

## PRESERVING Y-12'S CULTURAL AND HISTORIC RESOURCES

BWXT Y-12 is preserving Y-12's proud past through its National Historic Preservation Act (NHPA) Program. In accordance with the NHPA, some of Y-12's preservation activities include:

- ensuring that new additions or other modifications to historic buildings retain the architectural features and integrity of the historic facilities,
- collecting artifacts,
- improving and maintaining cultural resources on the site (for example, the New Hope Cemetery, which predates the Complex),
- recording oral histories of former and current Y-12 employees,
- creating informative and educational exhibits and displays and
- hosting public events that showcase Y-12's role in shaping world history.



*The last of the historic guard towers, built in 1948, stands on Pine Ridge, the north boundary of Y-12.*

BWXT Y-12 recognizes the Department of Energy and the National Nuclear Security Administration's role as stewards of the environment, both natural and the built environment. Y-12's history is being preserved in compliance with the National Historic Preservation Act and its implementing regulations 36 CFR 800 and other related rules and regulations.

Help preserve Y-12's proud history! Contact Y-12's NHPA Program Office to donate historic artifacts, give an oral history of your Y-12 experience or participate in other preservation projects.

**NHPA Program Office**  
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## PRESERVING Y-12'S HISTORY FOR FUTURE GENERATIONS



## A RICH HISTORY

Y-12's history is interwoven with the fabric of events that changed the world forever.

What now is the National Nuclear Security Administration's Y-12 National Security Complex was created during World War II and produced material for one of the atomic weapons that helped end the war.

After World War II, Y-12 took on a different mission and played a key role in winning the Cold War during the next 40 years. When the Cold War ended, Y-12's mission changed yet again—this time to being a major player in maintaining the nation's nuclear deterrent.



*Building 9731, known as the "Pilot Plant," is the oldest process building at Y-12.*

**On the Cover:** Building 9704-1 is the administration building where General Leslie Groves (above left) and Lt. Colonel Kenneth D. Nichols worked during their visits to Y-12. Groves was in charge of the Manhattan Project, and Nichols helped organize the Manhattan Engineer District. The Manhattan Project was the top-secret project to build the first atomic bomb.

The "A-Bomb" lapel pin was given to the Manhattan Project workers at the end of World War II.



## CALUTRONS: A GLIMPSE INTO Y-12'S SECRET PAST

Y-12 hosts events that allows the public, media and Y-12 employees' friends and family opportunities to see inside Y-12. These unprecedented tours showcase some of Y-12's historic properties and the remaining Manhattan Project-era electromagnetic separation devices (calutrons) used to create the first atomic bomb.

Calutrons separated fissile uranium-235 using huge magnets and vast quantities of electricity from the government-owned Tennessee Valley Authority and later saved to produce stable isotopes for the medical field.

*At its peak of production in World War II, Y-12 had 1,152 calutrons in operation in five Alpha buildings and four Beta buildings. Only the Beta-3 building still has calutrons in operable condition.*



**ALPHA CALUTRONS**



**BETA CALUTRONS**

Y-12 had two stages of calutrons—the Alpha and Beta stages. Alpha calutrons enriched material to about 15 percent enrichment, which was then fed into the Beta stage, which increased the enrichment to weapons-grade material.

## BUILDING ON A PROUD HERITAGE



*Construction of a new technical support facility, Building 9733-5, is compatible with the features of the historic Building 9201-1, Alpha-1.*



*The new addition to the original medical facility, Building 9706-2 (built in 1944), retains the architectural integrity of the historic facility.*



**BEFORE**

*Improvements have been made to New Hope Cemetery (former site of New Hope Baptist Church) located at the east end of Y-12.*



**AFTER**