

Exceptional Service in the National Interest

UNITED STATES
PRESIDENTS

SANDIA
PRESIDENTS

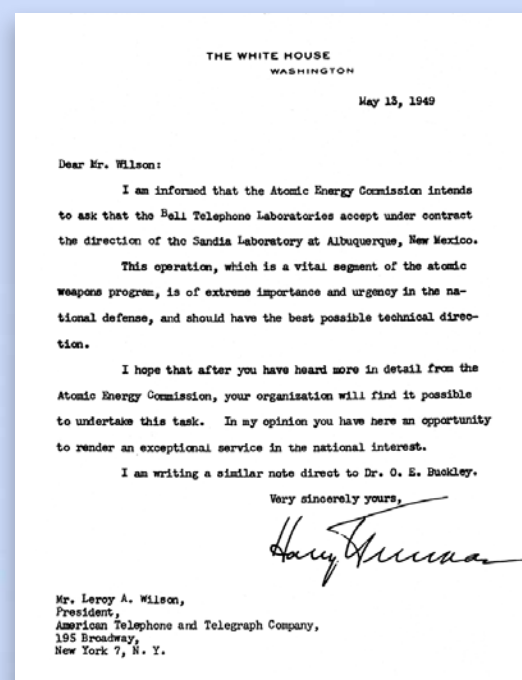
Franklin D. Roosevelt
March 1933 – April 1945

SANDIA
MANAGEMENT CONTRACT

A Visual History of Sandia National Laboratories

“... [Y]ou have here an opportunity to render an exceptional service in the national interest” (May 13, 1949). Calling for the operation of Sandia Laboratory, President Truman’s letter to AT&T will soon set on its course a premier institution of engineering and applied science, unique among the nation’s laboratories, and will inspire Sandians over the years to come.

Sandia was established on November 1, 1949. In the turbulent years of the Cold War, the Laboratory contributed to developing and maintaining the nation’s nuclear deterrent. In subsequent decades, Sandia has created technologies for treaty verification, international arms control, energy security, cooperative threat reduction, and homeland security. In the future, Sandia National Laboratories will continue to serve the nation with excellence and integrity, always alert and responsive to the changing security challenges facing the United States and the world.



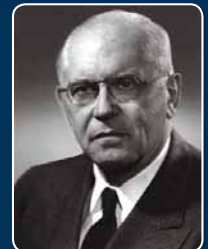
1940s

Franklin D. Roosevelt
March 1933 – April 1945

Harry S. Truman
April 1945 – January 1953

George A. Landry
October 1949 – February 1952

American Telephone and Telegraph Co.



George A. Landry

1942 Manhattan Engineer District is established.

1945 Z Division, Sandia's precursor, is an arm of Los Alamos Laboratory.

July 16, Trinity Test: The United States detonates the world's first nuclear device near Alamogordo, NM.

August 6—"Little Boy" atomic bomb is detonated above Hiroshima, Japan.

August 9—"Fat Man" atomic bomb is detonated above Nagasaki, Japan.

August 14—Japan surrenders; World War II ends.

Z Division moves to Sandia Base.

1946 President Truman signs the Atomic Energy Act establishing the Atomic Energy Commission.

1948 Z Division becomes a separate branch of Los Alamos and is renamed Sandia Laboratory.

1949 On November 1, AT&T takes over management of Sandia Laboratory.

The Atomic Energy Commission assigns Sandia surveillance activities for U.S. nuclear weapon storage.



1950s

Harry S. Truman
April 1945 – January 1953

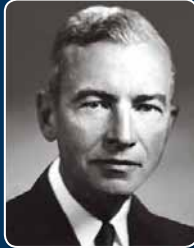
Dwight D. Eisenhower
January 1953 – January 1961

Donald A. Quarles
March 1952 – August 1953

James W. McRae
September 1953 – September 1958

Julius P. Molnar
October 1958 – August 1960

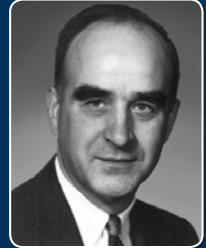
American Telephone and Telegraph Co.



Donald A. Quarles



James W. McRae



Julius P. Molnar

1950 Weapon effects testing for the Department of Defense sets a precedent for work for other agencies.

Sandia introduces the “wooden bomb” concept to produce a nuclear weapon that could sit in the stockpile for years with little or no maintenance and be ready for use at any time.

1951 A new department for systems analysis leads to a world-class program for evaluating nuclear weapon reliability.

1953 Transistors replace vacuum tubes in the cannon shell of the Mark 9 bomb.

1954 The Atomic Energy Commission assigns Sandia the quality assurance responsibility for nuclear weapons.

1956 Sandia opens new facilities in Livermore, California.

Sandia’s first venture into solar energy: A surplus army searchlight is converted into a solar furnace.

1958 Innovative work in shock-resistant components and parachute systems enables safe delivery of nuclear bombs.



1960s

John F. Kennedy
January 1961 – November 1963

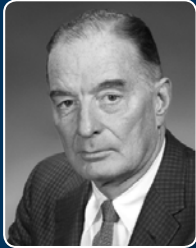
Lyndon B. Johnson
November 1963 – January 1969

Richard M. Nixon
January 1969 – August 1974

Siegmund P. "Monk" Schwartz
September 1960 – October 1966

John A. Hornbeck
October 1966 – September 1972

American Telephone and Telegraph Co.



Siegmund P. "Monk" Schwartz



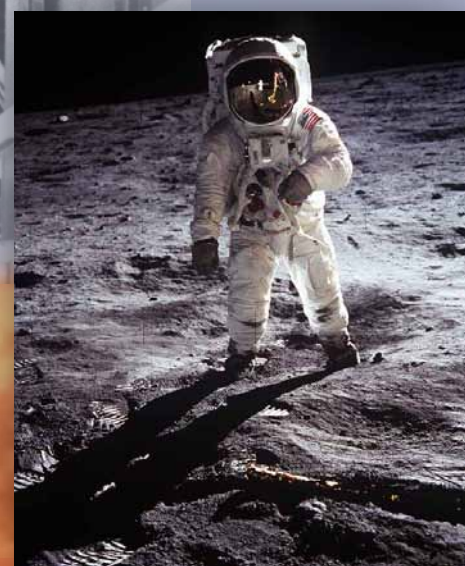
John A. Hornbeck

- 1960** The Tonopah Test Range in Nevada becomes Sandia's permanent location for testing weapon designs in the field.

The laminar flow clean room is invented at Sandia.

Sandia develops the permissive action link to prevent unauthorized use of nuclear weapons.
- 1962** President John F. Kennedy visits Sandia. In the photo at right, he is shown looking at Sandia's work on the Vela Program.
- 1963** The first Vela satellites are launched to detect nuclear detonations. Sandia contributes the Earth-looking optical sensors; the data processing, logic, and power subsystems; and the ground link.
- 1965** New application of the sensor program: developing seismic sensors to detect humans walking or trucks rumbling down a trail during the Vietnam War.
- 1966** Sandians help locate the bomb lost after a B-52 bomber collided with a KC-135 refueling tanker over Palomares, Spain. By 1969, Sandia establishes an independent group to assess weapon design safety.
- 1969** Official name: Sandia Laboratories.

Apollo astronauts deploy systems for nuclear auxiliary power on the moon. Sandia designed the seismic sensors to monitor moonquakes.



1970s

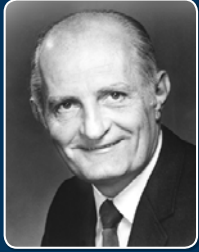
Richard M. Nixon
January 1969 – August 1974

Gerald R. Ford
August 1974 – January 1977

Jimmy Carter
January 1977 – January 1981

Morgan Sparks
October 1972 – July 1981

American Telephone and Telegraph Co.



Morgan Sparks

1970 Sandia designs the Safe Secure Trailer for transporting nuclear materials. Later, it will also design and test accident-resistant containers for nuclear materials.

1972 Antiterrorism work starts, leading to the Labs' remarkable support of homeland security after 9/11, 2001.

Sandia's sensor program flourishes as part of an international arms control effort. Eventually, Sandia will receive the largest budget in the country for this type of work.

1973 Funding from the Atomic Energy Commission enables Sandia to pursue fusion energy research. By the decade's end, Sandia becomes a world leader in pulsed power.

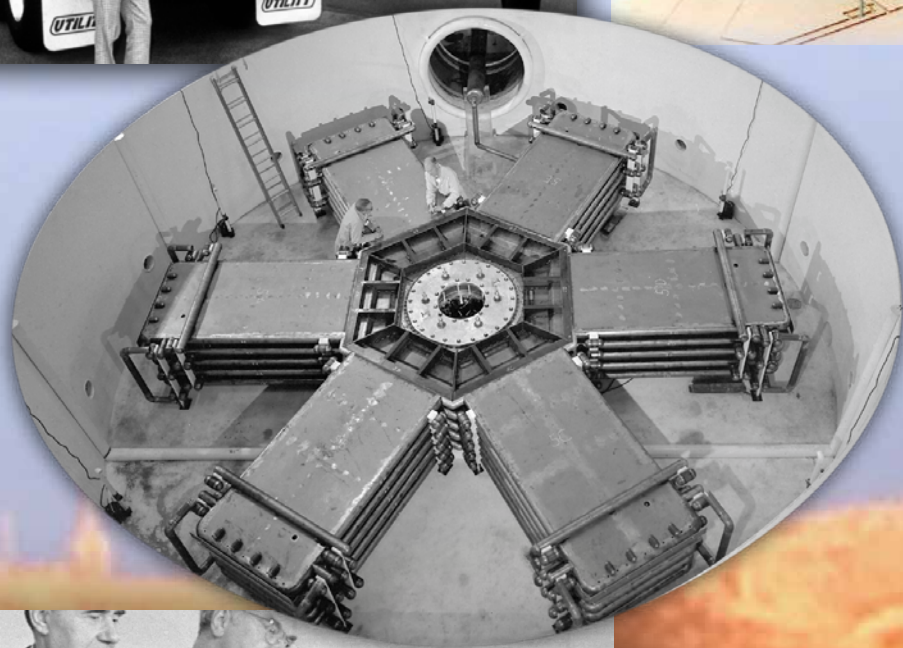
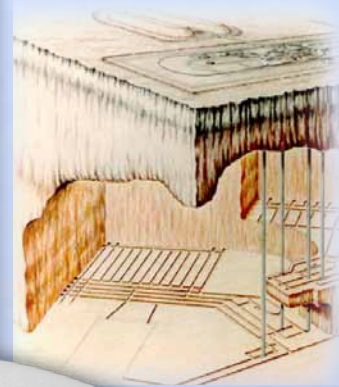
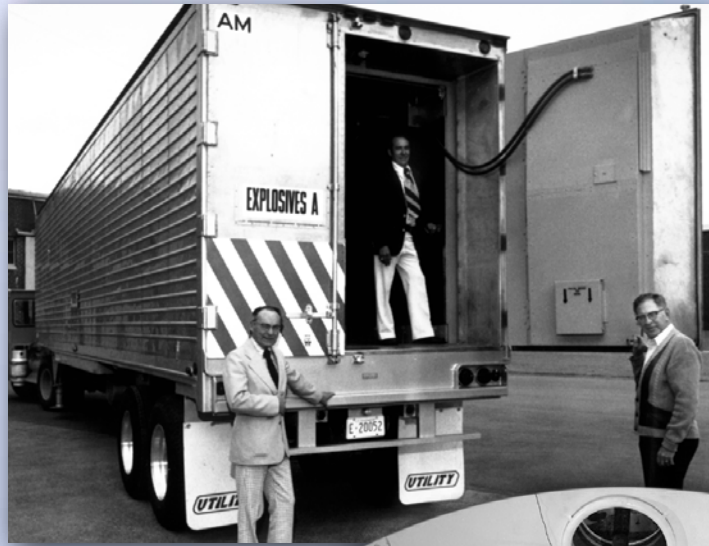
Sandia responds to national concerns about dependence on foreign oil by working on alternative energy technology.

1974 Sandia is named technical advisor on the Waste Isolation Pilot Plant.

1975 Sandia designs security systems for NATO's Long-Range Security Program.

1976 Ratification of the Threshold Test Ban Treaty and Peaceful Nuclear Explosions Treaty reinvigorates the Labs' underground test monitoring capabilities, including development of unattended seismic observatories.

1979 New official name: Sandia National Laboratories.



1980s

Jimmy Carter
January 1977 – January 1981

Ronald W. Reagan
January 1981 – January 1989

George Bush
January 1989 – January 1993

George C. Dacey
August 1981 – January 1986

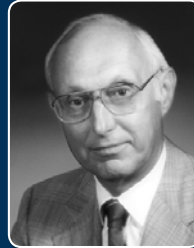
Irwin Welber
February 1986 – March 1989

Al Narath
April 1989 – August 1995

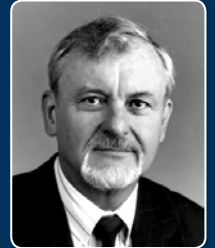
American Telephone and Telegraph Co.



George C. Dacey



Irwin Welber



Al Narath

1980 The Center for Radiation-Hardened Microelectronics is created to produce microelectronics for Sandia weapon systems, Department of Defense satellites, and NASA space probes.

1981 The Combustion Research Facility opens at Sandia, California, and is available to researchers worldwide.

1983 Sandia is assigned a role in the Strategic Defense Initiative. The Labs' most significant contribution will be the assessment of countermeasures and vulnerabilities.

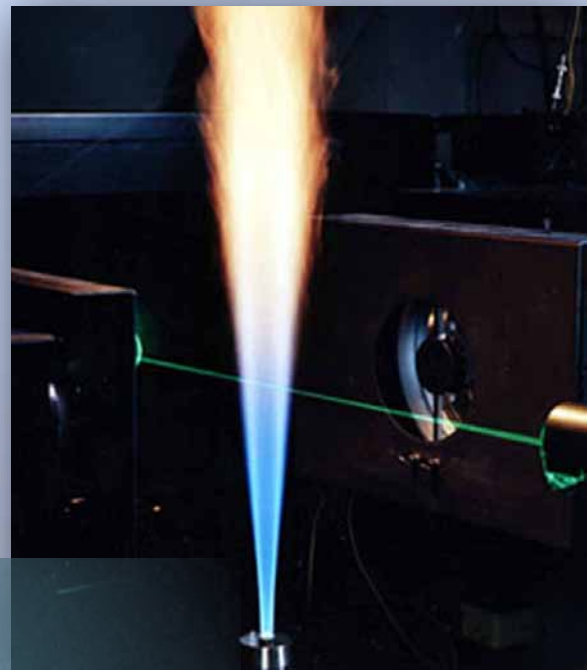
Sandia signs an agreement with the Navy for an integrated arming, fuzing, and firing assembly for Trident II missiles.

1984 Considered unfactorable for more than 300 years, the 69-digit Mersenne number is factored at Sandia in 32 hours, a momentous contribution to testing and challenging weapon security codes.

1986 The Technology Transfer and Management Department is established to transfer technology developed at Sandia to industry.

1987 Sandia plays a major role in negotiating and developing verification technology for the Intermediate Nuclear Forces Treaty.

1989 Sandia's expertise in nuclear weapon design is applied to improving conventional weapons.



1990s

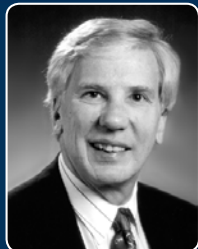
George Bush
January 1989 – January 1993

Bill Clinton
January 1993 – January 2001

C. Paul Robinson
August 1995 – April 2005

Martin Marietta

Lockheed Martin

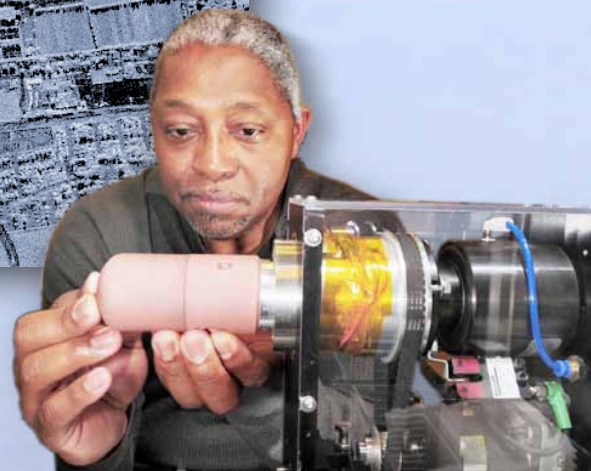


C. Paul Robinson

- 1991** The advanced synthetic aperture radar developed at Sandia is successfully used in Operation Desert Storm.
- 1993** As part of its nuclear weapon mission, Sandia is assigned production of neutron generators.

President Clinton acknowledges AT&T for having operated Sandia with a “genuine sense of patriotic duty” since 1949.

Martin Marietta takes over Sandia’s management contract. In 1995, it merges with Lockheed to become Lockheed Martin.
- 1994** The Cooperative Monitoring Center at Sandia begins hosting arms control specialists from around the world.
- 1996** The ASCI Red supercomputer (later Red Storm) reaches a processing speed of 1.06 teraflops and remains the world’s fastest computer into 2000. In 2008, Red Storm is one of the world’s fastest supercomputers at 284 teraflops.
- 1997** NASA’s Pathfinder space probe arrives on Mars, its landing cushioned by airbags designed by a team from Sandia and the Jet Propulsion Laboratory.
- 1999** Sandia receives Department of Energy approval to design the Microsystems and Engineering Sciences Application (MESA) facility, the largest construction project in Sandia’s history. MESA brings together advanced expertise in weapon design, high-performance computing, and microsystems. The bottom photo shows MESA in 2007.



2000s

Bill Clinton
January 1993 – January 2001

George W. Bush
January 2001 – January 2009

Barack Obama
January 2009 – Present

Thomas O. Hunter
April 2005 – July 2010

Lockheed Martin



Thomas O. Hunter

2001 Sandia responds to the 9/11 terrorist attacks by actively supporting homeland security efforts.

A decontamination foam invented at Sandia neutralizes anthrax in buildings on Capitol Hill.

2003 The National Infrastructure Simulation and Analysis Center, which evaluates national preparedness and security issues using expertise from Sandia and Los Alamos, becomes part of the Department of Homeland Security.

2004 Responding to U.S. military needs in Iraq, Sandia develops shoulder-length gauntlets made of a carbon composite.

2005 President George W. Bush visits Sandia to sign into law the Energy Policy Act of 2005 and to review the Labs' state-of-the-art energy systems.

2008 A new first production unit extends the service life of the W76 thermonuclear warhead.

Refurbished Z, Sandia's pulsed-power accelerator, provides data to simulate the effects of nuclear weapons, can be used to study the conditions surrounding black holes, and may eventually unlock the secrets of controlled nuclear fusion.

Simulations on Sandia's Red Storm supercomputer help the U.S. Navy determine how to shoot down an errant satellite posing a potential safety hazard.



2010s

Barack Obama
January 2009 – Present

Paul Hommert
July 2010 – Present

Lockheed Martin



Paul Hommert

2010 Stingray, a technology developed at Sandia, disables deadly improvised explosive devices in Afghanistan.

Sandia locks down more than 700 weapons worth of nuclear material in Kazakhstan.

The Livermore Valley Open Campus (LVOC) opens in California. A joint project of Sandia and Lawrence Livermore national laboratories, the LVOC enables leveraging the rapidly advancing worlds of open science, technology, and innovation.

Sandia rolls out glitter-sized photovoltaic cells made of crystalline silicon, a revolutionary way to capture solar energy and generate electricity from the sun.

Supporting the NNSA International Material Protection and Cooperation Program, Sandia has collaborated with the Russian Federation Ministry of Defense in designing and installing comprehensive physical security upgrades at several Russian nuclear warhead stockpile sites considered among the largest in the world. During the current decade, Sandia continues to support the systems that keep the Russian nuclear warheads secure against theft.

2011 Sandia develops a three-stage booster system and glide vehicle for the initial test flight of the U.S. Army Space and Missile Defense Command's Advanced Hypersonic Weapon. Data from this vehicle launched from Sandia's Kauai facility could open up new long-range flight capabilities for the military.

2012 Sandia's first quantum computer is operational, processing information stored in a cesium atom laser-cooled to 100 microkelvins.

Sandia is engaged in modernizing the U.S. nuclear weapons stockpile. The B61 Life Extension Program is the largest product development effort in nuclear weapons since the 1970s.

At the Combustion Research Facility in California, researchers discover supercritical behavior in modern fuel injection systems.



Sandia National Laboratories

Sandia is a multiprogram laboratory operated by Sandia Corporation, a Lockheed Martin Company, for the United States Department of Energy's National Nuclear Security Administration under Contract DE-AC04-94AL85000. SAND No. 2009-1379F

