

**MINUTES
of the
THIRD MEETING
of the
RADIOACTIVE AND HAZARDOUS MATERIALS COMMITTEE**

**September 8, 2010
Fuller Lodge
Los Alamos**

The third meeting of the Radioactive and Hazardous Materials Committee was called to order as a special subcommittee by Representative Jeannette O. Wallace on September 8, 2010 at 10:05 a.m. at the Fuller Lodge in Los Alamos.

Present

Rep. Jeannette O. Wallace, Acting Chair
Sen. Carroll H. Leavell
Rep. Antonio Lujan
Rep. Jim R. Trujillo
Sen. David Ulibarri

Absent

Sen. Richard C. Martinez, Chair
Rep. John A. Heaton, Vice Chair
Sen. Vernon D. Asbill
Sen. Stephen H. Fischmann
Rep. William J. Gray
Sen. John Pinto
Rep. Jeff Steinborn

Advisory Members

Rep. Eliseo Lee Alcon
Rep. Thomas A. Anderson
Sen. William H. Payne

Sen. Rod Adair
Rep. Donald E. Bratton
Sen. Dianna J. Duran
Sen. Gay G. Kernan
Sen. Lynda M. Lovejoy
Rep. Nick L. Salazar

Guest Legislator

Rep. Debbie A. Rodella

Staff

Gordon Meeks
Renée Gregorio
Adan Delval

Guests

The guest list is in the meeting file.

Handouts

Handouts and copies of written testimony are in the meeting file.

Welcome

Los Alamos County Commissioner Mike Wismer welcomed the committee to Los Alamos and the historic Fuller Lodge. He said the city is a community with a population of 18,000 and a worldwide reputation for science, but it also has exceptional cultural and recreation opportunities.

Kevin Smith, the Department of Energy (DOE) site manager, introduced himself to the committee for the first time, saying he is new to Los Alamos, having come from Oak Ridge, Tennessee. He mentioned the importance of partnerships between universities, local institutions and the laboratory. He has experience in managing enriched uranium programs and has managed other sites in the DOE weapons complex that all have cleanup activities, so he is familiar with the issues and technical challenges he will be facing and looks forward to living and working in Los Alamos.

The committee members introduced themselves.

Los Alamos National Laboratory (LANL) — State of the Lab: Overview; Research and Development; and Renewable Energy Highlights

Duncan McBranch, deputy principal associate director, Science, Technology and Engineering, LANL, distributed a handout and summarized LANL's \$2.17 billion budget, of which the majority (53%) is weapons-related. He told the committee that LANL is the oldest, most complex and second-largest DOE weapons site and is working hard to transform into a more efficient site. LANL includes 40 square miles, 1,280 buildings with nine million gross square feet and 11 nuclear facilities. He said that 40% of LANL is more than 40 years old and that 30% of the staff work in poor or failing space. There is \$450 million of deferred-maintenance backlog. There are 268 miles of roads on LANL property, 100 miles of which are paved. He said there has been a footprint reduction of one million square feet of post-World War II production facilities. LANL is a collection of unique facilities that address critical stockpile stewardship challenges, that includes supercomputing capabilities, that allows researchers to study weapons performance, that provides nanotechnology research programs and that draws international scientists to study materials. LANL's core function is to sustain the safety, security and effectiveness of the nation's nuclear deterrent through stockpile stewardship. LANL designs warheads, which constitute more than 60% of the nation's deterrent and the majority of the on-alert deterrent. This stockpile is managed through surveillance and life extension. Confidence without nuclear testing is based on a more fundamental understanding of science and engineering.

Mr. McBranch said that LANL is involved in research and development of energy in three areas: energy demand, nuclear energy and concepts and materials for clean energy. Subsets of these areas include programs in:

- efficient extraction of energy content from fuel;
- nonproliferation;
- energy storage, generation and transmission;
- predictive models for climate;
- infrastructure impact safeguards;
- effective waste management;
- revolutionary alternatives to petroleum;
- clean fossil energy analysis;

- prediction of abrupt change at multiple scales (regional to global); and
- global security and policy implications.

LANL is operated by Los Alamos National Security, LLC, (LANS) for the DOE and the National Nuclear Security Administration (NNSA).

Mr. McBranch summarized the Japanese partnership with Los Alamos County in photovoltaic integration and interconnection testing. The goal is to demonstrate that utility-scale photovoltaic systems can be integrated in a cost-effective manner into small-sized to mid-sized communities with minimal impact on the transmission grid by controlling different mixes of existing and new balancing resources to mitigate fluctuating photovoltaic generation. This project will involve the installation of 150 smart meters on homes and at LANL. It will provide the ability to forecast changes in solar irradiance. Energy storage with a combination of batteries and pumped water will be tested, as will electrical load shedding from LANL facilities, which will provide renewable energy to LANL.

The committee expressed interest in LANL's global climate modeling, reprocessing of spent nuclear fuel and storing renewable energy. There were also questions relating to LANL's annual budget. Most questions, however, related to comparisons between the alternative energy potential of the U.S. and that of other countries, including nuclear reactor designs at the lab and sequestering of carbon emissions as a component in reducing global warming.

Laboratory Community Outreach

Kurt Steinhaus told the subcommittee that, since 2006, LANS employee-giving has increased by more than 230%; student math scores in Española have shown three years of steady improvement; and the northern New Mexico economy is seeing a return of more than \$8.8 million in LANS investments. He said that the lab's outreach program is committed to build on this progress; it will evaluate internal and external impacts and it will continue to increase accountability, reassess LANS programs and make course corrections to ensure mutual benefit. He said that leveraging of LANS and community resources will achieve economic sustainability for the area. Volunteer hours by LANL employees have increased from fewer than 4,000 in 2006 to almost 200,000 hours in 2009, involving fewer than 100 employees in 2006 to more than 1,800 in 2009. The employee-giving program has increased from \$700,000 in 2006 to more than \$2.3 million in 2009. LANS matches employee donations dollar for dollar under this program. LANS' support for math and science teachers has resulted in 58 teachers in northern New Mexico obtaining their master's degrees, and it has improved science and math achievement in Española schools by raising proficiency from 23% to more than 37%.

Mr. Steinhaus described the education outreach program with the University of New Mexico's Los Alamos branch campus, Northern New Mexico College, New Mexico Highlands University and Santa Fe Community College, with which schools the lab is supporting initiation of degree programs in related disciplines of employment at the lab. LANS has also sponsored 55 scholarships, he said, highlighting one recipient from Peñasco.

In terms of business stimulation, Mr. Steinhaus described Northern New Mexico Connect, a program of the Venture Acceleration Fund, Springboard, LINK and Market Intelligence, which returned more than \$8.8 million to the northern New Mexico economy from a \$2.3 million LANS investment between 2006 and 2008. This produced 39 new jobs with an

average salary of \$78,500; six jobs were retained with an average salary of \$66,000; and \$5.4 million in business capital funding was leveraged from non-LANS sources. Approximately 20 entrepreneurs were served in 2006, which grew to 80 in 2009. Since 2007, LANL has assisted 233 New Mexico businesses. In combination with Sandia National Laboratories, combined impacts of the tax credit small business assistance program have resulted in 525 jobs created or retained with an average salary of \$39,000; and \$1.30 in tax dollars were returned to New Mexico for every \$1.00 in tax credit to the labs.

Laboratory Construction

Tom McKinney, associate director, Project Management and Site Services, LANL, delineated LANL's planning process, constraints and management issues for construction projects along the Pajarito Road corridor over the next 10 years. The largest of these projects, he said, is the chemistry and metallurgy research replacement facility (CMRR), with the radioactive laboratory, utility and office building being the largest building within the CMRR. Mr. McKinney spoke of the time line for the major projects at hand, with the CMRR holding the latest completion date of 2020. He added that additional personnel will be needed for these projects for engineering and design, support services and construction during peak periods. Mr. McKinney stated that there are qualified local work forces that will be hired by contractors who will be coming in at the national level. He added that this will be a boon to local construction business. He assured the committee that contractors will hire locally because it makes economic sense and that there is a preference in place already for hiring New Mexico contractors, as well. He did caution, however, that he did not want to get too prescriptive in terms of insisting that a specified amount of local hiring take place. He said that the lab will act as its own general contractor and that 35 construction packages will be phased in as funding is made available. Mr. McKinney stressed LANL's commitment to protecting cultural resources, and he said that all construction projects have been extensively surveyed and deemed to be non-impact projects. He added that LANL is attending to its environmental stewardship responsibly, protecting the environment through closure of contaminated areas as well as employing environmentally conscious design on its buildings. Relating to the Los Alamos Study Group's lawsuit in August 2010, Mr. McKinney stated that LANL is providing counsel with the needed documentation. In response to committee concerns about the treatment of radioactive waste, Mr. McKinney responded that the current facility for treatment is old and construction of a new facility is being considered. He added that waste found downstream in the Rio Grande is historical in nature and that LANL has complied with all discharge regulations in place.

Laboratory Cleanup Status

Michael Graham, associate director, Environmental Programs, LANL, updated the committee on LANL's environmental cleanup, which includes remediating hazardous and radioactive waste areas, repacking and shipping legacy transuranic waste and demolishing old buildings. He reported the receipt of \$212 million in American Recovery and Reinvestment Act (ARRA) funds for cleanup, from which 450 jobs were created, 16 buildings demolished and 15 ground water monitoring wells completed. Mr. Graham said that the property at Technical Area (TA) 21 will be turned over to the county for reuse when cleanup is complete. He added that to complete the closure of TA 54, 142 shipments of waste were moved to the Waste Isolation Pilot Plant site, which entailed shipping waste four to five days per week (seven days per week during the summer), output that he stated was "pretty remarkable". Mr. Graham said that there has been a lot of congressional support for the cleanup and that about half of the ARRA funds are still available, although they are fully obligated for projects. He added that LANL subcontracts

almost all of this work, creating opportunities for small businesses. He ended by saying that LANL is pushing for completion of cleanup by 2015.

Ron Curry, secretary, Department of Environment (NMED), stated that he has a history with Los Alamos through family employment — his father-in-law worked on the Manhattan Project. Secretary Curry worked as a contractor in the mid-1990s on sitewide environmental impact statements. He said that as the state looks at the 2005 consent order, it is important to engage with those with experience. He lauded the work of Mr. Graham, who he said has delivered to and engaged with the state to build trust and get things done in a timely manner, making him an asset to both LANL and the state. He stressed that, in dealings with the NMED and contractors, the greater the trust that can be developed with individuals, the more productive things become. In April of this year, Secretary Curry reported that he wrote a letter to U.S. Secretary of Energy Steven Chu expressing concerns over the state's contract with the NNSA which stated that, compared to the DOE, the NNSA is not serving LANL at its best. After site visits, the NNSA has conceded that there have been errors in how the cleanup has been conducted. As an auxiliary to the DOE, the NNSA has the responsibility to clean up sites. Because of a problematic decentralized approach where getting answers became impossible, Secretary Curry said that penalties were stipulated at an amount of over \$2.5 million. After frustration, mixed messages from the entities involved and a clear sense that the NNSA had been an obstructionist rather than a resolving influence, Secretary Curry concluded that the DOE has committed to come up with a management scheme that complements Mr. Graham's work. He added that the NNSA has not been in the business of cleanup, but it is in the business of manufacturing, and that the DOE understands the issues involved. He said that this needs to be resolved so that the actual cleanup is not impeded.

James Bearzi, chief of the Hazardous and Radioactive Materials Bureau, NMED, said that the most important component is the push to get completion of TA 21 and TA 54 by 2015. Mainly due to the trust that has been established, the NMED believes that this push is now underway. He stated that some critical elements are in place and that LANL has established a track record of performance and execution against the 2005 consent order.

He delineated sticking points as follows:

- material landfills or dumps;
- TA 54 cleanup;
- ground water contamination potential;
- the NNSA and the DOE are giving different signals to LANS;
- the stipulated penalties for missing deadlines and being out of compliance with the consent order in Area G have to take into account what is happening to the ground water;
- more than 1,000-foot-deep ground water monitoring has resulted in submission of inadequate reports;
- a well penetrated the regional aquifer, and LANL did not plug and fill that well for a long time; and
- "material disposal areas" need remediation.

Adjournment

There being no further business, the committee adjourned at 2:45 p.m.

