

Stories from Wilcox on Veterans' Day

D. Ray Smith | *Historically Speaking* | The Oak Ridger | December 25, 2007

In the last column as we focused on a most unique Veteran's Day program held on November 11, 2007 at the American Museum of Science and Energy, Cindy Kelly announced the publication of the Anthology, *Manhattan Project, The Birth of the Atomic Bomb in the Words of Its Creators, Eyewitnesses, and Historians*. We also featured the poetry of Colleen Black that is included in that book.



Bill Wilcox, Oak Ridge City Historian speaks of his experience as a Manhattan Project "veteran"

Next on that special Sunday afternoon's celebration of our nation's veterans we heard from Bill Wilcox. Bill told of his experiences living in Oak Ridge and working at Y-12 during the Manhattan Project. Among the stories he told were:

1. In Feb. 1944, the very first batch of 200 grams of partly enriched uranium 235 separated at Y-12 passed through Bill's laboratory to be purified for shipment to Los Alamos (of course, Bill had no idea where the material was going or for what it was going to be used). He was told he needed to purify the material and cautioned how important it was. He placed the carefully purified uranium in a glass container and then for protection against mishaps in a stainless-steel container with the lip of the glass just resting on the lip of the stainless steel vessel. He placed the arrangement in the oven, set the timer and went home for the night.

Upon returning the next day, a co-worker told him that the department manager was looking for him and was as mad as a person could be. The co-worker said to Bill, "What in the world did you do?" Bill replied, "I don't know!" Bill immediately sought out his immediate supervisor to learn what was going on. It seems the glass container resting on the lip of the stainless-steel container

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had dropped down in the metal container when it was heated and then when the oven timed out and the stainless steel cooled it shrunk and crushed the glass. This made a huge mess of things as the broken glass was all mixed in with the precious and extremely scarce uranium 235, delaying the precious shipment for two more days. It was to be the first major amount of enriched U to go to Los Alamos for urgently needed nuclear measurements...

2. Building 9206 at Y-12 had an unusual roof construction. It was designed to hold several inches of water. The intent of the design was to provide evaporative cooling from the water to keep the building temperature cooler in the summer. In 1945 when every least bit of enriched uranium was needed for Los Alamos, Y-12 "scraped the bottom of every barrel", reprocessing salvage of all kinds.

They even looked at the roof water, found a trace there and decided to recover it. The only way to get the water off was by a simple old-fashioned siphon, sending it down to a truck through a big hose. Well, the maintenance man responsible for holding the suction pipe under the water so the siphon would not be broken and the water would continuously flow, lost the siphon more than once when he let the hose end come up above the shallow pool. He was tired of being chewed out and decided the situation could be improved if he had a deeper pool of water in which to place the siphon hose. To that end, he took his pick and began to dig a shallow pit in the roof gravel-tar mixture. His impression of the depth of the gravel was over estimated and one of his pick strokes penetrated the roof completely.

Well, you know what happened next. All the thousands of gallons water on the roof quickly flushed down through the hole in the roof created when the pick penetrated the roofing material. The women record clerks and their ledgers and adding machines in the office below were suddenly deluged and they, along with the water poured out into the hall in a grand stream.

Bill said that ended the search of that source for a tiny bit of enriched uranium. The roof was patched, and the water replaced, and as you know Y-12 did deliver the needed amount.

3. A group of a dozen or so friends from Y-12, including Bill and Warren Fuchs decided to get away from the Oak Ridge dormitory environment and to commute to work for a week while living at Norris State Park. Several young men and young women decided this would be a really great idea (Bill hastily assured his audience at the Veteran's Day event that the young men were housed in separate accommodations than the young women and that the behavior of everyone was most circumspect).

The first part of the week went just fine and fun was had by all. The evenings were filled with games and talk between the young men and young women. They were feeling very fortunate to have thought of such a great arrangement. All was going well.

Then, near the end of the week, a problem surfaced. As all the workers loaded in their cars to go to work, Warren Fuchs could not locate his badge. All knew this was really a problem as the guards checked everyone's badge before allowing anyone to enter Oak Ridge. Warren had a presentation he had to make a 9:00 AM. He did not have time to wait to get in. He needed to get to work. He devised a plan. He would go into Oak Ridge hiding in the trunk of a car.

Everyone protested but Warren insisted he just had to get to that presentation. So, a discussion ensued regarding which of two possible cars to use for this "smuggling" attempt. One of the automobiles had a rumble seat and Bill's had a trunk. The car owners flipped a coin and Bill won – and did not have to take Warren. They all discussed the odds of Warren getting by with this

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deception. Warren felt it would work as guards often skipped the step of actually opening the trunk of cars...or at least so they convinced themselves. Actually, the guards almost never omitted such searches, but the young men and Warren especially wanted to believe their scheme would work.

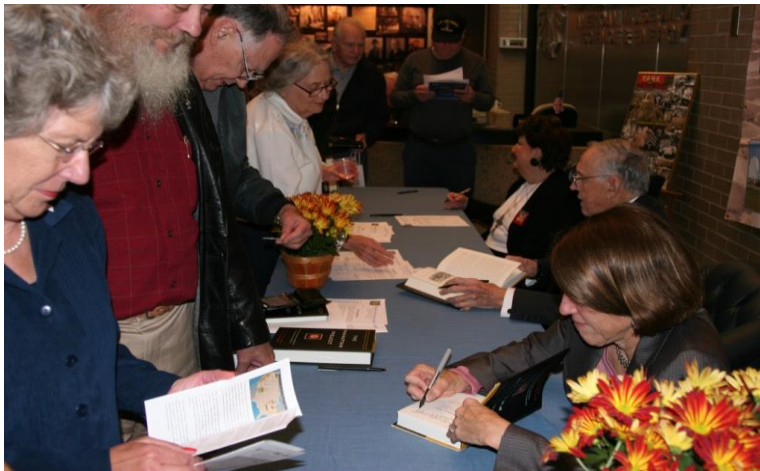
When they got to the gate, the inevitable happened. The guard checked the badges of the driver and then the passengers. Then the dreaded request, "Open the trunk" was heard. Warren pushed open the trunk, jumped up and yelled, "don't shoot, I'm Warren Fuchs and I work here."

Bill said that Warren was taken by the guards and the rest of them were told to go on into the city and that they must leave him there. They did as they were told. No one ever really knew exactly what happened to Warren. He never mentioned the specifics of what he was put through before getting to come on in the Oak Ridge and to his work.

He met the young men at the end of the day and went back to Norris, with his badge. Nothing was said, but the damper had been placed on the adventure and staying at Norris State Park and commuting to work was not the same for the rest of the week.

Bill also expressed his appreciation for being allowed to come to Oak Ridge right out of college and to do vital war work. He also expressed his pleasure at finding his life-long companion, Jeanie, here at Oak Ridge. He has never regretted accepting a job in "Dogpatch" and has come to think of Oak Ridge as truly his home.

He is now the city of Oak Ridge's official historian, is dedicated to preservation of K-25 history as a major portion of Oak Ridge's Heritage Tourism through the preservation of the North Tower, a small portion of the original K-25 Building that was used to enrich uranium for the Cold War.



From front to back, Cindy Kelly, Colleen Black and Bill

Bill, Colleen and Cindy all provided a most memorable Veteran's Day experience for the audience. They signed copies of *The Manhattan Project* for audience members who purchased copies of the book from the American Museum of Science and Energy's Discovery Shop. It was an excitingly unique Veteran's Day celebration as could only be held in Oak Ridge!

Perhaps the best possible way to convey the sentiment of the day is to cite for you readers the concluding paragraph of Bill Wilcox's presentation. I think it really serves well to capture the feeling of those in attendance at this most auspicious Veteran's Day

Celebration in Oak Ridge!

Bill said, "What a remarkable opportunity it was for us, just fresh college graduates, to be able to serve our country as 'soldiers without uniforms' when it so needed us to help in such a unique a way. We had the privilege of being part of the team that developed never before even contemplated technologies for the vitally important Y-12 Plant of the Manhattan Project. That new and complex chemical process we

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worked out during the summer of 1943 in Rochester, NY had to be replaced that very winter by a very different one, and that for an even better one in the spring of 1944! After the war when our bosses left Y-12 to return to their old jobs, we kids took over as the "old" experts in uranium chemistry – at just 23 or 24 years old. Most of the great Rochester gang stayed on, married gals we met here, and spent long careers working in that 'Dogpatch' town we fell in love with that bright October weekend so long ago.