The Cold War approaches and Y-12's workload grows

Many changes took place after the end of World War II in August, 1945. Y-12's population went from 22,000 workers in August, 1945 to a mere 1,500 in 1950. The transition from the Manhattan Project to the Atomic Energy Commission occurred in January, 1947. Y-12's uranium separation mission went away in December 1946. Yet, one thing remained constant – Y-12 still remained a central figure in the production of nuclear weapons.

As early as October, 1945, Y-12 was providing uranium metal "buttons" to Los Alamos for the manufacture of the next round of atomic weapons after the Gadget (the Trinity Test), Little Boy (dropped on Hiroshima) and Fat Man (dropped on Nagasaki). But, this would soon change.

Y-12's role in support of the nation's atomic age through specific manufacturing of nuclear weapons components could be considered as beginning with those uranium "buttons." As early as 1946 two additional atomic explosions were conducted, Able and Baker during the Operation Crossroads nuclear test conducted at the Bikini atoll in the Marshall Islands. These explosions used uranium metal from Y-12. More nuclear tests would soon be initiated and Y-12 would play a central role in each and every one.

The actual manufacture of uranium metal components transitioned from Los Alamos to Y-12 in 1947 through the specific efforts of the team of Jack Case, Wimpy Hilton and John Strohecker. According to Bill Wilcox's extraordinary *An Overview of the History of Y-12 – 1942-1992,* Jack Case related the story in 1987, on the occasion of the 40th anniversary of this major milestone in Y-12's history.

Case stated that the Atomic Energy Commission's general manager, Walt Williams, thought the then excess facilities at Y-12 could be used for machining uranium. He asked Y-12 to send a team to learn what was necessary to manufacture additional weapons of the same designs as Little Boy and Fat Man and to install the needed equipment at Y-12 to manufacture them.

As the AEC began to set new directions, make changes in assigned work and create new National Laboratories, Los Alamos was determined to remain a laboratory and the production of additional nuclear weapons components was not included in that new assigned role. This created the opportunity for Y-12's continued existence.

Y-12, being a huge industrial site, was ideally suited for additional nuclear weapons related work. The calutrons in eight of the nine major buildings had been shut down and placed in standby. Y-12 was without a continuing weapons related mission, so it was a logical choice to take on the manufacturing portion of what Los Alamos had been doing.

The team of Case, Hilton and Strohecker met some initial resistance at Los Alamos and had to wait on assistance from the AEC to persuade the Los Alamos people to share the needed information. While there were a number of scientists in Los Alamos who did not want to work on the manufacturing of additional weapons of the same old designs, evidently some folks there saw this as a potential loss of work for the laboratory and had to be told to allow the Y-12 team access.

An interesting side note to the transition of uranium machining to Y-12 is how the original budget for the work was developed. The AEC and Los Alamos both asked Y-12 management to provide a budget for this new work. Being without experience Y-12 management was reluctant to commit to an estimate.

However, finally the AEC was so persistent that a number of $500,000 was provided, by "reaching up" and coming down with the round number as there was no experience to base it on. Interestingly enough, that is the exact number Y-12 management charged AEC for the initial uranium machining work.

The calutrons at Y-12 that were left operational were transitioned to the stable isotope production and this mission also grew quickly after the end of the war. The zirconium work came to Y-12 as mentioned recently. Can't you see that Y-12 was becoming a place the AEC looked to for accomplishing unusual and difficult tasks? This would not stop, but would actually intensify as Y-12 continued to perform admirably on each and every one of the assigned tasks from the AEC.

While the Cold War had not yet officially been designated, the AEC pushed for increased numbers of nuclear weapons adding more in 1947 than had been added in 1946 and even more in 1948. Y-12 having taken on the manufacturing role helped the nation build up the supply of nuclear weapons more quickly.

This was being done in anticipation that the Soviet Union would soon have nuclear weapons. And that is exactly what happened on August 29, 1949 when the ninth nuclear explosion (the first Soviet one) in the history of the world occurred. The United States had exploded three more nuclear weapons (X-Ray, Yoke and Zebra) in Operation Sandstone on Eniwetok in the Marshall Islands in 1948, bringing the total US nuclear explosions at that time to eight.

Next we will look at other expanding missions at Y-12 occurring as a direct result of the entry of the Soviet Union into the nuclear weapons race, a primary element in what is known as the “Cold War.”