

# Y-12: SERVING THE NATION FOR MORE THAN 75 YEARS



## HONORING OUR PAST, SECURING OUR FUTURE

In 1943 the Clinton Engineer Works was established in East Tennessee with one specific purpose: produce enough enriched uranium for an atomic bomb to help end World War II. The dedication of 75,000 patriots in Oak Ridge and a nation brought success quickly. At the site now known as the Y-12 National Security Complex, national security has always been the primary mission, but its role has shifted depending on national defense requirements through the end of World War II, the Cold War, and into the modern era.

Today, Y-12 is a unique national asset in the manufacture, processing, and storage of special nuclear materials vital to our national security and helps prevent the spread of weapons of mass destruction. The site continues to evolve through an aggressive program of infrastructure modernization—led by the Uranium Processing Facility—that will enable Y-12 to support national security missions far into the future.



Y-12's history began when ground was broken for construction in the Bear Creek Valley in February 1943. In a short time, the site was filled with machinery and the bustle of people on a mission of global importance. In just 18 months, 175 separate facilities were completed, including 9 processing facilities with footprints as large as football fields. At its war-time peak, more than 22,000 employees were employed at the site. Thirty months after initial construction began, Y-12's mission was announced to the world when the Little Boy atomic bomb, fueled by uranium separated at Y-12, was detonated. It helped lead to the imminent surrender of the Empire of Japan, bringing World War II to an end.

As global tensions grew during the Cold War, Y-12 played a key part in the production of thermonuclear weapons, with thousands of people working around the clock to produce nuclear weapon secondaries that provided the United States with an effective deterrent, helping to prevent World War III. Since World War II, Y-12 has manufactured components for every

1943

### FEBRUARY 18, 1943

Ground is broken for Building 9201-1 (Alpha 1 was the first building begun on site, but Building 9731 was the first building completed on site)

### MARCH 1943

Building 9731 is completed (and becomes operational by June 1943)

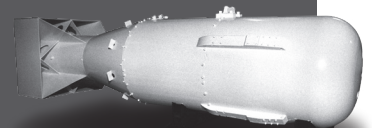
1944

### MARCH 1, 1944

Y-12 ships its first 200g of enriched uranium (U-235) to Los Alamos, New Mexico

### MAY 1945

The peak operating force at Y-12 totals 22,842 employees, and the population of the town of Oak Ridge peaks at 75,000



1945

### AUGUST 6, 1945

Hiroshima, Japan, is bombed; Little Boy contained U-235 that was electromagnetically separated at Y-12

### SEPTEMBER 2, 1945

**World War II ends**



nuclear weapon system ever deployed and has completely dismantled multiple weapon systems over the past 50+ years.

Y-12 continues its national security mission. The nuclear science and technological advances in Oak Ridge, which ultimately contributed to victory in both wars, also led to innovative advancements in medicine, agriculture, and industry that continue to enhance life today.

### Y-12 OVER THE YEARS

**'50s**

**1954** First batch of thermonuclear parts is assembled and shipped from Y-12

**'60s**

**1967** Y-12 produces "moon boxes" for the National Aeronautics and Space Administration to return lunar-surface geological samples to Earth

**'70s**

**1972** Y-12 begins "stockpile surveillance" disassembly to study effects of aging in nuclear weapons

**'80s**

**1988** Work begins to build propulsor prototypes for the Navy's Seawolf submarines, the site's most complex prototype project ever

**'90s**

**1992** First nuclear weapon disassembled for storage at Y-12

**'00s**

**1994** Y-12 leads a team that recovers and airlifts enriched uranium from Kazakhstan to United States (Project Sapphire)

**2007** UCE  
URANIUM CENTER OF EXCELLENCE  
Y-12 National Security Complex is designated the National Nuclear Security Administration's Uranium Center of Excellence

**'10s**

**2010** The Highly Enriched Uranium Materials Facility is dedicated with more than 1,000 visitors in attendance

**'20s**

**2014** The National Nuclear Security Administration combines Y-12 and Pantex operations under a single contract

**2018** Formal construction begins on the Uranium Processing Facility's main nuclear buildings

**2020** Conceptual design and cost range approved for a new Lithium Processing Facility on the site of the former Biology Complex

**2021** Construction begins on the Oak Ridge Enhanced Technology and Training Center featuring a 35,000 sq. ft. simulated nuclear and radiological activities facility and a 40,000 sq. ft. emergency response training facility

**2022** The Uranium Processing Facility project achieves "in the dry" status, meaning all buildings are fully enclosed by a roof and walls