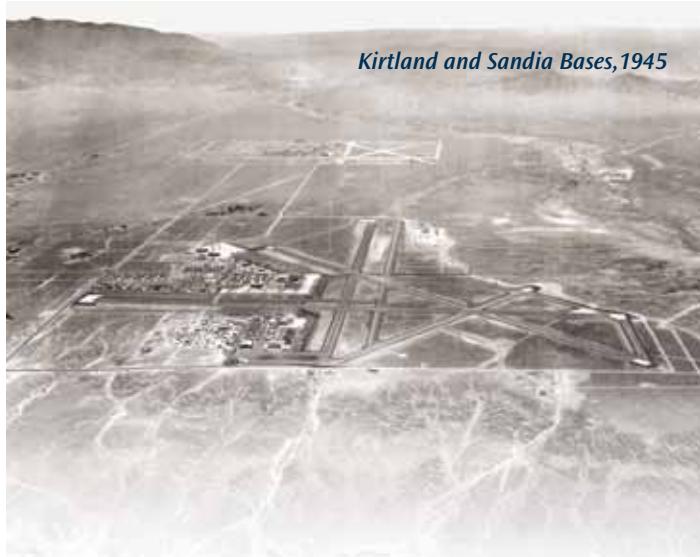


Sandia National Laboratories

A History of Exceptional Service in the National Interest



Sandia National Laboratories is one of the Department of Energy's (DOE) National Nuclear Security Administration (NNSA) laboratories. Sandia began in 1945 as Z Division, the ordnance design, testing, and assembly arm of Los Alamos. The Division moved to Sandia Base outside of Albuquerque to be near an airfield and work closely with the military. Ultimately, its growth prompted its separation from Los Alamos. On November 1, 1949, Sandia Corporation, a wholly owned subsidiary of Western Electric, began managing Sandia. Sandia was made a national laboratory by 1979 legislation. In 1993, Sandia Corporation became a Martin Marietta (now Lockheed Martin) company.

Highlights of Sandia's achievements.

1949 Given on-going responsibilities for stockpile surveillance. Provided surveillance personnel at the nation's nuclear weapon storage sites until 1960.

1950s Developed technologies for the wooden bomb—a weapon that could sit ready in the stockpile for years with little maintenance.

1956 Opened a second laboratory in Livermore, California.

1958 Shock-resistant components and parachute systems made possible the safe laydown delivery of nuclear bombs.

1960 Tonopah Test Range replaced the Salton Sea Test Base as Sandia's permanent test range.

1960 The science of terradynamics emerged from earth-penetrator design efforts.

1960 Introduced the Permissive Action Link to prevent unauthorized use of nuclear weapons.

1960 Laminar Flow Clean Room designed.

1962 Strypi rocket developed for the high-altitude Dominic nuclear test series.

1962 Began B61 design program to create a flexible lightweight tactical thermonuclear weapon.

1962 Began work on an independently targeted warhead fully integrated with its reentry vehicle; subsequent contract from Navy for the Poseidon missile's Mark 3 reentry body.

1963 Vela satellites, with Sandia-designed optical sensors as well as data processing, logic, and power subsystems, launched to detect nuclear detonations.

1966 Helped locate the bomb lost in an aircraft collision over Palomares, Spain. Established an independent safety group to assess weapon designs.

1970 Designed the Safe Secure Trailer for transporting nuclear weapons; later designed and tested accident resistant containers for nuclear materials.

1972 Began research and training in anti-terrorism.

1973 Initiated research on solar and wind technology, photovoltaics, enhanced fossil fuels recovery, and fusion development.

1974 Named the technical advisor on the Waste Isolation Pilot Plant (WIPP). WIPP received first waste in 1999.

1976 Using electron-beam-pumped laser, first recorded the argon fluoride spectrum.

1981 Combustion Research Facility opened at Sandia/CA; available to researchers from around the world.

1983 Contributed to the assessment of countermeasures and vulnerability of the Strategic Defense Initiative.

1983 Published research on strained-layer superlattices, a new class of materials that allow scientists to tailor semiconductors to specific functions.

1984 Factored the 69-digit Mersenne number as part of the effort to test and challenge weapon security codes.

1991 Sandia-advanced synthetic aperture radar (SAR) used in Desert Storm.

1993 Received mission assignment for neutron generator production.

1994 Cooperative Monitoring Center began hosting arms control specialists from around the world.

1996 The Sandia/Intel ASCI Red machine achieved 1.06 teraflops; remained the fastest computer in the world into 2000.

1997 NASA's Pathfinder space probe arrived on Mars, its landing cushioned by airbags designed by a Sandia/Jet Propulsion Laboratory team.

2000 Work in microelectromechanical (MEMS) technology research expanded, pushing ever-smaller chip features to the atomic scale.

2001 Sandia-developed decontamination foam used to neutralize anthrax in buildings on Capitol Hill.

2004 Sandia/CA dedicated the Distributed Information Systems Laboratory (DISL), providing a test-bed for new advanced technologies.

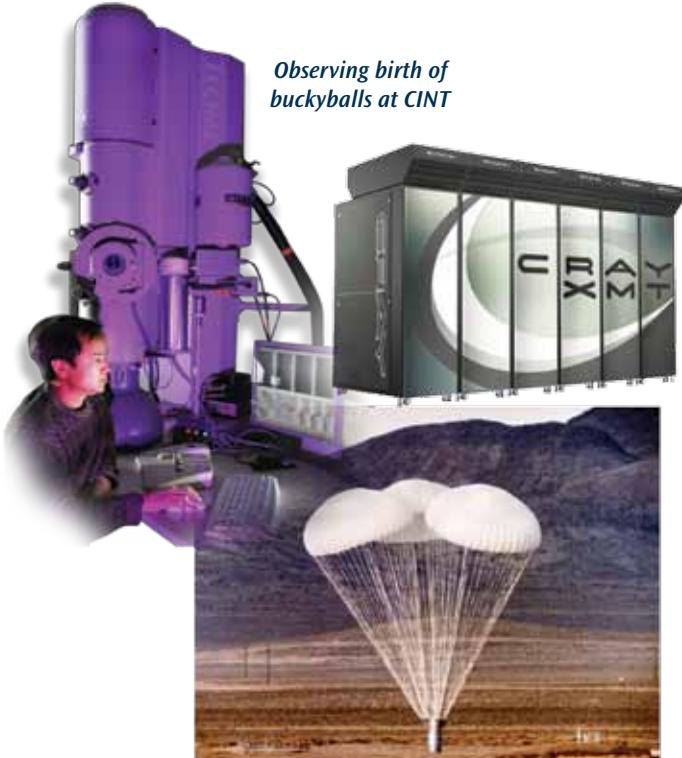
2005 BiNational Sustainability Laboratory (BNSL) in Santa Teresa, NM, opened to support collaborative technical efforts by the U.S., Mexico, and the State of New Mexico.

2007 New Microsystems and Engineering Sciences Applications (MESA) facilities dedicated, combining Sandia's expertise in weapon design, fast computing, and microsystems into an advanced research environment.

2007 Sandia/Los Alamos joint Center for Integrated Nanotechnologies (CINT) researchers witnessed birth of carbon-linked nanostructures (buckyballs).

2008 Refurbished Z machine operating, achieved 26 million amperes for a few billionths of a second.

2011 Sandia and Cray form Supercomputing Institute for Learning and Knowledge Systems to tackle big data issues.



Joint Test Assembly drop test of B53 at Tonopah Test Range

2011 New UNM-SNL agreement deepens commitment to joint collaboration and delivery of science-based benefits to the community and nation.

2012 Joint Sandia-UK team announced potentially revolutionary effects of Criegee biradicals.

2012 Cyber Engineering Research Institute (CERI) dedicated; created to coordinate with industry and universities on cyber security issues and solutions.

2012 Supported Pantex's completion of B53 nuclear weapon disassembly.

For more information, visit the Sandia National Laboratories web site at www.sandia.gov or contact:

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