

MINUTES
of the
LOS ALAMOS NATIONAL LABORATORY OVERSIGHT COMMITTEE
July 27, 2007
State Capitol, Room 321

The meeting of the Los Alamos National Laboratory (LANL) Oversight Committee was called to order at 10:03 a.m. on Friday, July 27, 2007, by Senator Phil A. Griego, co-chair.

Present

Sen. Phil A. Griego, Co-Chair
Rep. Roberto "Bobby" J. Gonzales, Co-Chair
Rep. Thomas A. Anderson
Sen. Richard C. Martinez
Rep. Jane E. Powdrell-Culbert
Rep. Debbie A. Rodella
Rep. Nick L. Salazar

Absent

Sen. John T.L. Grubestic
Sen. William H. Payne
Sen. William E. Sharer

Advisory Members

Sen. Dianna J. Duran
Sen. Mary Jane M. Garcia
Rep. Ben Lujan
Rep. Jeannette O. Wallace

Sen. Ben D. Altamirano

Staff

Gordon Meeks
Jacob Winowich

Guests

The guest list is in the meeting file.

Copies of all the handouts and written testimony are in the meeting file.

Friday, July 27

Los Alamos National Laboratory Science Overview

Dr. Terry Wallace, principal associate director of science, technology and engineering at LANL, told the committee that LANL is a science lab with more than 3,000 PhDs and 2,000 world class technicians and engineers working on "a science portfolio that ranges from alternative energy to health, from creating new technologies to detect weapons of mass destruction to exploring the distant reaches of the universe". He described the range of research subjects at LANL and products made possible by lab research, including space probes on Mars that carried LANL instruments and engines, the chemical core of the airbags in all new cars,

models for looking at the effects of global climate change and computer programs to simulate everything from the potential spread of avian flu to the optimization of spring river runoff in the Rio Grande Basin. He explained that LANL's science tradition is rooted in the Manhattan Project that was initiated in 1943 to develop an atomic bomb before the Nazis could. That research established a scientific culture at Los Alamos that has led to a long list of scientific accomplishments. He summarized the lab's core mission as: assuring the reliability of the nation's nuclear deterrent, protecting the nation from threats of mass destruction and solving emerging threats to the nation. He emphasized that Congress, in its funding of the lab, determines the lab's mission. Fifty-seven percent of the funding is related to weapons work, while about 20 percent is on threat reduction, 10 percent on basic sciences and seven percent on energy. But he clarified that the funding breakdown is misleading because the science underlying the weapons research often has a broader impact. For example, he said, the work to make nuclear weapons safer resulted in the discovery of gels that are the world's most effective isolators and will eventually reduce the cost of heating and cooling in future buildings. He concluded by saying the lab's research now touches on superconductivity, fuel cells, solar cells, climate modeling, aerosols, carbon sequestration, HIV modeling, "flu dip stick", protocells, radiation detectors, carbon nanotubes and roadrunner (high-performance) computing.

Questions and comments from the committee members addressed:

- defense mission as the primary mission of the lab and stockpile stewardship;
- partnerships between the lab and other institutions, including the state's universities;
- research on reducing the costs of energy;
- the "Roadrunner" supercomputer;
- security breaches at the laboratory;
- percentage of New Mexicans employed at the lab;
- the "dark skies" (particle physics) program;
- relationship to and effect on Native American lands and culture;
- sentiment in Congress to change LANL's mission;
- the effect of budget cuts on LANL's mission;
- research on port sensors and detection of weapons at airports;
- research on the vulnerability of communications systems;
- hydrogen energy research;
- public relations efforts to improve LANL's image;
- the chemical storage device for hydrogen power;
- disposition and intellectual property rights of information resulting from LANL research;
- response to contamination incidents and protocols for LANL's treatment of employees as a result of exposure to contaminants;
- fusion research;
- space elevator;
- methane as a greenhouse gas;
- recovery of particulate emissions;
- supercollider technologies;
- health physics research;

- integrated sensors;
- interdiction of a dirty bomb attack;
- undeveloped oil reserves and refinery capacities;
- the culture of noncompliance and arrogance; and
- atmospheric air circulation patterns and environmental controls.

Technology Transfer for Business Development

Duncan McBranch, Technology Transfer Division leader at LANL, told the committee that intellectual property is the lab's means to partner with industry to enhance science to serve national defense, strengthen the economy and foster job growth in New Mexico. He said that science at Los Alamos is multidisciplinary and revolutionary, not incremental. This is the source of ideas that change the world. He gave the example of the lab's work in modeling the spread of influenza. Los Alamos has created the world's most complete database of flu genetics, a \$5 million investment at the lab. He also referenced development by the lab of carbon-nanotube fibers, the camera on a microchip and the portable acoustic cytometer. Examples of LANL's partnerships with industry are the ones with Chevron, with is exploring ways to recover more oil and gas, and with Procter and Gamble, which is interested in research on phase stability, i.e., shelf life of products. He gave a brief overview of the intellectual property licensing process used at LANL. Technology transfer also involves visiting entrepreneurs, student internships, training and industrial fellows. LANL has invested \$15 million in its Technology Maturation Fund to facilitate technology transfer. Since 2002, he said, LANL has received 90 proposals and \$1.6 million has been invested in 37 recipients. This investment has resulted in 10 licenses, seven inventions and two new start-up businesses. He also described the makeup of the Technology Transfer Advisory Board and a \$1 million investment in the community commitment program, administered by the Northern New Mexico Regional Development Corporation.

Questions and comments made by the committee included:

- grants made from LANL's Venture Acceleration Fund;
- cooperation with the state Economic Development Department;
- accelerated licensing through intellectual property transfers;
- capital availability;
- leveraging of different resources through enterprise clusters;
- ability of scientists to develop entrepreneurial projects;
- patents and intellectual property ownership;
- range of frequencies of underground wireless technology being developed at Los Alamos;
- the number of business spinoffs that have stayed in New Mexico;
- measurements of success;
- hiring preferences;
- relations with state universities, especially New Mexico Highlands University;
- laboratory involvement in DNA technology; and
- technology transfer in Espanola and available clean rooms in Espanola.

Minutes of the June meeting were approved without opposition.

LANL Overview, Update, Budget Status and Contingent Reductions in Force Impacts

Mike Anastasio, laboratory director, summarized the first-year accomplishments of the Los Alamos National Security, LLC, LANL's contractor. He provided a handout to the committee that detailed safety, security, national defense, alternative energy, energy efficiencies, explosive research and development, quality control, accountability and environmental compliance. His handout, titled "Our First Year", stated that Los Alamos National Security, LLC, during its first year under the new contract, improved safety performance by 30 percent, reduced by 90 percent the number of facilities that hold strategic special nuclear materials, reestablished a multi-pit manufacturing capability, completed a six-year effort to deliver refurbished B61 bombs, provided input to the intelligence community regarding the North Korean nuclear test, recovered more than 15,000 radioactive sources from around the country, won five awards in R&D Magazine's annual R&D 100 competition, accelerated shipments of transuranic waste to WIPP, initiated the Northern New Mexico Connect Springboard Program and invested \$550,000 in regional economic development, among many other accomplishments.

Questions and comments of the committee addressed:

- pit production;
- the 2008 budget and the political environment;
- the nature of Congress' control and definition of LANL's mission;
- concerns about Congress' steps to redirect LANL to other missions besides national defense;
- the math and science academy donation to Northern New Mexico College expansion;
- consequences of funding cuts on northern New Mexico;
- reuse of LANL retired sites by the county and city of Los Alamos;
- improved communications and public relations;
- math and science education throughout the state;
- unfunded mandates by the Department of Energy to LANL;
- clear expression of concern to the congressional delegation regarding potential reductions in the LANL budget;
- LANL employment levels and demographic breakdowns of its employment;
- contract employees being replaced by out-of-state transfers;
- retraining programs for laid-off employees;
- pending class action lawsuit;
- contamination incident;
- compliments and expressions of appreciation;
- commendation for cleanup process;
- collaboration with small businesses in the district;
- LANL training assistance of small businesses wishing to become vendors to LANL;
- and
- gross receipts tax impact and where budget cuts will fall heaviest.

U.S. Representative Tom Udall was represented by Michele Jacquez-Ortiz and Sarah

Cobb, who read a statement from him to the committee that expressed his appreciation for the work of the committee. He applauded the officials at LANL for providing a consistently open stream of communication with the LANL Oversight Committee. The statement summarized the current congressional budgeting process for fiscal year 2008. Representative Udall's statement said he led the fight to protect the core mission of the lab, offering an amendment to restore \$192 million in budget cuts by the U.S. House Appropriations Committee. He stated that he is "confident that the final conference report between the House and the Senate will result in fully funding the core mission of the lab". His staff also provided copies of his floor statement on the budget to the committee.

The committee adjourned at 4:08 p.m.