

## **Y-12 and the 2000 decade – infrastructure reduction continued**

As we continue to examine the early years of the 2000 decade, there were several major changes that took place. A new contractor, BWXT Y-12 (now B&W Y-12) took charge in November, 2000, and quickly became engaged in the many improvements that needed to be made.

A major clean-up effort was initiated across the site, and housekeeping was emphasized as part of maintaining a safe workplace. Not that these things had not been in Y-12's culture all along, but bringing in approximately 100 individuals in the top positions of the organization caused a lot of fresh eyes to see things that those of us who had been here for years had all too often just come to accept.

These new managers often asked "Why are things the way they are, and what can we do to improve them?" It then became obvious what could be done...it seemed we just needed to ask more probing questions.

One of the many new initiatives was a program known as Infrastructure Reduction, which by 2003, was really beginning to take older structures and unused buildings down. The program known as Modernization was also gaining momentum.

Let's pick up with the last part of the quotation from the special **60<sup>th</sup> Anniversary 1943-2003** edition of Y-12's online news, Y-Source, where Infrastructure Reduction and Modernization were reviewed and the status of various accomplishments of 2001 and 2002 were given.

### **"Greatest Feat**

"Perhaps Infrastructure Reduction's greatest feat also was its least publicized. One of Y-12's critical missions is the storage and maintenance of Special Nuclear Material (SNM). SNM is stored in areas called Material Access Areas (MAA). The costs associated with MAA security are extremely high. A long-term goal at Y-12 is a more consolidated storage scheme for these materials.

"Part of the Infrastructure Reduction campaign involves the deactivation and eventual demolition of a large building known as 9206, which contained an MAA. After months of painstaking planning and careful execution, the staff at 9206 achieved the first-ever downgrade of a production MAA facility. The feat has led to safer, consolidated storage of Special Nuclear Material and clears the way for the continued deactivation of the 9206 facility.

### **Modernization**

"The second major program at Y-12 is called Modernization. While often associated with the aging facilities, the Modernization program actually addresses personnel, processes and facilities. The Modernization program is centered around the idea that while Y-12 made its mark on history with its role in World War II, a flourishing, technologically advanced Y-12 is equally critical to the nation's future.

"Many facilities currently in use at Y-12 were designed and built in the 1940s as temporary structures, designed to last until the end of World War II. More than 40 years beyond their life expectancy, many buildings desperately need rehabilitation.

"Even rehabilitation cannot match the technological advances of the last half-century though, and a key component of the Modernization plan is the design and construction of three primary facilities: A Special Nuclear Materials facility, a new facility to house Highly Enriched Uranium operations, and a state-of-the-art beryllium facility, in which employees can handle beryllium remotely, removing a major health hazard to employees.

## **Critical skills**

“In addition to facility planning, Modernization also addresses personnel issues. Much of the work that goes on at Y-12 is not performed anywhere else in the world. As a result, Y-12 has a highly skilled workforce using unique processes. Y-12’s employee population is aging however, and there is an immediate need to hire and train a new generation of workers.

“To respond to this need, the Modernization program focuses on ‘Critical Skills,’ primarily hiring new college graduates in science and engineering fields. In fact, between construction workers and the ‘Critical Skills’ program, Y-12 hired more than 950 employees last year.

“The third major component of the Modernization program is process planning. This facet of the program deals with working to design and implement work operations. Making sure that work flows in a cost-efficient way saves time and money and minimizes additional security costs. Planning for and procuring the tools for improved workflow also is a component of Modernization.”

The Infrastructure Reduction program continued for several years resulting in a reduction of well over 1,000,000 square feet of floor space and the demolition of nearly 300 buildings. The program at Y-12 continued to lead the entire NNSA effort and was touted as the leader among all DOE sites.

The Modernization program continued to flourish with the first new production facility built at Y-12 in 30 years starting construction in 2003. The Purification Facility, a state-of-the-art building designed expressly for the process being used, meant Y-12 processes no longer had to be fit into Manhattan Project structures not designed to handle the new equipment required for modern missions.

The Modernization program also resulted in new facilities such as the Jack Case and New Hope centers, as well as the new garage building and records storage building. The Highly Enriched Uranium Materials Facility was a major Modernization initiative coming online in 2008.

Modernization continues even today with the design of the Uranium Processing Facility. Increased funding in 2012 may well result in an earlier construction start date. At \$4.2 - \$6.5 billion, the Uranium Processing Facility at Y-12 will be the largest construction project in Tennessee’s history.

More on modernization as we continue to look at our history through the 2000 decade.