Y-12's second era begins

As early as September 1941, Stalin knew of the likely pursuit of an atomic bomb project by the United States and Great Britain. This was a year before the Manhattan Project actually took shape. The intelligence came by obtaining a copy of the MAUD report. The final MAUD report consisted of two documents, one describing the use of uranium for a bomb and the other describing the use of uranium to produce electricity.

It was the one about the bomb that caught their attention and caused Stalin to assign Igor Kurchatov as the lead scientist to study to possibility of creating an atomic bomb. Another thing that alerted the Soviets that something was amiss was the total lack of publications regarding nuclear fission from the United States and Great Britain.

Even though Stalin agreed to start a uranium program, it was not a major effort during the war. Espionage fed the details of the United States and British efforts to the Soviet secret police. However, much of what was learned was not shared with the scientists; rather it was used as a check on the accuracy of their progress.

After the war ended, Lavrentii Beria, former chief of security for Stalin, was put in charge of the overall atomic bomb program with Kurchatov remaining as the scientific head. After the successful explosions at Hiroshima and Nagasaki, Stalin now wanted badly to create an atomic bomb.

Stalin declared that the design for Fat Man given to the Soviets by Klaus Fuchs in June 1945 would be the design of their first weapon test. And so it was, Beria insisted that the proven design be followed as closely as possible. The Soviets exploded their first atomic weapons test on August 29, 1949 in Kazakhstan.

During this same time from 1945 to 1949, Y-12 was busy transitioning from an electromagnetic separation plant to a nuclear weapons manufacturing plant. As early as 1947, when the Atomic Energy Commission took charge of the atomic energy program, Y-12 was selected to perform the manufacturing of atomic weapons.

Jack Case, for whom the largest office building at Y-12 is now named, was among the group of individuals sent to Los Alamos by the AEC to bring back the technology for machining uranium. After a bit of hesitation by the folks at Los Alamos, Jack and his group did just that. Almost immediately, Y-12 began to do the work needed to manufacture the special parts required to create additional atomic bombs.

The first weapons components manufactured at Y-12 were fabricated in Building 9212. This building first became operational on November 4, 1945. The original purpose for the facility was to recover uranium 235 and process the material into a usable form to recycle through the calutrons.

By December 1946 the K-25 uranium feed material (enriched beyond what the Alpha calutrons could do), was being processed in Building 9212. By May 1947, production of the K-25 and K-27 plants completely replaced the calutrons and was producing enriched uranium 235 product.

"It was during the second half of 1947 that the enhanced material reduction process for enhanced weapons production performed at Los Alamos was initiated at Y-12, in Building 9212." That is the exact language found in historical records at Y-12. What it meant was that Y-12 began producing uranium metal from K-25's product by the reduction method and also began to machine shapes needed for nuclear weapons from that special material highly enriched in uranium 235.

During 1947 nuclear weapons were still being manufactured at Los Alamos but the transition to bring Y-12's capabilities up was rapidly being put in place. The United States was moving ahead with nuclear weapons testing and beginning to create a stockpile of weapons.

In the spring of 1948, certain components of the normal uranium (not enriched) weapons assemblies were fabricated in 9212, thus initiating the first actual parts made from metal at Y-12 that were used in a nuclear weapon. This was the start of the first nuclear weapons program for manufacturing weapons at Y-12.

In May of 1948, the first enriched uranium weapon design earlier manufactured at Los Alamos was fabricated from basic product to metal and machined to a finished product at Y-12, in Building 9212. This was the first manufacturing of enriched uranium weapons at Y-12.

The second era of Y-12 had begun. It was now a nuclear weapons manufacturing plant and no longer a uranium separation plant.