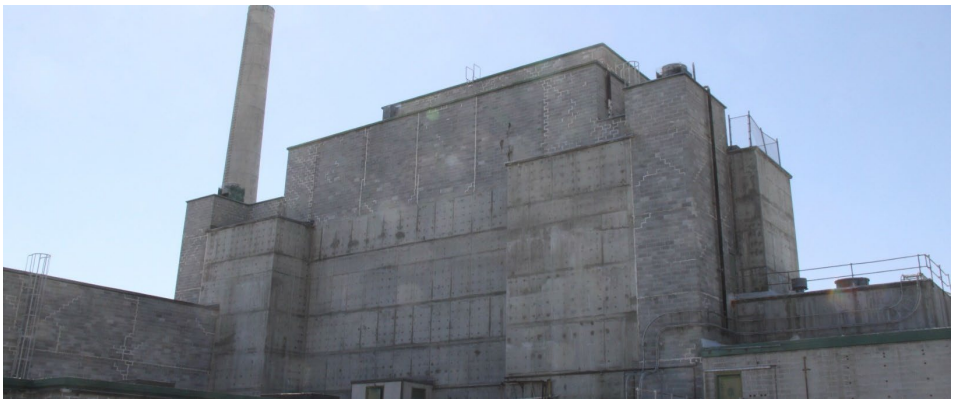
THE HANFORD SITE

# B Reactor Historical Site

*Fact Sheet – July 2021*



*The U.S. Department of Energy (DOE) and contractor Central Plateau Cleanup Company are supporting the preservation of B Reactor – a National Historic Landmark at the Hanford Site.*

## Background

The B Reactor National Historic Landmark at the Hanford Site in Washington state was the world's first full-scale plutonium production reactor. Created as part of the top-secret Manhattan Project during World War II, B Reactor produced plutonium used in the Trinity Test, as well as for the atomic bomb dropped on Nagasaki, Japan, to end World War II.

B Reactor consisted of a 28-by-36-foot, 1,200-ton graphite pile, penetrated through its entire length horizontally by 2,004 aluminum process tubes containing uranium fuel slugs. Cooling water from the nearby Columbia River was pumped through the aluminum tubes around the uranium slugs. This design allowed the reactor to produce plutonium-239 by irradiating naturally occurring uranium with neutrons.

Construction of B Reactor began in October 1943, and fuel was loaded into B Reactor on Sept. 13, 1944 — just 11 months later. B Reactor went "critical" at 10:48 p.m. on Sept. 26, 1944 and reached full power in February 1945.

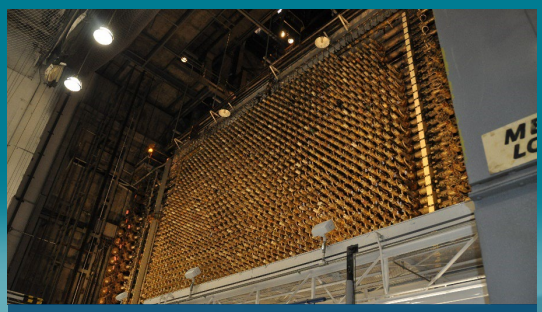
Its mission thought complete, B Reactor was initially shut down at the end of 1946. However, amid growing tension between the United States and the former Soviet Union, B Reactor was restarted in 1948 to support production of plutonium for the Cold War until 1967. At the direction of the Atomic Energy Commission, the B Reactor was shut down on Feb. 12, 1968.

## Mission

The B Reactor was named a National Historic Mechanical Engineering Landmark by the American Society of Mechanical Engineers in 1976, was listed in the National Register of Historic Places in 1992, was designated a National Historic Civil Engineering Landmark in 1994, and became a National Historic Landmark (NHL) in 2008. At the ceremony conferring NHL status on the facility, the acting DOE Deputy Secretary stood with the Deputy Secretary of the U.S. Department of Interior and announced a policy change for B Reactor, reserving it for preservation and public access.

*Dispositioned rail cars that were once used to transport irradiated rods from the 300 Area to the 100 Area.*

*The control room inside B Reactor.*



*The "face" of B Reactor.*

**For more information:**
**www.hanford.gov**
**cpcco.hanford.gov**

U.S. DEPARTMENT OF ENERGY

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an Amentum, Fluor, Atkins LLC