

## **The Fifth Alternative — BOMBPLEX TRANSFORMATION TO CONDUCT DEMANHATTAN PROJECT**

### **Purpose and Need**

The National Environmental Policy Act requires federal officials to include all reasonable alternatives in the preparation of Environmental Impact Statements. In order to determine what alternatives are reasonable, federal officials must consider agency preferences and must conduct a public scoping process.

The result of the scoping process for the Complex 2030 SPEIS was unequivocal. The number of people who participated was unusually large—more than 33,000 comments were submitted into the record—and more than 90% of the comments urged consideration of a path away from weapons production and toward disarmament in keeping with US obligations under the Nonproliferation Treaty.

The Draft SPEIS does not present such an alternative. This deficiency should be rectified in the final SPEIS, which should include a fifth alternative (after No Action and the three others in the current draft): The Weapons Complex that produces No Bombs.

Before exploring this alternative, we should answer two questions: Is such an alternative reasonable? Could such an alternative meet the president's directive to secure our nation with the least possible number of bombs?

The first question can be answered in the affirmative. In fact, if we take seriously the commitments of the United States in the Nuclear Nonproliferation Treaty and the stated nonproliferation goals of the United States, a nuclear weapons complex that produces no bombs is not only reasonable, it is inevitable. This turns our question to timing, and we ask: is it reasonable to consider a weapons complex that produces no bombs *now*?

The second question points toward security considerations. Is it possible to meet the demands of the president's directive "to secure our nation with the least possible number of bombs" with a weapons complex that produces no bombs?

In answering these questions we return to the published opinions of key strategists and long-time policy insiders, Henry Kissinger, George Shultz, Sam Nunn, William Perry, Thomas Graham and others. One of the distinguishing features of their call for a practical approach to nuclear disarmament is a sense of urgency—not only is it reasonable to contemplate moving in this direction now, it is imperative.

Kissinger and the others have come to this conclusion precisely because they see that our security requires it. In other words, their answer to our second question—Is it possible to meet the president's directive?—also goes beyond the standard of "reasonable" to imperative. Few would argue that the list of people who developed the nine practical steps outlined in the *Wall Street Journal* are willing to sacrifice US security needs in pursuit of nuclear disarmament. The least possible number of bombs that will secure our nation, in the future that these men and women believe can not come too soon, is zero. It is also the maximum number.

In a world where the NPT is realized, what is left of the weapons production complexes of the Nuclear Weapons States will be an infrastructure and workforce dedicated to the disassembly, dismantlement, and disposal of weapons materials and components. This work will be conducted under international verification protocols in facilities that are transparent by design and safeguarded as far as possible from hostile attacks and disruption by natural phenomena.

The time to begin developing this vision is now, and the place to begin putting flesh on this vision is the current SPEIS on Complex Transformation.

What will a weapons complex that produces no bombs look like? Where will its facilities be located? What capabilities would be included? What workforce will be required and what skill sets must they have?

The National Environmental Policy Act does not require the NNSA to make a weapons complex that produces no bombs a preferred alternative, but it does require such an alternative to be fully analyzed as a “reasonable” alternative—unless the vast majority of the public and leaders such as Henry Kissinger, Sam Nunn, et al are unreasonable.

**No Production Weapons Complex.** Under the programmatic No Production Alternative, NNSA would continue to operate only those facilities required to achieve the safe, secure, efficient disassembly and dismantlement of nuclear weapons and the disposition/disposal of their constituent parts. Some facilities at each of the seven sites will be retired and infrastructure and funding will be required to assure their safe, secure and complete decontamination, decommissioning and destruction. Some sites may be closed entirely; others may require new construction to achieve efficiencies and improve safety.

**Weapons Design and Certification.** In a fully-compliant NPT world, the need for weapons design activities will disappear. Requirements will shift, some weapons design capacities will need to be maintained to address possible questions which arise during decommissioning, disassembly, dismantlement and disposition of the stockpile. Capabilities of the weapons labs may also be used in determining alternative uses for some materials or constituents currently used in nuclear weapons and addressing issues that may arise should such transformation activities be deemed advisable.

Maintaining three fully equipped national laboratories would not be necessary; consolidation of required laboratory-based activities in support of a No Production Alternative would result in considerable savings—economic as well as environmental, savings which could be dedicated to addressing environmental concerns at the sites which close.

Decisions about which of the three weapons labs should continue to operate in support of the No Production Alternative should be made on the basis of an analysis of the technologies available at each lab rather than considerations of politics.

**Plutonium Operations and Pit Manufacture.** Plutonium operations requirements in a No Production Alternative would be reduced to questions of safe extraction, processing and disposal of plutonium currently in pits, in storage, or in other NNSA inventories. The location of such operations would be determined by an analysis of current technical and infrastructure capacities. Any facilities (new or upgraded) which conduct plutonium operations should incorporate transparency in their physical infrastructure as well as the processes in order to facilitate international verification of plutonium handling.

Activities required for plutonium currently in warheads would include: disassembly of warheads and pit removal; staging of pits awaiting further dismantlement; dismantlement of pits; safe and secure storage of pit materials until disposition activities are completed.

The plutonium itself should be placed under international monitoring and administrative control at the earliest possible moment.

The need for pit manufacture in an NPT-compliant, No Production world will be eliminated. Facilities currently available for pit production at Los Alamos would be given consideration for any role required in the disposition of plutonium from retired warheads or in other NNSA inventories. Plutonium immobilization could be done at SRS in existing high-level waste using the Defense Waste Processing Facility. The MOX factory could be converted to plutonium immobilization as plutonium reactor fuel is too proliferation-prone to be NPT-compliant. An additional glassification plant may be required to empty the waste tanks and provide high-radiation shields for plutonium inventories.

All other plutonium facilities would be decommissioned and scheduled for demolition.

**Uranium operations and Secondary and Case Fabrication.** Uranium operations in support of disassembly, dismantlement and disposition regimes would be located at the Y12 Plant in Oak Ridge, Tennessee, where considerable infrastructure, including a Uranium storage facility under construction, currently exists. Y12 is the only currently operating site with the technical capacity to undertake large scale uranium operations.

Current facilities at Y12 would be analyzed for suitability for uranium processing; the question of upgrading aging facilities vs. construction of a new uranium processing facility will be made only after a thorough cost/benefit analysis. In either case—retrofitting an older facility or constructing a new facility—all facilities will have transparency “designed-in” in order to facilitate international inspection of all stages of the uranium operations and eventually, international possession of all HEU.

Given the nature of thermonuclear secondaries, it would be expected that similar operations with other constituents—lithium, beryllium, etc—would be co-located with uranium operations, though evaluation of other options which might provide efficiencies or improvements in safety or security could be considered.

**Weapons Assembly/Disassembly and High Explosives Production.** The need for High Explosives Production for nuclear weapons would no longer exist under the No Production Alternative. If questions exist about stability of behavior of high explosives during disassembly/dismantlement operations or in current stockpiles of HEX, some bench-scale facilities might be maintained until such time as questions are satisfactorily resolved.

Weapons assembly operations would cease, and resources dedicated to assembly operations would transition to disassembly. Facilities for staging retired warheads awaiting disassembly, the actual physical disassembly, and staging constituent parts awaiting transportation or disposal would be co-located. While the Pantex facility seems an obvious choice to locate such facilities, consideration could be given to other sites which present efficiencies in operations or significantly reduce safety risks due to transportation. It does not seem likely that more than one facility would be required.

**Category I/II SNM Storage.** Co-location of storage facilities for some or all Category I/II materials under international administrative control will be analyzed in the SPEIS for a No Production Complex. Issues of safety and security which accompany transportation of Category I/II SNM will be evaluated against gains in efficiencies, safety, and long-term security before decisions are made.

This evaluation should incorporate site-specific evaluations at facilities currently handling Category I/II SNM and then be made on a programmatic basis.

**Tritium Production and R&D.** Tritium production will no longer be necessary in a fully NPT compliant weapons complex. Tritium production activities at the Watts Bar Nuclear Plant in Tennessee will cease and TPBars will be decontaminated, decommissioned, and destroyed.

Tritium operations at Savannah River will be scaled back—tritium extraction will cease. Tritium should be treated to render it unusable in weapons and any residual tritium-containing materials should be placed in safe, secure storage under international administrative control and monitored throughout its decay cycle.

**High Explosives R&D.** High Explosives R&D will cease. See High Explosives Production above.

**Flight Test Operations.** Flight Test Operations for nuclear weapons delivery systems will cease. Decontamination, decommissioning and environmental restoration of all facilities will take place.

**Hydrodynamic Test Facilities.** High explosive experiments to study weapons physics and assess the performance of nuclear weapons will no longer be necessary. If other, non-military uses can not be found for equipment and facilities, they will be decommissioned and demolished.

**Major Environmental Test Facilities.** Environmental facilities used to test nuclear weapons will no longer be necessary and will transition to non-weapons work or will be decommissioned and demolished.

**Non-nuclear production.** Under the No Production Alternative, the Kansas City Plant will be included in the SPEIS. Any facilities at the Kansas City Plant necessary to support safe and efficient disassembly, dismantlement and disposition of the stockpile will be maintained; the result will be a dramatically reduced footprint for the Kansas City operations. Current plans for moving the Kansas City Plant will be abandoned; funding currently allocated for relocation of the Kansas City Plant can be dedicated to addressing environmental concerns at the current operating facility.

#### **Benefits of the No Production Alternative**

The No Production Alternative minimizes environmental impacts and joined with effective political leadership, can be the most effective in reversing or at least remediating the effects of past negative environmental impacts.

The No Production Alternative can enhance the economic status of the communities in which facilities are located, directing the energy and efforts of the workforce toward dismantlement of warheads and of the apparatus and infrastructure of design, production and testing. With competent political leadership and an involved public, positive benefits will be realized and negative impacts will be minimized or eliminated.

The No Production Alternative is the only alternative that corresponds fully with the United States' obligations under the nuclear Nonproliferation Treaty and the finding of the World Court in 1996.

The No Production Alternative provides the leadership called for by arms control, diplomatic and military leaders.

The No Production Alternative enhances security for the United States by braking immediately the global momentum toward nuclear proliferation and increasing security for every country.