration of UCOP, LANL, and Lawrence Livermore National Laboratory, fostered research and the student pipeline.

Director Mason shared some of LANL's accomplishments during the first three years of the Triad contract. The Laboratory was a leader in the nuclear security enterprise, made progress in improving its culture, operated through the pandemic, and has begun to see the results of efforts to transform its aging infrastructure. LANL's current focus was on executing the national security mission; keeping science, technology, and engineering performance robust; building community programs and partnerships that could foster

economic development in a disadvantaged region; the Laboratory's leadership role; and hiring for the Laboratory of the future.

Committee Chair Sures asked if hiring was challenging given competition. Director Mason responded that hiring had been challenging even prior to the pandemic. The skillsets that LANL sought, such as artificial intelligence, data analytics, machine learning, and modeling and simulation, were very much in demand in industry. LANL tried to pay competitive salaries but did not have stock options. Director Mason was impressed with the Laboratory's younger staff, who were introducing new ways to tackle difficult problems. Director Mason acknowledged that LANL needed to increase its rate of hiring despite adding more employees in FY 2021 than over the last 30 years. The LANL budget has also grown by \$800 million, and LANL needed to build infrastructure and hire staff to address 21st century national security challenges.

Regent Hernandez asked about the challenges that LANL faced, noting the remoteness of its location and the need for growth. Director Mason acknowledged the remoteness of the Laboratory presented a challenge for dual-career couples. LANL did not have the Bay Area's rich employment offerings, but it also did not have the same population density and housing cost issues, and the Laboratory has tried to accentuate these positives in its recruitment efforts. Telework during the pandemic became an interim solution to LANL's physical space needs. Funding was available to improve infrastructure, but construction took time. LANL was adding stress to the transportation infrastructure in the region and was working closely with the State of New Mexico and Los Alamos County to remove transportation bottlenecks.

Regent Reilly asked about the demographics of LANL's minority employees. Director Mason replied that, being in a majority-minority state, LANL had a rich environment from which to recruit, especially with regard to Hispanic and Native American candidates. However, New Mexico had a small African American population, and the Laboratory was working with Minority-Serving Institutions to expand pipelines. LANL was particularly focused on its educational partnerships so that science, technology, engineering, and mathematics (STEM) disciplines might reflect the diversity of the country.

4. **APPROVAL OF PROJECT FUNDING USING CAPITAL AND CAMPUS OPPORTUNITY FUND MONIES TO SUPPORT THE SOUTHERN CALIFORNIA HUB PROGRAM**

The President of the University recommended that the President, or his delegate, be authorized to expend an additional \$300,000 of Capital and Campus Opportunity Fund funds to support the Southern California Hub program in FY 2021–22.

[Background material was provided to Regents in advance of the meeting, and a copy is on file in the Office of the Secretary and Chief of Staff.]

Vice President Leasure, recalling a presentation on the Southern California Hub during the November 2021 meeting, explained that the additional funding would go toward “seedling” research initiatives and the improvement of back office capabilities.

Committee Chair Sures asked if this funding would be drawn from the University’s earned fee. Mr. Leasure replied in the affirmative. This was money that UC National Laboratories had set aside in its reserves.

Regent Cohen asked how much the Southern California Hub spent to date. Mr. Leasure responded that it spent about \$200,000 this year.

Regent Cohen asked how the Southern California Hub planned to spend \$1 million in the next several months. Mr. Leasure stated that the summer was the busiest period for both the faculty and the students, so spending was expected to increase, but the COVID-19 pandemic did slow progress. If these funds are not spent in fiscal year 2021–22, they could carry over into the following fiscal year.

Regent Cohen asked about the funding expectations for FY 2022–23. Mr. Leasure projected that the Southern California Hub would need another year of support and would return to the Regents with a request of \$1 million next year. Committee Chair Sures added that the Southern California Hub was working with UC Irvine to secure physical space, the lack thereof presenting a challenge for the program.

Regent Estolano expressed her strong support for this action. She believed that an infusion of money was needed to kick start the program and that many students and researchers in Southern California would benefit from it. Regent Estolano expressed her hope that interest in the research opportunities and partnerships from the Southern California Hub would increase. In her view, this was an excellent way to take advantage of the National Laboratories’ earned fee and good ratings.

Upon motion duly made and seconded, the Committee approved the President’s recommendation and voted to present it to the Board, Regents Cohen, Drake, Estolano, Hernandez, Kounalakis, Reilly, and Sures voting “aye.”

The meeting adjourned at 4:10 p.m.

Attest:

Secretary and Chief of Staff