

The Trinity Site Alamogordo, New Mexico, 2003 Photographs by Eric Almquist

On July 16, 1945, America successfully tested the first atomic bomb at a desert site code-named “Trinity”, near Alamogordo, New Mexico.

The explosion was the culmination of the Manhattan Project, a top-secret military effort launched in 1942, headed by General Leslie Groves and Robert Oppenheimer. The goal of the project was to build a practical weapon based on the principles of atomic fission, which had been discovered in 1939, just before World War II.

Authorized by President Roosevelt, the Manhattan project grew to be the largest scientific project in history, employing 7,000 people in Los Alamos, New Mexico, 75,000 in Oak Ridge, Tennessee, and 45,000 in Hanford, Washington. The scientific team included Oppenheimer, Hans Bethe, Enrico Fermi, Richard Feynman, E.O. Lawrence, Phillip Morrison, Emilio Segrè, Edward Teller, and other luminaries.

A massive industrial effort, involving factories all over America, produced fissionable material for the bomb. To reduce risk of failure, two separate approaches were taken to bomb design, one based on plutonium and the other on uranium-235. By the summer of 1945, enough material had been refined for several weapons. The bomb tested at Trinity had at its core a small ball of plutonium, which was delivered to the site in the back of a sedan. The Trinity test yielded the equivalent power of 18,600 tons of TNT (18.6 kilotons). It produced the brightest light in the history of the earth to that time. Over 100,000 photographs were taken of the event.

In an effort to end the war against Japan, America dropped an untested uranium-235 bomb on Hiroshima on August 6, 1945. A plutonium bomb was dropped on Nagasaki three days later. Japan surrendered six days after Nagasaki, on August 15. By the end of 1945, an estimated 140,000 Japanese had died in Hiroshima and 70,000 in Nagasaki. During World War II as a whole, over 54 million people died, mostly civilians, across 57 nations.

So far, the only nuclear weapons used in war were those dropped by the U.S. on Japan. The Trinity explosion was small and inefficient compared to today’s nuclear weapons. There are thousands of active nuclear warheads across many countries today, almost all many times more powerful than those used at Trinity, Hiroshima, and Nagasaki.

The photographs shown here are from a series I took at “ground zero” on April 5, 2003. The Trinity Site is open two days each year, in April and October. Several thousand people visit the site on those days. Background radiation is now minimal—two hours of radiation at Trinity is equivalent to a coast-to-coast airplane flight. For further information, see: www.alamogordo.com/trinity.