

Y-12 and the Nuclear Posture Review

On Friday mornings at 7:30 AM what has come to be known as a truly unique Oak Ridge event occurs. The East Tennessee Economic Council's weekly meeting consists of a packed room of highly motivated and energetic individuals from many of the large and small organization in the area as well as key leaders of the community, state and nation who are often in attendance.

Even for this audience, normally well read and up to speed on the most recent thinking regarding the political, environmental, even social and cultural events and plans, Ted Sherry's astute presentation featuring the recently published Nuclear Posture Review Report of April 2010 kept them spellbound for the full 30 minutes of his talk and for 10 more minutes of well stated and probing questions and candid answers. It was a watershed event. The National Nuclear Security Administration's Y-12 Site Office Manager was talking shop with his friends, neighbors and supporters, and the communication was effective.

Wayne Roquemore, Chairman of ETEC's board of directors, said that for him Ted's presentation was eye-opening and reinforced the importance of Y-12's role in not only national security but also international affairs, especially regarding nuclear nonproliferation. The audience obviously agreed. Our own "Y-12," so familiar to us that, as Wayne said, "we often take it for granted," has far-reaching missions serving the good of the world as a whole.

The Secretary of Defense, Robert Gates, released the most recent Nuclear Posture Review on April 6, 2010, stating that it "... provides a roadmap for implementing President Obama's agenda for reducing nuclear risks to the United States, our allies and partners, and the international community." Seeking to fulfill the goal of a world without nuclear weapons by taking concrete steps now, the document explains what is desired and how it can be accomplished.

For the first time ever, the prevention of nuclear terrorism and proliferation is placed as the top priority as well as reducing the role and use of nuclear weapons. Yet the policy recognizes that as long as nuclear weapons exist, the United States must sustain a safe, secure, and effective nuclear arsenal. That is where Y-12 comes in. Every single nuclear weapon in the stockpile contains multiple components from Y-12 and those components return to Y-12 when the weapon is retired or in need of attention to remain viable.

A most significant move is the recommended transfer of \$5 billion from the Department of Defense to the Department of Energy over the next several years. This additional funding will enable NNSA to accomplish needed infrastructure improvements, especially the Uranium Processing Facility at Y-12, without adversely impacting other key needs in the energy arena or environmental cleanup, both of which are Oak Ridge missions as well.

This review puts teeth in the declaration made by President Obama at Prague recently. He said that the United States will, "seek the peace and security of a world without nuclear weapons." While he recognized this could not be accomplished quickly, he expressed his determination to take initial and significant steps toward that goal. Y-12 is a part of this nuclear weapons reduction strategy by disassembling weapons, storing nuclear materials and making some of that material available for peacetime uses already, and we stand ready to do even more as needed.

The five key objectives of the review are (1) preventing nuclear proliferation and nuclear terrorism; (2) reducing the role of U.S. nuclear weapons in U.S. national security strategy; (3) maintaining strategic deterrence and stability at reduced nuclear force levels; (4) strengthening regional deterrence and reassuring U.S allies and partners; and (5) sustaining a safe, secure, and effective nuclear arsenal.

An unsettling observation is made in the review's executive summary about the changing international scene. It recognizes that while the threat of global nuclear war has become remote, the risk of nuclear attack has increased. It also cites the most immediate and extreme danger as being nuclear terrorism. It is well known that Al Qaeda and other such groups are seeking nuclear weapons.

Another area of concern is the "vast stocks of nuclear materials around the world." Y-12 plays a role here as well. Examples include the recent removal of nuclear materials from Chile, the Libyan centrifuge equipment, and as far back as 1994 when Y-12 was a partner in the "Project Sapphire" effort to remove substantial amounts of poorly protected nuclear material from Kazakhstan. I personally recall that one as a maintenance supervisor who worked for me at the time was one of the key members of that exceptional team.

The positive changes in relationship between Russia and the U.S. are recognized in the review, and the potential for confrontation is stated to have "declined dramatically." Y-12 now has regular interaction with Russians in training programs where they visit Y-12 and are taught the most modern and effective methods being used to secure and protect nuclear materials. I have been privileged to meet these teams and to tell them about the history of Y-12. What a great experience it is, and with each visit I am sending more and more sets of the Secret City DVD's and other Oak Ridge history-related materials back home with them.

China's nuclear arsenal is stated as suspected to be much smaller than those of the U.S. or Russia, but remember only one nuclear weapon is powerful enough to cause tremendous damage if used. Evidence of changing relationships there also can be seen in the fact that a training class is scheduled to come to Y-12 from China later this year. Other countries are being welcomed as well in the hopes that helping them learn how to better secure and protect nuclear materials will keep it out of the hands of terrorists.

The review cites three key elements in the U.S. approach to preventing nuclear proliferation and nuclear terrorism: (1) bolster the Nuclear Non-Proliferation Treaty, by reversing the nuclear ambitions of North Korea and Iran and strengthening the International Atomic Energy Agency safeguards and enforcing compliance with them; (2) accelerating efforts to secure all vulnerable nuclear materials worldwide in four years; and (3) pursuing arms control efforts including the New Strategic Arms Reduction Treaty and other treaties that control nuclear material testing.

Finally the Nuclear Posture Review uses a somewhat obscure term, yet one it states as being a long-standing U.S. intent. That term is "negative security assurance." This term is explained as "declaring that the United States will not use or threaten to use nuclear weapons against non-nuclear weapons states that are party to the Nuclear Non-Proliferation Treaty and in compliance with their nuclear non-proliferation obligations."

It goes on to say, "This revised assurance is intended to underscore the security benefits of adhering to and fully complying with the Nuclear Non-Proliferation Treaty and persuade non-nuclear weapon states party to the Treaty to work with the United States and other interested parties to adopt effective measures to strengthen the nonproliferation regime." There is also a caution regarding any use of biological or chemical

weapons of mass destruction against the United States and the right to revise this “negative security assurance” should it be necessary.

In conclusion, the Nuclear Posture Review reinforces the need for Y-12 into the foreseeable future and strengthens the course of action being taken toward modernization. The review also clearly recognizes that uranium processing will be required at Y-12 as we reduce the nuclear weapons threat worldwide and that the Uranium Processing Facility will be required to meet that need.

Secretary of Energy Steven Chu is pictured in the review as he spoke recently at the Y-12 Highly Enriched Uranium Materials Facility dedication and cited the need for the Uranium Processing Facility at Y-12 in support of the directions contained in the Nuclear Posture Review. Y-12’s role remains of the highest order, and the magnitude of its workload to sustain the nation’s nuclear needs remains at the forefront of national policy and practices.