

UPF UPDATE

JUNE 2014

UPF PLAN ADOPTED BIG QUESTIONS UNANSWERED

When the challenges of building a new bomb plant in Oak Ridge on time and at an acceptable cost proved too much for the National Nuclear Security Administration, the Red Team was called in. After an intensive six week long study, the Red Team provided an alternate plan for enriched uranium operations at the Y12 complex and NNSA Administrator Frank Klotz says he expects the Red Team plan to be adopted. But the complex Red Team plan leaves the big questions—cost, safety, need and schedule—unanswered.

THE CHALLENGE

The Red Team's mandate was straightforward: get uranium operations out of the Building 9212 complex by 2025 and do it for less than \$6.5 billion. The plan they came up with scraps the "Big Box" UPF in favor of a more complicated scheme. Some operations will be moved to existing buildings after they are upgraded. Other operations will be housed in new buildings designed to a lesser safety standard. In addition, there will be a UPF for high-risk enriched uranium operations. In the end, NNSA still plans to maintain the capacity to produce 80 thermo-nuclear secondaries and cases per year at Y12 in Oak Ridge.

\$\$ PROBLEM SOLVED?

Just a year ago, Tennessee Senator Lamar Alexander said the nation could not afford a \$6 billion bomb plant in Oak Ridge. But the mandate given to the Red Team and the language in the report suggest an attempt to legitimize a \$6.5 billion ceiling for the bomb plant.

For years, the Government Accountability Office has been critical of NNSA's methods for projecting costs of major construction projects, but the latest UPF scheme breaks new ground—the \$6.5 billion figure is attached to no anchor in reality; it is an

artifact of the rejected "Big Box" UPF. Reality based cost projections will have to wait until an actual plan is in place. It is a mistake to assume the Red Team plan, which is more complicated than the "Big Box" UPF and relinquishes cost savings from the no-longer-reduced security footprint, will cost less than the "Big Box." Absent any change in NNSA's management culture, deep skepticism of those cost projections is warranted.

THE SAFETY GAMBLE

A sense of urgency surrounds the need to get out of the deteriorating facilities in the 9212 complex. As early as 2001, officials in Oak Ridge said Y12 was operating in "run to failure mode." Others said the aging building could not safely operate beyond 2018.

When it became clear the UPF project would not meet that schedule, the safe-operations-deadline magically shifted to 2025.

In fact, Building 9212 is not safe today. Electrical systems and older equipment have been replaced or upgraded, but the facility fails the crucial test—it is

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not seismically qualified. The 9212 complex is not expected to withstand a design basis earthquake, an unfortunate circumstance since it is located in the second highest activity seismic zone in the United States.

In April 1994, researchers at the University of North Carolina wrote the high level of activity in the New Madrid fault portends a significant seismic event in the future.

Bottom line: getting out of Building 9212 by 2025 is a great plan—unless the earthquake happens in 2021. If that happens, the US loses its enriched

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uranium capacity, faces unprecedented cleanup challenges, loses all material accountability for highly enriched uranium—and likely buries many workers, contaminates the nearby community, and leaves irremediable contamination in the Tennessee River.

The need for speed is soon to run headlong into

NNSA's legal obligations under the National Environmental Policy Act; the old UPF was analyzed in the Y12 Site Wide Environmental Impact Statement; the Record of Decision authoriz-

ing its construction was issued in 2011. The Red Team plan was not among the “reasonable alternatives” considered then and was not analyzed in that EIS. NNSA will now have to prepare a new EIS for the new plan.

HOW MUCH IS ENOUGH?

In 2011, NNSA said it could meet stockpile surveillance and maintenance mission requirements and conduct limited life extension activities with a production capacity of less than 10 secondaries and cases per year. But building a minimal capacity UPF would not support major modifications of weapon designs under the life extension program and would not permit full-scale production of new design nuclear weapons, so NNSA rejected that option.

How much production capacity NNSA really needs in Oak Ridge is an open question. A study on the re-use of secondaries required by the FY2014 Defense Authorizations Act may undermine NNSA assertions the way

the JASONS’ study discredited NNSA claims about plutonium pit lifetimes.

The possibility that some life extension operations could be performed at the Pantex assembly plant in Amarillo is ripe for exploration—doing the work at Pantex would eliminate the costs and risks of transporting secondaries to Oak Ridge and back.

Aligning operations in Oak Ridge with US nuclear policy could reduce the costs of future HEU operations and minimize mission risks. Insisting on overbuilding will increase costs, slow construction, and increase risks to workers, the public and the environment.

SAFETY, STILL

Almost lost in the rush to build is the need to provide maximum safety and security assurances for the public and workers. There is no question that putting new construction underground or below-grade is safer and more secure than building above-ground.

RECOMMENDATIONS

The future of enriched uranium operations is not clear at the moment. Whether the Red Team plan moves forward as it is or is modified or scrapped in favor of yet another plan, certain conservative steps must be taken:

1. NNSA and project management must be held accountable for the failure of the “Big Box” UPF—retaining the same management team sends a clear message to everyone working on the project.
2. NNSA must engage the public sooner rather than later. The NEPA process provides one vehicle—required by law—but NNSA has other ways to engage the public and should use them.
3. Overbuilding in a time of austerity makes no sense. The size and nature of weapons operations at Y12 should be determined after the secondary re-use study is completed; moving operations to Pantex must also be considered.
4. The need to increase dismantlement capacity should not be deferred; the time to prepare for the nation’s needs in 2030 is now.
5. NNSA must follow standard accounting procedures. The pricetag for enriched uranium operations can not be determined before a plan is adopted. Cost estimates must be built from the ground up.
6. Safety and security can not be compromised for any reason—pressure to meet artificial schedules and reduce costs can not be met by sacrificing maximum safety and security guarantees.