

A new nuclear bomb plant?

The Uranium Processing Facility

The new global nuclear arms race starts with a new bomb plant in Oak Ridge, TN

The government wants to spend one trillion dollars over the next thirty years to “modernize” every aspect of its nuclear weapons program, beginning with a massive new bomb complex in Oak Ridge, Tennessee to produce thermonuclear cores for a new generation of bombs—80 bombs a year. The Uranium Processing Facility (UPF) will take more than 20 years to complete and cost more than \$15 billion.

THE MANHATTAN PROJECT is ancient history by contemporary standards. It has been seventy years since the US built a massive bomb plant called Y-12 in Oak Ridge, Tennessee to produce highly enriched uranium for an atomic bomb. Y-12 eventually succeeded; the fuel for the Little Boy bomb that destroyed Hiroshima, Japan was made in Oak Ridge.

After the war, Y12 continued manufacturing material for bombs and warheads. By 1949 it had become the sole source for the core of H-bombs; Y-12 manufactured the thermonuclear secondary for every warhead and bomb in the US stockpile.

That is still the mission of Y-12, producing thermonuclear cores to upgrade existing weapons, sometimes modifying them to become new weapons, under the “Stockpile Life Extension Program.”

But the Manhattan project buildings at Y-12 have deteriorated past the point of safe operation, so the government needs to replace them if it is to continue building bombs.

Background

In 2005, the National Nuclear Security Administration announced plans to build the Uranium Processing Facility at the Y12 National Security Complex to consolidate all enriched uranium operations in a new building, replacing the old buildings, many of which had leaky roofs. Skyrocketing cost estimates required a scaling back of plans; now the sole mission of the UPF is to be bomb production, making new thermonuclear secondaries and cases for every warhead in the US stockpile. Originally estimated to cost \$600 million - \$1.5 billion, the UPF, if built, will operate until 2075. It is the flagship of the next generation of the weapons production complex, and the staging ground for a new, global nuclear arms race.

Status

Despite increased funding every year since 2012, the UPF has not yet begun construction. In October 2012 NNSA announced a “space/fit issue”— after spending a half billion dollars and reaching 85% design completion, the UPF design team noticed the building was not big enough for the equipment it has to hold.

The current schedule for the modernization of Y-12 calls for a radical new concept, and for construction of the UPF part to be complete by 2025. The current schedule for LEPs calls for the W76 LEP and the B61 LEP (if done) to be completed long before 2024.

A bad history

The UPF project has been deeply flawed from the start; things came to a head in 2012, beginning in February with criticism from the Government Accountability Office that singled out the UPF as a poster child for NNSA's management deficiencies. In April the Defense Nuclear Facilities Safety Board went public with concerns the “safety is not integrated into the design of the UPF;” in July three peace activists breached the lethal force security zone in the Transform Now Plowshares action and entered the weapons production area and painted on walls for thirty minutes before they were noticed. And then came the space/fit design fiasco in October 2012.

Since then, everything has gone downhill

except the budget. The UPF plan has been broken apart into seven buildings—five new buildings and two old, unsafe ones will be used to build nuclear weapon cores. In the latest environmental review, the NNSA declares it will continue to use unsafe buildings because bringing them up to modern seismic standards is “cost prohibitive.”

The budget President Trump sent to Congress includes \$663 million more for the UPF (\$12.75 million a week!), bringing total funding for the design of the UPF to more than \$3.5 billion dollars. Tennessee Senator

Lamar Alexander chairs the committee that controls the UPF budget. He holds secret meetings with the contractor, Bechtel, refuses to answer the public’s questions, and insists, implausibly, that the bomb plant will be built for \$6.5 billion.

With no legitimate need for the UPF, the project should be cancelled and funding redirected to a facility to dismantle retired nuclear weapons and to cleaning up excess high-risk facilities that pose, in the words of the Department of Energy’s Inspector General, an “ever-increasing risk to workers and the public.”

The UPF bomb plant undermines anyone’s idea of a world free of nuclear weapons. In July 2016, the NNSA released an “Amended Record of Decision” greenlighting the bomb plant. Challenging it in court is the single most effective thing we can do to stop the new bomb plant at the moment, but litigation is expensive. OREPA seeks contributions toward our goal of \$75,000 to mount a legal challenge to the UPF.

Congress should

- *Reject \$663 million in funding for the UPF in FY 2018.* Funding should be reduced to a minimum while need and mission are reassessed and management deficiencies are addressed. Potential savings are in the billions.

- *Resist the temptation to rush the UPF project.* DOE guidance says attempts to compress schedules for construction projects increases the risk of project failure and is likely to result in schedule delays and cost increases.

- *Tie construction funding to accountability.* NNSA should be required to provide a plan that links schedule and workplans to funding and work products with accountability assigned by name.

- *Require an independent Secondary Lifetime Study* to verify the need for production of new secondaries in LEPS.

- *Address security vulnerabilities inherent in the current UPF design.* An above-ground UPF in a narrow valley between unsecured ridges is inherently vulnerable.

- *Align operations and facilities in Oak Ridge with US policy and projected future mission needs.* The need for production capacity will continue to decrease while dismantlement capacity needs will increase.

- *Require the re-design of the UPF to match mission need.* Production capacity should be a maximum of 10 secondaries/year. Dismantlement operations, currently part of the “deferred scope,” should be fully restored to the UPF.

The Case Against the UPF

Capacity and Need: NNSA said in 2011 it can fulfill its stockpile surveillance and maintenance mission at Y-12 with a production capacity of 10 warheads/year. But the UPF is being designed with a capacity of 80 warheads/year. The excess capacity (700% each year!) is to accommodate production of new nuclear weapon designs. Future nuclear policies will continue the downward trajectory of “production needs.” Life Extension Programs proposed for the UPF are being questioned on the grounds of cost (billions for each) and advisability (every modification result in untested weapons of uncertain reliability). This should trigger a reassessment of the need for the UPF.

Cost: The UPF’s original pricetag was \$600 million - \$1.5 billion. OREPA calculates the price of modernization at Y-12 will exceed \$15 billion. NNSA is proceeding without a projected final cost or a required Independent Cost Estimate.

Security: UPF design calls for an above ground facility located in a shallow valley between wooded ridges; the UPF will be adjacent to the Highly Enriched Uranium Materials Facility, the bomb material warehouse whose high white walls were spattered with blood and painted on in July 2012. The UPF will be similarly vulnerable.

Safety: The current plan for the modernization of Y-12 envisions using at least two buildings which do not meet seismic standards for enriched uranium operations for at least 20 more years. This decision places workers, the public, the environment, and the US nuclear weapons program at risk of catastrophic failure in the event of a design-basis earthquake—an event the latest US Geological survey report says is increasingly likely.

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