

Donald Frank Musser – From Oak Ridge to Geneva and beyond

(As published in The Oak Ridger's Historically Speaking column on December 19, 2016)

Connie Musser Glass came to the Y-12 History Center for her first visit escorted by Bill Wilcox. She had made contact with him in 2010 after seeking for 18 years to learn what her dad, Donald Frank Musser had done when he worked at Y-12 during the Manhattan Project.

When she came to the Y-12 History Center during her visit to Oak Ridge in 2010, Bill, as he would do for many people, generously took time to explain to her about her dad's life in Oak Ridge. He brought her to the history center to get her as close as he could to where her dad had worked.

Connie said, "Bill brought me to the New Hope Center during two different visits, and another time, you were kind enough to open it for me on a Friday when I was there with six women from my neighborhood who were interested in learning about the history you so beautifully display." It is not uncommon for me to do that. If anyone has family in town over a weekend and would like to visit the Y-12 History Center, I try to accommodate them.

It was not until just a few weeks ago that I again heard from Connie when she sent me a manuscript she had written detailing her dad's career. She had filled in all the years from the Manhattan Project in the 1940's to his death at age 52 in December 1969. He had a most interesting career going from supervisor at Y-12 in the Analytical Chemistry Department to the Atomic Energy Commission and finally a United States diplomat.

Don Musser was typical of many who worked at Oak Ridge during the Manhattan Project who went on to do work at a national and some even an international level. His main focus was to help the world deal as effectively as possible with the powerful atomic bomb he had helped create. He had experienced both the gratitude of helping to end World War II but also knew the devastation the atomic bomb he had helped create could bring.

Connie related how she met Bill Wilcox and the extensive help he provided her. She first learned of him when she read an article about the "Secret City in Tennessee" in the Charlotte, NC newspaper, *The Charlotte Observer* that included comments by Bill Wilcox, the Oak Ridge City Historian at the time. She immediately asked her mother if she knew Bill Wilcox. She did. Not only did she know Bill and Jeanie, Don and her had shared a mutual friendship with Charlie Thornton and his wife while living in Oak Ridge.

Connie sent Bill an email to which he responded, "My hearing from the daughter of that big gun in the next office in Dept 191 was a real eye-opening pleasure. I'd be pleased to talk with you about Don or try to answer email. When I first knew your Dad I worked in the Analytical Chemistry Dept of the Y-12 Plant starting up their first Quality Control Program, beginning in August 1946, and worked there nearly two years until July 1948, when I went into the Research dept. He was a top notch chemist and fine supervisor, ran a no-nonsense (oh well, maybe a little now and then) bunch of analytical chemists. We had a good time too. Mighty pleased to hear your Mom is still with us. I remember them both warmly. Thank you for getting in touch... Cordially, Bill

If you remember Bill Wilcox, you will immediately recognize his way of speaking even in an email. I still miss Bill!

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Connie's mother recalled, "I do know who your dad's boss was. Charlie Thornton was his boss from the time he hired Don on as the shift foreman. That was hard for us, too, because he could work a different shift almost each day. I was home in this strange and muddy place with a two-year-old and expecting another baby soon."

Connie's mother also remembered, "But he got promoted quickly and soon he was the night foreman. Then he became the general foreman. He had all of those promotions between November and the time you were born in April. We thought the general foreman would be the best thing for the family because we could count on him being home at certain times. But it didn't turn out that way; he often worked late, and even went in on weekends. He was only 28 years old when he was made general foreman. Ironically, he was one of the older workers in his area."

Connie said, "Although Dad had only a high-school education, he had been mentored by three well-respected chemists, and learned quickly. Some of the people who reported to him had more education than he did. During his career, he even had PhD's working for him."

In her manuscript, Connie expressed deep gratitude for the late Bill Wilcox, and for all of the help he gave her in her research. His letter describing my father's work follows:

"Dear Connie, I will try to respond to your previous questions about your father's career:"

"Don was interviewed in by a bespectacled but very pleasant man, Charles D. W. Thornton. Charlie, he was called, was the Head of the Analytical Chemistry Division at the Nation's first uranium 235 enriching plant, called by the code name Y-12. Don would not learn any details about what the plant was doing until after the bombs were dropped in August 1945. But he was delighted to hear Charlie tell him about the broad challenges of the job, and of the supervisory duties he wanted Don to handle. The offer for employment came from the company running the Y-12 Plant, Tennessee Eastman Corporation. Don accepted, then he and Lavina and two-year-old Jean came to Oak Ridge in November of 1944.

"Thornton was an Analytical Chemist (the kind of chemist whose work is to tell you what is "in" something, and how much of it is there). This was a uranium enriching plant so the vast majority of the work of his Division was measuring how much uranium was in samples of liquids and solids. People from all parts of the huge Y-12 Plant would send in small samples of drums or cans full of solids or tanks or bottles full of solutions, to find out how much uranium was in them before transferring them to the next step in the process. Keeping track of where all the uranium in the plant was a major chore and very important since when it was enriched in U-235 it was very valuable because it cost so much to produce it. Y-12's final product when ready to send to Los Alamos cost over \$200,000 an ounce!

"I had worked in another part of the huge Y-12 since it started, but in August 1946 he moved into Charlie's Analytical Division to set up a Statistical Quality Control program to assure that Charlie's people's measurements of uranium in things were accurate. The Division had two buildings side by side. 9733-3 and -4, long one story wooden war-time buildings, and I was assigned an office in the middle of 9733-4 Building, and right away Charlie introduced me to Don Musser in the office next door (with his Secretary in an office between ours.) I liked and respected him from the start. I could see immediately

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that Don had an important job, responsible for lots of people and work, but he was not stuffy or pretentious like some, he was (as we used to say) 'down-to-earth' and 'a sleeves rolled up' kind of guy."
-- [Bill Wilcox, personal correspondence to the author.]

Connie's manuscript continues to document her father's career. After the war ended, Don Musser moved from his position in Y-12 to become the Chief of the Technical Analysis Section of Special Fissionable Materials at the Atomic Energy Commission. In 1956 he was appointed as director of the newly developed AEC Division of Source and Special Nuclear Materials Accountability in Washington, DC.

In 1958, Don Musser accepted a temporary six-week assignment with the International Atomic Energy Agency to help establish Requisites for Safeguards in the use of Fissionable materials. When he returned to the states, he brought with him the eight-page "Requisites for Safeguards" which was the beginning of international understanding of management and use of atomic energy.

Resulting from his experience in international matters, Musser also served on loan to the State Department in 1959 as they made plans for an international disarmament conference scheduled for June of 1960. Connie notes that her father was "pleased and honored when asked to join them as science and technology consultant during the Geneva Conference: The Ten National Conference on Disarmament."

Unfortunately, it was during this same time that the news broke regarding the U-2 incident where a US spy plane was shot down over Soviet Russia. When Soviet Premier Khrushchev announced that the U-2 pilot, Gary Powers, had admitted to working for the CIA, he declined to attend the conference and rescinded his invitation for President Eisenhower to visit Russia.

Connie's manuscript reflects that on May 19, 1960, her father's journal included, "it seems that the conference will be winding up soon." Then on Monday, June 27, 1960, Musser's journal contained, "Staff meeting at 9:15, TNCD at 10:30. The Soviet Bloc all made speeches along the general theme that the West is obstructing disarmament negotiations, and then walked out en masse. The UK took over the chair and the 5 Western Nations had their say. And so ends hope of any disarmament agreement for the time being. It puzzles me greatly as to why the Soviets broke at this point, just as Eaton returned from Washington consultations and before he had a chance to advance the new Western proposals."

Connie follows her dad's career in Washington, DC, as he worked first to further nuclear disarmament and then to arms control. Finally when President John F. Kennedy was elected the efforts shifted toward a Nuclear Test Ban Treaty.

In one of the final paragraphs of Connie's manuscript, she states, "The shift in language from disarmament to arms control to nuclear test ban treaties brought different nations closer to an accord. Reading my father's journal, I noted his shock and sorrow at the assassination of President Kennedy, followed by some degree of satisfaction when he recorded that our new President Johnson, signed a nuclear test ban treaty; the first bill he signed as President."

Thanks to Connie's persistence and to Bill Wilcox's kind help to give her a sense of what her dad did at Y-12, her story of her dad's career is finally documented. Donald Frank Musser was indeed a successful leader in the transition from winning World War II with atomic bombs to a world where the Nuclear Test

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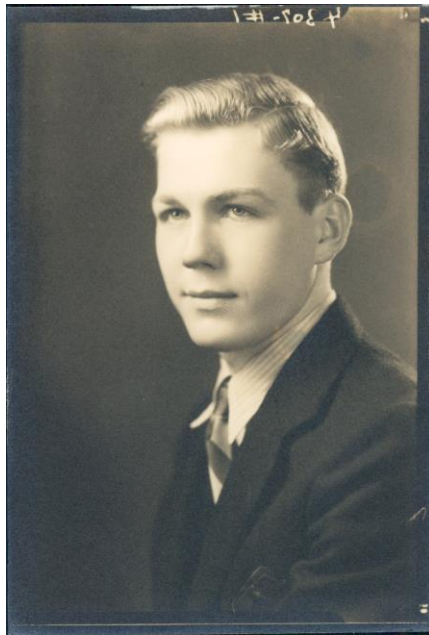
Ban Treaty provided the initiative to control nuclear weapons that continues today in modified form in the START treaty (Strategic Arms Reduction Treaty).



Connie Glass on her visit to Oak Ridge to meet Bill Wilcox

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Donald Frank Musser's college graduation photo



Musser shown at the Geneva Conference