



Providing the United States with the best scientific and engineering solutions to many of the nation's most crucial challenges.

Los Alamos Overview

Los Alamos National Laboratory is a premier national security research institution. The people of Los Alamos continually work on advanced technologies to provide the United States with the best scientific and engineering solutions to many of the nation's most crucial challenges. The primary responsibility of the Laboratory is assuring the safety and reliability of the nation's nuclear deterrent. Though the world is rapidly changing, this essential responsibility remains the core mission.

Yesterday

The Laboratory was established in 1943 as site Y of the Manhattan Project for a single purpose: to design and build an atomic bomb.

It took just 20 months. On July 16, 1945, the world's first atomic bomb was detonated 200 miles south of Los Alamos at Trinity Site on the Alamogordo bombing range. Under the scientific leadership of J. Robert Oppenheimer and the military direction of General Leslie R. Groves, scientists at the Laboratory had successfully weaponized the atom.

Hitler was defeated in Europe, but the Japanese Empire continued to wage an aggressive Pacific war. So President Harry S. Truman chose to employ atomic bombs in an effort to end WWII. Little Boy, a uranium gun-type weapon, was used against Hiroshima; Fat Man, an implosion plutonium bomb, was dropped on Nagasaki. On August 14, the war officially ended. An invasion of the Japanese home islands proved unnecessary, thus sparing thousands of American and Japanese lives.

Today

The Los Alamos of today has a heightened focus on worker safety and security awareness, with the ever-present core values of intellectual freedom, scientific excellence, and national service. Outstanding science underpins the Laboratory's past and its future. A rich variety of research programs directly and indirectly support the Laboratory's basic mission: maintaining the safety, security, and reliability of the nation's nuclear deterrent without the need to return to underground testing.

With a national security focus, the Laboratory also works on nuclear nonproliferation and border security, energy and infrastructure security, and countermeasures to nuclear and biological terrorist threats. As a foundation, the Laboratory conducts fundamental science in

- high-energy and applied physics and theory
- high-performance computing
- dynamic and energetic materials science
- superconductivity
- quantum information
- advanced materials
- bioinformatics
- theoretical and computational biology
- chemistry
- earth and environmental science
- alternative energy systems
- engineering sciences and applications

Tomorrow

The future is filled with promise. In partnership with IBM Los Alamos has developed the first peta-scale supercomputer. Currently #1 on the TOP500 list of supercomputers



“Roadrunner” is based on commercially available hybrid technology. Computer scientists attained the elusive petaflop - a million billion calculations per second - in May 2008. The second axis of the Dual Axis Radiographic Hydrotest facility began operations in early 2008 adding a high-energy four-pulse, 3D capability to the Laboratory’s suite of experimental resources. Construction continues on the Chemistry and Metallurgy Research Replacement facility, key to supporting the nation’s ability to replace existing plutonium pits. All Laboratory programs are built on our scientific infrastructure, with a focus on attracting and retaining top scientific talent and providing them the tools to succeed. MaRIE is a proposed signature experimental facility to conduct research of Matter-Radiation Interactions in Extremes and translate that into real program solutions. The Laboratory is refining this facility concept through internal workshops and in concert with DOE and the external science community as well as an external advisory committee.



National Security Sciences Building

Fast Facts 09•08

People - 11,233 total employees

Los Alamos National Security, LLC	8,270
SOC (Guard Force)	594
KSL (construction & maintenance)	939
Other contractors	402
Students	1,206

Place - Located 35 miles northwest of Santa Fe, New-Mexico, on 36 square miles of DOE-owned property. More than 2,000 individual facilities, including 47 technical areas with 8 million square feet under roof.

Replacement value of \$5.9 billion.

Budget FY 2008 - \$2.074 billion

55%	Weapons Programs
8%	Nonproliferation programs
7%	Safeguards and Security
8%	Environmental Management
3%	DOE Office of Science
3%	Energy and other programs
15%	Work for Others

Workforce Demographics 49% of employees live in Los Alamos, the remainder commute from Santa Fe, Española, Taos, and Albuquerque.

Average Age: 46. 65% male, 35% female.
39% minorities. 72% hold undergraduate degrees.
41% hold graduate degrees. 22% have earned a Ph.D.

Major Awards 105 R&D100 awards since 1978.
28 E.O. Lawrence Awards. The Seaborg Medal. The Edward Teller Medal.

Los Alamos National Laboratory is operated by Los Alamos National Security, LLC, a team composed of Bechtel National, the University of California, The Babcock & Wilcox Company, and the Washington Division of URS for the Department of Energy’s National Nuclear Security Administration.