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It's a Bumpy Ride to Private Management for Los Alamos, Livermore

By Michael Lucibella and Alaina G. Levine

When the management of the historic Los Alamos National Laboratory (LANL) and Lawrence Livermore National Laboratory (LLNL) was transferred from the University of California to two private companies, many officials hailed the move as the turning over of a new leaf for the labs. The goal of the transfer was to introduce private sector accountability into a management system seen by many in Congress and the Department of Energy as broken. However four years on, costs have swelled, red tape endures, and questions persist as to whether the transfer has benefited the labs in the long run.

“When I heard a company was going to run (LANL), I thought they would do it efficiently. I thought it would be good for us,” said a long-time member of the technical staff of LANL. “But it used to be that science drove this place and everyone knew it...Now that’s gone.”

Interviews with current and former employees of both laboratories show shared concerns that since the facilities have become managed by a for-profit entity, science is no longer the top priority; rather, the emphasis is on generating profits through a climate of intense risk aversion. Many of those who still work with the lab have asked to remain anonymous because of concerns of repercussions from their employers.

One of the lab’s former directors said that the system of governance at LANL in particular was broken in 1997 and since then has become more so. Siegfried S. Hecker served as the Director of LANL from 1986 to 1997 and is currently a research professor in the Department of Management Science and Engineering, and the co-director of the Center for International Security and Cooperation at Stanford University. He said the excessive security concerns, the creation of an extra level of bureaucracy, the National Nuclear Safety Administration (NNSA), and the fact that the contract to run the lab was given to a for-profit entity, all led to the greater emphasis on risk avoidance.

“It was difficult to get work done in 1997, and now it’s simply so difficult to get work done that it gets difficult to attract the best and brightest” to the facility, he said, “It’s gone downhill for some time and we failed to fix it with the creation of the NNSA and the new management structure.” He added that people are now more afraid to make mistakes, contributing to the difficulty of conducting scientific work.

How things got to be where they are

The University of California managed the operations of Los Alamos and Lawrence Livermore since their inception in 1942 and 1952 respectively. During the late nineties and early 2000s dissatisfaction with UC over the management and security of the labs had been increasing among

the scientists and in Congress. In 1999, the Department of Energy accused and jailed Los Alamos physicist Wen Ho Lee, based on 59 counts of improperly handling nuclear secrets, charges that were eventually dropped. In 2003, then secretary of energy Spencer Abraham said that there were what he called “systematic management failures,” the management contracts with UC would not be renewed, and the DOE would soon accept bids for new contracts to run the labs.

Only private companies were allowed to bid, and UC joined with the engineering firms Bechtel, Babcock & Wilcox, and URS to form Los Alamos National Security LLC (LANS). In addition, they aligned with research firm Battelle to form Lawrence Livermore National Security (LLNS). Though separate companies, the two organizations share many of the people on the two boards of governors. LANS took over operations from the University of California in June of 2006, and LLNS took over in October of the following year.

Until 2008, the LLCs issued publicly available reports that described the performance of each of the labs. These performance evaluation reports detail how well the labs did on a list of goals and metrics that determine how much of their possible fee they earned. However starting in 2009, citing concerns about proprietary information, the LLCs ceased to make these fifty-plus page reports available to the public, and instead began issuing single page summaries.

Critics said that the contract unfairly penalizes employees for mistakes, and encourages employees to avoid projects with uncertain potential outcomes and even underreport accidents in order to keep performance evaluations looking good. This has hurt morale at the lab and has hampered scientific research into areas where a successful result is in doubt.

“Support people used to believe they had an important job—they were helping the scientists do their job for the country,” said a Los Alamos technical staff member. But a general feeling of not being able to get work done, combined with fewer advancement opportunities, due to a change in how non-scientists can advance in the LLCs, has contributed to employee malaise.

Terry Wallace, Principal Associate Director for Science, Technology & Engineering at LANL, who grew up in Los Alamos, agrees that there is a morale issue at the facility. The management change “is a difficult transition to make,” he stated. “Where you have a workforce that believes ‘this is ours’ [meaning Los Alamos], and a new management team that appears to be dropped from outer space because it’s corporate... and they don’t know (them). You put those two things together and that spells large change and it’s difficult for the workforce to accept that kind of change. And we have a new set of requirements and a new set of people, and that new set of people don’t have an immediate reservoir of trust with our large science workforce.”

But he added that the contract itself, which is based on government standards, is guiding the management decisions. And “the federal government’s expectations were extraordinarily different from May 31 to June 1, 2006,” when the changeover occurred, he stated. When the contract was bid, the federal government indicated they want “good stewards of science,” he said. “However, once you go to the implementation phase, it’s an annual contract and that annual contract incentivises a number of things. Everything they want to incentivise has to do with getting the laboratory in compliance with federal and DOE regulations. There are no DOE

regulations about science but there are lots of DOE regulations about how you run a conference, what's an allowable charge, how you can use overhead to buy bottled water, etc. Suddenly you have all these lists of requirements instead of when you're a [Federally Funded Research and Development Center], where they say you go and figure out how to do this. Now they say we want you to do this. That's a pretty big change and we're still getting used to that."

Costs of Science

Since the turnover, the management costs for each lab ballooned to many times what UC was originally paid. In 2008 LANS received \$63 million in unadjusted dollars for their work running the lab, and \$72 million in 2009. When the University of California was the sole administrator of the lab, the highest it received was \$7.65 million in 1998.

Administrative costs at Lawrence Livermore have similarly swelled. In 2009 LLNS received \$47 million and \$30.9 million in 2008. The most the University of California received for running Lawrence Livermore was \$6.75 million in 2005. These increases were included as part of the original request for proposals issued by the NNSA in order to get qualified contractors to bid to run the lab.

In addition to increased management costs, the LLCs are subject to taxes from which the University of California was previously exempted. As a privately-held company LLNS paid \$87 thousand to the state of California in 2009 for various fees. However LANS, being located in New Mexico, has faced a much steeper tax burden, and since the transfer paid the state between \$74 and \$91 million per year in gross receipt taxes. New Mexico does not have a sales tax, and instead levies a gross receipt tax directly on businesses that sell goods and services. LANS, a private company, is subject to these taxes, while the University of California, as a public institution, was not.

"We've been experiencing the same sort of belt tightening that just about everyone else is going through, given the state of the economy. It can be a challenge, but we are making every effort to trim our operating expenses, not sacrifice our science and technology programs," Lynda Seaver, spokesperson for Lawrence Livermore said in an emailed message.

Between 2006 and 2008, about 440 workers, including about 150 scientists and engineers, were laid off at Livermore. In addition, almost 1,500 workers accepted buyouts and left voluntarily, reducing the lab's total workforce from about 9,000 to 7,000. The majority of the scientists who were let go had been with the lab for twenty years or more. Thus far Los Alamos has escaped any significant layoffs.

"These costs, coupled with a lower budget, inflation, struggling economy, rising medical costs, etc. all played a part in our workforce reduction. This was the last thing this Lab wanted to do—we had offered incentives for voluntary separation in hopes of avoiding layoffs—but we did not get the number of employees we had hoped for in order to avoid any layoff," Seaver said, "Just about every other DOE/NNSA lab went through a workforce reduction, for many of the same reasons as us."

Scientists at Livermore have likewise said that the changes in management and workforce

reductions have resulted in greater workloads, more bureaucracy and low morale.

“They’re not qualified to run a national lab,” one researcher at the lab said who wished to stay anonymous, “They just don’t have the know-how.”

Tomás Díaz de la Rubia, the chief research officer and a member of the board of governors, defended the lab. He said that science is still the top priority at the lab, pointing to the recently completed National Ignition Facility. He also said that Lawrence Livermore recently won more of the prestigious R&D 100 awards in 2009 than at any point in the lab’s history, and that Livermore physicist Berni Alder was awarded the National Medal of Science in 2009.

“When you go through a change like this which was actually pretty significant... There’s a disruption in the system. There are clearly still things that we have to deal with as we go forward,” he said, “There were disruptions and difficulties... but I think we are well on our way.”

The former director of Los Alamos thinks that one of the biggest problems is a lack of direction at the lab. Los Alamos and Lawrence Livermore are the nation’s two top nuclear weapons research labs, but since the end of the cold war, their purpose has become less clearly defined.

“It’s critical for the labs to have their mission redefined and change the operational environment to make it easier for jobs to get done,” Hecker said.

Wallace said that while the primary goal of Los Alamos remains “to be the premier national security science laboratory,” its mission is evolving. Emphasis remains on ensuring the reliability of the nuclear deterrent, protecting the nation against global threats, and providing scientific solutions to emerging national security challenges. New areas of research, including addressing the nation’s energy needs, are receiving more attention. “[In 2006] basic and energy science was around \$160 million each year. Today it is \$250 million a year. It is a reflection of what the nation wants us to do,” Wallace said

Like many current and former employees of both labs, Hecker is quick to point out that his ultimate desire is to improve the lab. Another science employee echoes this sentiment: “I just want to make the lab better. I love this place...I just want it to stop deteriorating.”

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