

New Interpretive Center to Open at K-25

(As published in The Oak Ridger's Historically Speaking column the week of July 14, 2025)

Gordon Fee, retired President of Lockheed Martin Energy Systems, and an exceptional advocate for historical tourism in Oak Ridge, brings us insights into an amazing friend we both knew and admired, Bill Wilcox. You will be reminded of things you already knew about Bill and his bowtie. I must tell you that just before he passed away at age 90 on September 2, 2013, he instituted an award intending that I be the first recipient, which came to be known as the Aid for Distressed Families of Appalachian Counties' Bowtie Award, in Bill's honor. We have recognized 15 individuals since and have raised hundreds of thousands of dollars for ADFAC, thanks to Bill!

Now, enjoy being reminded of things you remember about Bill, but also learning things I am sure you did not know that Gordon will share with Historically Speaking readers.

Today, six museums (available to the public – the Graphite Reactor is a seventh one but is not presently available for tours) are operating in Oak Ridge aimed at telling the story of the "Secret City". On August 23, 2025, a seventh, which will be available to the public, will be added with the grand opening of the **William J. Wilcox, Jr. K-25 Interpretive Center**. You will want to put this date on your calendar and see the newest museum in Oak Ridge. It is located near the K-25 Atomic History Center, which is at 652 Enrichment Street in the East Tennessee Technology Park's Heritage Center at the site of the previous Oak Ridge K-25 Gaseous Diffusion Plant.

This new Wilcox K-25 Interpretive Center is designed to help visitors to the K-25 site understand the role that this plant has played not only during the Manhattan Project but, just as important, the role it played in the 40 years after the War ended, i.e., the rest of the story, as the saying goes.

Long before historic tourism became an important part of Oak Ridge's economy, Bill Wilcox began dreaming of ways to preserve the history of Oak Ridge, and especially, K-25 and Y-12. In 2003, he authored the first Oak Ridge City Strategic Plan for Historic Tourism. He created the hypothetical tourist, Joe and Sally from Peoria, Illinois, whom he would weave into his stories of what might attract tourists to Oak Ridge.

Bill recognized that although the city's contribution to ending World War II was enormous, the story of what the Oak Ridge plants have contributed to make this a safer and better world after the Manhattan Project is even in some ways a bigger story, and it has not been well told.

He lived this story as he rose from a junior chemist in 1943 to become the Technical Director for the combined Research and Development programs for both Y-12 and K-25, a job he held until 1981, when he became a special assistant to the President of Union Carbide's Nuclear Division.

After graduating from Washington and Lee University in 1943, Bill joined Tennessee Eastman in Rochester, New York, and subsequently transferred to the Oak Ridge Y-12 Plant in October of 1943. He was one of the few people who knew the uranium that he was processing would be sent to Los Alamos for a highly secret defense project. He handled the first shipment of uranium 235 from Y-12 and helped process the rest of the material used in the first atomic bomb.

After the war ended, Bill helped terminate the production of enriched uranium at Y-12 as K-25 came online and was more efficient. Because of his extensive knowledge of uranium chemistry, Bill was transferred to the K-25 plant in 1949 to help expand the country's capacity to enrich uranium for defense and peaceful uses.

From 1950 to 1956, three large processing buildings were added at the K-25 site, and additional plants were constructed at Paducah, Kentucky, and Portsmouth, Ohio. It was during this period that K-25 began providing the fuel used to power the first nuclear submarine, the Nautilus. Today, as part of the United

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States' defense strategy, there are 71 nuclear-powered submarines and 11 nuclear-powered aircraft carriers. Many of these are fueled today by enriched uranium produced at K-25 in the late fifties and early sixties. An additional part of the nation's defense strategy is to maintain over 400 operational land-based intercontinental ballistic missiles, which contain nuclear warheads containing uranium produced at K-25 and shaped into metal parts at Y-12

In 1957, enriched uranium produced at K-25 was first used in a full-scale nuclear power plant to produce electrical power at Shippingport, Pennsylvania, and the nuclear era was born. Today, there are 94 nuclear reactors operational, and they produce 18 to 20% of the nation's electricity. After 1965, the only mission of the K-25 plant was to produce the fuel for our country's nuclear power plants. Millions of homes and businesses were and still are being provided the electricity they need by fuel produced at K-25. It is estimated that through the use of nuclear power, K-25's fuel saved the burning of over 1 billion tons of coal.

One of the reasons the K-25 plant is often referred to as the flagship of the gaseous diffusion plants is that it is the only one that maintained all the research and development activities designed to reduce the cost of processing power plant fuel and increase the capacity without building additional plants. Bill Wilcox played a key role in leading those R&D efforts. From 1954 to 1966, he served as head of the physics department in the Technical Division. At that time, over 300 people were involved in studying how to improve the processes. In 1966, Wilcox was promoted to Superintendent of the K-25 Gaseous Diffusion and Gas Centrifuge R&D Division. Then, in 1969, a decision was made to combine the Research and Development activities for K-25 and Y-12 into a single large organization led by Bill Wilcox – a role he held for twelve years until 1981.

During this period, advances made in the gaseous diffusion R&D program were used to modernize and upgrade all of the process buildings at K-25 and parts of the Paducah and Portsmouth plants. Under the leadership of Wilcox, major improvements were made in barrier technology, compressor dynamics, and instrumentation. This increased the capacity of the K-25 Plant by over 25% and significantly reduced the cost of the uranium fuel produced.

Throughout its lifetime, the K-25 plant played a role in helping electrify over 30 countries. Beginning in the late sixties, enriched uranium from the plant was shipped to many foreign countries to help develop their nuclear programs for peaceful uses. In 1957, when President Eisenhower created the "Atoms for Peace" program, K-25 provided the fuel for the 5-Megawatt pool reactor that was built in record time in Geneva, Switzerland.

From 1969 to the late 1970s, the K-25 plant also processed uranium owned by foreign countries or private U.S. entities on a fee-for-service (toll) basis by the U.S. Government. Not only did this help electrify the world, but as a side benefit collected over \$100 million in sales tax for the State of Tennessee.

Beginning in the late sixties, Wilcox and his R&D team were assigned the task of embarking on a program to develop an alternative method of enriching uranium using advanced centrifuges so as to reduce the cost of fuel. Within the last few months, announcements have been made that two new enrichment plants are to be built in Oak Ridge using centrifuge technology.

Bill Wilcox did not retire in 1986 after a 43-year career with Union Carbide and Martin Marietta; he simply changed careers and became the major force at preserving and showcasing the history of K-25 and Y-12. He wrote tens of articles, made over a hundred presentations, helped start several organizations dedicated to preserving history, and in 2006 was named the City of Oak Ridge's first official Historian.

No one will be able to ever match the contributions he has made to the City by (a) writing the histories of Y-12, K-25, (b) the Episcopal Church of Oak Ridge, (c) the Oak Ridge Methodist Medical Center, (d) the

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City of Oak Ridge, and (d) by leading the effort to construct the Secret City Commemorative Walk honoring those veterans who worked on the Manhattan Project.

Which brings us to the brand new Wilcox K-25 Interpretive Center, which is now named in his honor, "The William J. Wilcox, Jr. K-25 Interpretive Center." When the decision was made to shut down the K-25 plant due to the oversupply of enriched uranium, Bill put together a small team of individuals who worked with him to develop a strategy for preserving the history of K-25.

Bill personally authored nine different proposals, which were submitted to the Department of Energy and the State of Tennessee. After all nine were considered, the parties agreed to build and operate a museum on the site and include with it a "viewing platform" that would allow visitors to overlook the 44 acres that was once the K-25 building.

Bill Wilcox was truly the inspiration and the father of the idea to build this beautiful Interpretive Center. On July 2, 2025, the Wilcox family members were invited to tour the new Interpretive Center. In some aspects, Bill's dream for this facility is just starting. He envisioned that when folks go to the viewing platform they will see some distinct markings of the outline of the K-25 building and that around the site will be a walking path populated with various monuments telling the K-25 history and outlining the contributions that the over 12,000 folks who operated the plant over its years made to mankind. Plans are in place to add additional exhibits to the Interpretive Center and to make K-25 a destination site for historical tourists like Joe and Sally from Peoria, Illinois.

In 1946, Bill married Eugenia "Jeanie" Holder, of Newport, TN. They met in Oak Ridge. Jeanie, in her own right, left an indelible mark on the city of Oak Ridge. For 49 years, she volunteered at the Oak Ridge Methodist Hospital, and for 17 of those, led the crew of volunteers that helps make any patient's stay in the hospital just a little bit better.

The number of folks who helped assure that the Interpretive Center was named for Bill Wilcox are too many to name Mayor Warren Gooch and the Oak Ridge City Council, Lloyd Stokes and the Board of the Oak Ridge Heritage and Preservation Association, the Environmental Management staff of the Department of Energy, and Alan Lowe, Director of the American Museum of Science and Energy and the Board of the AMSE Foundation. Also, a special thanks needs to go out to Bill's daughter, Martha, who spent hours documenting her Dad's history.

Thank you, Gordon, for a superb reflection on an amazing man, Bill Wilcox. I still wish I could ask Bill when questions come to me that I know he would have known well, but my experience does not reach without much research. He was certainly an asset that we cannot replace. It is good that he is honored with the naming of this most recent addition to Oak Ridge history! He would be proud, I am sure.

Remember, mark your calendar for August 23, 2025, when the William J. Wilcox, Jr. Interpretive Center will open to the public.

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The "William J. Wilcox, Jr. Interpretive Center located at the south end of the U-shaped footprint of the K-25 Gaseous Diffusion Building.



Bill Wilcox is shown with the plaque he wrote to explain the purpose of the Oak Ridge International Friendship Bell