National Nuclear Security Administration

Fact Sheet

U.S. Department of Energy **www.nnsa.doe.gov**

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Myth vs. Fact: The Truth about Plutonium Aging

MYTH #1: The age of plutonium equals the age of a weapon.

FACT: There are thousands of parts in a nuclear weapon and the plutonium pit is not the only part in a weapon that needs maintenance and surveillance. Although plutonium aging contributes, other factors control the overall life expectancy of nuclear weapons systems, such as aging of high explosives and other organic components in the design, or corrosion of uranium or plutonium parts. The age of plutonium is but one variable that can affect a weapon's performance and reliability.

MYTH #2: The age of plutonium is the primary driver for the Reliable Replacement Warhead (RRW).

FACT: Plutonium aging was not and is not the only reason for RRW. Senior officials at NNSA have on many different occasions in congressional testimony, speeches and interviews outlined the many different reasons for RRW, including ensured continued and long-term high confidence in reliability; improved manufacturability; increased safety and security; reduced likelihood of the need for future underground testing; and decreased numbers of weapons in the stockpile.

MYTH #3: Now that plutonium lasts for 85 to 100 years, the country does not need the RRW.

FACT: Regardless of the age of plutonium, RRW is needed to ensure confidence in the reliability of the nuclear weapons stockpile well into the future. The U.S. nuclear stockpile is aging – the average age of most weapons is more than 20 years. In short, as a warhead is refurbished to extend its service life, small changes accumulate, which take it farther and farther away from the original configurations that were confirmed with underground nuclear tests - this results in decreasing confidence in warhead reliability and performance. An RRW would be much less sensitive to these changes and assure greater long-term confidence. In an RRW, NNSA would replace the parts and components that are hard to manufacture and difficult to maintain with ones that are safer, more secure and easier to sustain and replace. With RRW, NNSA will be able to reduce the likelihood that underground nuclear tests will be needed in the future and, most importantly, eventually be able to reduce the number of weapons in the stockpile even further.

MYTH #4: The plutonium aging study derails NNSA's Complex 2030 plan as well as RRW.

FACT: We need Complex 2030 with or without RRW and regardless of plutonium aging. Complex 2030 is about transforming and modernizing the Cold War-era nuclear weapons infrastructure into a smaller, more efficient complex that is better able and more suited to respond to future national security challenges. It will include increased dismantling of retired warheads; consolidating special nuclear materials; eliminating duplicative capabilities; establishing a consolidated plutonium center; and implementing more efficient and uniform business practices throughout the complex.

MYTH #5: NNSA does not need the Consolidated Plutonium Center (CPC) now that plutonium will last longer than expected.

FACT: Of the five nuclear weapons states recognized by the Nuclear Nonproliferation Treaty, the United States is the only one without a dedicated facility to manufacture plutonium pits. This is a national security risk, and it ties the hands of future presidents. Additionally, the CPC will do more than just produce pits. This center will consolidate all plutonium activities, including surveillance, fabrication, research and development, into one secure location. Right now, plutonium activities are spread out across the country at several different sites. By building one center, NNSA will reduce security costs and significantly improve its efficiency.

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