

Y-12 entered the 1990s and encountered major difficulties

In 1992, the United States agreed to a moratorium on underground nuclear testing. Atmospheric testing had been banned since 1963, when the Limited Test Ban Treaty was signed by all countries having nuclear weapons as well as many non-nuclear countries.

On a side note, some other nuclear countries continued testing until 1998, and the most recent nuclear test was conducted by North Korea on May 25, 2009. North Korea had also conducted its first nuclear test in October, 2006.

Development and production of new nuclear weapons in the United States was also halted. Some initial steps were taken to close some Nuclear Weapons Complex sites. The stockpile of the nation's nuclear weapons was already beginning to be reduced. Yet, assurance was given by both President Bush and incoming President Clinton that the nation would maintain nuclear forces of sufficient size to deter nuclear attack on the United States or its friends and allies.

Y-12 progressed through the turbulent times of the early 1990s struggling to maintain its place in the Nuclear Weapons Complex as downsizing began and consolidation seemed to be being considered at every turn. When the reductions in force came in 1991, work-force restructuring was a program established to help relocate workers between sites, both at Oak Ridge and other Nuclear Weapons Complex sites.

Attempts were made by some to move the work historically done at Y-12 to other locations. These moves were seen as politically motivated; and local workers, elected officials and retirees took a strong stand to defend Y-12 and keep the work here.

One major effort was known as "Complex 21" which surfaced in 1991. Since then, we have had numerous studies on consolidation, including recently one named "Complex 2030." We have gone through terms such as "Complex Transformation," "Modernization" and other labels to describe what is needed to maintain a viable nuclear weapons complex, yet keep it as simple and consolidated as possible.

Some nuclear weapons complex sites were completely shut down, buildings demolished and the sites have undergone or are still undergoing environmental cleanup. An example is Rocky Flats in Boulder, CO., which was shut down in 1989. Also, the Mound Plant in Miamisburg, OH, was identified for closure in 1989. That site is now the Mound Advanced Technology Center.

During this time of consolidation there emerged an effort to remove excess facilities, and several studies for making the Nuclear Weapons Complex function in the most effective manner possible were conducted. Y-12 has been a leader in reducing the footprint by demolishing close to 300 buildings that were no longer needed to support the nuclear weapons mission.

Over one million square feet of floor space was reduced with the removal of those buildings since 2001. New buildings have been constructed, such as the Jack Case Center, the New Hope Center, a new garage, and the Highly Enriched Uranium Material Facility; and now plans are under way for the Uranium Processing Facility. Changes at Y-12 over the past 20 years have been dramatic to say the least.

Amid the major changes in the complex in the early 1990s there was also a worldwide growing concern for the former Soviet Union countries where nuclear materials were left over from the Cold War. In February of 1993, the United States and Russia agreed to address this concern head on.

The United States agreed to purchase highly enriched uranium from Russia's dismantled nuclear weapons. This initial effort soon led to a number of other similar efforts to ensure the highly enriched uranium was located, purchased and down-blended to non-weapons grade suitable for nuclear reactors, but not for nuclear weapons.

In some cases, the nuclear materials were removed quietly and under secrecy to the United States as concern for terrorist activity grew through the years. Such initiatives as "Project Sapphire," in 1994, were among the first. These efforts have continued until today with initiatives such as "Golden Llama" where nuclear materials were removed from Chile in February, 2010.

On September 23, 1994, Y-12 underwent its most dramatic operational shutdown ever. This infamous date began a series of events that is unsurpassed in the history of Y-12. In the course of increased concern by oversight officials, finally an error was made that caused the managing contractor to take action to completely stop all work at Y-12...something previously unheard of.

This necessary action to regain the confidence of the oversight officials and internal contractor management soon led to the realization that this was not a simple stop and start back up. Some processes at Y-12 did not restart for 10 years! There are a number of reasons for the delayed restart, but the primary concern was something we know as "conduct of operations."

The rigor required to confidently perform work with nuclear materials using exacting procedures and formal process steps with complete and thorough documentation was the result of much effort to conform to the necessary requirements and to prove that we could do that consistently. It was not an easy transition.

Y-12 had historically performed tasks using procedures; however, the new level of detailed descriptive procedures was much more invasive into standard practices, and the oversight required consistent and repeatable process execution beyond what we had historically been required to produce. We were moving into the new world of transparency from the working floor to the regulations. We tried hard to match up to new expectations.

Many people exhausted themselves in long hours of procedure drills and rewriting steps that were not clear enough to ensure repeatability. The in-depth process knowledge required to write adequate procedures took time and education.

The middle 1990s were a stressful time because of the necessary pressures that were applied to all working levels at Y-12. Tensions often ran high as people tried to do their jobs, often with seemingly conflicting goals toward the outcome. In reality, it was a forced tension by placing the details of the regulations and those staff positions charged with enforcing them in the actual working environment where the work execution occurred.

It was a time of learning new terms, new thought processes and new relationships. But through it all, Y-12 workers continued to operate safely, securely and met the production demands placed on them.