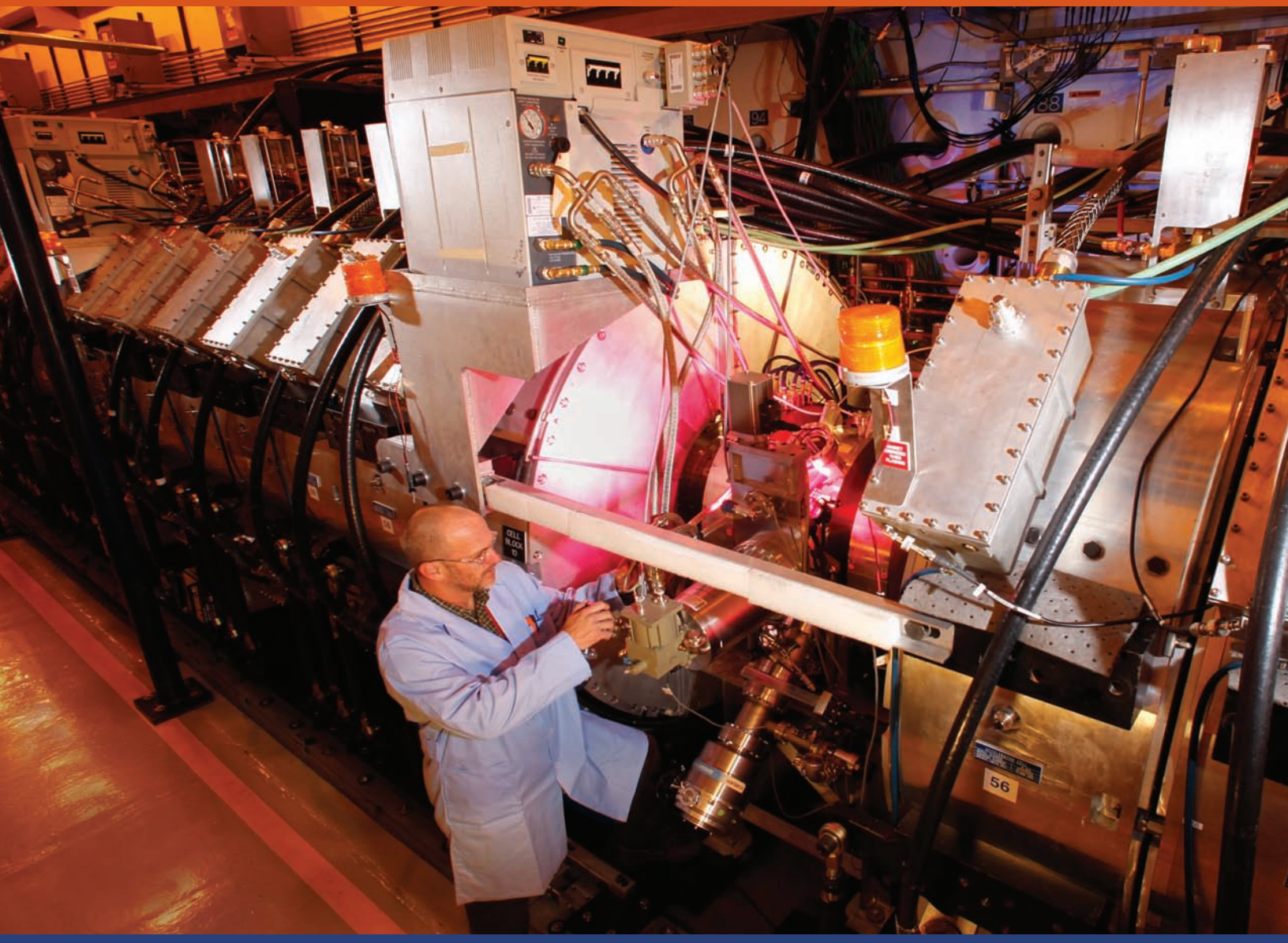
Delivering Excellence in National Security Science

2010 Board of Governors Annual Report
Los Alamos National Security, LLC



Los Alamos National Laboratory is operated by
Los Alamos National Security, LLC
for DOE's National Nuclear Security Administration

Los Alamos
NATIONAL LABORATORY
EST. 1943

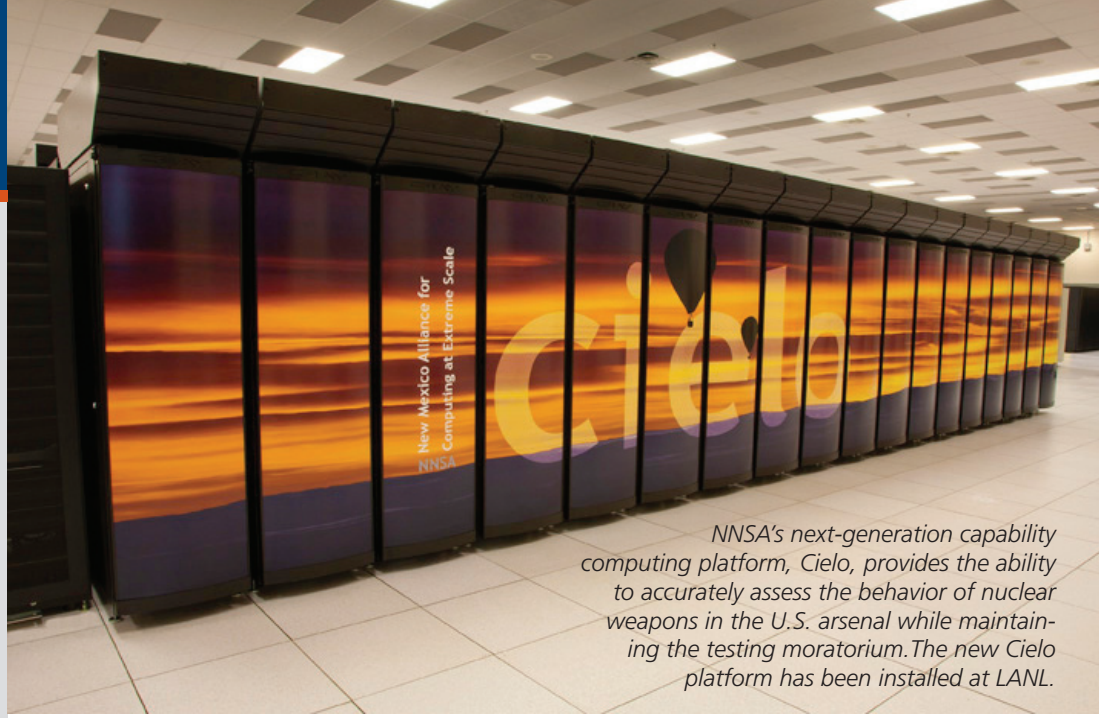
Our Mission

'The United States will take concrete steps toward a world without nuclear weapons. To put an end to Cold War thinking, we will reduce the role of nuclear weapons in our national security strategy, and urge others to do the same. Make no mistake: as long as these weapons exist, [the United States] will maintain a safe, secure, and effective arsenal to deter any adversary, and guarantee that defense to our allies.'

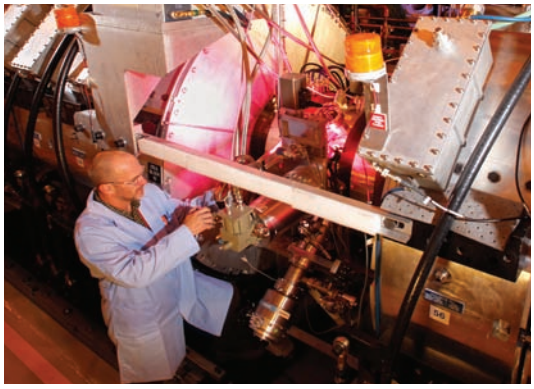
–President Barack Obama, Prague, April 2009

Annual Report Overview

This annual report highlights the LANS accomplishments that align with the FY11–FY15 Performance Improvement Strategy, shown below. The multi-year strategy defines goals to continuously improve LANL management and performance, under the themes of Creating Our Future and Enabling Our Mission.



NNSA's next-generation capability computing platform, Cielo, provides the ability to accurately assess the behavior of nuclear weapons in the U.S. arsenal while maintaining the testing moratorium.The new Cielo platform has been installed at LANL.



Front cover

In FY10, the Laboratory's Dual Axis Radiographic Hydrodynamic Test (DARHT) facility completed four successful two axis, multi-frame hydrodynamic tests. Here, Terry Priestley inspects components on the second axis.

PROGRESS REPORT

From the Board of Governors, Los Alamos National Security, LLC

Norman Pattiz

Scott Ogilvie

With support from the Los Alamos National Security, LLC (LANS) Board of Governors, Los Alamos National Laboratory (LANL) sustained high levels of mission performance in 2010 and boosted efficiency across the Laboratory.

Underscoring the tremendous efforts and expertise of LANL employees, the 2010 Nuclear Posture Review highlighted the NNSA Laboratories' critical importance to sustaining the national deterrent. Further, the testimony on the New START treaty by LANS President and LANL Laboratory Director Michael Anastasio before two Senate committees focused the nation's attention on the importance of LANL's work to national security.

Throughout 2010, LANS continued improving business systems and operational performance at the Laboratory. The partnership provided strong leadership, applied effective governance and oversight, facilitated reach-back to subject matter experts, and introduced best-in-class systems and processes. These key accomplishments exemplify our unwavering focus on compliant and ever-more efficient operations:

- Implementation of our core formality of operations philosophy dramatically improved nuclear safety, resulting in the number of recordable events falling by 45% and the off-site dose consequence at LANL's plutonium facility dropping a hundredfold.

- With a very small increase in permanent staff, the Laboratory executed $300 million more in programmatic work, kept the indirect budget constant, and realized efficiencies that enabled significant investments in facilities, information systems, scientific equipment and capabilities, and the employee pension plan.

In recognition of LANL's increasingly important contributions to reducing global threats, funding to the Laboratory for science and energy programs has increased by 70% since LANS began managing and operating the Laboratory in 2006.

We also advanced on our commitment to ensure the safety of our employees and the public. Our safety progress was recognized by the U.S. Department of Energy's Voluntary Protection Program at the "Merit" level. Moreover, we adopted an institutional safety improvement strategy that will allow LANL to achieve the coveted VPP "Star" level in three years. Meanwhile, the Laboratory reduced environmental risk with a record number of transuranic waste shipments sent to the Waste Isolation Pilot Plant.

Building on our successes of the past four years, we approach our fifth year on the job with even higher expectations.

Sincerely,

Norman Pattiz, Chairman
LANS, LLC Board of Governors

Scott Ogilvie, Vice Chairman
LANS, LLC Board of Governors

FY10 Significant Accomplishments

Message from the LANS President

This year, we achieved new levels in efficiency and productivity, sustaining our historically high-performance levels in mission and science delivery while positioning ourselves to meet future national security science demands. As a result, we made significant progress toward realizing our vision of making Los Alamos National Laboratory the premier national security science laboratory for the 21st century.

–Michael Anastasio, President, LANS, LLC and Laboratory Director

Under LANS leadership, Los Alamos made significant progress toward its strategic goals in FY10.

Weapons

- Completed the 15th annual stockpile assessment for all Los Alamos weapons systems. The assessment advises President Obama on the state and health of the nuclear weapons stockpile.
- Provided production support for the Life-Extension Project for the W76, the backbone of the nation's undersea deterrent force.
- Manufactured War-Reserve-quality W88 pits in support of the U.S. Navy.

Science

- Achieved four successful, full-scale, dual-axis hydrotest experiments at the Dual Axis Radiographic Hydrodynamic Test (DARHT) facility. All experiments yielded excellent data critical to understanding weapons physics.
- LANL scientists and engineers received many prestigious awards, including five R&D 100 Awards, two Federal Laboratory Consortium Awards, and five DOE Office of Science Early Career Research Program grants.

Global Security

- Launched the GPS IIF-1 satellite, carrying the next generation of the Laboratory's payloads designed to detect nuclear detonations.

Operations

- Received Merit-level recognition from the Department of Energy (DOE) as part of its Voluntary Protection Program (VPP) that validates LANS' highly effective safety programs.
- Successfully executed $212 million for environmental cleanup projects, as part of the American Recovery and Reinvestment Act (ARRA), by installing groundwater wells, decontaminating and decommissioning contaminated facilities, and beginning excavation of the Laboratory's oldest waste disposal site, Material Disposal Area B (MDA B).

Facilities

- Completed (ahead of schedule and under budget) the construction of the Radiological Laboratory Utility Office Building (RLUOB), which is registered as a Green Building by the U.S. Green Building Council Leadership in the Energy and Environmental Design (LEED) certification program.

Secretary of Defense Robert Gates, left, visited LANL in July for briefings from Lab Director Michael Anastasio, right, and others about the Operation Warfighter Program and Stockpile Stewardship Program.

Targeted Investing for the Future

By taking strategic actions in targeted areas, LANS is positioning LANL to execute its missions and deliver science that matters for years to come.

Science

- Invested $9 million in scientific equipment, program development, and strategic support for science capabilities.
- Awarded, with Oak Ridge National Laboratory as overall lead, the Consortium for Advanced Simulation of Light Water Reactors (CASL) as the first DOE Nuclear Energy Modeling and Simulation Energy Innovation Hub.
- Installed Cielo, the newest Cray supercomputer, at LANL to support Los Alamos, Lawrence Livermore, and Sandia national laboratories.
- Advanced the base of knowledge required to develop the next generation of structural materials.

Information Systems and Security

- Invested $16 million in modernizing information systems, including the institutional information technology roadmap and network hardening.

Site, Facilities, and Infrastructure

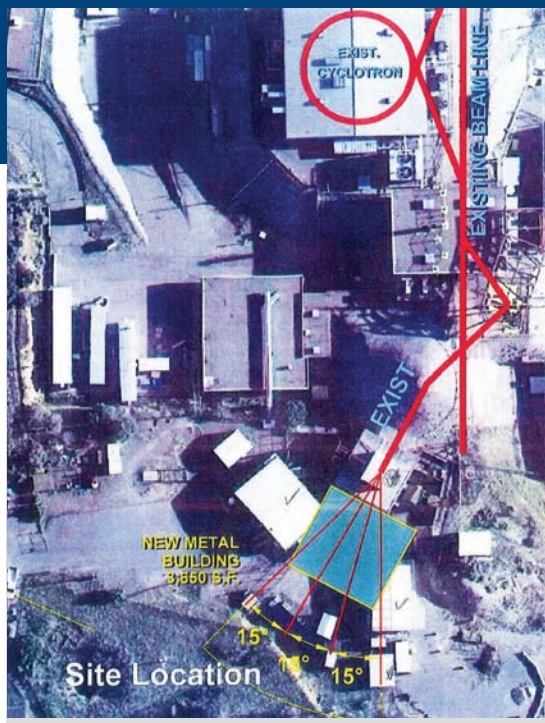
- Invested $20 million in facilities, such as the TA-33 septic system and the Sensitive Compartmented Information Facility (SCIF), and in the demolition of the old Administration Building.
- Invested LANS fee to upgrade the Los Alamos Neutron Science Center (LANSCE) with a new addition to the Weapons Neutron Research Facility, to expand the simulated high-altitude semiconductor testing programs for industrial users.

Project Management

- Leveraged parent company expertise to reduce the cost of the Chemistry and Metallurgy Research Replacement (CMRR) project by hundreds of millions of dollars. These opportunities will be integrated with the Uranium Production Facility Project at Y-12.

Business and Financial Management

- Created financial flexibility by reducing overhead costs as program execution increased. LANS will use lessons learned to achieve even higher levels of prudent fiscal management and investment to position the Laboratory for the future.



Above: An addition to the Weapons Neutron Research Facility, a new 3,650-square-foot building, will be constructed at LANSCE and will double the Laboratory's industrial radiation testing capacity and enhance its weapons neutron radiation capacity.

Below: The completed RLUOB, which is the first phase of the CMRR Project, will provide about 19,500 net square feet of radiological laboratory space that includes 26 separate modules.

Reliable Nuclear Deterrence

Assessing the safety, reliability, and performance of LANL weapons systems

LANS leadership is ensuring that LANL is an indispensable national security resource whose core component of work is to sustain the safety, reliability, and performance of weapons systems in the U.S. stockpile. We provide scientific leadership for the stockpile stewardship mission that remains technically challenging and vital to the nation.

Sustain the Stockpile

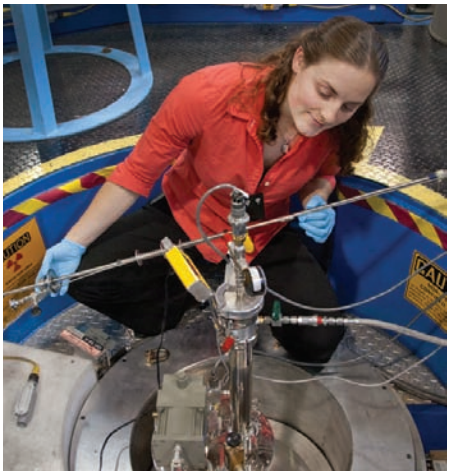
- Lab Director Michael Anastasio testified before the Senate Armed Services Committee and the Senate Foreign Relations Committee on the New START Treaty and the ability of the national laboratories to maintain the safety, security, and effectiveness of the stockpile into the future.
- Used the results of the DARHT hydrodynamic tests to close longstanding issues about performance and to support advanced certification concepts.
- Issued a technical response to the Nuclear Posture Review in nuclear weapons, nonproliferation and counterterrorism, and underpinning science, technology, and engineering.
- Manufactured plutonium samples needed for experiments, including the Bacchus and Barolo A subcritical experiments in Nevada.
- Ensured conformance to design intent as production plants increased W76-1 production rates.

Lower left: Brigadier General Robert Wheeler, LANL staff member Jeff Paisner, and General Kevin Chilton, commander, U.S. Strategic Command, tour the U1a Zero Room at the Nevada Test Site where the Bacchus shot (and later the Barolo A shot) took place.

Below: Elmer Lujan, a Laboratory research technologist, works on measuring the plutonium assay (i.e., the overall quantity of plutonium) in a nuclear material sample.

Assess Stockpile Warheads

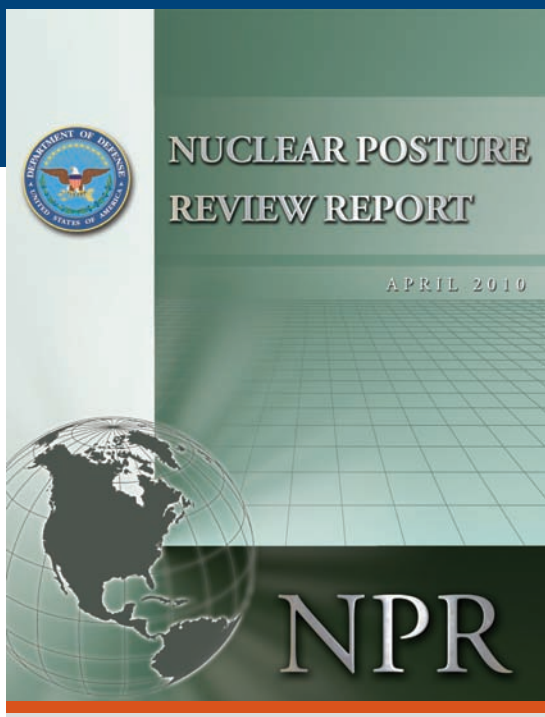
- Supported the Independent Nuclear Weapons Assessment Process by developing preliminary performance baselines for the W87, a Lawrence Livermore National Laboratory (LLNL) warhead, in accordance with the Tri-Laboratory implementation plan.



Postdoctoral researcher Katharine Page is working on a Neutron Powder Diffractometer at LANL's Lujan Neutron Scattering Center.

Develop Future Stockpile Stewards

- Created the Metropolis Postdoctoral Fellowship Program, in honor of Dr. Nicholas Metropolis, that seeks outstanding candidates in computer and computational sciences to assist LANL in advancing state-of-the-art supercomputing. Awarded the first fellowships to two highly qualified recipients.
- Committed funding with NNSA to reactivate the Service Academy Research Associates program to bring in cadets and midshipmen to conduct research in support of their academic degree programs.
- Increased the postdoctoral program to 546 participants, up significantly from 344 a year earlier.



'In order to remain safe, secure, and effective, the U.S. nuclear stockpile must be supported by a modern physical infrastructure—comprised of national security laboratories and a complex of supporting facilities—and a highly capable workforce with the specialized skills needed to sustain the nuclear deterrent.'

–Nuclear Posture Review Report, April 2010

Lab Director Michael Anastasio, far left, joined fellow National Laboratory directors from Lawrence Livermore and Sandia to brief Vice President Joe Biden and Secretary of Energy Steven Chu in the White House. The discussion focused on the state of the stockpile, the future of nuclear weapons policy, and the vitality of the NNSA laboratories.

The Future Weapons Complex

Achieving NNSA's Complex Transformation for the nation's nuclear weapons stockpile

LANS is ensuring that the NNSA vision for Complex Transformation to a smaller, safer, more secure, and less expensive enterprise is achieved by operating the Center of Excellence for Nuclear Design and Engineering, the Center of Excellence for Plutonium Science and Manufacturing, and being the Platform Host Site for Supercomputing.

Address Ongoing and Future Needs

- Roadrunner hybrid architecture with computing accelerators contributed significantly to resolution of the FY10 NNSA Headquarters milestone for energy balance.
- Cielo is expected to be more than seven times faster than its predecessor, the LLNL Purple supercomputer.
- Executed experiments at the National Ignition Facility (NIF) that provide critical data on weapons performance in the absence of underground testing.
- Remained on track to deliver a key neutron imaging system diagnostic for the NIF, in support of the National Ignition Campaign, nearly six months ahead of schedule.
- The Afghan-Specific Homemade Explosives Situational Training courses taught at the Laboratory were so successful the sponsor requested that the three-day course be expanded.

Implement Transformation Changes

- CMRR Project RLUOB received the 2010 Pollution Prevention Best-in-Class Award for Sustainable Building.
- Initiated the TRU Waste Facility Project and completed the TA-55 Reinvestment Project 1 scope for 2010 below the projected cost of $21.1 million.
- Executed LLNL experiments in front of DARHT facility accelerators.
- LANL certified LLNL staff to support integrated nuclear activities at TA-55.

Left: The Afghan-Specific Homemade Explosives Situational Training course was taught to support U.S. troops, including the New Mexico National Guard, before they were deployed to Afghanistan.

Below: In the TA-55 Reinvestment Project 1, the cooling tower/chiller system, which provides critical cooling to the plutonium facility (PF-4), was replaced with this new system.

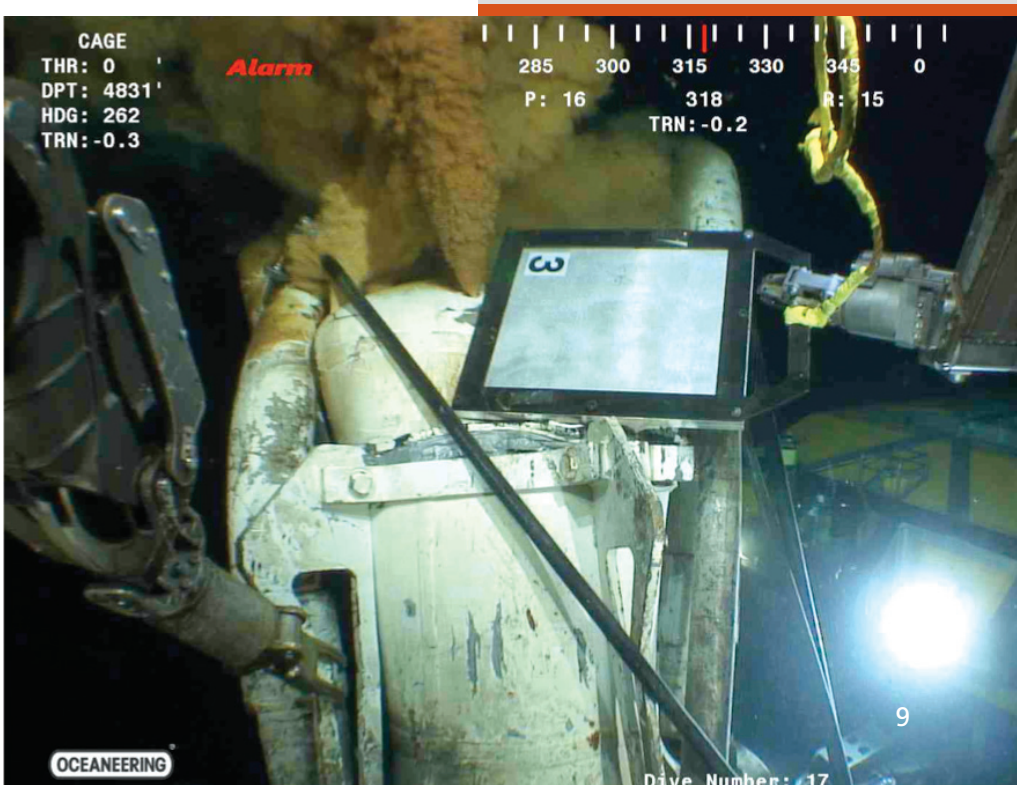
Providing scientific solutions to challenging worldwide security issues

Global Security

LANS leadership strongly supports the core nuclear weapons mission to globally reduce threats to the security of the United States and its allies by leveraging unique strengths to advance national security missions.

Approach Solutions with Strategy

- Published a Global Security strategic plan describing the goals, objectives, and scope of work to be accomplished in the next five years.
- The nonproliferation programs helped to detect clandestine nuclear weapons research and kept deadly material from going astray.
- Recovered more than 3,000 domestic and foreign radiologic sources, helping to prevent nuclear terrorism by reducing available radiation sources.
- Lab Director Michael Anastasio presented the Russian Ministry of Atomic Energy's Kurchatov Medal to Phil Hemberger for his contributions to threat reduction. Hemberger is the first Laboratory employee to receive the prestigious award.
- Built ChemCam for NASA's Curiosity Rover, scheduled for a launch to Mars in 2011. ChemCam uses laser pulses to dissolve rock surfaces and employs spectrographs to determine the composition of the resulting gases.
- Dr. James Maxwell won an R&D 100 Award for three straight years, an unparalleled feat. In 2010, Maxwell built on his previous Laser Weave technology awards with Ultraconductus, a technology that has the potential to increase the conductivity of metallic wiring by 100 times.



During the BP oil spill in the Gulf of Mexico, LANL's underwater radiography images provided essential information on the blowout preventer. LANS staff also provided flow-rate analysis, sea-floor and ocean-current modeling, well-kill support, containment design, risk analysis, and economic models of the impact on the Gulf Coast communities.

Energy Security

Developing sustainable solutions to growing global energy demand

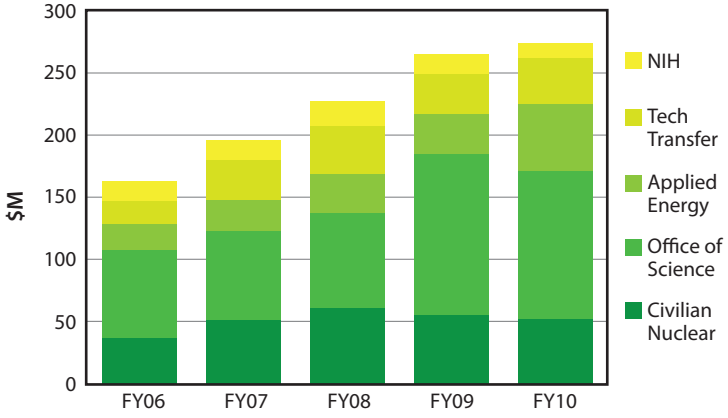
LANS leadership recognizes that the growth of global energy demand in this century will create significant new national security challenges, requiring the development of transformative new science for energy technologies in a manner that is sustainable and that mitigates negative environmental, social, and national security consequences.

Strengthen Capabilities

- Achieved significant funding growth in energy security, such as the Applied Energy Programs, which increased 69.4% to $53.7 million in FY10.
- Initiated the Greenhouse Gas Information System study with Lawrence Livermore, Sandia, and Lawrence Berkeley national laboratories, the Jet Propulsion Laboratory, and the National Oceanic and Atmospheric Administration.
- Provided technical leadership in materials science and in the development of advanced numerical models for simulations of reactor core and structural materials for the CASL First Energy Innovation Hub.
- Led a research team that identified a master switch for increasing plant growth and yield and increasing the nitrogen use efficiency of plants; executed an exclusive license agreement for this technology.
- Partnered with the National Alliance for Advanced Biofuels and Bioproducts to develop and demonstrate the science and technology of producing, harvesting, and extracting algae for biofuels.
- Partnered with others to fabricate transparent thin films capable of absorbing light and generating electric charge over a relatively large area. The semiconducting polymer material could be used to develop transparent solar panels or new types of optical displays.

Left: Developing viable algal fuel production requires optimized strains and production processes. The Laboratory is working to gain an in-depth understanding of algal metabolism, gene expression, and performance at multiple scales.

Growth in Science and Energy Programs



LANS strategies have led to very significant growth in science and energy programs (FY06–FY10).

Becoming the premier capabilities-based national security science laboratory

National Security Science

LANS fully expects that when the country has a complex scientific or technical national security issue, the experience and capabilities at LANL will be called upon. Our vision is to be the premier National Security Science Laboratory—the training and proving ground for scientists and engineers facing the toughest challenges for our nation and the world.

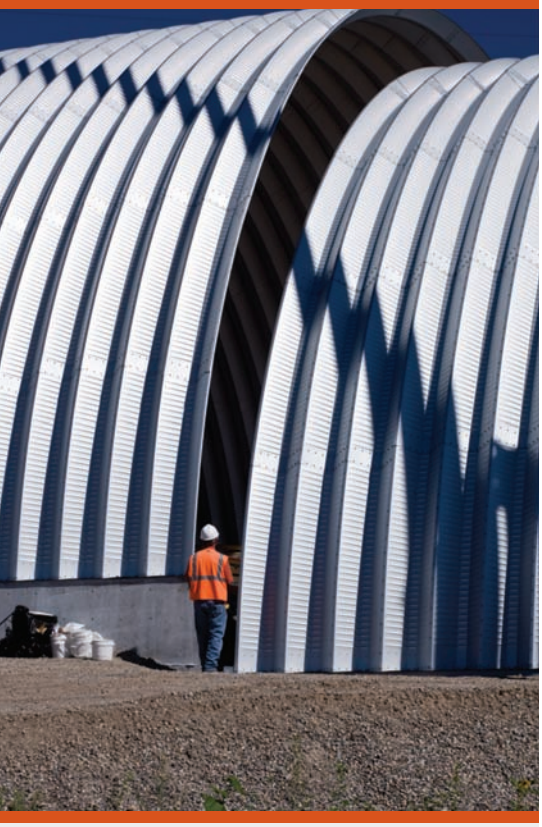
Demonstrate Excellence in Science

- Demonstrated a new version of the Laboratory's magnetic resonance scanner designed to characterize potentially explosive liquids and gels in bottles and cans.
- Created the world's largest evolutionary tree for HIV. Working with Duke University Medical Center and others, LANS researchers used this data to help design a new type of vaccine that is now progressing to human clinical trials.
- The Roadrunner supercomputer performed a series of simulations using Advanced Simulation and Computing (ASC) Program codes with unprecedented speed and fidelity.
- Produced higher neutron (long-wavelength) flux on the new target-moderator-reflector system at LANSCE, 20% higher than the doubling predicted by numerical simulations. This will enable users to conduct physics experiments on longer scales of both wavelength and time.
- Achieved an aggregate 5% increase in funding for LANL science programs.
- Increased industrial funding within the Work for Others, Non-Federal Entity Program, up more than 9% in FY10 from FY09.
- Addressed recommendations from the 2009 review of Energy Security Science Strategy, resulting in funding for two biofuels consortia and the CASL First Energy Innovation Hub, with awards totaling more than $170 million.

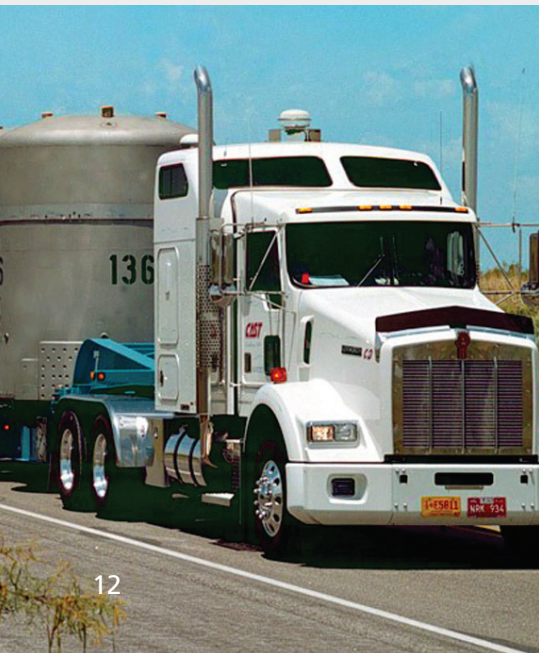
LANL developed the Interstellar Boundary Explorer (IBEX), making it possible to construct the first comprehensive sky map of our solar system.

LANL staff won five R&D 100 awards from R&D Magazine *in 2010. One award went to Scott Watson, inventor of the world's fastest and most flexible movie camera, Movies of eXtreme Imaging Experiments (MOXIE). The camera, which captures 20 million frames per second, was used for taking x-ray movies of full-scale mock explosions at DARHT.*

Enabling Our Mission



Above: By December 2010, the Laboratory completed more than half of the planned excavation at MDA B. Workers will excavate 22,000 cubic yards of dirt and waste that had been disposed of in the material disposal area from 1944 to 1948.



Left: The Offsite Source Recovery Project prepared 220 drums of transuranic waste sealed sources and shipped 290 drums—a record number—to the Waste Isolation Pilot Plant (WIPP) for permanent disposal.

Safe and Secure Workplace

- Reduced significant injuries by 19% in 2010.
- Established a chemicals e-Stock pilot program to improve LANL's Chemical Lifecycle Management process and reduce chemicals on site.
- Using LANS fee, completed five Assess, Improve, and Modernize (AIM) reviews. The AIM reviews identified areas for safety, security, and operational improvements, resulting in significant cost savings.

Exemplary Information Security

- Implemented secure wireless technology: LANL BlackBerry® devices are now allowed in security areas; pilots under way for other secure wireless initiatives to improve communications efficiencies.
- Commissioned the prototype super vault-type room (SVTR) during the security compliance order, allowing further consolidation of classified computing resources.
- Further simplified the business-computing environment, which improves information security and results in better integration of business systems.

Environmental Stewardship

- In FY10, 269 workers on 59 different teams were recognized for pollution prevention accomplishments, with documented environmental cost savings of $7 million.
- At TA-21, demolished all 24 buildings, for a footprint reduction of 175,000 sq. ft.
- Process improvements in 2010 continue to significantly improve results on EPA and New Mexico Environment Department compliance inspections (RCRA, air quality, stormwater).

Responsive Infrastructure

- Decommissioning and demolition of the old Administration Building (SM-43) is ahead of schedule.
- Initiated the Pajarito Corridor Construction planning effort to successfully integrate numerous projects over the next 10 years.
- Aside from TA-21, reduced the site footprint with the Decommissioning and demolition of more than 39,000 sq. ft. of trailers and transportables.

Performance-Based Management

- Developed institutional metrics to manage and improve short- and long-term performance in key systems for mission delivery and enablement.
- Consolidated LANS and Lawrence Livermore National Security oversight committees for business and operations, saving $110,000 a year.

Business Excellence

- Restructured the procurement function to be more effective and increased procurement awards to $925 million in FY10 from $724 million in FY09.
- To reduce future liability, made a $126 million pension payment for FY10, restarted employee contributions, and made preparations for additional future pension-funding contributions.
- Focused investments in enterprise business computing on business applications, network transformation, and desktop virtualization to achieve improved productivity and security at lower costs.
- Conducted targeted Parent Organization Functional Management Reviews (FMRs) in six business and operating areas. The FMRs provided external, independent reviews of processes and procedures, and incorporated industry best practices into operations.

Successful Workforce

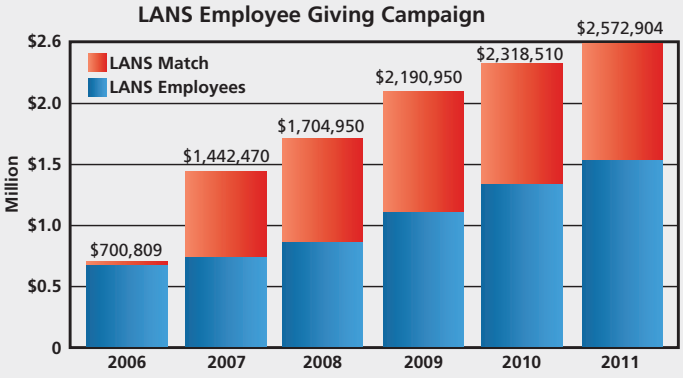
- Developed and implemented new diversity initiatives. These initiatives included a mentor-protégé program, a Management Selection Board, and an On-Ramp Program to pre-endorse management candidates.

LANL workers proudly display the new DOE VPP Merit Site flag at TA-3.

Outreach and Community Commitment

LANS has continued its longstanding commitment to support our Northern New Mexico neighbors.

- Funded institutional agreements with four Northern New Mexico colleges at $100,000 each for education programs that include applied technologies, science, systems administration (computers), and renewable energy.
- Achieved a return of more than $12.2 million in the Northern New Mexico economy, from a $3.3 million LANS economic development investment since 2006.



Our 2011 employee-giving campaign, including the LANS $1 million match, represents a 260% increase in employee giving since 2006.

2010 LANS Board of Governors

The LANS Board of Governors is composed of executive and advisory members from LANS partner organizations, together with key scientific, academic, national security, and business leaders serving as independent governors. The Board provides oversight for the management of the Laboratory and facilitates reach-back to the LANS partner entities for assistance in implementing best business and management practices.

Lab Director Michael Anastasio testified before the Senate Armed Services Committee in 2010 on the New START Treaty and the ability of the national laboratories to maintain the safety, security, and effectiveness of the stockpile into the future.

Executive Committee

Norman Pattiz
Chairman; Regent, University of California; Founder and Chairman, Westwood One, Inc.

Scott Ogilvie
Vice Chairman; President, Bechtel Systems and Infrastructure, Inc.

S. Robert Cochran
President, Babcock & Wilcox Technical Services Group; Chair of the Safeguards and Security Committee

Bruce Darling
Executive Vice President, University of California; Chair of the Nominations and Compensation Committee

William Frazer
Senior Vice President Emeritus, University of California; Chair of the Science and Technology Committee

Craig Weaver
Executive Vice President, Bechtel Systems and Infrastructure, Inc.; Vice Chair of the Business and Operations Committee

Independent Governors

Sidney Drell
Senior Fellow, Hoover Institution, Stanford University; Vice Chair of the Mission Committee

Richard Mies
Admiral (Retired), U.S. Navy; Former Commander, U.S. Strategic Command; Chair of the Nuclear Weapons Complex Integration Committee

Nicholas Moore
Global Chair (Retired), PricewaterhouseCoopers; Chair of the Ethics and Audit Committee

William Perry
Senior Fellow, Hoover Institution, Stanford University; Chair of the Mission Committee

Nick Salazar
State Representative, New Mexico Legislature

Advisory Members

Steven Beckwith
Vice President for Research and Graduate Studies, University of California

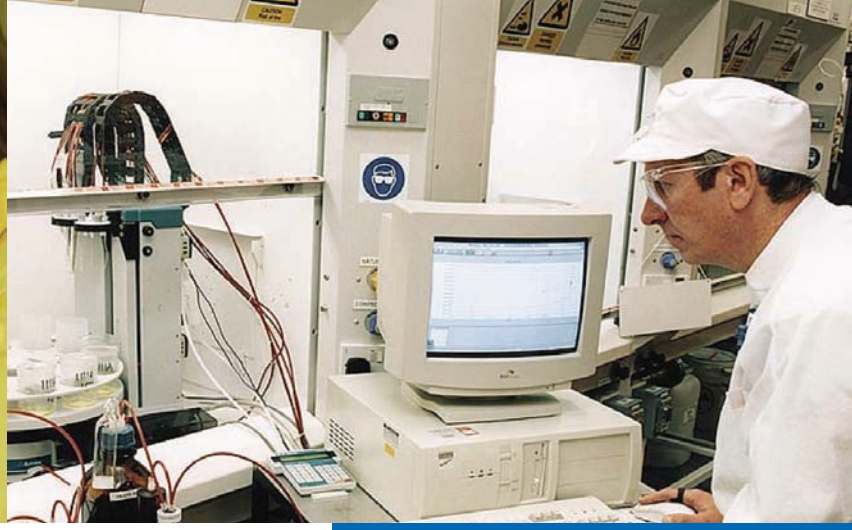
Tom Gioconda
Brigadier General (Retired), U.S. Air Force; former Acting Deputy Administrator for Defense Programs (NNSA); Vice President and Manager of Government Programs, Bechtel National, Inc.; Co-chair of the Safeguards and Security Committee; Vice Chair of the Nuclear Weapons Complex Integration Committee

Bruce Varner
Regent, University of California; Partner, Varner & Brandt LLP

David Walker
President, Bechtel National, Inc.; Chair of the Business and Operations Committee

Board of Governors Committees

Business and Operations; Ethics and Audit; Mission; Nominations and Compensation; Nuclear Weapons Complex Integration; Safeguards and Security; Science and Technology

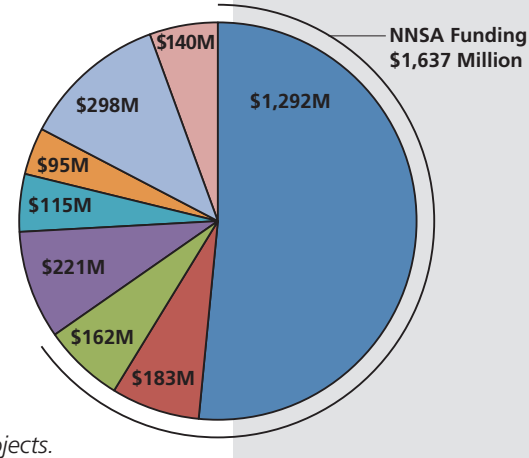


LANS scientists and the U.K. Atomic Weapons Establishment (AWE) share technical problem-solving tasks and opportunities through a Joint Working Group. In support of this effort, at left, Mariam Thomas of LANL fabricates filaments for thermal ionization mass spectrometry, and at right, an AWE chemist in the U.K. demonstrates an automated Davies-Gray titration system for uranium assay determination.

FY10 LANL Costs

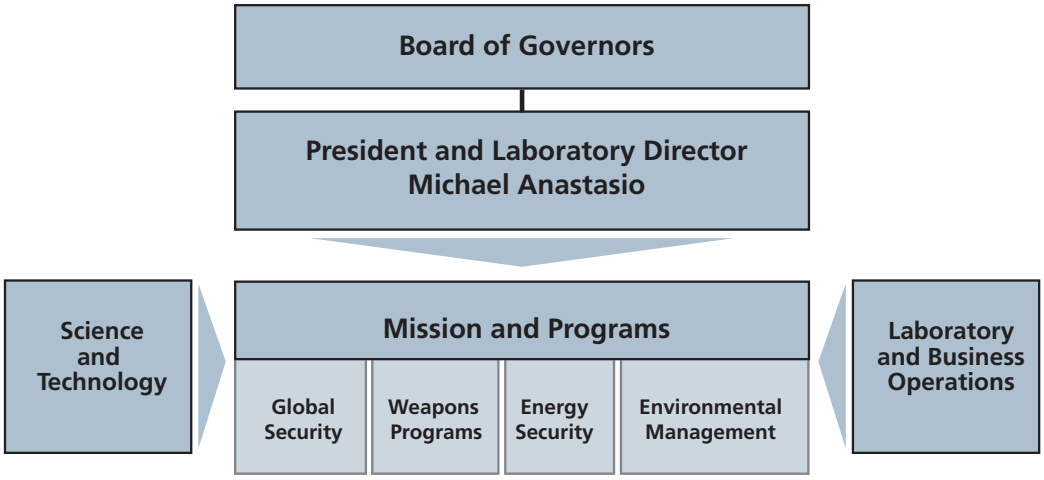
$2.5 Billion

- NNSA Weapons Program
- NNSA Nonproliferation
- NNSA Safeguards and Security
- DOE Environmental Management
- DOE Energy and Other Programs
- DOE Office of Science
- Work for Others
- Stimulus*



** In FY10, the Laboratory also spent $15.5 million of $63.3 million awarded for one-time science and technology stimulus projects and $125.6 million of $211.8 million awarded for one-time environmental management stimulus projects.*

LANS Organization



The hydrotests at DARHT use a two-layer containment vessel, shown here, which is specifically designed for the tests. DARHT tests are conducted in the vessels to enclose all of the hazardous materials and to prevent environmental and health impacts.

Los Alamos National Security, LLC

Los Alamos National Security, LLC (LANS) comprises four top U.S. organizations—Bechtel National, University of California, Babcock and Wilcox Company, and URS Energy & Construction, Inc.—that have extensive experience in nuclear defense programs, large-scale facilities management, applying science and technology to homeland security challenges, and safety and security.

BECHTEL

THE UNIVERSITY OF CALIFORNIA 1868

BWXT BWX Technologies, Inc.

URS

Los Alamos National Security, LLC

www.LANL.gov
www.LANSLLC.com

Los Alamos NATIONAL LABORATORY EST.1943

LA-UR-11-00054